

'g,Ýž,ÝfAfZf"fufo,É,Â,ç,Ä03001

'g,Ýž,ÝfAfZf"fufo (BASM) ,đŽg,α,ÆIntel 80x86 ,lfAfZf"fufofR[fh,đ Pascal fvfofOf %of€"à,É'¼Ú<Lq,Á,«,Ü,·B

'g,Ýž,ÝfAfZf"fufo,lfwf<fvõ^ø

â'ž®

asm

fAfZf"fufo<^Ž--½—β

fAfZf"fufo•¶.ì\•¶

fGf"fgfŠfR[fh,Æl—fR[fh

Ž®fNfofX

Ž®%o%oŽŽŽq

Ž®fvf"ff<

Ž®,ìCE^

Ž®

ŠO•"fAfZf"fufo

-½—β,ì-½—βfR[fh

f%ofxf<

ŠO•"fAfZf"fufofR[fh,lfŠf"fn

.MODEL Žw—β,Æ PROC Žw—β

"'l'è"

flfyfof"fh

'è<`ì,Ý,ìCE^fvf"ff<

fvfCEftfBfbfNfX-½—βfR[fh

fCEfwfxf^fvf"ff<

â"z'u%oÂ"\,ÉŽ®

—\-ñCEê

"ÁŽêfvf"ff<

•¶Žš—ñ'è"

'g,Ýž,ÝfAfZf"fufo,ìŽg,ç•ú

fAfZf"fufo•¶,í asm Žw—β,đŽg,Á,Ä'g,Ýž,ÝfAfZf"fufo,ÉfAfNfZfX,μ,Ü,·B

asm

AssemblerStmt <Separator AssemblerStmt>

end

'g,Ýž,ÝfAfZf"fufo,ìŽè±,«,ÆŠÖ",í external ,ìŽè±,«,âŠÖ",Æ"~,¶<K'¥,É],í,È,- ,Ä,í,È,è,Ü,¹,ñB

Ž®

'g,Ýž,ÝfAfZf“fuf%o,ìfGf“fgfŠfR[]fh,Æ[]—¹fR[]fh03002

fAfZf“fuf%o,ìžè'±,«,âšÖ”,Éž©“@[]—³,ê,éfGf“fgfŠfR[]fh,Æ[]—¹fR[]fh,ížÝ,ì,æ,æ,É,È,è,Ü,·[]B

```
PUSH BP ;Locals <> 0 ,Ü,½,Í Params <> 0 ,È,ç,î[]—  
MOV BP,SP ;Locals <> 0 ,Ü,½,Í Params <> 0 ,È,ç,î[]—  
SUB SP,Locals ;Locals <> 0 ,È,ç,î[]—
```

```
MOV SP,BP ;Locals <> 0 ,È,ç,î[]—  
POP BP ;Locals <> 0 ,Ü,½,Í Params <> 0 ,È,ç,î[]—  
RET Params ;[]É[]—
```

- Locals ,í[]f[]f<·í”,íTfCfY,ðž!,·
- Params ,ípf%of[]f^,íTfCfY,ðž!,·

Locals ,Æ Params ,^a,Æ,à,É 0 ,ìê[]#[]CfGf“fgfŠfR[]fh,í[]—³,ê,·[]C[]—¹fR[]fh,í RET -½—
ß,¾,·,É,È,è,Ü,·[]B

'g,Ýž,ÝfAfZf"fufo,ìlfyf%of"fh03003

'g,Ýž,ÝfAfZf"fufo,ìlfyf%of"fh,í"è"□CfCFWfXf^□CfVf"ff{f□C%%ŽŽŽq,Å\ □- ,³,é,éŽ@,Å,□B

'g,Ýž,ÝfAfZf"fufo,ìŽ@,Í Object Pascal ,ìŽ@,Æ" ,ŕŠî-{-@'¥,Åì□- ,³,é,Ü,·,□C□d— v,È'Š^á"_,^a,ç,,Å,©, ,è,Ü,·□B

'g,Ýž,ÝfAfZf"fufo,É,íŽŸ,ì"Á'¥,^a ,è,Ü,·□B

- "ÆŽ@,ì—\-ñĚêfZfbfg,đ" FŽ , ,é
- , , x, Å, ÌŽ@, đ 32 frfbfg, Ì@□"l,Æ,μ,Ä•]‰, ,é
- •ì"ŽQ□Æ,đ•ì" ,lfAfhfCFX,Æ,μ,Ä‰đŽB, ,é

f□f: Pascal ,Å,í•ì"ŽQ□Æ,í•ì" ,ì"à—e,Æ,μ,Ä‰đŽB,³,é,Ü,·□B

Ž@,í"è"l,É‰đĚ^ ,³,é,È,,Ä,í,È,è,Ü,¹,ñ□B

—á03005

The following example declares the label `BigJump`. Notice that there are no local labels declared in this example.

```
procedure foo;
label
  BigJump;
begin
  asm
    mov  ax, SomeVar
    or   ax, ax
    JZ   BigJump
    mov  SomeVar, dx
  end
  writeln(SomeVar);
  asm
BigJump:
    mov  ax, dx
  end;
end;
```

The following example declares local labels.

```
procedure foo;
begin
  asm
    or   ax, ax
    JZ   @@MyLabel
    mov  dx, ax
    mov  cx, ax
    @@MyLabel:
    inc  ax
  end;
end;
```

Ž®fNf%ofX03006

'g,Ýž,ÝfAfZf“fuf%o,ÍŽ®,đ 3 ,Â,ĵNf%ofX,É•^a—p,μ,Û,·B

fĈfWfXf^Ž®

fĿf.fŠŽQĿÆŽ®

‘l’lŽ®

'g,Ýž,ÝfAfZf“fuf%,ìŽ® 03007

'g,Ýž,ÝfAfZf“fuf%,í,·, x, Ä, ÌŽ®, ð 32 frfbfg, ì®“l, Æ, μ, Ä·]%

¿, μ, Ü, ·B·, “®¬““ _”, ÆC·ŕŽš—ñ'è”, ðœ, ·ŕŽš—ñ'l, ÍTf][fg, μ, Ä, ç, Ü, 1, ñB

'g,Ýž,ÝfAfZf“fuf%, ÌŽ®, ÌŽ®—v'f ('è“CfCFWfXf^CfVf“f{f<), Æ%%ŽŽŽq, ©, ç\

¬, 3, êC, », ê, ¼, ê, ÌŽ®, ÍŠÖ~A, ·, éŽ®fNf%fX, ÆŽ®CE^, ðŽ, ¿, Ü, ·B

Pascal ,ÆfAfZf“fuf%, ÌŽ®, ÌŠ^á“_

Object Pascal , ÌŽ®, ÆfAfZf“fuf%, ÌŽ®, É, ÌŽÿ, Ì 2 , Ä, Ì'á, «, È'S^á“_ª, , è, Ü, ·B

- , ·, x, Ä, Ì'g,Ýž,ÝfAfZf“fuf%Ž®, Ì'è“l, É%ðCE^, 3, êC, », Ì'l, ÍRf“fpfCf<Žž, ÉEvŽž, Ä, «, È, -
, Ä, Ì, È, ç, È, ç
- 'g,Ýž,ÝfAfZf“fuf%Ž®, Ì'ì“ŽQÆ, Ì'ì“”, ÌfAfhfCFX, ðŽ!, ·B, ½, Æ, Ì, Ì Object Pascal
, Ä, ÌCŽ® X + 4 , Ä X ,ª·ì“, Ìê#CX , Ì“à—e, É 4 , ð%Ä, Ì, é, ±, Æ, ð^Ó-ì, ·, é,ªC'g,Ýž,ÝfAfZf“fuf
%, Ä, ÌCX , ÌfAfhfCFX, ©, ç 4 fojCf g ä Ê, ÌfAfhfCFX, É, , éf][fh, Ì“à—e, ð^Ó-ì, ·, é

'g,Ýřž,ÝfAfZf"fufo%,ìž®%o%ožžžq03008

žŸ,ì\,í'g,Ýřž,ÝfAfZf"fufo%,ìž®,ì%o%ožžžq,ð—Dæ±^Ê,ì,ç±,Éž!,μ,Ä,ç,Û,·B
 ŠefjfejSfš"à,ì%o%ožžžq,ì—Dæ±^Ê,í"~,¶,Å,·B

| fjfejSfš | %o%ožžžq | à-¾ |
|------------|---------------|-------------------------------|
| Å—Dæ | <u>&</u> | ž·Êžqf[]fo[]f%ofCfh |
| | <u>(...)</u> | ·"·ž® |
| | <u>[...]</u> | f[]f,šžQÆ |
| | <u>±</u> | []\ç'ìf[]f"fo[][''ðžq |
| 'P€ | <u>HIGH</u> | ä^Ê 8 frfbfg,ð·Ô,· |
| | <u>LOW</u> | %o^Ê 8 frfbfg,ð·Ô,· |
| | <u>±</u> | 'P€fvf%ofX |
| | <u>±</u> | 'P€f}fCfifX |
| | <u>±</u> | fZfOf[]"fgf[]fo[]f%ofCfh |
| | <u>OFFSET</u> | f[]f[]Zfbfg·",ð·Ô,· |
| | <u>SEG</u> | fZfOf[]"fg·",ð·Ô,· |
| | <u>TYPE</u> | Æ^ (fofCf[]fTfCfY) ,ð·Ô,· |
| | <u>PTR</u> | Æ^fLfffXfg |
| | <u>*</u> | æžž |
| | <u>/</u> | ®",ìæžž |
| | <u>MOD</u> | ®"æžž,ìè—] (—],è) |
| | <u>SHL</u> | ~_—[]¶fVftfg |
| | <u>SHR</u> | ~_—[]%EfVftfg |
| %ÁÆ, | <u>±</u> | "ň[]€%Ážž |
| | <u>±</u> | "ň[]€Æ,žž |
| frfbfg'P^Ê | <u>NOT</u> | frfbfg"Û'è |
| | <u>AND</u> | frfbfg, ² ,Æ,ì AND |
| | <u>OR</u> | frfbfg, ² ,Æ,ì OR |
| | <u>XOR</u> | frfbfg, ² ,Æ,ì XOR |

'g,ÝŹ,ÝfAfZf"fuF%o,İŽ®,İCE^03009

,,x,Ä,İ'g,ÝŹ,ÝfAfZf"fuF%oŽ®,É,ÍŠÖ~A,·,éCE^,ª,è,Ü,·B

,±,İCE^,İfTfCfY,đ^Ó-ı,μ,Ü,·B'g,ÝŹ,ÝfAfZf"fuF%o
,İŽ®,İCE^,đfŹf,ŹŹ^É'u,İfTfCfY,Æ,Ý,È,·,©,ç,Å,·B

'g,ÝŹ,ÝfAfZf"fuF%o,Í%oÄ"\,È,ç,İ•K,·CE^,đf`fFbfN,μ,Ü,·BCE^f`fFbfN,ÉŽ,·s,·,é,ÆfGf
%o[İ,É,È,è,Ü,·B

fŹf,ŹŹQŹÆ,İCE^,đ•İX,μ,½,ç

,Æ,«,İCE^fLfffXfg,đŽg,ı,Ü,·B,½,Æ,ı,İCŽY,ÉŽ!,·fŹf,ŹŹQŹÆ,İ,·,x,Ä OutBufPtr •İŹ",İÄ%o,İ
(Ä%o^É) fojCfg,đŽQŹÆ,μ,Ü,·B

asm

MOV DL, BYTE PTR OutBufPtr

MOV DL, Byte (OutBufPtr)

MOV DL, OutBufPtr.Byte

end;

fŹf,ŹŹQŹÆ,İCE^,È,μ,İ (ŠÖ~A•t,·,ç,è,½CE^,ª,È,ç) İêŹª,ª,è,Ü,·B,½,Æ,ı,İC[]
,Ä^İ,ñ,¾'ı'ı,ı,»ı 1 —á,Ä,·B

asm

MOV AL, [100H]

MOV BX, [100H]

end;

Ž® [100H],É,ÍŠÖ~A•t,·,ç,è,½CE^,ª,È,ç,İ,ÄC'g,ÝŹ,ÝfAfZf"fuF%o,İä,İ-¼•Ü,İ-½—
ß,đŽó,·t,·,Ü,·B,±,İêŹª,İCİuffŹf^fZfOfŹf"fg,İfAfhfCEfX 100H,İ"à—eŹv,đ^Ó-
ı,μCCE^,İÄ%o,İfıfıf%of"fh (AL,İ BYTE, BX,İ WORD),©,ç"»'f,Ä,«,Ü,·B

'¼,İfıfıf%of"fh,©,çCE^,đ"»'f,Ä,«,È,çİêŹªC'g,ÝŹ,ÝfAfZf"fuF%o,É,İŽY,İ—á,ÉŽ!,·,æ,ı,È-
¾Žı"ı,ÈCE^fLfffXfg,ª•K—v,Ä,·B

asm

INC BYTE PTR [100H]

IMUL WORD PTR [100H]

end;

'g,Ýž,ÝfAfZf“fuf%o,ì'è` òï,Ý,ìCE^fVf“f{f<03010

CE»ÝéCE¾,³,ê,Ä,ç,é Pascal CE^ÈŠO,ÉC'g,Ýž,ÝfAfZf“fuf%o,É,ÍŽÝ,ì'è` òï,Ý,ìCE^fVf“f{f<,à, ,è,Ü,·B

| fVf“f{f< | CE^ |
|--------------------|------------|
| BYTE | 1 |
| WORD | 2 |
| DWORD | 4 |
| QWORD | 8 |
| TBYTE | 10 |

fCefWfXf^Ž® 03011

ŽQÆ

fCefWfXf^Ž®, ífCefWfXf^-¼,¾,¯,Å\¬,³,ê,é'g,Ýž,ÝfAfZf“fuf%Ž®,Å,·B

fCefWfXf^Ž®,É,ÍC,½,Æ,î,î EAXCECXCEDICESI,È,Ç,ª,è,Û,·B

fCefWfXf^Ž®,đfjyf%of“fh,Æ,μ,ÄŽg,æê#CfAfZf“fuf%,Í CPU fCefWfXf^,đ'€ì,·,é-½—
ß,ð¶¬,μ,Û,·B

ŽQÆ03012

'g.ÝŇž.ÝfAfZf"fu f%oo.ĭfCEfWfXf^fVf"ff f<

'l'ž®

f f,fšžQÆž®

f[]f,fšžQ[]Æž®03013

žQ[]Æ

f[]f,fšžQ[]Æ,íf[]f,fš^Ê'u,ďž!,·'g,Ý[]ž,ÝfAfZf"fuf%ož®,Å,·[]B

Object Pascal ,lf%ofxf<[]C·ï"[]CCE^·t,«'è"[]Cžè'±,«[]Cšö" ,í,±,ìjffefSfš,É'®,μ,Ü,·[]B

f[]f,fšžQ[]Æ,í,³,ç,É[]Ä"z'u%oÅ"\,Èž®,Æ[]âîž®,ì,ç,ç,©,É·³—p,³,ê,Ü,·[]B

ŽQÆ03014

fCfWfXf^Ž®

'IŽ®

‘I’IŽ®03015

ŽQÆ

‘I’I,lfæfWfxf^,Å,í,È,f,f,š^Ê’u,É,àŠÖ~A•t,¯,ç,ê,È,ç’g,Ýž,ÝfAfZf“fuf%Ž®,Å,·B

,±,lfOf<[fv,É,í Object Pascal ,lCE^,È,µ’è”,ÆCE^Ž~•ÉŽq,ªŠÜ,Ü,ê,Ü,·B

‘I’I,í,³,ç,ÉÄ”z’u%oÅ”\,ÈŽ®,Æâ’IŽ®,ì,Ç,¿,ç,©,É•ª—p,³,ê,Ü,·B

ŽQÆ03016

fCfWfXf^Ž®

f f.fŠŽQÆŽ®

Ä"z'u%oÄ"\,ÈŽ®,Æâ'îŽ® 03017

ŽQÆ

Ä"z'u%oÄ"\,ÈŽ®,Æ,ÍfŠf"fnŽž,ÉÄ"z'u,ð•K—v,Æ,·,é'l,ðŽw,μ,Ü,·
(Ä"z'u,ÍfŠf"fj,əfvf"f{f<,Éâ'ÍfAfhfCEfX,ðŠ,,,è"–,Ä,éfvfZfX,Å,·)B

â'îŽ®,Æ,ÍÄ"z'u,ð•K—v,Æ,μ,È,ϕ'l,ðŽw,μ,Ü,·B

'ÉíCf%ofxf<C•ï"Čžè'±,«CSÖ",ì,ϕ,,.é,©,ðŽQÆ,·,éŽ®,ÍÄ"z'u%oÄ"\,Å, ,èC'è",¾,¯,
ð'€ì,·,éŽ®,Íâ'îŽ®,Å,·B

f%ofxf<C•ï"Čžè'±

,«CSÖ",ìâ'ÍfAfhfCEfX,ÍČŽÀsŽž,ÉfR[fh,əfvf,fš"à,ì"C^Ó,ÍfAfhfCEfX,Éf[fh,³,é,é,Ü,Å,í,©,è,
,Ü,¹,ñB

'g,Ýž,ÝfAfZf"fuf%o,Íâ'í'l,É'í,μ,Ä,Í, ,ç,ä,é'€ì,ðŽÀs,μ,Ü,·,äCÄ"z'u%oÄ"\
,É'l,É'í,·,é'€ì,í'è",ì%ÁŽZ,ÆCE,ŽZ,ÉSCEÀ,³,é,Ü,·B

ŽQÆ03018

fĀfWfXf^Ž®

fĀf.fŠŽQÆŽ®

'I'Ž®

'g,Ýž,ÝfAfZf"fufo,İfCfWfXf^fvf"ff<03019

ŽQÆ

'g,Ýž,ÝfAfZf"fufo,İŽŸ,İ—\—ñfV"ff<,ðŽg,Á,Ä CPU fCfWfXf^,ðŽw'è,μ,Û,·B

fvf"ff<

fCfWfXf^

| | |
|-----------------|------------------------------------|
| EAX EBX ECX EDX | 32 frfbfg"Ä—pfCfWfXf^ |
| AX BX CX DX | 16 frfbfg"Ä—pfCfWfXf^ |
| AL BL CL DL | 8 frfbfg%°^ÊfCfWfXf^ |
| AH BH CH DH | 8 frfbfgä^ÊfCfWfXf^ |
| ESP EBP ESI EDI | 32 frfbfgf fCf"f^,Û,½,İfCf"ffbfNfX |
| SP BP SI DI | 16 frfbfgf fCf"f^,Û,½,İfCf"ffbfNfX |
| CS DS SS ES | 16 frfbfgfZfOf"fgfCfWfXf^ |
| ST | 80x87 fCfWfXf^fXf^fbfN |

f|fyf%of"fh,afCfWfXf^-¼,¾,¯,İê±CfCfWfXf^f|fyf
%of"fh,ÆCEÄ,İ,è,Û,·B,·,x,Ä,İfCfWfXf^,afCfWfXf^f|fyf%of"fh,Æ,μ,ÄŽg,İ,Û,·B

fCfWfXf^,İfCf"ffbfNfX•t,¯

fx[fXfCfWfXf^ (BX ,Æ BP) ,ÆfCf"ffbfNfXfCfWfXf^ (SI ,Æ DI) ,ð []
,Ä^İ,ñ,Å<Lq,·,é,ÆCfCf"ffbfNfXŽw'è,ª,Å,«,Û,·B,·,x,Ä,İ 32 frfbfgfCfWfXf^,É,Â,ç
,Ä,àfCf"ffbfNfXŽw'è,ª,Å,«,Û,·B

—LCø,ÈfCf"ffbfNfXfCfWfXf^,İ'g,Ý±,İ,¹,ðŽŸ,ÉŽ!,μ,Û,·B

[BP]

[BP+DI]

[BP+SI]

[BX]

[BX+DI]

[BX+SI]

[DI]

[SI]

[EAX+ECX]

[ESP+EAX-5]

ŽQÆ03020

fCfWfXf^Ž®

'g,Ýž,ÝfAfZf"fufo,ìž®fVf"ff<03021

'g,Ýž,ÝfAfZf"fufo,ðŽg,æ,ÆCfAfZf"fufoŽ®,ì†,Á,Ù,Æ,ñ,Ç,·,×,Ä,ì Object Pascal
fVf"ff<,ÉfAfNfZfX,Á,«,Ü,·B,±,ê,ç,ìfVf"ff<,É,ìf%ofxf<C'è"CE^C·ï"Çžè±
,«CSÖ",šŠÜ,Ü,ê,Ü,·B

'g,Ýž,ÝfAfZf"fufo,É,í,ç,,Á,©,ì'è<`ï,ÝCE^fVf"ff<,à, ,è,Ü,·B

| fVf"ff< | 'l | fNf%ofX | CE^ |
|-----------|--------------------------|---------|-------------|
| f%ofxf< | f%ofxf<,ìfAfhfCEfX | f, fŠ | Short |
| 'è" | 'è",ì'l | 'l | 0 |
| CE^ | 0 | f, fŠ | CE^,ìfTfCfY |
| ftfB[f<fh | ftfB[f<fh,ìfìftfZfbfg | f, fŠ | CE^,ìfTfCfY |
| ·ï" | ·ï",ìfAfhfCEfX | f, fŠ | CE^,ìfTfCfY |
| Žè±,« | Žè±,«,ìfAfhfCEfX | f, fŠ | Near |
| ŠÖ" | ŠÖ",ìfAfhfCEfX | f, fŠ | Near |
| ftfjfbfg | 0 | 'l | 0 |
| @Code | fR[fhfZfOf"fg,ìfAfhfCEfX | f, fŠ | 0FFF0H |
| @Data | ff[f^ZfOf"fg,ìfAfhfCEfX | f, fŠ | 0FFF0H |
| @Result | CE%oÉ,ì var fìftfZfbfg | f, fŠ | CE^,ìfTfCfY |

'g,Ýž,ÝfAfZf"fufo,ìž®,ÁŽg,ì,È,çfVf"ff<

ŽÝ,ìfVf"ff<,'g,Ýž,ÝfAfZf"fufo,ìž®,Á,ìžg,ì,Ü,¹,ñB

- W€,ìžè±,«,ÆŠÖ" (Writeln, Chr ,È,Ç)
- "ÁŽè"z—ñ Mem, MemW, MemL, Port, PortW
- ¶Žš—ñ'è"Ç, "®—" " 'è"ÇW±'è"
- CE»Ý,ìfuf[fbfN,ÁéCE¾,¾,ê,Ä,ç,È,çf%ofxf<
- ŠÖ"ŠÖ",ì @Result fVf"ff<

'g,Ýž,ÝfAfZf"fufo,ìf[f<·ï"

f[f<·ï" (Žè±,«,šŠÖ" "à,ÁéCE¾,¾,ê,½·ï") ,ìí,ÉfXf^fbfNä,ÉŠ,,è—,Ä,ç,êCSS:BP
,ÉŠî,Ä,«fAfNfZfX,¾,ê,Ü,·B

f[f<·ï" fVf"ff<,ì'l,ì EBP ,©,ç,ì·,·t,«fìftfZfbfg,Á,·B

'g,Ýž,ÝfAfZf"fufo,ìf[f<·ï",Ö,ìžQÆ,Éž©"®"l,É [EBP] ,ð'Ç%Á,μ,Ü,·B

'g,Ýž,ÝfAfZf"fufo,ì var fpf%of[f^

'g,Ýž,ÝfAfZf"fufo,ì var fpf%of[f^,ðí,É 32 frfbfg,ìfCf"f^,Æ,μ,Ä^μ,¾,½,βCvar fpf
%of[f^,ìfTfCfY,ìí,É 4 ,Á,· (32 frfbfgfCf"f^,ìfTfCfY)B

const fpf%of[f^,ìfpf%of[f^CE^,ìfTfCfY,¾ 4 fofCfG,æ,è'á,«,çê±Cvar fpf
%of[f^,Æ" ,¶,æ,¾,É^μ,í,è,Ü,·B

Object Pascal ,Á,ìCvar fpf%of[f^,ÉfAfNfZfX,·,é¶·¶,Æ'ìfpf%of[f^,ÉfAfNfZfX,·,é¶
·¶,ì" ,¶,Á,·B'g,Ýž,ÝfAfZf"fufo—p,É<Lq,·,éfR[fh,Á,ì,±,è,ì—,Ä,ì,Ü,è,Ü,¹,ñB

var fpf%of[f^,ìžÀÜ,ìfCf"f^,Á, ,é,½,βCfCf"f^,Æ,μ,Ä^μ,í,È,-
,Á,ì,É,è,Ü,¹,ñB,μ,¾,¾,Á,ÁCvar fpf%of[f^,ì"à—e,ÉfAfNfZfX,·,é,É,ìC,Ü,· 32 frfbfgf
Cf"f^,ðf[fh,μ,Á,©,çC,»,ìfpf%of[f^,šžw,μ,Á,ç,é^É'u,ÉfAfNfZfX,μ,Ü,·B

fxfr[fv

fxfr[fv,lfcefr[fhce^,ü,½,lfifufwffnfgce^,ìce^cftfb[f<fhc•i",išefvf"f{f<,é,æ,á,ä'ñ<ÿ,³,ê,ü,·B

Object Pascal ,iš@'sCEÀ'èŽ•ÊŽq,Æ"~,¶,æ,κ,ÉcftfjfbfgŽ•ÊŽq,í"Á'è,lf+fjfbfg,lfXfr[fv,đf[fvf",μ,ü,·B

%o%oZZŽq

fcefr[fhce^,â•i",È,Ç,ì,ç,,Á,©,lfvf"f{f<,íCv'ç'if"fo['i'đŽq (.) %o%oZZŽq,đŽg,Á,ÄfAfNfZfx%oÂ"\,Éfxfr[fv,đŽ,¿,ü,·B

CE^Ž•ÊŽq

fvf[fOf%of€,đ<Lq,·,é,Æ,«CE^Ž•ÊŽq,đŽg,Á,Ä•i",đi~-,Á,«,ü,·B

Žÿ,ışe-½—β,í"~^ê,ì@šBCEéfr[fh,đ¶i~-,μ,ü,·B¶i~-,³,é,éfr[fh,í [EDI+4] ,ì"à—e,đ EAX,Éf[fh,μ,ü,·B

type

```
TPoint = record
  X, Y: Integer;
end;
TRect = record
  A, B: Point;
end;
```

asm

```
MOV    EAX, (Rect PTR EDI) .B.X
MOV    EAX, Rect ([EDI]) .B.X
MOV    EAX, Rect [EDI] .B.X
MOV    EAX, Rect [EDI] .B.X
MOV    EAX, [EDI] .Rect.B.X
```

end;

ST(x) fWfXf^fVf“f{f<03022

fVf“f{f< ST ,í 80x87 •,“®□-□”“_fWfXf^fXf^fbfNã,ìÅ□ã^Ê,lfWfXf^,ð•\,μ,Ü,·□B
8 ĆÂ,ì•,“®□-□”“_fWfXf^,í ST(x) ,ðŽg,Á,Ä,» ,ê,¼,êŽQ□Æ,Á,« ,Ü,·□Bx ,í 0 ,© ,ç 7
,Ü,Á,ì'è□”,Å□CfWfXf^fXf^fbfN,ìÅ□ã^Ê,© ,ç,ì<—£,ðŽ!,μ,Ü,·□B

'g,Ýž,ÝfAfZf"fufo%,ì•ŕŽš—ň'è"03023

ŽQÆ —á

'g,Ýž,ÝfAfZf"fufo%•ŕ,Á,íC•ŕŽš—ň'è",íP^ø—p•,,Ü,½,í"ňd^ø—p•,,Á^í,Ü,È,-
,Ä,í,È,è,Ü,¹,ňB

'è""à,Á^ø—p•,,ðŽg,æ,É,íC'è",ð^í,p,ì,ÉŽg,æ^ø—p•,,Æ"~,ŕŽí—p,ì^ø—p•,,ð 2 ,Á~A'±
,µ,ÄŽg,ç,Ü,·B,½,Æ,ì,îŽŸ,ì,æ,æ,É,µ,Ü,·B

'"That"'s all folks", he said.'

DB <^Ž—½—ß,Á,í" C^Ó,ì'·,³,ì•ŕŽš—ň'è",ðŽg,ì,Ü,·BfR[fhfZfOf"fg"à,ÁC•ŕŽš—
ň"à,ì•ŕŽš,ì ASCII fR[fh,ðŠÜ,pfofCfgyV[fPf"fx,ðŠ,,è"-,Ä,³,è,Ü,·B

DB <^Ž—½—ß^ÈŠO,ÁŽg,æê#C•ŕŽš—ň'è",í 4 •ŕŽš^È"à,Á,È,-
,Ä,í,È,ç,·CŽ®,ì^è•",Æ,µ,ÄŽg—p,Á,«,é""l,ðŽ!,µ,Ü,·B

•ŕŽš—ň'è",©,ç,È,é""l,îŽŸ,ì,æ,æ,ÉEvŽZ,³,è,Ü,·B

Ord(Ch1)+ Ord(Ch2) shl 8 + Ord(Ch3) shl 16 + Ord(Ch4) shl 24

- Ch1 ,í%œE'[(ÄÆã) ,ì•ŕŽš,ðŽ!,·
- Ch4 ,íŕ'[(Ä%œ) ,ì•ŕŽš,ðŽ!,·
- ŕŽš—ň,ð 4 •ŕŽš-ç-ž,ìê#Cŕ'[(Ä%œ) ,ì•ŕŽš,í 0 (f[f]) ,Æ,Ý,È,³,è,Ü,·B

ŽQÆ03024

l'è

—á03025

•ŕŽš—ň'è" ,Æ'í%ž,·,é"'"l,ì—á,ďŽŸ,ÉŽ!,μ,Ü,·B

•ŕŽš—ň 16 i"

'è" 'l

'a' 00000061H

'ba' 00006261H

'cba' 00636261H

'dcba' 64636261H

'a ' 00006120H

' a' 20202061H

'a'*2 000000E2H

'a'-'A' 00000020H

NOT 'a' FFFFFFF9EH

'g,Ýž,ÝfAfZf"fufo%,ì""'è"03026

ŽQÆ —á

'g,Ýž,ÝfAfZf"fufo%,ì""'è",í -2,147,483,648 4,294,967,295 ,ì"í^í,ì®" ,Á,È,-
,Á,Í,É,ç, ,C0 , ©,ç 9 ,Ü,Ä,ì"Žš,Ü,½,í \$,Äžn,Ü,ç,È,,Á,Í,É,è,Ü,¹,ñB

ffftfHf<fg,Á,íC""'è",É,í 10 i (Šî" 10) •\<L,ðŽg,ç,Ü, ,^aC'g,Ýž,ÝfAfZf"fufo%,í 2 i (Šî"
2)C8 i (Šî" 8)C16 i (Šî" 16) ,ìŠe•\<L,àftf|[]fg,μ,Ä,ç,Ü,¹,ñB

'l'ð,.,é•\<L-@ Žw'è

2 i ""'l,ìÆä,É•ŕŽš B ,ðŽw'è,.,é

8 i ""'l,ìÆä,É•ŕŽš O ,ðŽw'è,.,é

16 i ""'l,ìÆä,É•ŕŽš H ,ðŽw'è,.,é,©C""'l,ì'O,É \$,ðŽw'è,.,é

Object Pascal ,ìž®,Á,í 10 i•\<L,Æ 16 i•\<L (fvfçftfBfbfNfX \$,ðŽg,π) ,¾, ,^a<-
,³,é,Ü,·BftftfBfbfNfX B, O, H ,íftf|[]fg,μ,Ä,ç,Ü,¹,ñB

ftftfBfbfNfX H ,ðŽg,Á,Ä 16 i'è",ð<L[]q,.,é,Æ,«C[]Å%o,ìÆ...,^a A , ©,ç F ,Ü,Á,ì 16
i"Žš,ìé±,íC""'l,ì'O,Éf[] (0) ,ð•t, ,È,,Á,Í,É,è,Ü,¹,ñB

ŽQÆ03027

•řžš—ň'è"

—á03028

0BAD4H 16 □i'è□"

\$BAD4 16 □i'è□"

BAD4H Ž•ÊŽq (□"Žš,Å,Í,È,•¶Žš B ,ÅŽn,Ü,Á,Ä,ç,é,½,ß)

'g,Ýž,ÝfAfZf“fuf%o,ì—\-ñĈĚ03029

fIfyf%of“fh“à,ÅĈCŽŸ,ì—\-ñĈĚ,í'g,Ýž,ÝfAfZf“fuf%o,É'í,μ,Ä,·,Å,É^Ó-i,ª'è<` ,³,ê,Ä,ϕ,Ü,·ĈB

—\-ñĈĚ

AH

AL

AND

AX

BH

BL

BP

BX

BYTE

CH

CL

CS

CX

DH

DI

DL

DS

DWORD

DX

ES

HIGH

LOW

MOD

NOT

OFFSET

OR

PTR

QWORD

SEG

SHL

SHR

SI

SP

SS

ST

TBYTE

TYPE

WORD

XOR

—\-ñĈê,Íft□[fU□[‘è<`),lž̄•Ěžq,æ,è,à□í,É—D□æ,³,ê,Ü,·□B‘g,Ý□ž,ÝfAfZf“fuf%o,ì—\-
ñĈê,Æ“̄,ŕ-¼‘O,Íft□[fU□[‘è<`fVf“f{f<,ÉfAfNfZfX,·,é,É,Í□Cž̄•Ěžqf□[fo□[f%ofCfh%o%ožžžq
(&),đžg,ç,Ü,·□BžŸ,É—á,đž!,μ,Ü,·□B

var

ch: Char;

·
·
·

asm

MOV &ch, 1

end;

f□f: ‘g,Ý□ž,ÝfAfZf“fuf%o,ì—\-ñĈê,Æ“̄,ŕ-¼‘O,lž̄•Ěžq,đ‘è<`),·,é,Æ□C-¼‘O,^q□—□,μ□C, ,
ç,Ü,ç,ÅĈ©,Â,̄,É,,çfofo,^q□ŕ,·,éĈ‘^ö,É,É,è,Ü,·□Bž̄•Ěžq-¼,É,ì—\-ñĈê,đžg,í,É,ç
,æ,ɹ,É,μ,Ä,,³/₄,³,ç□B

'g,ÝŹ,ÝfAfZf"fuuf%,ìfvfCEftfBfbfNfX-½—ßfR[fh03030

'g,ÝŹ,ÝfAfZf"fuuf%,ÍŽŸ,ìfvfCEftfBfbfNfX-½—ßfR[fh,ðfTf[fg,μ,Ä,ç,Û,·B

-½—ßfR[fh

^Ó-i

| | |
|-------|--------------------------------------|
| LOCK | fofXf[fbfN |
| REP | •Źš—ñ'€[ì,ðCEJ,è•Ô,· |
| REPE | "™,μ,çŠÔC•Źš—ñ'€[ì,ðCEJ,è•Ô,· |
| REPZ | 0,ìŠÔC•Źš—ñ'€[ì,ðCEJ,è•Ô,· |
| REPNE | "™,μ,,È,çŠÔC•Źš—ñ'€[ì,ðCEJ,è•Ô,· |
| REPZ | 0,Ä,È,çŠÔC•Źš—ñ'€[ì,ðCEJ,è•Ô,· |
| SEGCS | CS (fR[fhfZfOf[f"fg) f[f%ofCfh |
| SEGDS | DS (ff[f^fZfOf[f"fg) f[f%ofCfh |
| SEGES | ES (fGfNfXfgf%ofZfOf[f"fg) f[f%ofCfh |
| SEGSS | SS (fXf^fbfNfZfOf[f"fg) f[f%ofCfh |

fAfZf"fuuf%-½—ß,É,í^Èä,ì-½—ßfR[fh,ð 3 ,Ä,Û,ÄfvfCEftfBfbfNfX,Æ,μ,Äžw'è,Ä,«,Û,·B

"-,Ź•Ź,ì†,Ä-½—ßfR[fh,ðžw'è,¹,,ÉfvfCEftfBfbfNfX-½—

ßfR[fh,ðžw'è,·,é,ÆCfvfCEftfBfbfNfX-½—ßfR[fh,ÍŽŸ,É'±,fAfZf"fuuf%•Ź,ì-½—ß,ì-½—ßfR[fh,É[ì—p,μ,Û,·B

80x86 fvf[fZfbfT,í,·,x,Ä,ì'g,ÝŹ,í,¹,ð³,μ,^—,·,é,í,~,Ä,í,È,ç,½,ßC•;[",ìfvfCEftfBfbfNfX-½—ßfR[fh,ìžw'è,Ä,í[Ź,³d—v,Ä,·B

'g,Ýž,ÝfAfZf“fuf%o,ì-½—ß,ì-½—ßfR[fh03031

ŽQÆ

'g,Ýž,ÝfAfZf“fuf%o,í 8086/8087 ,Æ 80386/80387 ,ì-½—ß,ì,·,x,Ä,ì-½—ßfR[fh,ðTf|
[fg,μ,Ä,ç,Û,·B

-½—ßfR[fh,É,Â,ç,Ä,ìÚ×,í Intel 80x86 ,“,æ,Ñ 80x87 ,ìŠftf@fÆf“fXf}fjf...
fAf<,ðŽQÆ,μ,Ä,,¾,¾,çB

ŽQÆ03032

Ž©“®fwfff“fvfTfCfY

'g,Ýž,ÝfAfZf"fufo%,ìž© " ®fWfff"fvÅ"K%»03033

"Á,ÉŽw'è,μ,È,ϕCEÀ,èC'g,Ýž,ÝfAfZf"fufo%,íÅ,àCEø—|"l,ÈfWfff"fv-½—
 ß,ìCE`Ž®,ðž© " ®"l,É'ì'ð,·,é,±,Æ,É,æ,Á,ÄCfWfff"fv-½—ß,ðÅ"K%»μ,Û,·B

f^[fQfbfg,³f%ofxf<,ìê± (Žè'±,«,âšÖ",Á,È,ϕê±)C,±,ìž© " ®fWfff"fvTfCfY,í JMP
 ,Æ,·,x,Ä,ìðCEfWfff"fv-½—ß,É"K—p,³,ê,Û,·B

| $-½—ßfR[fh$ | $f^[fQfbfgf%ofxf<,Û,Á,ì<—£$ | $'g,Ýž,ÝfAfZf"fufo%,^a$ $¶¶¬,·,éfwfff"fv-½—ß$ |
|--|-----------------------------|--|
| JMP | -128 ¶` 127 fojCfĝ^È"à | <u>short fwfff"fv</u> |
| NOT | -127 ¶` 128 fojCfĝ^ÈŠO | <u>near fwfff"fv</u> |
| ðCE | -128 ¶` 127 fojCfĝ | <u>short fwfff"fv</u> |
| fwfff"fv | -127 ¶` 128 fojCfĝ^ÈŠO | <u>short inverse fwfff"fv</u> |
| Žè'±,«,âšÖ",lfGf"fgfŠf fCf"fg,Ö,lfWfff"fv,íí,É near ,Á,·B | | |

'g,Ýž,ÝfAfZf"fufo,ì DB CDW CDD <^Ž--½—B03034

—á

'g,Ýž,ÝfAfZf"fufo,ì DB (fofCfg'è<`) CDW (f[fh'è<`) CDD (f_fuf<f[fh'è<`) ,ì 3 ,Á,ìfAfZf"fufo<^Ž--½—B,ðff|f[fg,μ,Á,φ,Û,·B

Še<^Ž--½—B,íC<^Ž--½—B,ìĀ,Éff"f}<æ∅,è,ÅŽw'è,³,ê,½fifyfof"fh,É'í %ž,·,éff[f^,ðff[μ,Û,·B

| <^Ž--½—B | fifyfof"fhĀ | 'l,ì"í'í | 'g,Ýž,ÝfAfZf"fufo, ^a ff[μ,·,éff[f^ |
|----------|---------------------|-------------------------------------|---|
| DB | 'è"Ž® ·ŕŽš—ñ | -128 [255 "C^Ó,ì', ³ | 1 fofCfg Še·ŕŽš,ì ASCII fR[fh,É'í %ž,·,éfofCfgfV[fPf"fx |
| DW | 'è"Ž® fAfhfĀfXŽ® | -32,768 [65,535 | 1 f[fh near f fCf"f^ (flftfZfbfgf[fh) |
| DD | 'è"Ž® fAfhfĀfXŽ® | -2,147,483,648 [4,294,967,295 | 1 f_fuf<f[fh far f fCf"f^ (Ā,è,ÉfZfOf"fgf[fh, ^a ±,- flftfZfbfgf[fh) |

DB, DW, DD ,ìŠe<^Ž--½—

ß,É,æ,Á,Äff[μ,³,ê,éff[f^,í,ÉfR[fhfZfOf"fg,ÉŠi"[,³,ê,Û,·B

-ç%Šú%»Û,½,í%Šú%»Û,Ý,ìff[f^,ðff[f^fZfOf"fg,Éff[μ,·,é,É,íC'É'í,ì Pascal ,ì var
ÉĀ,Û,½,í const ÉĀ,ðŽg,ç,Û,·B

'g,Ýž,ÝfAfZf"fufo·ŕ,Á'è<^%Ä"\,ÈfVf"ff{f<,ìŽí—B,íf%xf<,³/₄,-,Á,·B·Û",í,·,×,Ä Pascal [\
·ŕ,ðŽg,Á,ÄÉĀ,μ,È,,Á,Í,È,è,Û,¹,ñB

—á03035

DB, DW, DD ,iše<^Ž—½—β,ì—á,ǎŽŸ,ÉŽ!,μ,Û,·□B

| ffBfĈfNfgfŠ | flfyf%of“fh | Ĉ<%oĚ |
|-------------|---------------------|---------------------------|
| DB | OFFH | 1 fofCfg |
| DB | 0,99 | 2 fofCfg |
| DB | 'A' | Ord('A') |
| DB | 'Hello...', 0DH,0AH | •ŕŽš—ñ + CR/LF |
| DB | 12,"Object Pascal" | Pascal fXf^fCf<,ì•ŕŽš—ñ |
| DW | OFFFFH | 1 f□□[fh |
| DW | 0,9999 | 2 f□□[fh |
| DW | 'A' | DB 'A',0 ,Æ“˘,ŕ |
| DW | 'BA' | DB 'A','B' ,Æ“˘,ŕ |
| DW | MyVar | MyVar ,ìf ftfZfbfg |
| DW | MyProc | MyProc ,ìf ftfZfbfg |
| DD | OFFFFFFFFFH | 1 f_fuf<f□□[fh |
| DD | 0,999999999 | 2 f_fuf<f□□[fh |
| DD | 'A' | DB 'A',0,0,0 ,Æ“˘,ŕ |
| DD | 'DCBA' | DB 'A','B','C','D' ,Æ“˘,ŕ |
| DD | MyVar | MyVar ,Ö,ìf fCf“f^ |
| DD | MyProc | MyProc ,Ö,ìf fCf“f^ |

'g,Ýž,ÝfAfZf“fuf%o,ì•¶,ì\•¶103036

fAfZf“fuf%o•¶,ì\•¶,íŽÿ,ì,Æ,“,è,À,•B

[Label:] <Prefix> [Opcode [Operand <,Operand>]]

- Label ,íf%ofxf<Ž⁻•ÉŽq,ðŽ!,•
- Prefix ,ífAfZf“fuf%o,ífvfĈftfBfbfNfX-½—βfR□[fh,ðŽ!,•
- Opcode ,ífAfZf“fuf%o-½—β,ì-½—βfR□[fh,Ü,½,í<Ž—-½—β,ðŽ!,•
- Operand ,ífAfZf“fuf%oŽ®,ðŽ!,•

•i□”,ífAfZf“fuf%o•¶,ðfZf~fRf□f“,Å<æ□Ø,Á,Ä 1 □s,ÉŽw'è,À,«,Ü,•B2 ,Ä,ífAfZf“fuf%o•¶,ð•É□X,ì□s,ÉŽw'è,•,é□ê□#□CfZf~fRf□f“,í•s—v,À,•B

fRf□f“fg,í { ,Æ } ,Ü,½,í (* ,Æ *) ,ðŽg,κ Pascal fXf^fCf<,Å<L□q,μ,È,,Ä,í,È,è,Ü,¹,ñ□B

fRf□f“fg,ífAfZf“fuf%o•¶,ìŠÔ,É<L□q,À,«,Ü,•,ª□CfAfZf“fuf%o•¶,ì“à•”,É,í<L□q,À,«,Ü,¹,ñ□B

'g,Ýž,ÝfAfZf"fuf%,ì @CodeC@DataC@Result03037

'g,Ýž,ÝfAfZf"fuf%,Å,ÍC,Ù,Æ,ñ,Ç,·,×,Ä,Ì Pascal
fVf"f{f<,ÖfAfNfZfX,Å,«,é^ÈŠO,ÉCŽŸ,ì"ÁŽêfVf"f{f<,àŽg,!,Ü,·B

| fVf"f{f< | ^Ó-i |
|--------------------|---|
| @Code | Œ»Ý,ìfR[fhfZfOf"f |
| @Data | Œ»Ý,ìff[f^fZfOf"f |
| @Result | ŠÖ",ì•¶•""à,ìŠÖ"Œ<%È•ì" |
| f{f<: | @Code ,Æ @Data ,í•K, , <u>SEG %%%ŽŽŽq</u> ,Æ'g,Ý†,í, ¹ ,ÄŽg,í,È,,Ä,í,È,è,Ü, ¹ ,ñB |

'g,Ýž,ÝfAfZf“fuf%o,ìŽ•ÊŽqfi[f%ofCfh%o%oŽŽŽq (&)03038

fAf“fh<L+t,ì¼Ěã,ìŽ•ÊŽq,íC'g,Ýž,ÝfAfZf“fuf%o,ì\u-ñĚê,Æ“ ,ŕ'Ô,è,Å, ,Á,Ä,àCft[fU['è
<`fVf“f{f<,Æ,μ,Ä^μ,í,ê,Ü,·B

&Ž•ÊŽq

'g,Ýž,ÝfAfZf“fuf%o,ì”•až® (...)**03039**

fjfbfR,Å^í,Ü,ê,½ž®,í”•až®,Å,·B

(ž®)

•”•až®,í 1 ,Å,ìž®—v'f,Æ,μ,Ä^μ,κ'O,Éš®'S,É•]‰ž,³,ê,Ü,·B

•”•až®,ì'O,É,à,κ 1 ,Å•Ê,ìž®,đ'u,,±,Æ,ª,Å,«,Ü,·B,±,ìê±CCE<%Ê,í 2
,Å,ìž®,ì'l,ì±CEv,É,È,èCCE^,íÅ‰,ìž®,Æ“~,¶,É,È,è,Ü,·B

'g,Ýž,ÝfAfZf“fuf%,ìf,f,šŽQÆ%‰‰ŽŽŽq [...]03040

‘ǎfffbfR [] ,Ā^í,Ü,ê,½Ž®,íff,fš^É^u,ðŽQÆ,μ,Ü,·B
[Ž®]

fff,fšŽQÆŽ®,í 1 ,Ā,ìŽ®—v^f,Æ,μ,Ā^μ,π^O,ÉŠ®^S,É•]‰‰,³,ê,Ü,·B

CPU fÆfWfXf^,ìfCf“fffbfNfXŽw^è,ðŽ|,·,½,ßCfvf‰‰fX (+) ‰‰
‰‰ŽŽŽq,ðŽg,Á,Āff,fšŽQÆŽ®,Æ BX, BP, SI, DI ,ìšefÆfWfXf^,ðÆ<#,Ā,«,Ü,·B

fff,fšŽQÆŽ®,ì^O,É,à,π 1 ,Ā•É,ìŽ®,ð^u,,±,Æ,ª,Ā,«,Ü,·B,±,ìê#CÆ<‰‰É,í 2
,Ā,ìŽ®,ì^I,ì#Æv,É,È,èCÆ^,íĀ‰‰,ìŽ®,Æ“^,¶,É,È,è,Ü,·B

Æ<‰‰É

í,Éff,fšŽQÆ,É,È,è,Ü,·B

'g,Ýž,ÝfAfZf“fuf%,ì\‘ç‘ìf“fo[%%žžq (xxx . yyy)03041

2 "Ô-Ú,ìž®,íĀ%,ìž®,Āž!,³,ê,é\‘ç‘ì,ìf“fo[,Ā,·B
ž®1.ž®2

CE<%oĒ

2 ,Ā,ìž®,ì‡Ev,É,È,è,Û,·B

CE<%oĒ,ìĒ^

2 "Ô-Ú,ìž® (ž®2) ,ìĒ^,Ā,·B

Ā%,ìž®,Āž!,³,ê,éXfR[fv,É'®,.fv“f{f<,Éî,μC2 "Ô-Ú,ìž®,ĀfAfNfZfX,Ā,<,Û,·B

'g,Ýž,ÝfAfZf“fuf%,ì HIGH %%%žžžq03042

HIGH %%%žžžq,É±,ffhftfCfY,ìž®,©,çă^Ê 8 frfbfg,đ•Ô,μ,Û,·B

HIGH ž®

ž®,íâ'î'ı,Å,È,,Ä,í,È,è,Û,ı,ñB

'g,Ýž,ÝfAfZf“fuf%,ì LOW %%%ŽŽŽq03043

LOW %%%ŽŽŽq,É±,ffhftfCfY,ìŽ®,©,ç%º^Ê 8 frfbfg,đ•Ô,μ,Û,·B

LOW Ž®

Ž®,íâ'î'í,Å,È,,Ä,í,È,è,Û,¹,ñB

'g,Ýž,ÝfAfZf“fuf%o,ì'P€fvf%ofX (+...)03044

'P€fvf%ofX%%ŽŽžq,É'±,Ž®,đ•ïX,È,μ,É,»,ì,Û,Û•Ô,μ,Û,·B
+Ž®

Ž®,íâ'î'í'í,Å,È,,Ä,í,È,è,Û,¹,ñB

'g,Ýž,ÝfAfZf“fuf%o,ì'P€f}fCfifX (-...)03045

'P€f}fCfifX%%ŽŽq,É±,Ž®,ì•%o,ì'l,ð•Ô,μ,Û,·B

-Ž®

Ž®,íâ'î'!l,Å,È,,Ä,í,È,è,Û,¹,ñB

'g,Ýž,ÝfAfZf“fuf%o,ìfZfOf“fgf“fo“f%ofCfh%o%ŽZZq (: ...)03046

,±,ì%o%ŽZZq,íRf“,ì'O,ìfZfOf“fgfCfWfXf^{-1/4} (CS, DS, SS, ES ,ì,ç,.,ê,©)
,ÅŽw'è,³,ê,½fZfOf“fg,ÉfRf“,ìĀă,ìŽ®,^a®,.,é,æ,αŽw'è,μ,Û,·B

xx: Ž®

xx ,í CS, DS, SS, ES ,ì,ç,.,ê,©,Å,·B

CE<%oĒ

fRf“,ìĀă,ìŽ®,ì'I,É,æ,éf“f,šŽQ“Æ,Å,·B

fZfOf“fgf“fo“f%ofCfh,ð^{-1/2}—βfifyf%of“fh,ÅŽg,αê“C^{-1/2}—β,ìæ“^a,É,íSY“—
,.,éfZfOf“fgf“fo“f%ofCfhfvfCftfBfbfNfX^{-1/2}—β,^a•t,«,Û,·B,±
,ê,É,æ,èŽw'è,μ,½fZfOf“fg,^aŠmŽÅ,É'I'ð,³,ê,Û,·B

'g,Ýž,ÝfAfZf“fuf%,ì OFFSET %%%žžžq03047

OFFSET %%%žžžq,É'±,ž®,ìfjftfZfbfg•” (%º^Êf[]fh) ,đ•Ô,μ,Û,·B

OFFSET ž®

CE<%%Ê

'l,Â,·B

'g,Ýž,ÝfAfZf“fuf%,ì SEG %%%ŽŽŽq03048

SEG %%%ŽŽŽq,É'±,Ž®,ìfZfOf“fg•” (ă^Êf[h) ,đ•Ô,μ,Û,·B

SEG Ž®

CE<%É

'l,Â,·B

'g,Ýž,ÝfAfZf“fuf%,ì TYPE %%%žžžq03049

TYPE %%%žžžq,É±,ž®,ìĚ^ (fofCfgr”,Ăž!,μ,½fTfCfY) ,đ•Ô,μ,Û,·B

TYPE ž®

'!ìĚ^,í 0 ,Ă,·B

'g,Ýž,ÝfAfZf“fuf%,ìĈ^fLfffXfg%%%žžžq (... PTR ...)03050

2 "Ô-Ú,ìž®,đÅ%,ìž®,ìĈ^,ÉfLfffXfg,μ,Û,·B

ž®1 PTR ž®2

Ĉ<%Ě

2 "Ô-Ú,ìž®,ì',ĚÅ%,ìž®,ìĈ^,đž®,Āf,fšžQĚ,Ā,·B

'g,Ýž,ÝfAfZf“fuf%,ìæŽŽ%ŽŽŽq (... * ...)03051

Å%,ìŽ®,Æ 2 "Ô-Ú,ìŽ®,ðæŽŽ,μ,Û,·B

Ž®1 * Ž®2

,Ç,ı,ç,ìŽ®,àâ'í'ı,Å,È,,Ä,Í,È,è,Û,¹,ñB

CE<%É

â'í'ı,Å,·B

'g,Ýž,ÝfAfZf“fuf%o,ì®”œŽZ (... / ...)03052

Å%o,ìŽ®,đ 2 "Ô-Ú,ìŽ®,ÅœŽZ,μCCE<%oÊ,ì®”••ª,đ•Ô,μ,Û,·B
Ž®1 / Ž®2

,Ç,¿,ç,ìŽ®,àâ'í'!l,Å,È,,Ä,Í,È,è,Û,¹,ñB

CE<%oÊ

â'í'!l,Å,·B

'g,Ýž,ÝfAfZf“fuf%,ìè—]%%ŽŽq (... MOD ...)03053

Å%,ìŽ®,đ 2 "Ô-Ú,ìŽ®,ÅœŽZ,μCCE<%Ê,ì—],è,ì"•^a,đ•Ô,μ,Û,·B

Ž®1 MOD Ž®2

,Ç,¿,ç,ìŽ®,àâ'í'!l,Å,È,,Ä,Í,È,è,Û,¹,ñB

CE<%Ê

â'í'!l,Å,·B

'g,Ýž,ÝfAfZf“fuf%o,ìfVftfg%o%žZZq (... SHL ...)03054

Å%o,ž®,đ¶,É nnn frfbfg,¾, jVftfg,μ,Ü,·Bnnn ,í 2 "Ô-Ú,ž®,Å,·B

Ž®1 SHL Ž®2

,Ç,¿,ç,ž®,àâ'í'!l,Å,È,,Ä,Í,È,è,Ü,¹,ñB

CE<%oÉ

â'í'!l,Å,·B

'g,Ýž,ÝfAfZf“fuf%,ì%EfVftfg%%ŽZZq (... SHR ...)03055

Å%,ìŽ®,ð%E,É nnn frfbfg,^{3/4},fVftfg,μ,Û,·Bnnn ,í 2 "Ô-Ú,ìŽ®,Å,·B

Ž®1 SHR Ž®2

,Ç,¿,ç,ìŽ®,àâ'í'!l,Å,È,,Ä,Í,È,è,Û,¹,ñB

CE<%É

â'í'!l,Å,·B

'g,Ýž,ÝfAfZf“fuf%,ì%ÁŽZ (... + ...)03056

Å%,ž®,đ 2 "Ô-Ú,ž®,É%ÁŽZ,μ,Û,·B

Ž®1 + Ž®2

Ž®,í'í,Û,½,íff,fšžQÆ,Å,·B^ê•ú,ž®,¾,¯,đ"z'u%Á"\,È'í,É,Å,«,Û,·B

CE<%É

^ê•ú,ž®,"z'u%Á"\,È'í,ìê±C"z'u%Á"

,È'í,É,È,è,Û,·B,ç,¿,ç,©,ž®,ff,fšžQÆ,ìê±,íff,fšžQÆ,É,È,è,Û,·B

'g,Ýž,ÝfAfZf“fuf%,ìĚ,ŽŽ (... - ...)03057

□Å□%,ìŽ®,©,ç 2 "Ô-Ú,ìŽ®,đĚ,ŽŽ,μ,Û,·□B

Ž®1 - Ž®2

□Å□%,ìŽ®,í,ç,ìfNf%ofX,Å,à,©,Û,ç,Û,¹,ñ,^a□C2 "Ô-Ú,ìŽ®,í□â'î'í,Å,È,,Ä,í,È,è,Û,¹,ñ□B

Ě<%oĚ

□Å□%,ìŽ®,Æ“-,ñfNf%ofX,É,È,è,Û,·□B

'g,Ýž,ÝfAfZf“fuf%o,ìfrfbfg”Û'è (NOT)03058

NOT %o%oŽŽŽq,É'±,Ž@,ìfrfbfg”Û'è (1 ,ì•â”) ,đ•Ô,μ,Û,·B

NOT Ž@

Ž@,Íâ'î'!l,Â,È,,Ä,í,È,è,Û,¹,ñB

CE<%oÉ

â'î'!l,Â,·B

'g,Ýž,ÝfAfZf“fuf%o,ìfrfbfg AND03059

2 ,Â,ìž®,ìfrfbfg,²,Æ,ì AND ,ð•Ô,μ,Û,·B

ž®1 AND ž®2

,Ç,¿,ç,ìž®,àâ'í'!l,Â,È,,Ä,Í,È,è,Û,¹,ñB

CE<%oÊ

â'í'!l,Â,·B

'g,Ýž,ÝfAfZf“fuf%o,ìfrfbfg **OR03060**

2 ,Â,ìŽ®,ìfrfbfg,²,Æ,ì OR ,ð•Ô,μ,Û,·B

Ž®1 OR Ž®2

,Ç,¿,ç,ìŽ®,àâ'í'!l,Â,È,,Ä,Í,È,è,Û,¹,ñB

CE<%oÉ

â'í'!l,Â,·B

'g,Ýž,ÝfAfZf“fuf%o,ìfrfbfg”r¼“l OR (XOR)03061

2 ,Â,ìž®,ìfrfbfg,²,Æ,ì XOR ,ð•Ô,μ,Û,·B

ž®1 XOR ž®2

,Ç,¿,ç,ìž®,àâí!l,Â,È,,Ä,Í,È,è,Û,¹,ñB

CE<%oÊ

âí!l,Â,·B

'g,Ýž,ÝfAfZf"fufoŠÖ",ì-ß,èêŠ03062

—á

'g,Ýž,ÝfAfZf"fufo,ì<^Ž—-½—ß (asm) ,ðŽg,ᄁŠÖ",íCCE<%oÊ,ðŽŸ,ì,æ,ᄁ,É•Ô,³,È,-,Ä,Í,É,è,Û,¹,ñB

| CE<%oÊ | CE<%oÊ,ð•Ô,êŠ | CE^ |
|--------|--|--|
| ~ | AL (8 frfbfg'l) AX (16 frfbfg'l) EAX (32 frfbfg'l) | @~"CcharC~_—CC—ñ<" ,išeCE^ |
| ŽÀ" | fRfvfZfbfT,ífCefWfXf^fXf^fbfN,ì ST (0) | single, double, extended, currencyCcomp ,išeCE^ |

f|fCf"f^ EAX

•Ÿš—ñ @Result ,žw,êžž"l,èêŠ

'Êí,ìŠÖ",Å ASM fR[fhfufbfN,ìŠÖ",ìCE<%oÊ,ð•ìX,·,é,É,íC'l,ð @Result ,É'u,©,È,-,Ä,Í,É,è,Û,¹,ñBPascal ŠÖ",ífGfsf[fOfR[fh,í @Result ,©,çã,ÅŽ,μ,½fCefWfXf^,Éí,ÉfRfs[.μ,Û,·B

—á03063

```
function foo: Pointer
```

```
begin
```

```
  asm
```

```
    xor  ax,ax
```

```
    mov  @Result, Word[0], ax
```

```
    mov  @Result, Word[2], ax
```

```
  end;
```

```
end;
```

short fWfff“fv03064

1 fofCfg, ì•î^Ê, ðÆã, É'±, 1 fofCfg-½—ß, ìfR□[fh, Å, ·□B

near fWfff“fv03065

2 fofCfg, ì•î^Ê, ãÆã, É'±, 1 fofCfg-½—ß, ìfR□[fh, Å, ·□B

ŠO•"fAfZf"fuf%03067

ŠO•"fAfZf"fuf%,đŽg,Á,ÄfAfZf"fuf%•¶,đfRf"fpfCf<,·,é•û-@,à, ,è,Û,·BŠO•"fAfZf"fuf%
,ÅfRf"fpfCf<,μ,½fAfZf"fuf%•¶,ÍĚă,Å Object Pascal ,lfR□[fh,ÉfCf"f|□[fg,Å,«,Û,·□B

ŠO•"fAfZf"fuf%,É,Â,ç,Ä,ìÚ□×,ÍŽŸ,ÌšefgfsfbfN,đŽQ□Æ,μ,Ä,,¾,¾,ç□B

.MODEL Žw—β,Æ PROC Žw—β

ŠO•"fAfZf"fuf%□[fh,lfŠf"fN

flfufWfFfNfgftf@fCf<,ì•İŠ:

ŠO•"fAfZf"fufŠĚ¾Ěê,lf□\fbfh

.MODEL Žw—ß,Æ PROC Žw—ß03068

ŽQ□Æ —á

Turbo Assembler (TASM) ,đŽg,æ,ÆfAfZf“fufŠCE¾4CEê,Åf<□[f`f“ ,đfvf□fOf%of~f“fO,µ Delphi fAfvfŠfP□[fVf†f“,É'g,Ý□ž,p,ì,ª—e^Ö,É,É,è,Û,·□BTurbo Assembler ,Å,Í Pascal fvf□fOf%of}—p,ÉŠÈ—ª%o» ,µ,½fZfOf□f“fe□[fVf†f“,ÆCE¾4CEê,đfTf|□[fg,µ,Ä,ç,Û,·□B

Žw—ß “®□ì

.MODEL ŠÈ—ªfZfOf□f“fe□[fVf†f“,đŽg,æfAfZf“fuf%of,fWf...
□[f<,lf□f,fŠf,fff<,đŽw'è,·,é

PROC Pascal fvf□fOf%of€ ,Å'è<` ,³,ê,Ä,ç,é,ì,Æ“` ,¶□#□~ ,Åfpf
%of□□[f^ ,đ'è<` ,Å,« ,é,æ,æ,É,·,é

.MODEL Žw—ß,đŽg,æ,ê#□CPASCAL CE¾4CEê,đŽw'è,·,é,±,Æ,É,æ,Å,Ä Turbo Assembler ,Í^ø□“ ,đfXf^fbfN□ã,É¶¶,©,ç%oE,Ö,ÆfvfbfVf... ,µ,Û,·□B

PROC Žw—ß,đŽg,Á,Ä•¶Žš—ň,đ•Ô,·ŠÖ□“ ,đ'è<` ,·,é,ê#□CRETURNS flfvfVf†f“ ,đŽg,Á,Ä,- ,¾,¾,ç□BRETURNS flfvfVf†f“ ,Í RET •¶,É'ç%oÁ ,³,ê,½fpf%of□□[f^fofCf□“ ,É%oe<¿,đ— ^,ì,·,É□CfXf^fbfN□ã,ì^èŽž•¶Žš—ňfjCf“f^ ,ÖfAfNfZfX,Å,« ,é,æ,æ,É,µ,Û,·□B

ŽQÆ03069

ŠO•"fAfZf"fuf%ofR[fh,ifŠf"fN

—á03070

.MODEL Žw—β,Æ PROC Žw—β,ìŽg—p—á,ðŽŸ,ÉŽ!,μ,Û,·□B

.MODEL LARGE, PASCAL

.CODE

MyProc PROC FAR I : BYTE, J : BYTE RETURNS Result : DWORD

PUBLIC MyProc

LES DI, Result ; ^êŽž•¶Žš—ñ,ìfAfhfœfX,ðŽæ“¾,μ,Û,·

MOV AL, I ; ‘æ 1 fpf%of□□[f^ I ,ðŽæ“¾,μ,Û,·

MOV BL, J ; ‘æ 2 fpf%of□□[f^ J ,ðŽæ“¾,μ,Û,·

.

.

.

RET

Pascal ŠÖ□“,ì’è<`,ìŽŸ,ì,æ,α,É,È,è,Û,·□B

function MyProc(I, J: Char): **string**; **external**;

ŠO•"fAfZf"fuf%ofR[fh,lfŠf"fN03071

ŽQAE

fAfZf"fufŠCE¾CEè,Å<Lq,μ,½Žè'±,«,âŠÖ",đfŠf"fN,·,é,É,ÍC\$ fRf"fpcf%Žw—β,đŽg,ç,Û,·B

fAfZf"fufŠCE¾CEè,ìŽè'±,«,âŠÖ",đŽg,α,É,ÍCDelphi,lfvfOf%of€,Û,½,íftjfbfg,Å,±,ê,ç,đŠO•",ìŽè'±,«,Û,½,íŠÖ",Æ,μ,ÅéCE¾,μ,È,,Ä,Í,É,è,Û,¹,ñB

'í%ž,·,éfAfZf"fufŠCE¾CEèf\[\fXftf@fCf<,Å,ÍŽŸ,ì,æ,α,É,μ,Û,·B

▪ ·,x,Ä,ìŽè'±,«,ÆŠÖ",đ CODE,Û,½,Í CSEG,Æ,ç,α-¼'O,lfZfOf"f"fg,©C-¼'O,^a _TEXT,Å,í,í,éfZfOf"f"fg,É'u,©,È,,Ä,Í,È,ç,È,çBŠO•",ìŽè'±,«,ÆŠÖ",ì-¼'O,đ PUBLIC Žw—β,ÅŽw'è,μ,È,,Ä,Í,È,ç,È,ç

▪ %Šú%»i,Ý,ì•i",Í CONST,Æ,ç,α-¼'O,lfZfOf"f"fg,©C-¼'O,^a _DATA,Å,í,í,éfZfOf"f"fg,ÅéCE¾,Å,«,é

▪ -ç%Šú%»i•i",Í DATA,Û,½,Í DSEG,Æ,ç,α-¼'O,lfZfOf"f"fg,©C-¼'O,^a _BSS,Å,í,í,éfZfOf"f"fg,ÅéCE¾,Å,«,é

Object Pascal,lfOf\[\fof<•i",Æ"- ,lfZfOf"f"fg,É'¶Y,·,é-ç%Šú%»i•i",Í DS, fZfOf"f"fgfWfXf^,đŽg,Å,ÄfAfNfZfX,Å,«,Û,·B,Û,©,ìèŠ,ÅéCE¾,³,è,½-ç%Šú%»i•i",ÍfAfZf"fufŠCE¾CEèf\[\fXftf@fCf<,lfvf%ofCfx\fg•i",É,È,è,Û,·B

EXTRN Žw—β,đŽg,α,Æ Delphi,lfvfOf%of€,Û,½,íftjfbfg,ÅéCE¾,³,è,½Žè'±,«CŠÖ"C•i",âCŽg—p't,íftjfbfg,lfCf"f^[\ftfF\[\fXfZfNfVf†",ÅéCE¾,³,è,½,·,x,Ä,ìŽè'±,«CŠÖ"C•i",đŽQAE,Å,«,Û,·B

ŽQÆ03072

fAfZf“fufŠCE³/₄CEê.lf[]f\bfh

flfufWfFfNfgftf@fCf<.i•iš.

flfufWfFfNfgftf@fCf<,i•iŠ•03073

žQ□Æ

\$L Žw—ß,ÅflfufWfFfNfgftf@fCf<,ðŽw'è,μ,½□ê□#□CObject Pascal ,í,» ,lftf@fCf<,ð Intel ,ì□Ä"z'u
%oÄ"flfufWfFfNfgf,fWf...□[f<CE`Ž® (.OBJ) ,©,ç"ÆŽ©,ì"à•""l,É□Ä"z'u%oÄ\
CE`Ž®,É•iŠ•,μ,Ü,·□B

,±,ì•iŠ•,íŽÿ,ì<K¥,ªŽç,ç,ê,½□ê□#,É,¾,~%oÄ"l,Å,·□B

- ,·, x, Ä, ÌŽè' ±, «, ÆŠÖ□", ð CODE ,Ü, ½, í CSEG ,Æ, ç, x-¼'O, ìfZfOf□f"fg, ©□C-¼'O,ª _TEXT ,Å□l, í, éfZfOf□f"fg, É'u, ©, È,, Ä, í, È, ç, È, ç
 - □%oŠú%o»□í, Ý, ì•i□", í CONST ,Æ, ç, x-¼'O, ìfZfOf□f"fg, ©□C-¼'O,ª _DATA ,Å□l, í, éfZfOf□f"fg, É'u, ©, È,, Ä, í, È, ç, È, ç
 - -ç□%oŠú%o» ,ìfvf%ofCfx□[fg•i□", í DATA ,Ü, ½, í DSEG ,Æ, ç, x-¼'O, ìfZfOf□f"fg, ©□C-¼'O,ª _BSS ,Å□l, í, éfZfOf□f"fg, É'u, ©, È,, Ä, í, È, ç, È, ç
 - ,» ,ì¼, ì, ·, x, Ä, ìfZfOf□f"fg, Æ GROUP Žw—ß, í-³Ž<,³, ê, é
 - fR□[fhfZfOf□f"fg, í□í, ÉfofCfg<<ŠE, É"z'u,³, ê, é
 - ff□[f^fZfOf□f"fg, í□í, Éf□□[fh<<ŠE, É"z'u,³, ê, é
 - Object Pascal ,ìfR□[fhfZfOf□f"fg (CODE , CSEG□C, Ü, ½, í xxxx_TEXT) ,Æ□%oŠú %o»□í, Ýff□[f^fZfOf□f"fg (CONST ,Ü, ½, í xxxx_DATA) ^ÈŠO, ìfZfOf□f"fg, ìff□[f^, ð-³Ž<,·, é□B, μ, ½,ª, Ä, Å□C-ç□%oŠú%o» ,ìff□[f^fZfOf□f"fg (DATA , DSEG□C, Ü, ½, í xxxx_BSS) ,Å•i□", ð□éCE¾,·, é□ê□#□C•K, <^ -â•, (?) ,ðŽg, Ä, Ä'l, ðŽw'è, μ, È,, Ä, í, È, ç, È, ç
 - EXTRN fVf"ff{f<, Ö, ìfofCfGfTfCfY, ÌŽQ□Æ, í<-%oÄ,³, ê, È, ç
- fZfOf□f"fg'è< ,Å, í PUBLIC ,ÆfNf%ofX-¼, ðŽw'è, Å, «, Ü,·,ª□CŽw'è, μ, Ä, à-³Ž<,³, ê, Ü,·□B

ŽQÆ03074

'g.Ýž,ÝfAfZf“fuf%oo.É.Â,ç,Ä

ŠO • "fAfZf" fufŠCE¾CEê, ìf\fbfh03075

ŽQÆ

fAfZf" fufŠCE¾CEê, Å<Lq, µ, ½f\fbfh, ìŽÀCE», íCfRf" fpcf%Žw—ß \$L, Æ—\—ñCEê external
, đŽg, Å, Å Delphi fvffOf%œ, ÉfŠf" fN, Å, «, Ü, ·B

f\ufWfFfNfgCE^, Å, ìŠO • "f\fbfh, ìéCE¾, íC'Éí, ìf\fbfh, ìéCE¾, Æ^á, ç, ¢, è, Ü, ¹, ñB

f\fbfh, ìŽÀCE» • ", Å, í—\—ñCEê **external**, ¢CEă, ë, É'±, f\fbfhfwfbf_[][, ¾, ¯, ¢Ž, ³, è, Ü, ·B

fAfZf" fufŠCE¾CEê\[]fXfefLfxfg, Å, íCCEÀ'èŽ^-ÉŽq, đ<Lq, ·, é, ½, ß, É, ísfŠf\fh (.) , ì, ©, í, è, É<L+
(@) , đŽg, ç, Ü, · (fAfZf" fufŠCE¾CEê, Å, ísfŠf\fh, í•É, ì^Ó-ì, đŽq, Å, ½, ßŽ^-ÉŽq, É, íŽg, ì, Ü, ¹, ñ)B

@ \ • ¶, í PUBLIC Ž^-ÉŽq, Æ EXTRN Ž^-ÉŽq, ì, Ç, ç, đéCE¾, ·, éê[]‡, É, àŽg, ì, Ü, ·B

f_fCfif~fbfNfŠf“fNf%ofCfuf%ofŠ (DLL)03076

ŽQ□Æ

f_fCfif~fbfNfŠf“fNf%ofCfuf%ofŠ (DLL) ,í¼,ì DLL

,Ü,½,ÍAfvfŠfP□[fVf†f“,É,æ,Á,Žg,í,è,éfR□[fh,âfŠf□[fX,â“ü,Á,½ŽÀ□s%oÁ“\f,fWf...□[f< (Šg’£Žq .DLL) ,Á,·□BWindows ŠÁ<«„Á,í□CDLL ,É,æ,è•i□“,ÍAfvfŠfP□[fVf†f“,âfR□[fh,âfŠf□[fX,ð<α— L,Á,«„Ü,·□B

DLL ,É□Á,à,æ,Ž—,½ Delphi ,ìŠT”O,íftfjfbfg,Á,·□B,μ,©,μ□Cftfjfbfg“à,ìf<□[f`f“,ÍfŠf“fNŽž,ÉŽÀ□s %oÁ“\ftf@fCf<,ÆfŠf“fN,³,è,Ü,· (fXf^fefBfbfNfŠf“fN)□B,±,è,É’í,μ DLL

,ìf<□[f`f“,íCEÁ•É,ìftf@fCf<,É, ,è□CŽÀ□sŽž,É—~—p%oÁ“\,É,È,è,Ü,· (f_fCfif~fbfNfŠf“fN)□B

DLL ,É,æ,Á,Ä•i□“,ÍAfvfŠfP□[fVf†f“,â<α’É,ÉŽ□,Á 1 ,Á,ìf<□[f`f“,ð<α—L,Á,«„Ü,·□B.DLL

ftf@fCf<,ÍŽÀ□sŽž,ÉAfvfŠfP□[fVf†f“,Æ“~ ,ífffBfCEfNfgfŠ,É,È,,Á,í,È,è,Ü,¹,ñ□B

fvf□fOf%of€ ,âf□f,š,Éf□□[fh,³,è,é,Æ□CfAfvfŠfP□[fVf†f“,Ífvf□fOf%of€“à,ì **procedure**

CEÁ,Ñ□o,μ,Æ **function** CEÁ,Ñ□o,μ,ðfvf□fOf%of€ ,âŽg,α DLL “à,ìGf“fgfŠf|

fCf“fg,É“@“l,ÉfŠf“fN,μ,Ü,·□B

fif.: DLL ,âfGfNfXf□[fg,Á,«„é,ì,íŽè±,«„ÆŠÖ□“,¾, -,Á,·□B

Delphi fAfvfŠfP□[fVf†f“,í Object Pascal ,Á<L□q,³,è,Ä,ç,È,ç DLL

,ðŽg,ì,Ü,·□B¹¼,ìCE¾CEè,Á<L□q,³,è,½fvf□fOf%of€,à Object Pascal ,Á<L□q,³,è,½ DLL

,ðŽg,ì,Ü,·□B

DLL ,ìŽg,ç•û,É,Á,ç,Ä,ì□Ú□×,ÍŽŸ,ìfgfsfbfN,ðŽQ□Æ,μ,Ä,,¾,³,ç□B

DLL ,ÉŠi“[μ,Ä, ,éf<□[f`f“,ÍAfNfZfX

fCf“f^□[ftfF□[fXf<□[f`f“,ì□éCE¾

DLL ,Æ,μ,Ä,ìftfH□[f€,ì□Ä—~—p

DLL ,ì□ì□¬

ŽQÆ03077

ŠÖ"CEÄ,Ño,μ

fC"f[fgftjfbfg

DLL ,ÉŠi"l,μ,Ä, ,éf<[]f`f" ,lfAfNfZfX03078

ŽQ[]Æ —á

DLL ,ÉŠi"l, ,é, ½f<[]f`f" ,ÉfAfNfZfX, μ, ½, èĀ, Ñ[]o, ,É, í 2 ,Á, ì•û-@, ,è, Û, ·[]B

- fvf[]Of%œ"à, Ä external []éĀ¾, ðŽg, π (Ä"lfCf"f[]fg, Û, ½, Í^Ä-Û, lf[]fh) external []éĀ¾, ðŽg, Á, Ä"Ä"l DLL fCf"f[]fg, ðŽÀ[]s, ,é, Æ[]CDLL ,lfvf[]Of%œ , ì<N" @'O, Éf[]fh, ,é, é[]BDLL ,ì-¼'O, ÍŽÀ[]sŽž, É•í[]X, Ä, «, È, ç[]BŽÀ[]sŽž, ÉŽg—p%œÄ" \ ,Ä, È, ç DLL ,ðŽw'è, ,éfvf[]Of%œ, ÍŽÀ[]s, Ä, «, È, ç
- GetProcAddress ,Æ LoadLibrary ,ðŽg, Á, Äfvf[]Of%œ"à, Ìžè'±, «f[]fCf"f^ ,ð%œŠú%œ», ,é (" @"lfCf"f[]fg, Û, ½, Í-¾Ž"lf[]fh)

GetProcAddress ,Æ LoadLibrary ,ðŽg, Á, Ä DLL ,ðfCf"f[]fg, ,é, Æ[]Cfvf[]Of%œ, í, Ç, Ì DLL ftf[]fCf< ,ðf[]fh, ,é, ©, ð[]\$Ā, Ä, «, Û, · (GetProcAddress ,Æ LoadLibrary ,ì-¼•û, ðŽg, í, È, - ,Ä, Í, È, è, Û, ,ñ)[]B, ½, Æ, ,Í Windows ,lf[]fCfXfhf%œCfo, í, ·, x, Ä" , ,lfCf"f^ []ftfF[]fX, ðŽ[] ,Ä DLL ,Ä, ·, æ[]C"à•", Ä, lf[]fhfEFAĀ—L, ì<@"\ ,ðŽÀ[]s, μ, Û, ·Bfvf[]Of%œ, lf[]fhfEFA, É, Ä, ç, Ä %œ½, à'm, ç, , ,Éff[]fCfXfhf%œCfo, Ì DLL ,ðŽg, ,ì, Û, ·B" @"lfCf"f[]fg, Ä, Í LoadLibrary ,æ DLL ,ðĀ© ,Ä, ,ç, è, È, ç[]è[]#, àfvf[]Of%œ, ÍŽÀ[]s, ð'±, ,é, ±, Æ, ,Ä, «, Û, ·[]B

DLL ,í•ï" ,ðŽ[] ,Ä, Û, ,æ[]C, » ,é, ð'¼, lf, fWf...[]f< ,É, lfCf"f[]fg, Ä, «, Û, ,ñ[]BDLL

•ï" ,Ö, lfAfNfZfX, Ížè'±, «fCf"f^ []ftfF[]fX, ð'É, ¶, Ä, μ, È, Ä, Í, È, è, Û, ,ñ[]B

DLL ,ðŽg, fvf[]Of%œ, ðfRf"fpfCf< ,é, Æ, «, ÉfRf"fpfCf%œ, í DLL ,ðŽQ[]Æ, μ, È, ç, Ì, Ä[]CDLL ,í, È, - ,Ä, à, ©, Û, ç, Û, ,ñ[]B

"Æž©, Ì DLL ,ð[]- ,é, é[]è[]#, É, í[]C•É, ÉfRf"fpfCf< ,μ, È, ,Ä, Í, È, è, Û, ,ñ[]B

f<[]f`f" ,lfCf"f[]fg

fCf"f[]fg, ,é, éžè'±, «, àšÖ" ,Ä, í[]éĀ¾•", ÆžÀ[]s•", æ external Žw—ß, É'u, «Š' ,í, è, Û, ·[]B

Object Pascal ,É, Ížè'±, «, àšÖ" ,ðfCf"f[]fg, ,é, ½, ß, Ì•û-@, ,æ 3 ,Ä, ,è, Û, ·[]B

- žè'±, «-¼/šÖ"-¼, É, æ, éfCf"f[]fg
- É-¼, É, æ, éfCf"f[]fg
- ã" ,É, æ, éfCf"f[]fg

žè'±, «-¼/šÖ"-¼, É, æ, éfCf"f[]fg

index []ß, Û, ½, Í name []ß, ðŽw'è, ,É DLL ,©, çf<[]f`f" ,ðfCf"f[]fg, ,é, é[]è[]#[]Cžè'± ,« ,Û, ½, ÍšÖ" ,Í-¼'O, É, æ, Ä, Ä-¾Ž"l, ÉfCf"f[]fg, ,é, Û, ·[]B

žg, í, è, é-¼'O, í[]Cžè'±, «, Û, ½, ÍšÖ" ,ìž•Éžq, ÆfXfyf< ,à'ã•¶žš-•¶žš, à" ^è, Ì, à, Ì, Ä, ·[]B

name []ß, ðŽw'è, μ, ½, é[]è[]#[]Cžè'±, «, Û, ½, ÍšÖ" ,í, » ,ìž•Éžq, Æ, í^Û, È, é-¼'O, ÄfCf"f[]fg, ,é, Û, ·[]B

f[]f: external f[]f[]fh, ÌĀ, Ì DLL -¼, Æ name []ß, Ì't, Äžw'è, ,é[]V, μ, ç-¼'O, í•¶žš—ñšfj%œ< ,Ä, È, Ä, à, ©, Û, ç, Û, ,ñ[]B" C^Ó, Ì•¶žš—ñž®, æžg, ,ì, Û, ·[]B

•É-¼, É, æ, éfCf"f[]fg

name []ß, ðŽw'è, μ, Ä DLL ,©, çf<[]f`f" ,ðfCf"f[]fg, ,é, é[]è[]#[]Cžè'± ,« ,Û, ½, ÍšÖ" ,í, » ,ìž•Éžq, Æ, í^Û, È, é-¼'O, ÄfCf"f[]fg, ,é, Û, ·[]B

ã" ,É, æ, éfCf"f[]fg

index []ß, æ, é[]ó'Ö, Ä DLL ,©, çf<[]f`f" ,ðfCf"f[]fg, ,é, é[]è[]#[]Cžè'± ,« ,Û, ½, lf<[]f`f" ,íã" ,É, æ, Ä, ÄfCf"f[]fg, ,é, Û, ·[]B

ã" ,É, æ, éfCf"f[]fg, í DLL ,ì-¼'Ofe[]fuf< ,É, ,é-¼'O, ð'T, •K—v, æ, È, ç, Ì, Äf[]fhžžšÖ, æ'Z, - ,Ä, ,Ý, Û, ·[]B

index □β,ÉŽw'è,.é□□",É,Í"C^Ó,ì"è□□@□"Ž®,^aŽg,!,Ü,.□B

ŽQÆ03079

fC“f^□[ftfF□[fXf<□[f`f“. ìéĒ¾

fC“f|□[fgftfjfbfg

DLL ,Æ,μ,Ä,}ftfH□[f€. ìÄ—~—p

DLL ,ìì□=

-á03080

-á (Žè'±,«-¼/ŠÖ"-¼,É,æ,éf<[f`f",.ìfCf"f|[]fg)

-á (•Ê-¼,É,æ,éf<[f`f",.ìfCf"f|[]fg)

-á (□~□",É,æ,éf<[f`f",.ìfCf"f|[]fg)

—á03081

```
{ŽŸ,ì—á,í□Ctestlib.dll ,©,ç-¼'O ' }ImportByName' } ,đŽg,Á,Ä ImportByName Žè'±  
,«,đfCf"f|□[fg,μ,Ü,·}
```

```
function GetPassword(const Password: string): Boolean; external 'PASSWORD';
```

—á03082

```
{ŽŸ,ì—á,í□Ctestlib.dll ,©,ç-¼'O '}'RealName'} ,đŽg,Á,Ä ImportByNewName Žè'±  
,«,đfCf"f|□[fg,μ,Ü,·}
```

```
function GetPassword(const Password: string): Boolean; external 'PASSWORD'  
name 'NEWPASSWORD';
```

—á03083

```
{ŽŸ,ì—á,í Ctestlib.dll "à,ì 5 "Ô-Ú,ìfGf"fgfŠf|fCf"fg,Æ,μ,Ä ImportByOrdinal Žè'±  
,«,ðfCf"f|f|fg,μ,Ü,·}
```

```
function GetPassword(const Password: string): Boolean; external 'PASSWORD'  
index 5;
```


fCf“f|[]fghtfjfbfg03084

fCf“f|[]fg,·,éžè'±,«,âšÖ”,ìéCE¾,í,»,ê,ðfCf“f|[]fg,·,éfvf[]fOf
%of€“à,É'¼Ú”z'u,Å,«,Ü,·[]BéCE¾,í DLL “à,ì,·,x,Ä,ìžè'±,«,ÆšÖ”,ìéCE¾,ª“ü,Á,½fCf“f|
[]fghtfjfbfg“à,Å[]CDLL ,Æ,lfCf“f^[]ftfF[]fX,É•K—v,È'è”,âCE^,Æ^ê[][],ÉfOf<[]fv
%o»,³,è,Ü,·[]B,½,Æ,¡,î Windows ftfjfbfg,lfCf“f|[]fghtfjfbfg,Å,·[]B

fCf“f|[]fghtfjfbfg,ðžg,ª,É,í

▶ CEÄ,Ñ[]o,µCE³ftfjfbfg,ì uses []B,É'Ç%oÁ,·,é

fCf“f|[]fghtfjfbfg,í DLL fCf“f^[]ftfF[]fX,É•K[]{,Å,í,·,è,Ü,¹,ñ,ª[]C•i”,ì DLL
,ðžg,ªfvf[]fWfFfNfg,ìšÇ—[],ðšÈ'P,É,µ,Ü,·[]BšÖ~A•t,·,ç,è,½ DLL ,ð•ï[]X,·,é[]ê[]#[]CfCf“f|
[]fghtfjfbfg,ð•ï[]X,É[]#,í,¹,Ä[]X[]V,·,é,¾,·,Ä,·,Ý,Ü,·[]B

DLL ,ðžg,ªfvf[]fOf%of€,ðfRf“fpfCf<,·,é[]ê[]#[]CfRf“fpfCf%o,í DLL ,ð'T,³,È,ç,ì,Å DLL ,í,È,-
,Ä,à,©,Ü,ç,Ü,¹,ñ[]B,µ,©,µ[]Cfvf[]fOf%of€,ìžÄ[]sžž,É,í•K—v,Å,·[]B

“Æž©,ì DLL ,ð[]ì—,·,é[]ê[]#,É,í[]C•Ê,ÉfRf“fpfCf<,µ,È,·,Ä,í,È,è,Ü,¹,ñ[]B

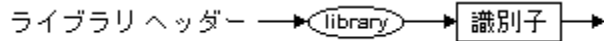
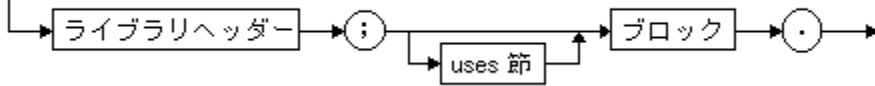
DLL ,ìòìò-03085

ŽQÆ —á

Object Pascal DLL ,ìòìò'ç,Æfvf[]fOf%of€,ìòìò'ç,í DLL ,ìžn,β,ªfvf[]fOf%of€fwfbf_[][,Á,í,È,f%ofCfuf%ofŠfwfbf_[][,Á, ,é“_ ,ðœ,«“ ,ñ,Á,·B

f%ofCfuf%ofŠfwfbf_[][,í Delphi ,ÉŠg'£Žq .EXE ,Á,í,È, .DLL ,ìžÀ[]s%oÁ"\
ftf@fCf<,ðòìò-,·,é,æ,ª,Éžwžì,μ,Ü,·BžÀ[]s%oÁ"\ftf@fCf<,É DLL ,ìf}[][fN,ð•t, ,Ü,·B

ライブラリ



Žè±,« ,âŠÖ” ,ð DLL ,É,æ,Á,ÄfGfNfXf[][fg,·,é,Æ,«[]Cstdcall Žè±,«Žw—
β,ðžg,Á,ÄfRf“fpfCf<,·,é,±,Æ,ª,æ,, ,è,Ü,·B,±,è,í•K[]{,Á,í, ,è,Ü,¹,ñ,ª[]Cstdcall CEÄ,Ñ[]o,μ<K-
ñ,ðžg,ª,±,Æ,Á[]C,Ü,©,ìCE¾CEè,Á[]',©,è,½fAfvfŠfP[][fvf#”,©,ç,» ,ì DLL ,ðžg,ª,±,Æ,ª%oÁ”
,É,È,è,Ü,·B

žÀÜ,Éf<[]f” ,ðfGfNfXf[][fg,·,é,É,í exports []β,ðžg,ç,Ü,·B

f%ofCfuf%ofŠ,í•i” ,ìffjfbfg,Á,Á,« ,Ä,ç,é[]ê# ,ª,æ,, ,è,Ü,·B,» ,ìê#[]Cf%ofCfuf%ofŠ,ìf
[]fXftf@fCf<,ª uses []β[]Cexports []β[]Cf%ofCfuf%ofŠ%oŠú%o»fR[][fh,É,È,Á,Ä,ç,é[]ê# ,ª,æ,-
, ,è,Ü,·B

fOf[][fof<•i”

DLL “à,Á[]éCE¾,ª,è,éfOf[][]fof<•i” ,í,» ,ì DLL ,é'í,μ,ÄCEÄ—L,ì•i” ,Á,·B

DLL ,ìž©•ª,ðCEÄ,Ñ[]o,·f,fWf...[]f<,é,æ,Á,Ä[]éCE¾,ª,è,é•i” ,ÉfAfnfzfx,Á,« ,.[]C¹¼,ìf,fWf...
[]f<,ªžg,ª,½,β,ì•i” ,ðfGfNfXf[][fg,Á,« ,Ü,¹,ñ[]B,±,ì,æ,ª,ÉfAfnfzfx,ìžè±
,«fCf“f^[]ftfF[]fX,ð'É,ñ,Á,μ,È,,Á,í,È,è,Ü,¹,ñ[]B

1 ,Á,ì DLL ,ð“žž,É•i” ,ìfAfvfŠfP[][fvf#”,©,çžg,ª,±,Æ,í,Á,« ,Ü,·,ª[]CDLL ‘ª,©,çCE©,è,ìfNf
%ofCfAf“fg,í 1 ,Á,¾, ,Á, ,è[]CDLL
,ìšefCf“fxf^f“fx,²,Æ,É,» ,è,¾,è“Æž© ,ìfOf[][]fof<•i” ^èž®,ª,Üž[],ª,è,Ü,·B•i” ,ì DLL (,Ü,½,í
1 ,Á,ì DLL ,ì•i” ,ìfCf“fxf^f“fx) ,ªf[]f,š,ð<α—L,·,é,½,β,É,í[]C,» ,ì DLL
,Á,ìf[]f,šf}fbfvfhftf@fCf<,ðžg—p,μ,È, ,è,í,È,è,Ü,¹,ñ[]B[]Ú[]x,í Windows API ,ìfhfLf...
f[]f“fg,ðžQÆ,μ,Á,,¾,¾,ç[]B

-á03086

{ŽŸ,ì—á,í 2 ,Â,ìfGfNfXf|[]fg,³,ê,éšÖ□",ðž□,ÂšÈ'P,È DLL ,ðžÀ€»,μ,Ü,·}

library MinMax;

{stdcall Žè'±,«Žw—β,í□C,Ù,©,ì€¾€ê,¾ftf|[]fg,·,é€Ä,Ñ□o,μ<K-ñ,Å Min ,Æ Max
,ðfGfNfXf|[]fg,μ,Ü,·}

function Min(X, Y: Integer): Integer; **export;**

begin

if X < Y **then** Min := X **else** Min := Y;

end;

function Max(X, Y: Integer): Integer; **export;**

begin

if X > Y **then** Max := X **else** Max := Y;

end;

{**exports** □β,í 2 ,Â,ìf<□f`f“,ðfGfNfXf|[]fg,μ, ,»,ê,¼,ê,Éf|fvfvf†f“,ì□~□“,ð—^,ì,Ü,·}

exports

Min **index** 1,

Max **index** 2;

begin

end.

ŽQÆ03087

DLL,ÉŠi”[,μ.Ä, ,éf<[f`f“ ,]fAfNfZfX

DLL ,Æ System ftjfbfg

Import units

f%ofCfuf%ofŠ□%oŠú%o»fR□[fh

DLL ,Æ,μ.Ä,]ftfH□[f€ ,i□Ä—~—p

DLL ,Å,ì—áŠO,ÆŽÀ□sŽžfGf%o□[<α—Lf□f,fŠf}f□[fWffDLLProc •i□”

f%ofCfuf%ofŠ%Šú%»fR[fh03088

—á DLL,ìììì

f%ofCfuf%ofŠ,ìžÀs•”,í%ofCfuf%ofŠ,ì%Šú%»fR[fh,ð\¬,μ,Ä,ç,Ü,·B%Šú%»fR[fh,íCf%ofCfuf%ofŠ,â%o,ß,Äf[fh,³,è,½,Æ,«,É 1 %oñ,¾,~ŽÀs,³,è,Ü,·B

’ÊíCf%ofCfuf%ofŠ,ì%Šú%»fR[fh,í%ofCfuf%ofŠ,É“ü,Á,Ä,ç,éfEfBf“fhfEfvfV[fWff,ífEfBf“fhfEfNf%ofX,ð“o~^,μ,½,èCf%ofCfuf%ofŠ,ífOf[fof<•ì”,É%Šú’l,ðY’è,μ,½,è,μ,Ü,·B,³,ç,ÉCExitProc •ì”,ðŽg,Á,Ä—¹Žè±,«,ðfCf“fXfg[f<,Á,«,Ü,·B—¹Žè±,«,ífIfyfCE[fefBf“fOfvfXfef€,âf%ofCfuf%ofŠ,ðfAf“f[fh,·,é,Æ,«,ÉŽÀs,³,è,Ü,·B

f%ofCfuf%ofŠ,ì%Šú%»fR[fh,Ä ExitCode •ì”,ðf[f^ÈŠO,ì’l,ÉY’è,·,é,±,Æ,É,æ,Á,ÄCfGf%o[ðCE,ð’È’m,Á,«,Ü,·BExitCode ,í System ftjfbfg“à,ÉéCE¾,³,è,Ä,“,èCfftfHf·fg’l,ì%Šú%»fR[fh,Ä ExitCode ,ðf[f^ÈŠO,ì’l,ÉY’è,μ,½,è,μ,Ü,·B,³,ç,ÉCExitProc •ì”,ðŽg,Á,Ä—¹Žè±,«,ðfCf“fXfg[f<,Á,«,Ü,·B—¹Žè±,«,ífIfyfCE[fefBf“fOfvfXfef€,âf%ofCfuf%ofŠ,ðfAf“f[fh,·,é,Æ,«,ÉŽÀs,³,è,Ü,·B

f[f, ò^—ò,Á,«,É,ç—áŠO,âf%ofCfuf%ofŠ,ì%Šú%»fR[fh,ìžÀs’t,É”-òì,μ,½,è,μ,Ü,·B,³,ç,ÉCExitProc •ì”,ðŽg,Á,Ä—¹Žè±,«,ðfCf“fXfg[f<,Á,«,Ü,·B—¹Žè±,«,ífIfyfCE[fefBf“fOfvfXfef€,âf%ofCfuf%ofŠ,ðfAf“f[fh,·,é,Æ,«,ÉŽÀs,³,è,Ü,·B

DLL ,âfAf“f[fh,³,è,é,ÆCDelphi ,í%ofCfuf%ofŠ,ì—¹Žè±,«,ðŽÀs,·,é,½,ß,ÉCExitProc •ì”,â nil ,É,È,é,Ü,Á ExitProc ,ÉŠi”[,³,è,Ä,ç,éfAfhfCEfX,ìCEÄ,Ñò,μ,ð±,¯,Ü,·B,±,è,í Object Pascal fvfOf%of€“à,Á,ì—¹Žè±,«,ìžæ,è^μ,ç,Æ“¯,ì,È,ì,ÁCfvfOf%of€,Æf%ofCfuf%ofŠ,ì—¼·û,Á“¯,ì—¹Žè±,«,~—ò,âŽg,ì,Ü,·B

f[f, fAfvfŠP[fVf#f“,Ü,½,í%ofCfuf%ofŠ,âŽg,æ,·,×,Ä,ìftjfbfg,ì initialization •”,ìCí,É,»,ífAfvfŠP[fVf#f“,Ü,½,í%ofCfuf%ofŠ,ìžÀs•”,æ,è’O,ÉŽÀs,³,è,Ü,·B“—l,ÉCftjfbfg,ì finalization •”,ífAfvfŠP[fVf#f“,Ü,½,í%ofCfuf%ofŠ,âfCf“fXfg[f<,μ,½,ì—¹Žè±,«,ìCEä,ÉŽÀs,³,è,Ü,· (ftjfbfg,ì finalization •”,ìCŽÀÜ,É,í ExitProc •ì”,ðŽg,Á,ÄŽ©•âŽ©g,ðfCf“fXfg[f<,μ,Ü,·)B

—á03089

{□%Šú%»fR□[fh,Æ□|—¹Žè'±,«,^a, ,éf%ofCfuf%ofŠ,ì—á,đŽŸ,ÉŽ!,μ,Û,·□B}

library Test;

var

SaveExit: Pointer;

procedure LibExit;

begin

:
{ f%ofCfuf%ofŠ□|—¹fR□[fh }

:
ExitProc := SaveExit; { 1 ,Â'O,ì□|—¹Žè'±,«,Ö,ìf|fCf“f^,đ•œE³,μ,Û,· }

end;

begin

:
{ f%ofCfuf%ofŠ□%Šú%»fR□[fh }

:
SaveExit := ExitProc; { 1 ,Â'O,ì□|—¹Žè'±,«,Ö,ìf|fCf“f^,đ•Û'¶,μ,Û,· }

ExitProc := @LibExit; { LibExit □|—¹Žè'±,«,đfCf“fXfg□[f<,μ,Û,· }

end.

DLL ,Æ System ftjfbfg03090

ŽQÆ

IsLibrary ~ _—•ĭ” ,đŽg,æ,ÆCfR[fh,æfAfvfšfP[fVf†f” ,Æf%ofCfuf
%ofš,ĭ,ç,ż,ç,ĭfRf“fefLfXfg,ÅŽÀs,³,ê,Å,ç,é,©,đ”»•Ê,Å,«,Û,·BIsLibrary
ĭfAfvfšfP[fVf†f““à,Å,ĭí,É<U,Å ,èCf%ofCfuf%ofš“à,Å,ĭí,É^,Å,·B

DLL ,ĭŽg—p’tCHInstance •ĭ” ,ĭ,» ,ĭ DLL ,ĭfC“fXf^f“fXfnf“fhf<,đ•ÛŽ,µ,Û,·B

DLL “à,Å,ĭ CmdLine •ĭ” ,ĭí,É nil ,Å,·B

ŽQÆ03091
System ftjfbfg
DLL ,iïï=

DLL ,À,ì—áŠO,ÆŽÀ□sŽžfGf%□[03092

ŽQ□Æ

DLL “à,À□□□—,³,è,½—áŠO,ª DLL “à,À□^—□,³,è,È,ç□ê□□□C,»ì—áŠO,í DLL ,ìŠO•”,Ö“` ,ì,ç,è,Ü,·□BCEÄ,Ñ□o,μCE³fAfvfŠfP□[fvf#f“,Ü,½,í DLL ,ª□CDelphi ,À□i□—,³,è,Ä,ç ,é□ê□# ,í□C’É□í,ì **try...except** •¶,À—áŠO,ð□^—□,À,« ,Ü,·□B

CEÄ,Ñ□o,μCE³fAfvfŠfP□[fvf#f“,Ü,½,í DLL ,ª•É,ìfvf□fOf%of~f“fOCE¾CEè,À□’,©,è,Ä,ç ,é□ê□#□C,»ì—áŠO,í—áŠOfR□[fh \$0EEDFACE ,ìfìfyfCE□[fefBf“fOfVfXfef€—áŠO,Æ,μ,Ä□^— □,À,« ,Ü,·□BfìfyfCE□[fefBf“fOfVfXfef€—áŠOfCEfR□[fh,ì ExceptionInformation “z—ñ,ì□Å□% ,ìfGf“fgfŠ,É,í—áŠOfAfhfCEfX,ª“ü,Á,Ä,“,è□C2 “Ô-Ú,ìfGf“fgfŠ,É,í Delphi — áŠOfìfufWfFfNfg,Ö,ìŽQ□Æ,ª“ü,Á,Ä,ç,Ü,·□B

DLL ,ª SysUtils ftfjfbfg,ðŽg,í,È,ç□ê□#□CDelphi ,ì—áŠOfTfj□[fg,íŽg—p•s %oÁ,É,È,è,Ü,·□B,» ,ì□ê□#□CDLL “à,ÀŽÀ□sŽžfGf%□[,ª”□¶, ,é,Æ□C,» ,ì DLL ,ðCEÄ,Ñ□o,μ,½fAfvfŠfP□[fvf#f“,í□i—¹,μ,Ü,·□BDLL ,É,í,» ,ìCEÄ,Ñ□o,μCE³,ª Object Pascal fAfvfŠfP□[fvf#f“,À, ,é,ì,©□C,» ,è,Æ,à•É,ìfvf□fOf %of~f“fOCE¾CEè,À□’,©,è,½fAfvfŠfP□[fvf#f“,À, ,é,ì,©,ðŽ~•É, ,éŽè’i,ª,É,ç,ì,À□CDLL ,ìfAfvfŠfP□[fvf#f“,ì□i—¹’O,É,» ,ìfAfvfŠfP□[fvf#f“,ì□i—¹Žè’± ,« ,ðCEÄ,Ñ□o,¹,Ü,¹,ñ□BfAfvfŠfP□[fvf#f“,í’P,É’t’f,μ□Cf□f,fŠ,©,ç□í□œ,³,è,Ü,·□B,±,ì,æ,α,ÈfGf %□[,ª<N,±,ç,È,ç,æ,α,É□C•K, , DLL fR□[fh,ì’t,À□\•ª,Èf fFfbfN,ð,μ,Ä,¾,¾,ç□B

ŽQÆ03093

—áŠO^—

DLL ,iì

<α—Lj□f,fšf}f□□[fWff03094

ŽQ□Æ DLL,ì□□□

'·,ç•¶Žš—ñ,đfpf%of□□[f^,Ü,½,ÍŠÖ□"CE<%oÊ,Æ,μ,Ä"n,·Žè'±,«,âŠÖ□",đ DLL
,©□i'¼□Ú□C,Ü,½,ÍfCEfR□[fh,âfIfufWfFfNfg"à,ÉfIfXfg,μ,Ä□jfGfNfXf□[fg,μ,½□ê□#□C,»),ì DLL
,Æ,»),ì DLL ,IfNf%ofCfAf"fgfAfvfšfP□[fVf#f"□i,Ü,½,Í DLL□j,Í,·,×,Ä ShareMem
ftfjfbfg,đŽg,í,É,¯,ê,î,È,è,Ü,¹,ñ□B1 ,Â,If,fWf...□[f<□ifAfvfšfP□[fVf#f",Ü,½,Í DLL□j,^a New ,©
GetMem ,đŽg,Á,Äf□f,fš,đš,,è"—,Ä□C,»),If□f,fš,^a·É,If,fWf...□[f<"à,ì Dispose ,© FreeMem
,lCEÄ,Ñ□o,μ,É,æ,Á,Äš,,è"—,Ä%ođ□œ,³,ê,é□ê□#,à"—,¶,Á,·□B

ShareMem ,í DELPHIMM.DLL <α—Lj□f,fšf}f□□[fWff,IfCf"f^□[ftfF□[fXftfjfbfg,Á, ,è□CShareMem
,đŽg,xfAfvfšfP□[fVf#f", ©f%ofCfuf%ofš□C,Ü,½,Í,»,ì—
¼•ù,Æ^ê□□,ÉfAfvfšfP□[fVf#f"%o»,³,ê,È,¯,ê,î,È,è,Ü,¹,ñ□BfAfvfšfP□[fVf#f",Ü,½,Í DLL ,^a
ShareMem ,đŽg,xf□ê□#□C,»),IfAfvfšfP□[fVf#f",Ü,½,Í DLL ,If□f,fšf}f□□[fWff,í DELPHIMM.DLL
"à,If□f,fšf}f□□[fWff,É'u,«š·,ı,ç,ê□C,»),ê,É,æ,Á,Ä□C"®"l,Éš,,è"—,Ä,ç,ê,½f□f,fš,đ•i□",If,fWf...
□[f<,^a<α—L,Á,«,é,æ,α,É,È,è,Ü,·□B

fAfvfšfP□[fVf#f",Ü,½,Íf%ofCfuf%ofš,Á ShareMem
ftfjfbfg,đŽg,xf□ê□#,í□CfAfvfšfP□[fVf#f",Ü,½,Íf%ofCfuf%ofš,ì **uses** □ß,Á ShareMem
ftfjfbfg,đ□Á□%o,Ifftfjfbfg,É,μ,È,¯,ê,î,È,è,Ü,¹,ñ□B

ŽQÆ03095

ShareMem_ftfjfbfg

ŽQÆ03097
System.ftjfbfg

Ā~ĀĀ,ĒfAfvfŠfP[fVf#f“,ìì-03098

Delphi ,ÍĀ~ĀĀ,ĒfAfvfŠfP[fVf#f“,đì-.,é<@\,đ”đ,Ā,“,èCì-.,μ,½fAfvfŠfP[fVf#f“,ÍfGf
%□[.đ^êŠŃ,μ,½•û-@,Ā^—.,é,½,βCfAfvfŠfP[fVf#f“,Í%Ā“\,Ē,ç,ÍfGf%□[.©,ç
%oñ•œ,μC•K—v,Ē,ç,ÍfVfffbfgf_fEf“,đŽĀs,Ā,«Cff[f^,ÆfŠf[fX,àŽ.,í,è,Û,¹,ñB

Delphi ,ÍfGf%□[đĀĒ,Í—áŠO,É,æ,Ā,ĂŽ!,³,è,Û,·B

—áŠO,đŽg,Ā,Ā^À'S,ĒfAfvfŠfP[fVf#f“,đì-.,é,É,ÍCŽŸ,ìì<Æ,đ—%đ,μ,Ā,“,•K—v,ª, ,è,Û,·
B

- fR[fhfuf[fbfN,ì•ŪĒì
- fŠA[fXŠ,,,è“-Ā,ì•ŪĒì
- ŽĀsŽž—áŠO,ì^—
- fRf“fì[fif“fg—áŠO,ì^—
- fIfCfĒf“fg—áŠO
- ft[fU[“ÆŽ©,ì—áŠO,ì'è<

fR [fhfuf fbfN, ì • Û È ì 03099

Ž Q Æ

fAfvfŠfP [fVf#f", ðCE~ÆÅ, É, ·, é, É, Í C " ñ, μ, ½ — áŠO, ð" FŽ -, μ C — áŠO, É%ž"š, ·, éfR [fh, ð', · K
—v, ^a, , è, Û, · B%ž"š, ðŽw'è, μ, È, ç, Æ C fAfvfŠfP [fVf#f", ÍfGf% [, ð à -
^¾, μ, ½ f [fbfZ [fWf {fbfNfX, ð • Ž, μ, Û, · B, μ, ½, ^a, Á, Ä • K —v, È ñ < Æ, Í C " Á, ÉfGf
% [, É, æ, Á, Äff [f ^ , âfvfXfefçfšf [fX, ^a Ž , í, è, é%ž"š" \ [, ^a, , é — ì ^ æ, ÁfGf% [, ^a < N, «, » , ð
, È ñ ê ñ Š, ðCE © < É, ß C%ž"š, ð'è < , ·, é, ±, Æ, Å, · B

— áŠO, Ö, ì%ž"š, ð ñ ñ -, ·, é, Æ, «, Í C fR [fh, ìfuf [fbfN, É'í, μ, Ä ñ ñ -, μ, Û, · BfGf
% [, É'í, μ, Ä, ·, x, Ä " , ñ Ž í — p, ì%ž"š, ð • K —v, Æ, ·, é ^ è ~ A, ì • ñ, ^a, , é, Æ, «, Í C, » , è, ç, ì • ñ, ð 1
, Á, ìfuf [fbfN, É, Û, Æ, ß C, » , ìfuf [fbfN' S'ì, É " K —p, ·, éfGf% [%ž"š, ð'è < , Å, «, Û, · B

— áŠO, É'í, μ, Ä " Á'è, ì
%ž"š, ð, ·, éfuf [fbfN, ðfvf [fefNfguf [fbfN, ÆCEÄ, Ñ, Û, · B, » , è, ç, ìfuf [fbfN, ÍfAfvfŠfP [fVf#f", ð ñ —
1, ·, é, ©ff [f ^ , ð ñ • t, , é%ž"š" \ [, ^a, , éfGf% [, É'í, μ, Ä Ž © • ^a, ð • Û È ì, Ä, «, é, ©, ç, Á, · B

fR [fhfuf fbfN, ð • Û È ì, ·, é, É, Í C ŽŸ, ì, ±, Æ, ð — ñ%ž"š, μ, Ä, " , · K —v, ^a, , è, Û, · B

- — áŠO, Ö, ì%ž"š
- — áŠO, Æ Ž A ñ s, ì — ñ, è
- — áŠO%ž"š, ìfXfg

ŽQÆ03100

fšf[fXŠ,,è“-Ä,ì•ÚĚì

žÀ□sžž—áŠO,ì□^—□

fRf“f□[f]f“fg—áŠO,ì□^—□

fTfCfĚf“fg—áŠO

f†□[fU□[“Æž©,ì—áŠO,ì'è<`

—áŠO,Ö,ì%ž“š03101

ŽQÆ

fGf%[] [ðCE,ª”[] ,·,é,ÆfAfvfŠfP[] [fvfþf“ ,í—áŠO,ð[] [] ,μ,Ü,·[] B,Á,Ü,è[] C—

áŠOfifufWfFfNfg,ð[] [] ,μ,Ü,·[] B—

áŠO,ª[] [] ,³,ê,½CEã[] CfAfvfŠfP[] [fvfþf“ ,ífNfŠ[] [f“fAfbfvfR[] [fh,ðŽÀ[] s,·,é,©[] C—áŠO,ð[] ^—
[] ,·,é,©[] C, ,é,ç,í,» ,ì—¼•û,ðŽÀ[] s,μ,Ü,·[] B

fNfŠ[] [f“fAfbfvfR[] [fh,ìŽÀ[] s

—áŠO,É'í%ž,·,é[] Å,àŠÈ'P,È•û-@,í%½,©,ífNfŠ[] [f“fAfbfvfR[] [fh,ª•K, ŽÀ[] s,³,ê,é,æ,κ,É,·,é,±
,Æ,Å,·[] B,±,ìŽí,ì%ž“š,Å,ífGf%[] [,ìCE

´^ö,Æ,È,Á,½[] ðCE,í'ù[]³,Å,« ,Ü,¹,ñ,ª[] CfAfvfŠfP[] [fvfþf“ ,ìŠÀ« ,ð•s^À'è,È[] ó'Ò,ì,Ü,ÜŽc,³,È,ç,æ,κ
,É,Å,« ,Ü,·[] B

'Ê[] í,±,ìŽí,ì%ž“š,í[] CfGf%[] [,ª<N,« ,½,© ,Ç,κ,© ,ÉŠÖCEW,È,ŠmŽÀ,ÉfAfvfŠfP[] [fvfþf“ ,ÉfŠf[] [fX,ð
%øð•ú,³,¹,é,½,β,ÉŽg,ç,Ü,·[] B

—áŠO,ì[] ^—[]

—áŠO,ì[] ^—[] ,Æ,í“Á'è,ìŽí—p,ì—áŠO,É'í,μ,Ä“Á'è,ì%ž“š,ð[] [] ,·,é,±,Æ,Å,·[] B,±,ì[] ^—

[] ,É,æ,Á,ÄfGf%[] [[ðCE,ªfNfŠfA,³,ê[] C—

áŠOfifufWfFfNfg,ª”pŠü,³,ê,é,½,β[] CfAfvfŠfP[] [fvfþf“ ,ìŽÀ[] s,ð'±,¯,ç,ê,Ü,·[] B

'Ê[] í,í—áŠOfnf“fhf% ,ð'è< ,μ[] CfAfvfŠfP[] [fvfþf“ ,ªfGf%[] [,© ,ç%ñ•œ,μ,ÄŽÀ[] s,ð'±,¯,ç,ê,é,æ,κ
,É,μ,Ü,·[] B[] ^—[] ,Å,« ,é—áŠO,ìŽí—p,Æ,μ,Ä,í[] C'[] [] Ý,μ,È,çftf@fCf<,ðŠ],±,κ,Æ,μ,½,±,Æ[] C,ç

,Á,í,ç,É,È,Á,½fffBfXfN,Ö,ì[] ' ,«[] ž,Ý[] C—LCEø”í'í,ð' , , ,½CEvŽZ,È,Ç,ª, ,è,Ü,·[] B,±

,é,ç,ì^ê”[] C,½,Æ,ì,î[] uftf@fCf<,ªCE@ ,Å,© ,è,Ü,¹,ñ[] v,È,Ç,í'ù[]³,Æ[] ÄŽŽ[] s,ª—

e^Ö,Å,·,ª[] Cf[] [f,š•s'« ,È,ÇfAfvfŠfP[] [fvfþf“ ,âft[] [fU[] [,ªŠÈ'P,É'ù[]³,Å,« ,È,ç—áŠO,à, ,è,Ü,·[] B

ŽQÆ03102

—áŠO,ì□□□□

—áŠO%ož“š,ìfXfg

fŠf□[fXŠ,,è“-,Ä,ì•ÚŒì

ŽÀ□sŽž—áŠO,ì□^—□

fRf“f□[fif“fg—áŠO,ì□^—□

fTfCfŒf“fg—áŠO

f†□[fU□[“ÆŽ©,ì—áŠO,ì'è<`

—áŠO,ÆŽÀ□s,ì—¬,é03103

ŽQ□Æ —á

Object Pascal ,Å,í—áŠQ,ª'Ê□í,ìfR□[fh,ì—¬,ê,ì't,É"ü,Á,Ä,±,È,ç,ì,Å□CfGf%□[□^—
□,ðŠÈ'P,ÉfAfvfŠfP□[fvf#f" ,ì't,Ö'g,Ý□ž,ß,Ü,·□BfGf%□[CEÝ□ ,ÆfGf%□[□^—□,ðfAf<fSfŠfYf€
,ìf□fCf" ,ì—¬,ê,ìŠO,Ö□o,·,±,Æ,É,æ,è□C□' ,fR□[fh,à'P□f,É,È,é%□Å"□«^a ,è,Ü,·□B

fvf□fefNfguf□fbfN,ð□éCE^{3/4},·,é,Æ,«□C,» ,ìfuf□fbfN"à,Å<N,« ,é%□Å"□«^a ,é—áŠO,É'Î,μ,Ä"Á'è,ì
%□ž"š,ð'è` ,μ,Ü,·□B,» ,ìfuf□fbfN"à,Å—áŠO,ª<N,« ,é,Æ□C'è` ,μ,½
%□ž"š,Ö,·,® ,ÉŽÀ□s,ª^Ú,è□C,» ,ìfuf□fbfN,ìŽÀ□s,í□l—¹,μ,Ü,·□B

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fvf[]fefNfgfuf[]fbfN,ª“ü,Á,½fR[]fh,ðŽŸ,ÉŽ!,μ,Ü,·[]B,±,lfvf[]fefNfgfuf[]fbfN“à,Á—
áŠO,ª<N,«,é,Æ[]C—áŠO[]^—[]•”,ÖŽÀ[]s,ª^Ú,é,½,ß[]CCEx[]%o¹,ª-
Â,è,Ü,·[]BŽÀ[]s,lfuf[]fbfN,ìŠO•”,Â[]ĂŠJ,³,é,Ü,·[]B

```
...
try { fvf[]fefNfgfuf[]fbfN,ðŠJŽn,μ,Ü,· }
    Font.Name := 'Courier'; { ,±,ê,ç,ì•¶,ì'†,Â ... }
    Font.Size := 24; { ... —áŠO,ª”[]¶,·,é,Æ ... }
    Color := clBlue;
except { ... ,±,±,ÖŽÀ[]s,ª^Ú,è,Ü,· }
    on Exception do MessageBeep(0); { ,±,ê,íCEx[]%o¹,ð-Â,ç,·,±,Æ,Â—áŠO,ð[]^
—[]μ,Ü,· }
end;
... { ŽÀ[]s,lfvf[]fefNfgfuf[]fbfN,ìŠO•”,ì,±,±,©,ç[]ĂŠJ,³,é,Ü,· }
```

ŽQÆ03105

—áŠO,Ö,ì%ž“š

—áŠO%ž“š,lfXfg

—áŠO%ž“š,ìfXfg03106

ŽQÆ

fufbfN“à,Å”¶,μ,½—áŠO,Ö,ì%ž“š,ìfR[h,À'è` ,μ,Ü,·BPascal
,Å,ìfufbfN,ì't,É'¼,ìfufbfN,ðfXfg,Å,«é,½,βC,·,Å,É%ž“š,ðfXf^f}fCfY,μ,½fufbfN,ì't,Å,
,Å,À,à%ž“š,ðfXf^f}fCfY,Å,«,Ü,·B

,½,Æ,ì,îÅ,à'P¶f,Èé¶CfŠ¶[fXŠ,,,è“- ,Ä,ð•ÚEì,Å,«C,»,ìvf¶efNfgfufbfN,ì't,É'¼,ìfŠ¶
¶[fX,ðŠ,,,è“- ,Ä,Ä•ÚEì,·,éfufbfN,ð'è` ,Å,«,Ü,·B,±,ìŠT”O,ðŽŸ,ÉŽì,μ,Ü,·B

fXfgfufbfN,ðŽg,Å,Ä“Á'è,ì—áŠO,ì¶¶[fj¶¶^—¶,ð'è` ,μC,»,ìfufbfN,ì¶ã^ÊfufbfN,Å,ì^—
¶,ðf¶[fo¶[f%¶Cfh,·,é,±,Æ,à,Å,«,Ü,·B,±,ìŠT”O,ðŽŸ,ÉŽì,μ,Ü,·B

ŠeŽì,ì—áŠO%ž“šfufbfN,ð¶-,º,Ä¶C—áŠO^—¶fufbfN“à,ÅfŠ¶
¶[fX•ÚEì,ðfXfg,μ,½,èC,»,ì<t,à,Å,«,Ü,·B

ŽQÆ03107

—ášO,Ö,ì%ž“š

—ášO,ÆŽÀ□s,ì—□,ê

—ášOfnf“fhf%o,lfXfR□[fv

fšf [fXš,,è“-,Ä,ì•ÙĈèì03108

žQ [AE

Ĉ~ĈĈĈ, ÈfAfvfšfP [fVf#f“, ð [ì [–, , é 1 ,Ĉ, ìĈ © , í [CfAfvfšfP [fVf#f“, Ĉfšf [fX, ðš,, è“-, Ä, ½, ç [C
—áŠO, ^a<N, «, ½, Æ, «, Ĉ, àšmžĈ, É, » , ĭšfš [fX, ^a%ð•ú, ³, è, é, æ, x, É, , é, ±
, Æ, Ĉ, • [B, ½, Æ, ĭ, ĭfAfvfšfP [fVf#f“, Ĉf [f, fš, ðš,, è“-, Ä, ½ [è [#, í [C [Ĉ Ĉ ĭ “ ĭ, É, » , ĭf [f, fš, ^ašmžĈ, É
%ð•ú, ³, è, é, æ, x, É, , é•K—v, ^a, , è, Û, • [B ftf @fCf<, ðš [J, ç, ½, ç [CĈĈĈ, Ĉ, » , ĭtf @fCf<, ð•K, , •Ĉ, ĭ, é•K—
v, ^a, , è, Û, • [B

—áŠO, í [ç, ½fR [fh, ©, ç [[ĭ, , é, ³/₄, , Ĉ, ĭ, È, ç, ±, Æ, à-
Y, è, Ä, ĭ, È, è, Û, ¹, ñ [B, ½, Æ, ĭ, ĭfAfvfšfP [fVf#f“ “à, Ĉ RTL f< [f` f“, â, » , ĭ' ¹/₄, ĭfRf“f [f
[f [f“fg, ðĈĈĈ, Ñ [o, , Æ [C—áŠO, ^a [ĭ [–, ³, è, é [è [#, ^a, , è, Û, • [B, » , è, ç, ĭ [ðĈĈ, ^a”-
[ĭ, µ, ½ [è [#, Ĉ, à [Cš,, è“-, Ä [ĭ, Y, ĭšfš [fX, ^ašmžĈ, É%ð•ú, ³, è, é, æ, x [fR [ffBf“fO, , é•K—v, ^a, , è,
Û, • [B

fšf [fX, ðĈø%è“ ĭ, É•ÙĈèì, , é, É, í [CžŸ, ĭ, ±, Æ, ð— [%ð, µ, Ä, , •K—v, ^a, , è, Û, • [B

- ÙĈèì, ^a•K—v, Èfšf [fX, ĭží—p
- fšf [fX•ÙĈèìfuf [fbfN, ĭ [ì [–

ŽQÆ03109

fR[fhfuffbfN,ì•ÚĚì

ŽÀsŽž—áŠO,ì^—

fRf“f|f|f“fg—áŠO,ì^—

fTfCfĚf“fg—áŠO

f†fU[“ÆŽ©,ì—áŠO,ì`è<`

• ŮĚì,ª•K—v,ÈfŠf\[]fX,ìŽí—P03110

ŽQ[]Æ —á

'Ê[]í,ìŠÀ<«,Å,ÍŠ,,è“-,Ä,Æ%øð•ú,ì—¼•ú,ìfR[]fh,ð'g,Ý[]ž,ß,í[]CfAfvfŠfP[]fVf#f“,ªŠ,,è“-,Ä,½fŠf\ []fX,ðŠmŽÀ,É%øð•ú,Å,«,Û,·[]B,µ,©,µ—áŠQ,ª”[]¶,µ,½,Æ,«,í[]CfAfvfŠfP[]fVf#f“,ÉŠmŽÀ,ÉfŠf\ []fX%øð•úfR[]fh,ðŽÀ[]s,^{3,1}é•K—v,ª, ,è,Û,·[]B

•K, ,ŠmŽÀ,É%øð•ú,µ,È,,Ä,Í,È,ç,È,ç^è”Ê“l,ÈfŠf\[]fX,ðŽÝ,ÉŽl,µ,Û,·[]B

- ftf@fCf<
- f[]f,fŠ
- Windows fŠf\[]fX
- flfufWfFfNfg

-á03111

ŽŸ,lfCxf“fgfnf“fhf%oo,lf[]f,fš,đš,,,è“-,Ä,½CEã,ÉfGf%oo[],đ[][]-.,,é,ì,À[]Cf[]f,fš,đ
%ođ•ú,.,éfR[]fh,đCE^,μ,ÄŽÀ[]s,μ,Ü,¹,ñ[]B

procedure TForm1.Button1Click(Sender: TComponent);

var

APointer: Pointer;

AnInteger, ADividend: Integer;

begin

ADividend := 0;

GetMem(APointer, 1024); { 1KB ,lf[]f,fš,đš,,,è“-,Ä,Ü,· }

AnInteger := 10 **div** ADividend; { ,±,é,lfGf%oo[],đ[][]-.,μ,Ü,· }

FreeMem(APointer, 1024); { ,±,±,É,íCE^,μ,Ä“ž’B,μ,Ü,¹,ñ }

end;

,Ü,Æ,ñ,Ç,lfGf%oo[],í,±,é,Ü,Ç,í,©,è,â,.,, ,è,Ü,¹,ñ,ª[]C,±,lfR[]fh,í[]d-v,È“_,đž!,μ,Ä,ç

,Ü,·[]B,Ä,Ü,è[]Cf[]f[],É,æ,é[]œžž,lfGf%oo[],ª”-

[][],.,,é,ÆžÀ[]s,lfuf[]fbfN,ìšO,Ö^ú,é,½,β[]CFreeMem •¶,lf[]f,fš,đCE^,μ,Ä%ođ•ú,Ä,«,Ü,¹,ñ[]B

FreeMem ,ª GetMem ,É,æ,Á,Äš,,,è“-,Ä,ç,é,½f[]f,fš,đšmžžÀ,É%ođ•ú,Ä,«,é,æ,ª,É,.,,é,É,í[]C,±

,lfR[]fh,đfšf[]fX•ÜCEìfuf[]fbfN,ì’t,É“ü,é,é•K-v,ª, ,è,Ü,·[]B

ŽQÆ03112

fŠA[fX•ÚEifuf[fbfN.ìi]—

fšf [fX • ŮĈefuf fbfN, ì ì - 03113

žQĀĒ —á

```

š,, è"- ,Äĭĭ, Ÿ, ĭfšf [fX, ð—ášO, a<N, «, Ä, àšmžĀ, É%øđ•ú, , é, É, ĭCfvf [fefNfgfuf fbfN" à, Éfšf
[fXžg—pfR [fh, ðCfuf fbfN, ĭ"Ážê•"•a, Éfšf [fX%øđ•úfR [fh, ð-
,, ßž, Ÿ, Ů, ·ĀĤê"É"ĭ, Éfvf [fefNfgfšf [fXš,, è"- ,Ä, ĭšT—a, ðžŸ, Éžĭ, μ, Ů, ·ĀB
{ fšf [fX, ðš,, è"- ,Ä, Ů, · }
try
{ fšf [fX, ðžg, x•ĭ }
finally
{ fšf [fX, ð%øđ•ú, μ, Ů, · }
end;

```

, ±, ĭ **try..finally** fuf fbfN, ì d—v, È" _ , ĭCfvf [fefNfgfuf fbfN" à, Ā—
 ášO, ^a<N, «, ½ĕĕĕ, Ā, àfAvfšfP [fVfĕĕ", ^a•K, , ±, ĭfuf fbfN, ĭ **finally** •", ĭ•ĭ, ðžĀs, , é, ±
 , Ā, Ā, ·ĀB, ±, ĭfuf fbfN, ĭ **try** •", ĭfR [fh (, Ů, ½, ĭ **try** •", É"ü, Ā, Ā, ĕ
 , éfR [fh, É, æ, Ā, ĀĈĀ, Ńo, ³, ê, ½f< [f`f") , ^a—
 ášO, ðĭĭ—, μ, ½ĕĕĕC, , @, ÉžĀs, ^afNfš [f" fAfbvfR [fh, ĀĈĀ, ĭ, ê, é **finally** •", Ö^Ů, è, Ů, ·ĀB
 —ášO, ^a<N, «, È, -, ê, ĭC, ±, ĭNfš [f" fAfbvfR [fh, ĭÉĭ, ĭĕĕ, ĀC, Ā, Ů, è **try** •", É"ü, Ā, Ā, ĕ
 , é, , x, Ā, ĭ•ĭ, ĭĈĕ, ÉžĀs, ³, ê, Ů, ·ĀB

ĭ—¹fR [fh" à, ĭ•ĭ, ĭ—ášO, ĭ"ĭĭ, É^É"ĭ, μ, Ů, ¹, ñĀ**try** •", ĭ•ĭ, ^a—ášO, ðĭĭ—, μ, È, , Ā, àĀĀĀ—
¹fR [fh, ^aø, «'±, «žĀs, ³, ê, Ů, ·ĀB

fĕf: fšf [fX • ŮĈefuf fbfN, ĭ—ášO, ðĕ—, μ, Ů, ¹, ñĀĀĀ—¹fR [fh, ĭ—ášO, ^a"ĭĭ, μ, ½, ©, Ć, x
 , ©, ³, ĭ'm, ĕ, ³, ê, È, ĕ, ĭ, ĀC—ášO, ðĕ—, , é•K—v, ^a, , é, ©, Ć, x, ©, ð"»'f, Ā, «, Ů, ¹, ñĀBfšf
 [fX • ŮĈefuf fbfN" à, Ā—ášO, ^a"ĭĭ, , é, ĀĈĀs, ĭ, Ů, , ĭ—¹fR [fh, É^Ů, èĀĈžŸ, É—
 ášO, ^aĭĭ—, ³, ê, ½, Ů, Ů, ĭĕ'Ō, Āfuf fbfN, ðo, Ů, ·ĀB, » , ĭĈĕCfvf [fefNfgfuf fbfN, ^a"ü, Ā, Ā
 , ĕ, éfuf fbfN, ĭ—ášO, É%ž"š, Ā, «, Ů, ·ĀB

—á03114

ŽŸ,lfCxf“fgfnf“fhf%o,lf□f,fš,đš,,è“-,Ä,ÄfGf%o□[.đ□¶□¬,μ,Ü,·,ª□Cš,,è“-,Ä,½f□f,fš,đ
%ođ•ú,μ,Ü,·□B

```
procedure TForm1.Button1Click(Sender: TComponent);
var
  APointer: Pointer;
  AnInteger, ADividend: Integer;
begin
  ADividend := 0;
  GetMem(APointer, 1024); { 1KB ,lf□f,fš,đš,,è“-,Ä,Ü,· }
  try
    AnInteger := 10 div ADividend; { ,±,ê,lfGf%o□[.đ□¶□¬,μ,Ü,· }
  finally
    FreeMem(APointer, 1024); { fGf%o□[.É,à,©,©,í,ç,,ŽÀ□s,Í,±,±
,©,ç□ÄšJ,³,ê,Ü,· }
  end;
end;
```

ŽQÆ03115

•ÚĚì,ª•K—v,ĚšŦ[[fX,ìŽí—p

ŽÀsŽž—áŠO,ì^—03116

ŽQÆ

ŽZpŠÖ",âftj@fCf<^—Žè'±,«,È,ÇCf%of"f^fCf€f%ofCfuf%ofŠ (RTL)

"à,ìf<[f`f",ðÆÄ,Ño,·fR[fh,ð',,ÆCRTL ,ífGf%o[,ð=

áŠO,ìÉ` ,ÅfAfvfŠfP[fVf#",Ö•Ö,μ,Û,·BffftjHf<fg,Å,Í RTL —

áŠO,ífbfZ[fW,ð¶—,μC,»,ìfbfZ[fW,ðfAfvfŠfP[fVf#",âftjU[.É•Ž!,μ,Û,·B'¼,ì•û-
@,Å RTL —áŠO,ð^—,·,é"ÆŽ©,ì—áŠOfnf"fhf%o,à'è` ,Å,«,Û,·B

ffftjHf<fg,ÅfbfZ[fW,ð•Ž!,μ,È,çTfCf€f"fg—áŠO,à, ,è,Û,·B

RTL —áŠO,ðÆø%É"l,É^—,·,é,É,ÍCŽÿ,ì,±,Æ,ð—%øð,μ,Ä,¨,•K—v,^a, ,è,Û,·B

- ŽÀsŽž—áŠO,Æ,Í
- —áŠOfnf"fhf%o,ìi—
- ffftjHf<fg,ì—áŠOfnf"fhf%o,ì'ň<ÿ
- —áŠO,ìNf%ofX,ì^—
- —áŠO,ìÄ¶—

ŽQÆ03117

fR[fhfuffbfN,ì•ÚĚì

fŠf[fXŠ,,è“-,Ä,ì•ÚĚì

fRf“f[f“fg—áŠO,ì^—

fTfCfĚf“fg—áŠO

f†[fU[“ÆŽ©,ì—áŠO,ì`è<`

ŽÀ sŽž—áŠO,Æ,Í03118

ŽQÆ

f%of“f^fCf€f%ofCfuf%ofŠ,ì—áŠO,í SysUtils ftjffbfq“à,À'è` ,³,ê,Ä,¨,èC,±,ê,ç,ì—áŠO,í,·, x ,Ä
Exception ,Æ,ç,˘^ê”Ê—áŠOfufWfFfNfgÆ^,ðÆp³,μ,Ä,ç,Û,·BException ,í RTL —
áŠO,³fftfHf<fg,Å•Žì,·,éffbfZ[fW,ì•¶Žš—ñ,ð'ñ<ÿ,μ,Û,·B

RTL ,³¶¶—,·,é—áŠO,íŽÿ,ì 7 Ží—p,Å,·B

- “üo—í—áŠO
- fgfv—áŠO
- ¶@¶””’l%o%oŽZ—áŠO
- •,“@¶—¶””’l%o%oŽZ—áŠO
- Æ^fLfffXfg—áŠO
- •İ·—áŠO
- fn¶lfhfEjFfA—áŠO

“ü□o—í—áŠO03119

“ü□o—í—áŠO,í RTL ,áftf@fCf<,Ü,½,í“ü□o—ífffofCfX,ÖfAfNfZfX,μ,æ,π,Æ,μ,½,Æ,«,É<N,«,é,±,Æ,ª, ,è,Ü,·□B,Ù,Æ,ñ,Ç,ì“ü□o—í—áŠO,í Windows ,Ü,½,í DOS ,áftf@fCf<,ÖfAfNfZfX,μ,½,Æ,«,É•Ô,μ,½fGf%□[fR□[fh,ÉŠÖ~A,μ,Ä,ç,Ü,·□B

SysUtils ftfjfbfg,í ElnOutError ,Æ,ç,π^ê”Ê“ü□o—í—áŠO,đ’è<,μ,Ä,¨,è□C,±,é,É,Í,Ç,ì,æ,π,ÈfGf %□[,ª”□¶,μ,½,ì,©,đŽ!,· ErrorCode ,Æ,ç,πfIfufWfFfNfgftfB□[f<fh,ªŠÜ,Ü,è,Ä,ç,Ü,·□B≡
áŠOIfufWfFfNfgfCf“fXf^f“fX”à,ì,±,ìftfB□[f<fh,ÖfAfNfZfX,; ,é,î□C—áŠO,ì□^—□•û-
@,ª,í,©,è,Ü,·□B

fq[]fv—áŠO03120

fq[]fv—áŠO,í“®“lf[]f,š,š,,,è“-,Ä,âfAfNfZfX,ðŽŽ,Ý,½,Æ,«,É<N,«,é,±,Æ,ª, ,è,Ü,·[]BSysUtils
ftfjfbfg,í EOutOfMemory ,Æ EInvalidPointer ,Æ,ç,æ 2 ,Ä,lfq[]fv—áŠO,ð'è<` ,µ,Ä,ç,Ü,·[]BŽŸ,ì\ ,í“Á'è,lfq[]fv—áŠO,ðŽ!,µ,Ä, ,è[]C,Ç,¿,ç,à Exception ,ð'¼[]ÚÆp[]³,µ,Ä,ç,Ü,·[]B

—áŠO

^Ó-í

EOutOfMemory —v<[],³,è,½'€[]ì,ðŽÀ[]s,·,é,ì,É[]\•ª,ÈfXfy[]fX,ªfq[]fv[]ã,É,È,©,Á,½

EInvalidPointer fAfvfŠfP[]fVf#f“ ,lfq[]fv,ìŠO•” ,ðŽw,·f[]Cf“f^,ð”jŠü,µ,æ,æ
,Æ,µ,½[]B'É[][]C,±,è,lf[]Cf“f^,ª,·,Ä,É”jŠü,³,è,Ä,ç,é,±,Æ,ð^Ó-í,·,é

☐®☐"☐"'!%o%oŽZ—áŠO03121

☐®☐"☐"'!%o%oŽZ—áŠO, í☐®☐"Ĉ^, ðŽ®, ð%o%oŽZ, μ, ½, Æ, «, É<N, «, é, ±, Æ, ¢, , è, Ü, ·☐BSysUtils
ftfjfbfg, í ElntError , Æ, ¢, ¤^ê"Ê☐®☐"☐"'!%o%oŽZ—áŠO, ð'è<, μ, Ä, ¢, Ü, ·☐BRTL , íĈ^, μ, Ä
ElntError , ð☐¶☐¬, μ, Ü, ¹, ñ, ¢☐C, ±, ê, í, ·, x, Ä, ð"Á'è☐®☐"☐"'!%o%oŽZ—
áŠO, ¢Ĉp☐³, ·, éŠî'ê, ð'ñ<Ÿ, μ, Ü, ·☐B

ŽŸ, ð·\, ð"Á'è☐®☐"☐"'!%o%oŽZ—áŠO, ðŽ!, μ, Ä, " , è☐C, ±, ê, ¢, í, Ç, ê, à ElntError
, ð'¼☐ÚĈp☐³, μ, Ü, ·☐B

—áŠO

^Ó-i

| | |
|--------------|---------------------------------------|
| EDivByZero | f[f☐, Å☐œŽZ, μ, æ, ¤, Æ, μ, ½ |
| ERangeError | Ž®, ð☐"'! , ¢"í^íŠO |
| ElntOverflow | ☐®☐"☐"'!%o%oŽZ, ¢f☐[fo☐[ftf☐☐[, μ, ½ |

•,“®□-□”“_□”’l%o%oŽZ—áŠO03122

•,“®□-□”“_□”’l%o%oŽZ—áŠO,ÍŽÀ□”CE^,ìŽ®,đ%o%oŽZ,μ,½,Æ,«,É<N,«,é,±,Æ,ª, ,è,Ü,·□BSys
Utils ftjfbfg,Í EMathError ,Æ,ç,π^è”Ê•,“®□-□”“_□”’l%o%oŽZ—áŠO,đ’è<` ,μ,Ä,ç,Ü,·□BRTL
,ÍCE^,μ,Ä EMathError ,đ□¶□-□,μ,Ü,¹,ñ,ª□C,±,ê,í,·,×,Ä,ì“Á’è•,“®□-□”“_□”’l%o%oŽZ—
áŠO,ªCEp□³,·,éŠî’ê,đ’ñ<Ÿ,μ,Ü,·□B

ŽŸ,ì•\,ì“Á’è•,“®□-□”“_□”’l%o%oŽZ—áŠO,đŽ!,μ,Ä,¨,è□C,±,ê,ç,ì—áŠO,í,ç,·,ê,à EMathError
,đ’¼□ÚCEp□³,μ,Ü,·□B

—áŠO

^Ó-i

| | |
|-------------|--|
| EInvalidOp | f v f □ f Z f b f T,ª-ç’è<`-½—β,đCEŸ□o,μ,½ |
| EZeroDivide | f[f□,É,æ,é□œŽZ,đŽŽ,Ÿ,½ |
| EOverflow | •,“®□-□”“_□”’l%o%oŽZ,ªfI□[fo□[ftf□□[,μ,½ |
| EUnderflow | •,“®□-□”“_□”’l%o%oŽZ,ªfAf“f_□[ftf□□[,μ,½ |

CE^fLfffXfg—áŠO03123

CE^fLfffXfg—áŠO,í as fpf%of□□[f^,đŽg,Á,ÄfJfufWfFfNfg,đ•Ê,ìCE^,ÖCE^fLfffXfg,μ,æ,κ
,Æ,μ,½,Æ,«,É<N,«,é,±,Æ,ª, ,è,Ü,·□BSysUtils ftjfbfg,Í—v<□,³,ê,½CE^fLfffXfg,ª"ñ□‡-@,ì,Æ,«,É
RTL ,ª□¶□¬,·,é EInvalidCast ,Æ,ç,κ—áŠO,đ'è<` ,μ,Ä,ç,Ü,·□B

•İŞ.—áŠO03124

•İŞ.—áŠO, í IntToStr, StrToInt, StrToFloat

,È,Ç,İŠÖ",đŽg,Á,Äff[]f^,ìE`Ž®,đ•İŞ·,μ,½,Æ,«,É<N,«,é,±,Æ,ª, ,è,Ü,·BSysUtils
ftfjfbfg,İŠÖ",Ö"n,³,ê,½ff[]f^,đ•İŞ·,Å,«,È,ç,Æ,«,É RTL ,ª[][]¬,·,é EConvertError ,Æ,ç,ª—
áŠO,đ'è` ,μ,Ä,ç,Ü,·B

fn[fhfEjFfA—áŠO03125

fn[fhfEjFfA—áŠO, í 2 ,Á, ì ó < μ, Å < N, «, é, ±, Æ, ¢, , è, Û, · □ B1 ,Á, ì fvf □ fZfbfT, ¢ ^ — □, Å, «, È, ¢ áŠQ, ð Æ ÿ □ o, μ, ½, Æ, « □ C, à, x 1 ,Á, Ì Ž À □ s, ð ' t ' f, ·, é Š, ,, è □ ž, Ý, ð f Afvf Š fP □ [fVf#f", Å ^ Ó □ } " l, È □ ¶ □ ¬, μ, ½, Æ, «, Å, · □ Bfn □ [fhfEjFfA— áŠO, ì □ ^ — □ fR □ [fh, í DLL , É ' u, ,, ±, Æ, í, Å, «, · □ C fXf ^ f " fhf Af □ f", ì f Afvf Š fP □ [fVf#f", É, Ì, Ý Š Û, ß, é, ± , Æ, ¢, Å, «, Û, · □ B

SysUtils ftjfbfg, í EProcessorException , Æ, ¢, x ^ è " È fn □ [fhfEjFfA—áŠO, ð ' è < ` , μ, Å, ¢, Û, · □ BRTL , Í Æ ^ , μ, Å EProcessorException , ð □ ¶ □ ¬, μ, Û, ¹, ñ, ¢ □ C, ±, è, í " Á ' è fn □ [fhfEjFfA— áŠO, ¢ Æ p □ ³, ·, é Š ' è, ð ' ñ < Ý, μ, Û, · □ B

Ž Ÿ, Ì, ·, Ì " Á ' è fn □ [fhfEjFfA—áŠO, ð ž Ì, μ, Å, ¢, Û, · □ B

| —áŠO | ^Ó-i |
|----------------|---|
| EFault | , ·, x, Å, ì □ áŠQ ì fufWfFfNfg, ¢ Æ p □ ³, ·, é Š ' è — áŠO ì fufWfFfNfg |
| EGPFault | ' È □ í, í □ % o Š ú % o » , ³, è, Å, ¢, È, ¢ f j f C f " f ^ , â ì fufWfFfNfg, ¢ Æ ^ ^ ö, Å < N, «, é ^ è " È • Û Æ ì — áŠO |
| EStackFault | f v f □ f Z f b f T, ì f X f ^ f b f N f Z f O f □ f " f g, Ö, Ì " ñ □ † - @ f A f N f Z f X |
| EPageFault | Windows , ì f □ f, f Š f } f □ [f W f f, ¢ f X f □ f b f v f t f @ f C f < , ð □ ³, μ, Ž g, Ì, È, ©, Å, ½ |
| EInvalidOpCode | f v f □ f Z f b f T, ¢ - ¢ ' è < ` - ½ — ß, ð Æ ÿ □ o, μ, ½ □ B ' È □ í, ± , è, ì f v f □ f Z f b f T, ¢ f f □ [f ^ f □ f, f Š, Û, ½, í □ % o Š ú % o » , ³, è, Å, ¢ , È, ¢ f □ f, f Š, ð ž À □ s, μ, æ, x, Æ, μ, ½, ±, Æ, ð ^ Ó - i, ·, é |
| EBreakpoint | f Afvf Š fP □ [fVf#f", ¢ f u f Æ □ [fNf] f C f " f g Š, ,, è □ ž, Ý, ð □ ¶ □ ¬, μ, ½ |
| ESingleStep | f Afvf Š fP □ [fVf#f", ¢ f V f " f O f < f X f e f b f v Š, ,, è □ ž, Ý, ð □ ¶ □ ¬, μ, ½ |

^ è " È • Û Æ ì — áŠO, ð □ œ, ·, í □ C, ±, è, ¢, Ì — áŠO, ð Æ ÿ □ o, ·, é, ±, Æ, í, Û, è, Å, · □ B, ±, è, ¢, Ì — áŠO, í ' € □ Ì Š Å < < , ì □ d ' á, È □ áŠQ, ð • \, μ, Å, ¢, é, ©, ¢, Å, · □ B f u f Æ □ [fNf] f C f " f g — áŠO, Æ f v f " f O f < f X f e f b f v — áŠO, í ^ è " È, È Delphi " à • " , Ì " □ □ # f f f o f b f K, È, æ, Å, Å □ ^ — □, ³, è, Û, · □ B

ŽQÆ03126

—áŠOfnf“fhf%oo,ìììì

ffftfHf<fg,ì—áŠOfnf“fhf%oo,ì'ň<Ÿ

—áŠO,ìfNf%ofX,ì^—

—áŠO,ìÄ1

ŽQÆ03128

—áŠOfCf“fXf^f“fX,ìŽg,č•û

—áŠOfnf“fhf%o,ìXfR□[fv

ffftHf<fg,ì—áŠOfnf“fhf%o,ì'ň<Ÿ

—áŠO,ìfNf%ofX,ì□^—□

—áŠO,ì□Ä□1□□□

—áŠO□^—□•¶03129

ŽQ□Æ =á

try..except fuf□fbfN,ì **except** •”,É“ü,Á,Ä,ç,é•¶,í“Á’è,ìŽí—p,ì—áŠO,ð□^—
□,·,é,½,ß,ÉŽÀ□s,·,éfR□[fh,ð’è<` ,μ,Û,·□B,±,ê,ç,ì—áŠO□^—□•¶,ì□’Ž®,ìŽŸ,ì,Æ,¨,è,Á,·□B
on <—áŠO,ìŽí—p> do <•¶>;
—áŠO,ðŽg,κ,Æ□CfAfçfSfŠfYf€,ì□u’Ê□í,ì□vŽ®,ð□Ú,μ,□à^{-3/4},μ,Ä□C,»,ìŽ®,^a“K—p,³,ê,È,ç—
áŠO“l,È□ê□‡,ð<K’è,Á,«,Û,·□B—áŠO,ðŽg,í,È,ç□ê□‡,í□CCEvŽZ,ìCEÂ□X,ìfXfefbfv,Á□æ,Ö□i,ň,Á,ç
,ç,©,Ç,κ,©,ð-^%oňŠm”F,μ,È,,Ä,í,È,è,Û,¹,ň□B

—á03130

ŽŸ,lfR[fh,lf[f,É,æ,é[œŽŽ,ÁffftfHf<fg,ìCE<%oÊ,đ'ñ<Ÿ,·,é—áŠOfnf“fhf%oo,đ'è<` ,μ,Ä,ç,Û,·B

```
function GetAverage(Sum, NumberOfItems: Integer): Integer;
begin
  try
    Result := Sum div NumberOfItems;
  except
    on EDivByZero do Result := 0;
  end;
end;
```

,±,lfR[fh,ÍŠÖ“,đœÄ,Ñ[o,·,½,Ñ,Éf[f,lfefXfg,đ,·,é,æ,è,í,©,è,â,·,ç,±,Æ,É“^Ó,μ,Ä,,¾,¾,çB—
áŠO,đ—~—p,μ,É,ç““™,ÍŠÖ“,đŽŸ,ÉŽ!,μ,Û,·B

```
function GetAverage(Sum, NumberOfItems: Integer): Integer;
begin
  if NumberOfItems <> 0 then
    Result := Sum div NumberOfItems
  else Result := 0;
end;
```

,±,ê,ç 2 ,Ä,ÍŠÖ“,ì^á,ç,Í—áŠO,đŽg,Á,½fvf[fOf%of~f“fO,Æ,»,x,Ä,È,çfvf[fOf%of~f“fO,ì^á,ç
,đ,æ,·\,μ,Ä,ç,Û,·B,±,ê,Í“ñí,É’P[f,È—á,Ä,·,ª[C,à,Á,Æ·;ŽG,È“·SfXfefbfv,ìCEvŽŽ,Ä%o½\
%oñ,à,ì“ü—Í,ì 1 ,Ä,ª-³œø,Ä, ,Á,½,Æ,«,É[C,Ç,ê,©,lfXfefbfv,ÄáŠQ,ª<N,±,é,±
,Æ,ª’z’œ,Ä,«,Û,·B

ŽQÆ03131

—áŠOfCf“fXf^f“fX.lžg.č•û

—áŠOfnf“fhf%o,lXfR□[fv

—áŠofCf“fXf^f“fX,ìŽg,č•û03132

ŽQ□Æ —á

,Ù,Æ,ñ,ç,ì□ê□#□C—áŠofnf“fhf%oo,í—áŠO,ÉŠÖ,μ,Ä,» ,ìŽí—p^ÈŠO,ì□î•ñ,ð•K—v,Æ,μ,È,ç ,ì,Ä□Con..do ,É±,•¶,í,» ,ì—áŠO,ìŽí—p,¾, ,ð‘í□Ú,Æ,μ,Ü,·□B,μ,©,μ□C□ê□# ,É,æ,Á,Ä,Í— áŠofCf“fXf^f“fX,ì‘t,É“ü,Ä,Ä,ç,é□î•ñ,ì^ê•” ,ª•K—v,É,È,è,Ü,·□B

—áŠofnf“fhf%oo,ì‘t,Ä—áŠofCf“fXf^f“fX,ÉŠÖ,·,é“Á’è,ì□î•ñ,ð“ç,Ý□o,·,É,í□C— áŠofCf“fXf^f“fX,Ö,ìfAfNfZfX,ð%oÄ“\,É,·,é on..do ,ì“Á•Ê,È•ĪCE`□\•¶,ðŽg,ç,Ü,·□B,±,ì“ÁŽê□\ •¶,Ä,ÍfCf“fXf^f“fX,ð“ü,ê,Ä, , ^êŽž•Ī□” ,ð—p^Ó,·,é•K—v,ª, ,è,Ü,·□B

,±,ì^êŽž•Ī□” (ŽŸ,ìfR□[fh,Ä,í E) ,ìCE^ ,ìfRf□f“ ,ìCEã,ÉŽw’è,³,è,Ü,· (ŽŸ,ìfR□[fh,Ä,í EInvalidOperation)□B•K—v,È,ç,Ī as %oo%oŽŽŽq,ðŽg,Á,Ä—áŠO,ð,æ,è“Á’è,³,è,½Ží— p,ÉCE^fLfffXfg,Ä,« ,Ü,·□B

f□f,: ^êŽž—áŠoflfufWfFfNfg,ð”pŠü,μ,Ä,í,È,è,Ü,¹,ñ□B—áŠO,ð□^—□,·,é,Æ□C,» ,ì— áŠoflfufWfFfNfg,íŽ©“@“l,É”pŠü,³,è,Ü,·□BfLfufWfFfNfg,ð□ŸŽè,É”pŠü,·,é,Æ□CfAfvfŠf P□[fVf†f“ ,í,» ,ìfLfufWfFfNfg,ð□Ä“x”pŠü,μ,æ,α,Æ,μ,Ä’v-½“l,ÈfAfvfŠfP□[fVf†f“fGf %o□[,ª□¶□- ,³,è,Ü,·□B

—á03133

ftjH[]f€,^a 1 ,Á,^{3/4}, -“ü,Á,^{1/2}V,μ,cfvf[]WfFfNfg,ð[]i[]¬,μ,^{1/2}ê[]#[]CftfH[]f€
,ÖfXfNf[]f<fo[],ÆfRf}f“fhf{f^f“,ð’Ç
%oÁ,Á,«,Ü,·[]Bf{f^f“,ðf_fuf<fNfŠfbfN,μ[]CŽÿ,ì[]s,ðfNfŠfbfNfCfxf“fgfnf“fhf%o,Ö’Ç%oÁ,μ,Á,-
,^{3/4},³,ç[]B

```
ScrollBar1.Max := ScrollBar1.Min - 1;
```

fXfNf[]f<fo[],ì[]Á‘á’l,íCE^,μ,Ä[]Á[]¬‘l,ð’’,ì,È,ç,ì,Á[]C,±,ì[]s,í—
áŠO,ð[]¶[]¬,μ,Ü,·[]BfAfvfŠfP[]fVf†f“,ìffftfHf<fg,ì—áŠOfnf“fhf%o,í—
áŠOfIfufWfFfNfg,ì†,ìf[]fbfZ[]fW,^a“ü,Á,^{1/2}fCfAf[]fOf{fbfNfX,ðŠj,«,Ü,·[]B,±,ìfnf“fhf%o,ì†,ì—
áŠO[]^—[],ðfI[]f[]f%ofCfh,μ,Ä[]C—áŠO,ìf[]fbfZ[]fW•¶Žš—
ň,^a“ü,Á,^{1/2}“ÆŽ©,ìf[]fbfZ[]fWf{fbfNfX,ð[]i[]¬,Á,«,Ü,·[]B

try

```
ScrollBar1.Max := ScrollBar1.Min - 1;
```

except

on E: EInvalidOperation **do**

```
MessageDlg('Ignoring exception: ' + E.Message, mtInformation, [mbOK],  
0);
```

end;

ŽQÆ03134

—áŠO^—•¶

—áŠOfnf“fhf%o,ìXfR[fv

—áŠOfnf“fhf%o,ìfXfR[]fv03135

ŽQ[]Æ

, ; , x , Ä , ìfuf[]fbfN , ì , ; , x , Ä , ìŽí—p , ì—áŠO , É , Ä , ç , Äfnf“fhf%o , ð’ñ<ÿ , ; , é•K—v , í , , è , Ü , ¹ , ñ[]B“Á’è , ìfuf[]fbfN“à , Ä“Á , É[]^—[] , μ , ½ , ç—áŠO , É , Ä , ç , Ä , ¾ , ˘fnf“fhf%o , ð’ñ<ÿ , ; , é•K—v , ² , , è , Ü , ·[]B

fuf[]fbfN , ³“Á’è , ì—áŠO , ð[]^—[] , μ , È , ˘ , è , í[]C—
áŠO , í[]¶[]— , ³ , è , ½ , Ü , Ü , ì[]ó‘Ô , ÅŽÀ[]s , ² , » , ìfuf[]fbfN , ð[]o , Ä[]C , » , ìfuf[]fbfN , ì[]ã^Êfuf[]fbfN[]i , Ü , ½ , í , » ,
ìfuf[]fbfN , ð[]ÆÄ , Ñ[]o , μ , ½fR[][]fh[]j , Ö—ß , è , Ü , ·[]B , ±
 , ìfv[]fZfX , í[]ÆJ , è•Ô , ³ , ê[]C , » , ì , ½ , Ñ , ÉfXfR[][]fv , ì’P^Ê , ²[]L , ² , è , Ü , ·[]B

ŽQÆ03136

—áŠO^—•¶

—áŠOfCf“fXf^f“fX,lžg.č•û

ffftfHf<fg,ì—áŠOfnf“fhf%oo,ì'ñ<Ÿ03137

ŽQ□Æ

“Á'è,ìfnf“fhf%oo,á'ñ<Ÿ,³,è,Ä,ç,È,ç,·,×,Ä,ì—áŠO,ð□^—□,·,é,½,β□CffftfHf<fg,ì—áŠOfnf“fhf%oo,ð 1,Ä'ñ<Ÿ,Ä,«,Ü,·□B,»,,ì,½,β,É,ÍŽŸ,ì,æ,α,É—áŠO□^—□fuf□fbfN,ì **except •**”,É **else •**”,ð'Ç %ooÄ,μ,Ü,·□B

```
try
  { •¶ }
except
  on ESomething do { “Á'è,ì—áŠO□^—□fR□[fh ]};
  else { ffftHf<fg,ì—áŠO□^—□fR□[fh ]};
end;
```

fuf□fbfN,ÉffftfHf<fg,ì—áŠO□^—□,ð'Ç%ooÄ,·,é,Æ□Cfuf□fbfN,ª,·,×,Ä,ì—áŠO,ð%oo½,ç,©,ì•û-@,Ä□^—□,μ□C,»,,è,É,æ,Ä,Ä□ã^Êfuf□fbfN,©,ç,ì,·,×,Ä,ì□^—□,ªŠmŽÄ,ÉfI□[fo□[f%ofCfh,³,è,Ü,·□B

Ex□□: ,±,ì,æ,α,È,·,×,Ä,ð□^—□,Ä,«,éffftfHf<fg—áŠOfnf“fhf%oo,ð'è<` ,·,é,Æ,«,,É,í□^Ó,μ,Ä,-,¾,³,ç□Belse □β,í,Ü,Ä,½,□³'ì,ì'm,è,È,ç—áŠO,àŠÜ,β□C,·,×,Ä,ì—áŠO,ð□^—□,μ,Ü,·□B^è”É”I,É□Cfvf□fO%of},ÍŽÄ□Ü,É□^—□•û-@,ª,í,©,Ä,Ä,ç,é—áŠO,¾,¯,ð□^—□,·,éfR□[fh,ð□',,,×,«,,Ä,·□B,»,,è^ÈŠO,ì□ê□‡,Ä,à□CfNfŠ□[f“fAfbfvfR□[fh,ðŽÄ□s,μ,Ä,»,,ì—áŠO,Æ,»,,ì□^—□•û-@,É,Ä,ç,Ä□Ü,μ,ç□í•ñ,ðŽ□,Ä,Ä,ç,éfR□[fh,É□^—□,ð”C,¹,é,ì,ª“¾□ô,Ä,·□B

ŽQÆ03138

—áŠOfnf“fhf%o,iìì

—áŠO,ìfNf%ofX,i^—

—áŠO,iÄ1

—áŠO,lfNf%ofX,ì^—03139

ŽQÆ —á

—áŠOlfufWfFfNfg,ÍŠK'w,ì^è•",È,ì,ÅCŠK'w,ì,»,ì•"•ª,ªÆp³,μ,Ä,ç,é—áŠOfNf%ofX,É,Ä,ç,Äfnf"fhf%o,ð'ñ<ÿ,·,é,ÎCŠK'w,ì•"•ª'S'ì,É,Ä,ç,Äfnf"fhf%o,ðŽw'è,Ä,«,Ü,·B

—áŠO,ð,³,ç,É"Á'è,μ,ÄÚ×,Èfnf"fhf%o,ðŽw'è,·,é,±,Æ,à,Ä,«,Ü,·ªC,»,é,ç,lfnf"fhf%o,Í^è"Êfnf"fhf%o,ìä,É"z'u,·,é•K—v,ª,·,è,Ü,·BfAfvfŠfP[fVf†",Ífnf"fhf%o,ðoCE»‡,ÉCEÿð,μCÄ%o,ÉCE©,Ä,©,Ä,½"K—p%oÄ"\,Èfnf"fhf%o,ðŽÄs,·,é,©,ç,Ä,·B

—á03140

ŽŸ,lfuffbfN,í,·,x,Ä,ì®"'"I%%ŽZ—áŠO,đ"Á•Ê,É^—,·,éfR[fh,ÌŠT—^a,đŽ!,μ,Ä,ç,Ü,·B

```
try
  { ®"'"I%%ŽZ,đŽÀ[s,·,é•¶ }
except
  on EIntError do { ®"'"I%%ŽZfGf%[-p,ì"ÁŽê^— } ;
end;
```

,½,Æ,!,îŽŸ,lfuffbfN,í"í^fGf%[,É,Â,ç,Ä,í"ÁŽê,È^—,đC,»,ì¼,ì,·,x,Ä,ì®"'"I%%ŽZfGf%[,É,Â,ç,Ä,í,»,ì¼,ì^—,đ'ñ<Ÿ,μ,Ü,·B

```
try
  { ®"'"I%%ŽZ,đŽÀ[s,·,é•¶ }
except
  on ERangeError do { "í^íŠO,ì^— } ;
  on EIntError do { ,»,ì¼,ì®"'"I%%ŽZfGf%[,ì^— } ;
end;
```

EIntError —p,lfnf"fhf%^a, ERangeError —p,lfnf"fhf%^a,ì'O,É,·,é,ÆCŽÀ[s,^aCE^,μ,Ä
ERangeError —p,ì"ÁŽêfnf"fhf%^a,Ü,Á"ž'B,μ,È,ç,±,Æ,É'^Ó,μ,Ä,,¾,¾,çB

ŽQÆ03141

—áŠOfnf“fhf%oo,ìììì

fftfHf<fg,ì—áŠOfnf“fhf%oo,ì'ň<Ÿ

—áŠO,ìÄ11

—áŠO,ìÄ¶¶—03142

ŽQÆ —á

—áŠO,đf¶¶[fjfk,É¶^—¶,·,é,Æ,«¶C¶ã^Êfuf¶bfN,ì¶^—¶,đ'u,«Š·,ì,é,ì,Ä,È,¶CŠg'â,μ,½,¶ê¶¶,ª, ,è,Ü,·¶Bf¶¶[fjfk¶fnf“fhf%o,í¶^—¶,đ¶l,ì,é,Æ—

áŠOfCf“fXf^f“fX,đ”pŠü,·,é,ì,Ä¶C¶ã^Êfuf¶bfN,ìfnf“fhf%o,í<@“\,μ,Ü,¹,ñ¶B,μ,©,μ¶Cfnf“fhf%o,ª
—áŠO,đ”pŠü,μ,È,¶,æ,¶,É,μ,Ä¶ã^Êfnf“fhf%o,É%ož“š,ì<@%oï,đ—^,ì,é,±,Æ,ª,Ä,«,Ü,·¶B

—áŠO,ª<N,«,½¶ê¶¶C%o½,©,ìŽí—p,ìf¶bfZ¶[fW,đft¶[fU¶[,É·\Žì,μ,Ä,©,ç·W¶€¶^—
¶,É¶i,p,ì,ª·¶Ê,Ä,·¶B,»,¶,·,é,É,ìf¶bfZ¶[fW,đ·\Žì,·,é¶¶[fjfk—áŠOfnf“fhf%o
,đ¶éÆ¾,μ¶C,»,ìÆã,É—\ñÆê,ì **raise** ,đÆÄ,Ñ¶o,μ,Ü,·¶B

{ ·¶ } ·”,ìfR¶[fh,ª—áŠO,đ¶¶—,·,é,ÆŠO'¶,ì **except** ·”,ìfnf“fhf%o,¾,ª,ªŽÀ¶s,³,è,Ü,·¶B,μ,©,μ
{ “ÁŽè,È·¶ } ·”,ìfR¶[fh,ª—áŠO,đ¶¶—,·,é,Æ“à'¶,ì **except** ·”,ì¶^—
¶,ªŽÀ¶s,³,è¶C,»,ìÆã,ÉŠO'¶,ì **except** ·”,ì^è”È“l,È¶^—¶,ª±,«,Ü,·¶B

—áŠO,đÄ¶¶—,·,é,ì¶CŠü'¶,ìfnf“fhf%o,đŽ,·,ì,·,ü,½,í¶d·i,³,¹,·,¶j,É“ÁŽè,È¶ê¶¶,ì“ÁŽè,È—
áŠO¶^—¶,đŠÈ'P,É'ñ<Ÿ,Ä,«,Ü,·¶B

—á03143

ŽŸ,lfR[fh,í—áŠO,ðÄ¶¶¬,μ,Û,·B

```
try
  { •¶ }
  try
    { “ÁŽê,È•¶ }
  except
    on ESomething do
      begin
        { “ÁŽê,È•¶,ì,½,ß,¾,¬,ì^— }
        raise; { —áŠO,ðÄ¶¶¬,μ,Û,· }
      end;
    end;
  except
    on ESomething do ...; { ,:×,Ä,ìê¶,ì^— }
  end;
```

ŽQÆ03144

—áŠOfnf“fhf%oo,ìììì—

ffftHf<fg,ì—áŠOfnf“fhf%oo,ì'ň<Ÿ

—áŠO,ìfNf%ofX,ì^—

fRf“f|□[flf“fg—áŠO,ì□^—□03145

ŽQ□Æ —á

Delphi fRf“f|□[flf“fg,ÍfGf%□□[□đCE□,đŽ!,·,½,β,É—áŠO,đ□¶□□—,μ,Ü,·□B,Ù,Æ,ñ,Ç,lfRf“f|□[flf“fg—
áŠO,í“¼,ì□ê□‡,È,çŽÀ□sŽžfGf%□□[,³□¶□□—,³,è,éfvf□fOf%□f~f“fOfGf%□□[,đŽ!,μ,Ä,ç,Ü,·□BfRf“f|
□[flf“fg—áŠO,đ□^—□,·,éŽd'g,Ý,ÍŽÀ□sŽž—áŠO,ì□^—□,Æ“~,¶,Å,·□B

fRf“f|□[flf“fg,ÅfGf%□□[,²·N,«,é^ê”É“l,ÈCE´^ö,ÍfCf“fffbfNfX•t,«fvf□fpfefB,ì”í^ÍfGf
%□□[,Å,·□B,½,Æ,ì,ÍfŠfXfgf{fbfNfX,É 3 ,Â,ì□€-Ú (0..2) ,³“ü,Á,Ä,ç,ÄfAfvfŠfP□[fvf‡f“,©,ç□€-
Ú”Ô□+ 3 ,ÉfAfNfZfX,μ,æ,α,Æ,·,é,Æ□CfŠfXfgf{fbfNfX,í□u”í^ÍŠOfCf“fffbfNfX□v—
áŠO,đ□¶□□—,μ,Ü,·□B

-á03146

ŽŸ,lfCxf"fgfnf"fhf%,É,Íft[fU[,ÉfŠfXfgf{fbfNfX,Á,ì-³EøfCf"ffbfNfXfAfNfZfX,ð'É'm,;é-
áŠOfnf"fhf%,³"ü,Á,Ä,ç,Ü,·B

```
procedure TForm1.Button1Click(Sender: TObject);  
begin  
  ListBox1.Items.Add('a string');      { fŠfXfgf{fbfNfX,É•Ÿš-ñ,ð'Ç  
%Á,μ,Ü,· }  
  ListBox1.Items.Add('another string'); { •É,ì•Ÿš-ñ,ð'Ç%Á,μ,Ü,· }  
  ListBox1.Items.Add('still another string'); { 3 "Ô-Ú,ì•Ÿš-ñ,ð'Ç  
%Á,μ,Ü,· }  
  try  
    Caption := ListBox1.Items[3];      { ftfH[f€,lfLfffvJvf#f",ÉfŠfXfgf{fbfNfX"à,ì  
4 "Ô-Ú,ì•Ÿš-ñ,ðŸ'è,μ,Ü,· }  
  except  
    on EListError do  
      MessageDlg('List box contains fewer than four strings', mtWarning,  
[mbOK], 0);  
    end;  
  end;
```

f{f^f",ð 1 %ñfNfŠfbfN,·,é,ÆCfŠfXfgf{fbfNfX,É,í 3 ,Á,ì•Ÿš-ñ,μ,©"ü,Á,Ä,ç,È,ç,ì,ÅC4 "Ô-
Ú,ì•Ÿš-ñ (Items[3]) ,í-áŠO,ðŸŸ-μ,Ü,·B,à,π 1 %ñfNfŠfbfN,·,é,ÆfŠfXfg,É•Ÿš-ñ,³Ç
%Á,³,é,é,ì,ÅC-áŠO,í,»è^Èă<N,«,È,,È,è,Ü,·B

ŽQÆ03147

fR[fhfuffbfN,ì•ÚĚì

fŠf[fXŠ,,è“-,Ä,ì•ÚĚì

ŽÄ[sŽž—áŠO,ì^—

ft[fU[“ÆŽ©,ì—áŠO,ìè<`

ftfCfCef“fg—áŠO03148

ŽQ□Æ —á

Delphi fAfvfŠfP□[fVf#f“, í□^—□, ì, ½, ß, ìfR□[fh, á“Á, É□’, ©, ê, Ä, ç, È, ç—áŠO, ð□^—□, ·, é□ê□#□C, ½, ç, Ä, ç, í—áŠOfIfufWfFfNfg, ©, ç, ìf□fbfZ□[fW•¶Žš—ñ, á“ü, Á, ½f□fbfZ□[fWf{fbfNfX, ð•\ Žì, μ, Ü, ·□BffftfHf<fg, ĀfAfvfŠfP□[fVf#f“, ÉfGf%□□[f□fbfZ□[fW, ð•\Žì, ³, ¹, É, ç□ufTfCfCef“fg□v— áŠO, à’è<’, Ā, «, Ü, ·□B

ftfCfCef“fg—áŠO, í—áŠO, ð□^—□, ·, é, Ā, à, è, í, È, ç, á’É□ì, ð<□\$□I—¹, μ, ½, ç, Æ, ç, π□ê□#, É—ð— š, ÿ, Ü, ·□B’É□ì, ì<□\$□I—¹, í Break Žè’±, «, â Exit Žè’±, «, ðŽg, Á, Āfuf□fbfN, ð’t’f, ·, é, ±, Æ, É, æ, Ž—, Ä, ç, Ü, ·, á□CfIfXfg, μ, ½•i□”, ìfuf□fbfNfCfCefxf<, ð’t’f, Ā, «, Ü, ·□B

, ·, x, Ä, ìftfCfCef“fg—áŠO, í•W□€—áŠOÉ^, ì EAbort , ðCEp□³, μ, Ä, ç, Ü, ·□B Delphi fAfvfŠfP□[fVf#f“, ì□ê□#□CffftfHf<fg, ì—áŠOfnf“fhf%□, í EAbort , ðCEp□³, μ, ½—áŠO, ð□œ, ·, x, Ä, ì— áŠO, É’í, μ, ĀfGf%□□[f□fbfZ□[fWf_fCfAf□fOf{fbfNfX, ð•\Žì, μ, Ü, ·□B

ftfCfCef“fg—áŠO, ð□¶□□—, ·, é, ½, ß, ìfVf#□[fgfjfbfg, á, , è, Ü, ·□B Žè“® , ĀfIfufWfFfNfg, ð□\’z, ·, é, ©, í, è, É Abort Žè’±, «, ðCEĀ, Ń□o, ¹, Ü, ·□B Abort , íŽ“®“I, É EAbort —áŠO, ð□¶□□—, ·, é, ì, Ā□CfGf %□□[f□fbfZ□[fW, á•\Žì, ³, è, , , ÉCE»□Ý, ì’É□ì, á’t’f, ³, è, Ü, ·□B

—á03149

ŽŸ,lfR[fh,í'€ì,ð<[f,·,é'P[f,È—á,ðŽ!,μ,Ä,ç,Ü,·[B<ó,lfŠfXfgf{fbfNfX,Æf{f^f",ä"ü,Á,Ä,ç
,éftfH[f€[f,Ä[CŽŸ,lfR[fh,ðf{f^f",ì OnClick fCxf"fg,ÉfAf^fbf` ,μ,Ü,·[B

```
procedure TForm1.Button1Click(Sender: TObject);  
var  
    I: Integer;  
begin  
    for I := 1 to 10 do      { 10 %ñf<[fv,μ,Ü,· }  
        begin  
            ListBox1.Items.Add(IntToStr(I));  { fŠfXfg,É["l,ì•¶Žš•\Œ»,ð'Ç%Á,μ,Ü,· }  
            if I = 7 then Abort;  { 7 %ñ-Ú,ìŒã,É<[f,· }  
        end;  
    end;  
end;
```

ŽQÆ03150

fR[fhfuffbfN,ì•ÚĚì

fŠf[fXŠ,,è“-Ä,ì•ÚĚì

ŽÀ[sŽž—áŠO,ì^—

fRf“f[f“fg—áŠO,ì^—

ft[fU[“ÆŽ©,ì—áŠO,ìè<`

ŽQÆ03152

fR[fhfuffbfN,ì•ÚĚì

fŠf[fXŠ,,è“-,Ä,ì•ÚĚì

ŽÀ[sŽž—áŠO,ì^—

fRf“f|f|f“fg—áŠO,ì^—

fTfCfĚf“fg—áŠO

—áŠOfjfufWfFfNfgCE^,ìéCE¾03153

ŽQAE —á

—áŠO,lfjfufWfFfNfg,È,ì,Á□□V,μ,ϕŽí—p,ì—áŠO,ð'è<` ,:é,±
,Æ,í□V,μ,ϕfjfufWfFfNfgCE^,ðéCE¾, :é,ì,Æ“~,¶,,ç,ϕŠÉ'P,Á,·□B,Ç,ì,æ,κ
,ÈfjfufWfFfNfgfCf“fXf^f“fX,Á,à—áŠO,Æ,μ,Ä□¶□—,Á,«,Û,·,ªC•W□€—áŠOfnf“fhf%o,í
Exception ,ðEp³,μ,½—áŠO,¾,¯,ð^—□,μ,Û,·□B
,μ,½,ª,Á,Ä□□V,μ,ϕ—áŠOCE^,í Exception ,Û,½,í,»,ì'¼,ì•W□€—
áŠO,©,ç“h□¶,³,¹,é,ì,ª“¾□ô,Á,·□B,»,κ,·,ê,î□V,μ,ϕ—áŠO,ð,»,ì—áŠO—p,ì“Á'è,ì—áŠOfnf“fhf%o
,É,æ,Á,Ä•ÛCEì,³,ê,Ä,ϕ,È,ϕfR□[fhfuf□fbfN,ì't,Á□¶□—,μ,½□ê□‡,Á,à□C•W□€fnf“fhf%o,ì 1
,Á,ª,©,í,è,É,»,ì—áŠO,ð^—□,μ,Û,·□B

—á03154

,½,Æ,¡,îŽŸ,ìéĈ¾,ð□,¡,Ä,Ý,Ü,·□B

type

```
EMyException = class (Exception);
```

EMyException ,ð□¶□¬,μ□CEMyException —p,ì“Á'è,ìfnf“fhf%o

,đ'ň<Ÿ,μ,È,©,Á,½□ê□#□CException (,Ü,½,íffftfHf<fg,ì—áŠOfnf“fhf%o) ,ª,»,ê,ð□^—

□,μ,Ü,·□BException —p,ì•W□€,ì□^—□,í□¶□¬,³,ê,½—áŠO,ì-¼'O,đ•\Ž!,·,é,±,Æ,È,ì,Å□C□,È,-

,Æ,àŽ©•ª,ª□ì□¬,μ,½□V,μ,¢—áŠO,ª□¶□¬,³,ê,½,±,Æ,ª,í,©,è,Ü,·□B

ŽQÆ03155

—áŠO,ì¶¶—

—áŠO,ì□¶□—03156

ŽQ□Æ

fAfvfŠfP□[fvf†f“,ì’t,ÅfGf%□□[ðCE□,ðŽì,·,½,β□C—áŠO,ð□¶□—,μ□C,» ,é,É“~ ,¶—
áŠOCE^ ,ìfCf“fXf^f“fX,ð□\’z,³,¹,Ä—\—ñCEè **raise** ,ðCEÄ,Ñ□o,³,¹,é,±,Æ,ª,Å,« ,Ü,·□B

—áŠO,ð□¶□—,·,é,É,í□C—\—ñCEè **raise** ,ð,» ,ìCEä,É—
áŠOfifufWfFfNfg,ìfCf“fXf^f“fX,ð•t,~ ,ÄCEÄ,Ñ□o,μ,Ü,·□B

—áŠO,ðŽÀ□Ú,É□^—□,μ,½—áŠOfnf“fhf%□,í□ÅCEä,É—
áŠOfCf“fXf^f“fX,ð”pŠü,·,é,ì,Å□C”pŠü,ì,½,β,ìfR□[fh,ð□’,•K—v,í, ,è,Ü,¹,ñ□B

—áŠOfAfhfCEfX,ì□Ý’è

—áŠO,ª□¶□—,³,é,é,Æ□CfAfvfŠfP□[fvf†f“,ª—áŠO,ð□¶□—,μ,½fAfhfCEfX,ª System ftjfjfbfg“à,ì
ErrorAddr •ì□”,ÉŠì”[,³,é,Ü,·□B—áŠOfnf“fhf%□,ì’t,Å ErrorAddr ,ðŽQ□Æ,·,é,ì□Cft□[fU□[,ÉfGf
%□□[,ì”□¶□è□Š,ð’É’m,μ,½,è,Å,« ,Ü,·□B—áŠO,ð□¶□—,·,é,Æ,« ,É ErrorAddr ,ì’l,ðŽw’è,·,é,±
,Æ,à,Å,« ,Ü,·□B

—áŠO,ìfGf%□□[fAfhfCEfX,ðŽw’è,·,é,É,í□C—áŠOfCf“fXf^f“fX,ìCEä,É—\—ñCEè **at** ,Æ,» ,é,É±
,~ ,ÄŽ~ •ÉŽq,È,Ç,ìfAfhfCEfXŽ@ ,ð’Ç%□Å,μ,Ü,·□B

—á03157

ŽQÆ03158

—áŠOfjfufWfFfNfgCE^,ìéCE^{3/4}

—áŠO,ìÄ¶¶¶

Object Pascal $\text{CE}^{\frac{3}{4}}\text{CE}^{\hat{e}}, \text{i} \cdot \text{i} \square \text{X} _ 03159$

, ±, ±, Å, í □ CDelphi , ì Object Pascal $\text{CE}^{\frac{3}{4}}\text{CE}^{\hat{e}}, \text{i} \cdot \text{i} \square \text{X}^{\frac{3}{4}}, \hat{e}, \frac{1}{2} _ , \delta$ Borland Pascal 7.0 , ìft □ [fU □ [—
p, É—v—ñ, μ, Å, ç, Ü, □ BBorland Pascal 7.0 , ðŽg, Å, $\frac{1}{2}, \pm, \text{AE}, \hat{e}, \text{çft} \square [fU \square [, \hat{e}$ Object Pascal , É, Å, ç
, ÅŠw □ K, μ, $\frac{1}{2}, \text{ç} \square \hat{e} \square \ddagger, \text{í} \square \text{CE}^{\frac{3}{4}}\text{CE}^{\hat{e}} \text{'è} \text{ç} _ , \delta \text{Ž} \text{Q} \square \text{AE}, \mu, \text{Å}, \frac{3}{4}, \frac{3}{4}, \text{ç} \square \text{B}$

—áŠÖ □ ^ — □

—áŠÖ □ ^ — □, Å, í fAf v f Š f P □ [f v f f " , ð □ [—¹, ¹, , É f G f % □ [, ð □ ^ — □, Å, «, Ü, □ B □ Ú □ ×, í —áŠÖ □ ^ —
□, ð Ž Q □ AE, μ, Å, $\frac{3}{4}, \frac{3}{4}, \text{ç} \square \text{B}$

□ V, μ, ç f l f u f W f F f N f g f, f f f <

Delphi , Å, í □ V, μ, ç f l f u f W f F f N f g f, f f f <, ð Ž g, ç
, Ü, □ CCE Å, ç f X f ^ f C f <, í f l f u f W f F f N f g, AE □ V, μ, ç f X f ^ f C f <, í f l f u f W f F f N f g, ð • É □ X, ì f t f j f b f g, Å □ é CE $\frac{3}{4}, \mu$,
Å □ C " ^ , í f v f □ f O f % □ f € , Å — $\frac{1}{4} \cdot \hat{u}$, í f l f u f W f F f N f g, ð Ž g, x, ±, AE, à, Å, «, Ü, □ B, μ, ©, μ □ C, ±
, ê, ç, í f l f u f W f F f N f g, É, í — $\frac{3}{4} \text{Šm}$, É ^ á, ç, ^a, , é, ±, AE, ð " F Ž ^ , μ □ C f t □ [fU □ [, ì Ó " C, Å ^ á, ç, É ^ í % Ž, μ, Å, -
, $\frac{3}{4}, \frac{3}{4}, \text{ç} \square \text{B}$

CE Å, ç f X f ^ f C f <, í f l f u f W f F f N f g, Å — \ — ñ CE **object** , ð Ž g, ç
, É, ^a, ç □ C □ V, μ, ç f X f ^ f C f <, í f l f u f W f F f N f g □ é CE $\frac{3}{4}, \text{Å}, \text{í}$ **class** , ð Ž g, x, ±, AE, É ' □ ^ Ó, μ, Å, $\frac{3}{4}, \frac{3}{4}, \text{ç} \square \text{B}$

Ž Ÿ, ì • i □ X, í f o □ [fW f f " 7.0 ^ È ' O, í f l f u f W f F f N f g f, f f f <, ð Ž g, x f l f u f W f F f N f g, É " K — p, ³, è, Ü, □ B

- protected • (f p f u f Š f b f N " , AE f v f % □ f C f x □ [f g " , É % □ Å, í, Å)
- published •

Ž Ÿ, ì • i □ X, í □ V, μ, ç (f o □ [fW f f " 7.0 , æ, è CE ä, ì) f l f u f W f F f N f g, É, $\frac{3}{4}$, " K — p, ³, è, Ü, □ B

- f l f u f W f F f N f g □ é CE $\frac{3}{4}, \text{i} \cdot \text{i} \square \text{X}$
- f l f u f W f F f N f g, ì Ž g, ç • ù, ì • i □ X
- f v f □ f p f e f B
- f □ \ f b f h f f f B f X f p f b f ^ , ì • i □ X

f l □ [f v f " " z — ñ, ì □ \ • □

f l □ [f v f " " z — ñ, ì □ \ • □, Å, í □ C " z — ñ, ð □ [—, μ, Å p f % □ f □ [f ^ , AE, μ, Å " n, , ±, AE, ^a ^ è " x, É, Å, «, Ü, □ B " z —
ñ f p f % □ f □ [f ^ , ð □ [—, , é, É, í □ C " z — ñ — v ' f, ì ' l, ð Š p f j f b f R [] , Å ^ í, Ý, Ü, □ B □ Ú □ ×, í f l □ [f v f " " z — ñ f p f
% □ f □ [f ^ , ð Ž Q □ AE, μ, Å, $\frac{3}{4}, \frac{3}{4}, \text{ç} \square \text{B}$

• i □ , í CE ^ , ð Š Ÿ, p CE ^ • Ú □ Ø, í f l □ [f v f " " z — ñ

□ V, μ, ç □ \ • □, ì **array of const** , Å, í • i □ , í CE ^ , í f l f u f W f F f N f g, í f l □ [f v f " " z —
ñ, ð □ CE ^ , ð • Ú □ Ø, μ, Å Ž è ' ±, «, Ü, $\frac{1}{2}$, í Š Ö □ , É " n, ¹, Ü, □ B, ±, ì □ \ • □, ð Ž g, í, í □ C • i □ , í CE ^ , ì □ € —
Ú, ð " C ^ Ó, ì □ , $\frac{3}{4}$, " Ž ó, " ü, è, é CE ^ Ž @ f < □ [f ^ f " , ð □ é CE $\frac{3}{4}, \text{Å}, \text{«}, \text{Ü}, \square \text{B}$

Š Ö □ , ì Result • i □

, Ç, ì Š Ö □ , à □ C Š Ö □ , ì — ß, è ' l, AE " ^ , í CE ^ , í f □ □ [f j f < • i □ " Result , ð ^ Å — Ü, É Ž □ , Å, Å, ç, Ü, □ B Result
, Ö, ì " ä " ü, í □ C, » , ì Š Ö □ " — $\frac{1}{4}$, Ö, ì " ä " ü, AE " ^ , í CE Ø % □ É, ð Ž □ , ç, Ü, □ B

, μ, ©, μ □ C □ Ä ^ A Š Ö □ " CE Å, Ñ □ o, μ, ð □ □ [—, , é, ì, Å, í, É, CE » □ Ý, ì — ß, è ' l, ð Ž Q □ AE, , é " ä " ü • □, ì % □ E " x, Å, à
Result , ð Ž Q □ AE, Å, «, Ü, □ B

Š Ö □ , í CE < % □ É, í CE ^

' P □ [f CE ^ □ C • i □ □ CE ^ □ C • W □ € CE ^ , Ü, $\frac{1}{2}$, ì f t □ [f U □ [' è < ' CE ^ , Å, à □ CE Å, ç f X f ^ f C f <, í f l f u f W f F f N f g (f N
% □ f X, É ' í, , é, à, ì, AE, μ, Å) □ C f e f l f X f g CE ^ , ì f t f □ f C f <, Ü, $\frac{1}{2}$, í **file of** CE ^ , ì f t f □ f C f <, ð □ œ, ç
, Å □ C Š Ö □ , í, Ç, í CE ^ , à • Ö, ¹, Ü, □ B Š Ö □ , í CE < % □ É, AE, μ, Å f l f u f W f F f N f g, ð □ ^ — □, , é — B ^ è, ì • ù —
@, í f l f u f W f F f N f g f l f C f " f ^ , ð Ž g, x, ±, AE, Å, □ B

case • □, ì □ Å " K % □ »

case •¶,É%Á,¡,ç,ê,½•ïX“_„žŸ,ÉŽ!,μ,Ü,·B

- case •¶,ì”í^í,í□d,È,Á,Ä,í,È,ç,È,ç
- case 'è”„ž□.□‡,É”z’u,·,é,Æ□CfRf“fpfCf%„,í-^%„ñŒvŽZ,·,é,ì,Å,í,È,□CfWffff“fv,žŽg,Á,Ä

case „ž□Å“K%„»„Å,«„é

fxfr [fv03160

žQAE —á CE¾CEè'è`

fvfOf%of€ ,Ü,½,íftfjfbfg“à,ìž`•Éžq,ìfxfr [fv,íC,» ,ìž`•Éžq,³fvfOf%of€
 ,Ü,½,íftfjfbfg“à,ì¼,ìžè±,« ,Ü,½,íSÖ” ,Ážg,ì,é,©,Ç,α,©,đ`è` ,μ,Û,·B

fxfr [fv,íf [fjfk, ©fOf [fof< ,ì,Ç,ž,ç,©,Á,·Bf [fjfkž`•Éžq,ì,» ,ìž`•Éžq,đéCE¾,μ,½fuf [fbfN,
ÉŠÛ,Û,è,éf [f`f“ ,ÆéCE¾,É´,μ,Á,¾,`%oÁž< ,É,È,è,Û,·B

fOf [fof<ž`•Éžq,íftfjfbfg,ìCf“f^ [ftfF [fxzfNfvfj““à,ÁéCE¾,³,èC,» ,íftfjfbfg“à,ì,·,x,Á,ìf<
 [f`f“ ,ÆéCE¾,É´,μ,Á%oÁž< ,É,È,è,Û,·B

fvfOf%of€, ì` çÝEv,Á,íCfxfr [fv,ÉŠÖ,·,éžÿ,ì 3 ,Á,ì<K'¥,É],Á,Á,,¾,¾,çB

▪ Šež`•Éžq,ì,» ,ìž`•Éžq,³éCE¾,³,è,½fuf [fbfN“à,ÁCéCE¾,³,è,½^É'u^È~ ,Á,¾,`^Ó-
 j,đž,Á

fuf [fbfN“à,ÁfOf [fof<ž`•Éžq,đÄ'è` ,·,éèè#CéCE¾^É'u,©,çfuf [fbfN,ì,í,è,Û,Á,ìSÖCÁ,à“
 à`α,ì (Á,àfXfg,³ [ç) 'è` ,ª—Dæ,³,è,é

▪ Žè±,« ,đÄ<A“ì,ÉCEÄ,Ño,·è#CfOf [fof<·ï” ,Ö,ìžQAE,Á,ì,» ,ì·ï” ,ª`è` ,³,è,½žè±
 ,« ,đ`è” ÖÁCEã,ÉCEÄ,Ño,μ,½,Æ,« ,ì·ï”fCf“fxf^f“fx,³í,ÉžQAE,³,è,é

fxfr [fv,É,ì,ç,·,Á,©,ìží—b,ª, ,è,Û,·B

fuf [fbfN,ìfxfr [fv

fRf“f [f“fg,ìfxfr [fv

fRf“f [f“fg,ì%oÁž<«

ftfjfbfg,ìfxfr [fv

fCf“f^ [ftfF [fxž`•Éžq,Æ·W€ž`•Éžq,ìfxfr [fv

ŽQÆ03161

fOf□□[fof<•i□”,Æf□□[ff<•i□”

fXfR□[fv,ì<K’¥

fRf“f|□[flf“fg,lfXfR□[fv03162

ŽQ□Æ fxfr□[fv

fNf%ofXCE^,Å□éCE¾,³,è,½fRf“f|□[flf“fgŽ~•ÊŽq,lfXfR□[fv,í□C□éCE¾,ì^Ê'u,©,çfNf
%ofXCE^'è<`,ì□l,í,è,Ü,Å,É,í,½,è□C,³,ç,ÉfNf%ofXCE^,ì,·,×,Ä,ì%oo^ÊfNf%ofX,ÆfNf
%ofXCE^,ì,·,×,Ä,lf□f□fbfh□éCE¾,lfuf□fbfN,É<y,Ñ,Ü,·□B,Ü,½□CfRf“f|
□[flf“fgŽ~•ÊŽq,lfXfR□[fv,É,íftfB□[f<fh□Cf□f□fbfh□Cfvf□fpfefB,ìŽw'èŽq,É%oÁ,!,Ä□C,»,lfNf
%ofXCE^,ì•l□”,ð'€□ì,·,é **with** •¶,ªŠÜ,Ü,ê,Ü,·□B

fNf%ofXCE^,Å□éCE¾,³,è,½fRf“f|□[flf“fgŽ~•ÊŽq,lfNf%ofXCE^,lf□f
fbfh□éCE¾,lfuf□fbfN,Å□Ä□éCE¾,Å,«,Ü,·□B,»,ì□ê□f□CSelf fpf
%of□□[f^,ðŽg,Á,ÄŽ~•ÊŽq,ª□Ä□éCE¾,³,è,½fRf“f|□[flf“fg,ÉfAfNfZfX,Å,«,Ü,·□B

□ã^Ê,lfNf%ofXCE^,Å□éCE¾,³,è,½fRf“f|□[flf“fgŽ~•ÊŽq,í,»,lfNf%ofXCE^,ì%oo^ÊfNf
%ofX,Å□Ä□éCE¾,Å,«,Ü,·□B,±,ì,æ,æ,É□Ä□éCE¾,Å,íCep□³fRf“f|□[flf“fg,ðCEø%oÊ“l,É
%oB,μ,Ü,·,ª□CfL□[f□□[fh **inherited** ,ðŽg,Á,ÄCep□³fRf“f|□[flf“fg,ðfXfR□[fv“à,É-ß,·,±
,Æ,à,Å,«,Ü,·□B

ŽQÆ03163

fufbfN,ifXfR[fv

fXfR[fv,ìK'¥

fCf" f^[[ftfF[fXŽ·ÊŽq,Æ·W[€Ž·ÊŽq,ifXfR[fv

ftfjfbfg,ifXfR[fv

fuf□fbfN,lfXfR□[fv03164

ŽQ□Æ —á fXfR□[fv

fuf□fbfN“à,Å,í□CŽ⁻•ÉŽq,Ü,½,lf

%ofxf<,lfXfR□[fv,í□éC^¾,í[^]É’u,©,çC[»]□Ý,lfuf□fbfN,ì□l,í,è,Ü,Å,É,È,è□C,·,x,Ä,lfXfgfuf□fbfN,ªŠÜ,Ü,ê,Ü,·□B

flfXfg,μ,½fuf□fbfN“à,ÅŽ⁻•ÉŽq,ðf□[fo□[f

%ofCfh,μ,½□ê□#□C□V,μ,çŽ⁻•ÉŽq,lfXfR□[fv,lfXfgfuf□fbfN“à,¾,¯,ÉCÀ,ç,êŠO,Ö,í□L,ª,è,Ü,¹,ñ□B

C[^]Ž⁻•ÉŽq,lfXfR□[fv,íC[^]□éC^¾,ª,³,ê,½fuf□fbfN“à,Å,lf□□[fff<,È,à,ì,É,È,è,Ü,·□Bf|

fCf“f[^]C[^],ð□œ,ç,Ä□C□éC^¾,É,í,»[,]êŽ□□g,ÍŠÜ,Ü,ê,Ü,¹,ñ□B

—á03165

```
program Outer; { ŠO•"fXfR[]fv,ìŽn,Ü,è }
type
  I = Integer; { I ,đ[]@[]"Ĉ^,Æ,μ,Ä'è<` ,μ,Ü,· }
var
  T: I; { T ,đ[]@[]"•ĭ[]",Æ,μ,Ä'è<` ,μ,Ü,· }
procedure Inner; { "à•"fXfR[]fv,ìŽn,Ü,è }
type
  T = I; { T ,đ[]@[]"Ĉ^,Æ,μ,Ä[]Ä'è<` ,μ,Ü,· }
var
  I: T; { I ,đ[]@[]"•ĭ[]",Æ,μ,Ä[]Ä'è<` ,μ,Ü,· }
begin
  I := 1;
end; { "à•"fXfR[]fv,ì[]I,í,è }
begin
  T := !;
end. { ŠO•"fXfR[]fv,ì[]I,í,è }
```

ŽQÆ03166

ftfjfbfg.lfXfR□[fv

fXfR□[fv,l<K'¥

fCEfR[fh,lfXfR[fv03167

ŽQÆ fXfR[fv

fCEfR[fhĈ'è<,ĀéĈ¼,³,ê,éftfB[f<fhŽ•ÊŽq,lfXfR[fv,íCéĈ¼,îĈ'ú,©,cfCEfR[fhĈ'è<,ì,í,è,É,Û,Ā<y,Ń,Û,·B

ftfB[f<fhŽ•ÊŽq,lfXfR[fv,É,íftfB[f<fhŽw'èŽq,Æ,»),lfCEfR[fh,ì,ï"ŽQÆ,ð'€),·,é with
•¶,ªŠÛ,Û,ê,Û,·B

ŽQÆ03168

fĈfR[fhĈ^

fXfR[fv,łK'¥

ftfjfbfg,lfXfR[]fv03169

ŽQ[]Æ fXfR[]fv

ftfjfbfg,lfCf“f^[]ftfF[]fX•” ,Å[]éCE¾,¾,é,éŽ-•ÉŽq,í[]C,» ,ìŽ-•ÉŽq,ðŠÜ ,pftfjfbfg,ð uses []ß,ÅŽw’è, ,é¼,lfvf[]fOf%of€ ,Ü,½,lfTfjfbfg,ÅŽg—p,Å,«,Ü,·[]B

uses []ß,Å•;[]” ,lfTfjfbfg,ªŽw’è,¾,é,é[]ê[]#[]CŽÿ,ì<K’¥,ª“K—p,¾,é,Ü,·[]B

- Šeftfjfbfg,lfXfR[]fv,É,Í,» ,é,É’±, ,·,×,Ä,lfTfjfbfg,Æ[]Cuses []ß,ðŠÜ ,p,lfvf[]fOf%of€ (,Ü,½,lfTfjfbfg) ,ªŠÜ,Ü,é,é
- []Å[]%o,lfTfjfbfg,ª[]Å,àŠO’x,lfXfR[]fv,ð’è<` ,µ[]C[]ÅCEã,lfTfjfbfg,ª[]Å,à“à’x ,lfXfR[]fv,ð’è<` ,·,é[]B,µ,½,ª,Å,Ä[]CŽ-•ÉŽq,ª•;[]” ,lfTfjfbfg,Å[]éCE¾,¾,é,é[]ê[]#[]CŽ-•ÉŽq,Ö,ìCEÀ’è,ì,É,çŽQ[]Æ,Å,í[]ÅCEã,lfTfjfbfg,É,æ,Å,Ä[]éCE¾,¾,é,½fCf“fXf^f“fX,ª‘I’ð,¾,é,é[]B•É,lfTfjfbfg,Å[]éCE¾,¾,é,½fCf“fXf^f“fX,ðŽw’è, ,é,É,í[]CCEÀ’èŽ-•ÉŽq,ðŽg,x

f[]f,: System ftfjfbfg,lfXfR[]fv,lfOf[][]fOf<,Å, ,é,½,ß[]C, ,·,×,Ä,lfvf[]fOf%of€,ª Object Pascal
•W[]€Ž-•ÉŽq,ÉfAfNfZfX,Å,«,Ü,·[]BSystem ftfjfbfg,í uses []ß,ÅŽw’è, ,é•K—
v,í, ,é,Ü,¹,ñ[]B

ŽQÆ03170

ĀÀ'èŽq

fXfR[fv,łK'¥

—á03171

```
program scope2;
var
  A: integer;      {fOf□□[fof<•i□"}

procedure SetA;
var
  A : integer;    {f□□[ffj<•i□" A ,ð□i□¬,μ,Ü,·}
begin
  A := 4
end;              {f□□[ffj<•i□" A ,ð"pŠü,μ,Ü,·}

begin
  A := 3;         {fOf□□[fof<•i□" A ,É'l,ð'ã"ü,μ,Ü,·}
  SetA;          {Žè'±,« SetA ,ðĀĀ,Ń□o,μ,Ü,·}
  Writeln(A)    { A ,l'l,í 4 ,Ā,í,È, 3 ,É,È,è,Ü,·}
end.
```

fxfr[fv, i<K'¥03172

ŽQAE fxfr[fv

éCE¾, ÉŽq, Ü, ½, íf%ofxf<, ŠÜ, Ü, è, ééé#CŽ- • ÉŽq, Ü, ½, íf%ofxf<, à'è<, ³, èC, »), iŽ- • ÉŽq, âf %ofxf<, àÄ, ÑŽg, í, è, ééé#É, É, íC, ±, íéCE¾, ífxfr[fv“à, Ä, È, , Ä, Í, È, è, Ü, ¹, ñB

Ž- • ÉŽq, Ü, ½, íf

%ofxf<, ífxfr[fv, íéCE¾^É'u, ©, çCE»Ý, ífuf[fbfN, í, í, è, Ü, Ä, È, È, èCCE»Ý, ífuf[fbfN, à•iŠÜ, µ, Ä, ç, é, , x, Ä, ífuf[fbfN, àŠÜ, Ü, è, Ü, ·B

fxfr[fv, ífufWfFfNfgCE^, ì, ·, x, Ä, ì

%o^ÉfíufWfFfNfg, É, àL, à, èC, »), ífufWfFfNfgCE^, Ö, ì•ï“ŽQAE, ð'€ì, ·, éftB[f·fhŽw'èŽq, AE with ·¶, àŠÜ, Ü, è, Ü, ·B

Žÿ, ì 3 , Ä, i<K'¥, í—áŠO, Ä, ·B

1. •iŠÜ, ³, è, ½fuf[fbfN“à, Ä, ìÄéCE¾

Exterior fuf[fbfN, à•É, ífuf[fbfN Interior , ð•iŠÜ, ·, é, AE'z'è, µ, Ü, ·B Exterior , AE Interior , à“ , ¶-¼' O, iŽ- • ÉŽq (, ½, AE, í, í) , ðŽ, Äéé#C Interior , iŽ © , à, àéCE¾, µ, ½ J , É, ¾, ~fAfNfZfX, Ä, «C Exterior , à Ž © , à, àéCE¾, µ, ½ J , É, ¾, ~fAfNfZfX, Ä, «, Ü, ·B

2. fuf[fbfN“à, ìéCE¾, ì^É'u

Ž- • ÉŽq, AE%ofxf<, íéCE¾, ³, è, è, Ü, Ä, iŽg, í, Ü, ¹, ñB

Ž- • ÉŽq, AE%ofxf<, íCfuf[fbfN, íf%ofxf<“à, Ä, »), iŽ- • ÉŽq, Ü, ½, íf %ofxf<, àŽg, í, è, é' O, ÉéCE¾, µ, È, , Ä, Í, È, è, Ü, ¹, ñB, ½, ¾, µCŽ- • ÉŽq, âf%ofxf<, à-çéCE¾, ìf íCf“f^CE^, ìŠî- { CE^, Ä, , ééé#É, ðœ, «, Ü, ·B, »), ìéé#É, àCE<<Ç, íf íCf“f^CE^, ðŽw'è, ·, é, ì, AE“ , ¶CE^éCE¾, ”, ÄŽ- • ÉŽq, ðéCE¾, µ, È, , Ä, Í, È, è, Ü, ¹, ñB

3. fuf[fbfN“à, Ä, ìÄéCE¾

Ž- • ÉŽq, Ü, ½, íf%ofxf<, íCfuf[fbfN, ìŠO•”fCEfxf<, Ä 1

%oñ, ¾, ~éCE¾, Ä, «, Ü, ·B, ½, ¾, µ•iŠÜ, ³, è, Ä, ç , éfuf[fbfN“à, ÄéCE¾, ·, ééé#É, àCfCEfR[fh, ìftfB[f·fhfŠfXfg, ÄŽw'è, ³, è, Ä, ç , ééé#É, ðœ, «, Ü, ·B

fCEfR[fhftfB[f·fhŽ- • ÉŽq, ífCEfR[fhCE^“à, ÄéCE¾, ³, èC, »), ífCEfR[fhCE^, ì•ï“ , Ö, ìŽQAE, AE'g, Ýé, í, ¹, ½éé#É, É, ¾, ^Ó-í, ðŽ, ì, Ü, ·B

ftfB[f·fhŽ- • ÉŽq, í“ , ¶fuf[fbfN“à, Ä (“ , ¶' Ó, è, Ä)

ìÄéCE¾, Ä, «, Ü, ·, àC“ , ¶fCEfR[fhCE^“à, ì“ , ¶fCEfxf<, Ä, íéCE¾, Ä, «, Ü, ¹, ñB

, ½, ¾, µC, ·, Ä, ÉéCE¾, ³, è, ½Ž- • ÉŽq, í“ , ¶fuf[fbfN“à, ÄftfB[f·fhŽ- • ÉŽq, AE, µ, ÄÄéCE¾, Ä, «, Ü, ·B

ŽQÆ03173

fufbfN,ifXfR[fv

fCf“f^□[ftfF□[fXŽ⁻•ÊŽq,Æ•W□€Ž⁻•ÊŽq,ifXfR□[fv

fRf“f□[fif“fg,ifXfR□[fv

fCefR□[fh,ifXfR□[fv

ftfjfbfg,ifXfR□[fv

fCf“f^[]ftfF[]fX,Æ•W[]€Ž•ÊŽq,ìXfR[]fv03174

ŽQ[]Æ fxfr[]fv

uses []ß, ðŽ[], Áfvf[]fOf%of€ , Ü, ½, ìftfjfbfg, í, » , ì **uses**
[]ß, ĀŽw’è, ³, ê, ½ftfjfbfg, ìfCf“f^[]ftfF[]fX•”, É’ @ , , éŽ•ÊŽq, ÉfAfNfZfX, Ā, «, Ü, ·[]B

uses []ß, ìŠeftfjfbfg, ìŽg, í, è, éŽc, è, ìftfjfbfg, Æ **uses** []ß, ðŠÜ, pfvf[]fOf%of€
, Ü, ½, ìftfjfbfg, ð•iŠÜ, ·, é[]V, μ, cfXfR[]fv, ð—LÆø, É, μ, Ü, ·[]B

uses []ß, ì[]Å[]%o, ìftfjfbfg, ì[]Å, àŠO’x, ìXfR[]fv, ð•\, μ[]C[]ÅÆã, ìftfjfbfg, ì[]Å, à“à’x, ìXfR[]fv, ð•\
, μ, Ü, ·[]B

•i[]”, ìftfjfbfg, a“ , ¶Ž•ÊŽq, ð[]éÆ¾, ·, é[]ê[]#[]CŽ•ÊŽq, Ö, ìÆÀ’è, ì, È, çŽQ[]Æ, Ā, í **uses**
[]ß, ì[]ÅÆã, ìftfjfbfg, É, æ, Á, Ä[]éÆ¾, ³, ê, ½fCf“fXf^f“fX, a’I’ð, ³, ê, Ü, ·[]B

ŽQÆ03175

fufbfN,ifXfR[fv

fR“f[fif“fg,ifXfR[fv

fXfR[fv,ik'¥

ftfjfbfg,ifXfR[fv

Uses []ß

fRf“fpcf%Žw—B: 'è<` ,Æ—p“r03176

ŽQÆ fRf“fpcf%Žw—B

fRf“fpcf%Žw—B, Žg, x, ÆfRf“fpcf%, lffftfHf<fg, l“ @, ðjfxf^f}fCfY, Å, «, Ü, ·BfRf“fpcf% Žw—B, í“Á•É, È\•¶, ðŽ, ÅfRf“fg, ÅCfRf“fg, ð<Lq, Å, «, ééŠ, É, ç, Ç, ±, Å, àŽg, i, Ü, ·BfRf“fpcf%Žw—B, lxfR[fv, lff[fjfk, É, àfOf[fof<, É, à, Å, «, Ü, ·, aC, ·, x, Å, lŽw—B, a—¼•ù, lRf“fefLxfg, ÅŽg, i, é, í, , Å, í, , è, Ü, 1, ñB

- f[fjfk, ÈŽw—B, lfvf[fOf%œftfjfbfg“à, i, Ç, ±, É, Å, àŽw’è, Å, «, éB, ±, è, ç, lŽw—B, lRf“fpcf%—, l^è•”, É, ¾, —p, ·, é
 - fOf[fof<, ÈŽw—B, lRf“fpcf<, ·, évf[fOf%œ, Ü, ½, lftfjfbfg, l’éœ¾•”, l’O, ÅŽw’è, µ, È, - , Å, í, È, ç, È, çB, ±, è, ç, lŽw—B, lRf“fpcf%—, S’i, É—p, ·, é
- fRf“fpcf%Žw—B, í 3, Å, lffefSfŠ, É•a—p, ¾, è, Ü, ·B

fXfCfbf` Žw—B

fXfCfbf` Žw—B, lRf“fpcf%, l<@“\, ðflf“ , Ü, ½, lflft, É, µ, Ü, ·B

1 •¶žš, lŽw—B, lCŽw—B, l•¶žš, l’¼œä, É + , Ü, ½, í - , ðŽw’è, µ, Ü, ·B

’, ç-¼’O, lŽw—B, lè±, lCŽw—B-¼, lœä, É on , Ü, ½, í off , ðŽw’è, µ, Ü, ·B

•j“ , lXfCfbf` Žw—B, ðfOf<[fv%œ], µCjff“f} , Å<œ∅, Å, Å (fXfy[fX, ðŠÜ, B, , É) Žw’è, Å, «, Ü, ·BŽŸ, É—á, ðŽ, i, µ, Ü, ·B

{ \$F+, R+, D- }

, Ü, Æ, ñ, Ç, lXfCfbf` Žw—B, l[mflfvVf+“(O)bfvfWfFfNfg(P)]n, Å•\

Ž, ¾, è, émfvfWfFfNfg, lY’ènf_fCfAfOf{fbfNfX, lCompliernfy[fW, ÅŽw’è, Å, «, Ü, ·B

fpf%ff[f^ Žw—B

fpf%ff[f^ Žw—B, lftf@fCf<-¼CfefLxfgCf, fŠžd—l, È, Ç, lî•ñ, ðfRf“fpcf%, É“n, µ, Ü, ·BŽw—B-¼, Æfpf%ff[f^ , Æ, lŠÔ, É, í 1 , Å^èä, l<ó”fXfy[fX, a•K—v, Å, ·BŽŸ, É—á, ðŽ, i, µ, Ü, ·B

{ \$I TYPES . INC }

{ \$L YOUR . DOC }

f[f, fŠ, ðŠ, „, è“ - , Å, épf%ff[f^ Žw—B, l[mflfvVf+“(O)bfvfWfFfNfg(P)]n, Å•\

Ž, ¾, è, émfvfWfFfNfg, lY’èn, lLinkernfy[fW, ÅY’è, Å, «, Ü, ·B, „, l’¼, lfpf%ff[f^ Žw—B, lR[fh“à, Å¼ÚŽw’è, µ, È, , Å, í, È, è, Ü, 1, ñB

ðœŽw—B, Æðœfvf“f{f<

ðœŽw—B, l[fXfefLxfg, lŠe•”•a, lRf“fpcf<, ðCŽw—B, É±, ç, ÅŽw’è, ¾, è, éVf“f{f<, l•]‰

ž, ÉŠt, Å, ç, Å\$œä, µ, Ü, ·BŽ©•a, Å“ÆŽ©, lVf“f{f<, ð’è< , µ, ½, è Object Pascal

, l’è< , lYVf“f{f<, ðŽg, i, Ü, ·BðœŽw—B, lR[fh“à, ÅŽw’è, µ, È, , Å, í, È, è, Ü, 1, ñB

ŽQÆ03177

ðŒŽw—ß,ÆðŒfVf“f{f<

ðŒŽw—ß,lŽg,ç•û

'è<`ï,ÝVf“f{f<'è<`ï,Ý,ìðŒfVf“f{f<,í CONSOLECWIN32CCPU386CVER90 ,Å,·B 03178

FR“fpfCf%Žw—B,lAf<ftf@fxfbfg□#^ê—03179

ŽQ□Æ

,±,±,Ā,Í Delphi ,ǻTf]□[fg,μ,Ā,č,é,·,×,Ā,lfRf“fpfCf%Žw—B,ǻfAf<ftf@fxfbfg□#,É^ê—•\ Ž!,μ,Ā, ,è,Ů,·□BfŠfXfg,©,çSeŽw—B,ì□Ů□×•\Ž!,ÉfWffff“fv,Ā,«,.,Ů,·□B

| <u>Žw—B</u> | CE ^ | □à-¾ |
|---------------------------------|----------------------|-------------------------------|
| <u>\$A</u> | fXfCbf` | ff□[f^fAf%ofCf“f□f“fg |
| <u>\$ALIGN</u> | fXfCbf` | ff□[f^fAf%ofCf“f□f“fg |
| <u>\$APPTYPE</u> | fpf%of□□[f^ | fAfvfŠfP□[fvf#f“ ,lŽí—P |
| <u>\$B</u> | fXfCbf` | ~_—□•]‰ž |
| <u>\$BOOLEVAL</u> | fXfCbf` | ~_—□•]‰ž |
| <u>\$D</u> | fXfCbf` | fffofbfO□î•ñ |
| <u>\$DEBUGINFO</u> | fXfCbf` | fffofbfO□î•ñ |
| <u>\$D Text</u> | fpf%of□□[f^ | □à-¾ |
| <u>\$DESCRIPTION Text</u> | fpf%of□□[f^ | □à-¾ |
| <u>\$EXTENDSYNTAX</u> | fXfCbf` | Šg'£\•¶ |
| <u>\$H</u> | fXfCbf` | '·,č•¶Žš—ñ |
| <u>\$HINTS</u> | fXfCbf` | fRf“fpfCf%ofqf“fg |
| <u>\$I</u> | fXfCbf` | “ü□o—Íf`fFfbfN |
| <u>\$I FileName</u> | fpf%of□□[f^ | ftf@fCf<,lfCf“fNf<□[fh |
| <u>\$IMAGEBASE</u> | fpf%of□□[f^ | fR□[fhfCf□□[fwfx□[fxfAfhfCEfX |
| <u>\$IOCHECK</u> | fXfCbf` | “ü□o—Íf`fFfbfN |
| <u>\$J</u> | fXfCbf` | □',<□ž,Ý‰Ā“\,ÈCE^•t,<'è□” |
| <u>\$L</u> | fXfCbf` | f□□[fjf<fvf“f{f<□î•ñ |
| <u>\$L FileName</u> | fpf%of□□[f^ | fŠf“fNf fufWfFfNfgftf@fCf< |
| <u>\$LINK FileName</u> | fpf%of□□[f^ | fŠf“fNf fufWfFfNfgftf@fCf< |
| <u>\$LOCALSYMBOLS</u> | fXfCbf` | f□□[fjf<fvf“f{f<□î•ñ |
| <u>\$LONGSTRINGS</u> | fXfCbf` | '·,č•¶Žš—ñ |
| <u>\$M</u> | fXfCbf` | ŽÀ□sŽžCE^□î•ñ |
| <u>\$M StackSize</u> | fpf%of□□[f^ | □Ā'âfXf^fbfNfTfCfY |
| <u>\$MAXSTACKSIZE StackSize</u> | fpf%of□□[f^ | □Ā'âfXf^fbfNfTfCfY |
| <u>\$MINENUMSIZE</u> | fXfCbf` /fpf%of□□[f^ | —ñ<“CE^fTfCfY |
| <u>\$MINSTACKSIZE StackSize</u> | fpf%of□□[f^ | □Ā□~fXf^fbfNfTfCfY |
| <u>\$O</u> | fXfCbf` | □Ā“K‰» |
| <u>\$OPENSTRINGS</u> | fXfCbf` | fI□[fvf“•¶Žš—ñfpf%of□□[f^ |
| <u>\$OPTIMIZATION</u> | fXfCbf` | □Ā“K‰» |

| | | |
|----------------------------|--|---------------------------------|
| <u>\$OVERFLOWCHECKS</u> | fXfCfbf` | □"l%o%oŽZf□[fo□[ftf□□[f`fFfbfN |
| <u>\$P</u> | fXfCfbf` | f□[fvf"•¶Žš—ñfpf%o□□[f^ |
| <u>\$Q</u> | fXfCfbf` | □"l%o%oŽZf□[fo□[ftf□□[f`fFfbfN |
| <u>\$R</u> | fXfCfbf` | "í^íj`fFfbfN |
| <u>\$R FileName</u> | fpf%of□□[f^ | fŠf□[fXftf@fCf< |
| <u>\$RANGECHECKS</u> | fXfCfbf` | "í^íj`fFfbfN |
| <u>\$REFERENCEINFO</u> | fXfCfbf` | fVf"f{f<ŽQ□Æ□í•ñ |
| <u>\$RESOURCE FileName</u> | fpf%of□□[f^ | fŠf□[fXftf@fCf< |
| <u>\$SAVEDIVIDE</u> | fXfCfbf` | Pentium ,í^À'S,È FDIV %o%oŽZ |
| <u>\$STACKFRAMES</u> | fXfCfbf` | Windows fXf^fbfNftf□[f€ |
| <u>\$T</u> | fXfCfbf` | CE^•t,< @ %o%oŽZŽq |
| <u>\$TYPEDADDRESS</u> | fXfCfbf` | CE^•t,< @ %o%oŽZŽq |
| <u>\$TYPEINFO</u> | fXfCfbf` | ŽÀ□sŽžCE^□í•ñ |
| <u>\$U</u> | fXfCfbf` | Pentium ,í^À'S,È FDIV %o%oŽZ |
| <u>\$V</u> | fXfCfbf` | •í□"•¶Žš—ñf`fFfbfN |
| <u>\$VARSTRINGCHECKS</u> | fXfCfbf` | •í□"•¶Žš—ñf`fFfbfN |
| <u>\$W</u> | fXfCfbf` | Windows fXf^fbfNftf□[f€ |
| <u>\$WARNINGS</u> | fXfCfbf` | fRf"fpfCf%oCEx□□ |
| <u>\$WRITABLECONST</u> | fXfCfbf` | □',<□ž,Ý%oÂ"\,ÈCE^•t,<'è□" |
| <u>\$X</u> | fXfCfbf` | Šg'£□\•¶ |
| <u>\$Y</u> | fXfCfbf` | fVf"f{f<ŽQ□Æ□í•ñ |
| <u>\$Z</u> | fXfCfbf` | f□□[fhfTfCfY—ñ<"CE^ |
| f□f.: | ^È□ã,ìŽw—β,ì,Ù,Æ,ñ,Ç,í□mfvf□fWfFfNfg(P)□bflfvfVf#f"(O)□n,Â•\ Ž!, ³ ,è,é□mfvf□fWfFfNfg,ì□Ý'è□nf_fCfA□fOf{fbfNfX,ì□mCompiler□nfy□[fW,Â□Ý'è,Â,<, Ü,·□B | |

ŽQÆ03180

ðŒŽw—ß,ÆðŒfVf“f{f<

fRf“fpfCf%Žw—ß,ì'è<`,Æ—p“r

ðŒŽw—ß,ìŽg,ç•û

ŽQÆ03182

fRf"fpfCf%oŽw-β,lfAf<ftf@fxfbfg[]#^ê---

fRf"fpfCf%oŽw-β,l'è<`,Æ-p"r

[]ðCE[]Žw-β,lŽg,ç•û

ŽQÆ03184

\$DEFINE ,Æ \$UNDEF ,iðCEfvf“ff<Žw—ß

ŽQÆ03186

Ž•ÊŽq

ðCEŽw—ß,lžg,q•û

'è` òï,Ýðœƒvf“f{f<03187

ŽQÆ fR“fpfCf%Žw—ß

Delphi ,íŽŸ,ìðœƒvf“f{f<,ð`è` ,μ,Ü,·B

CONSOLE

fAfvfŠfP[fVf†“ ,əfRf“f∞[f<fAfvfŠfP[fVf†“ ,Æ,μ,ÄfRf“fpfCf<,³,é,éèè†,É`è` ,³,é,Ü,·B

CPU386

CPU ,əfCf“fef<,ì 386 ,Ü,½,í,» ,é^Èä,Å, ,é,±,Æ,ðŽ!,μ,Ü,·B

VER90

í,É`è` ,³,éC,±,ìfRf“fpfCf% ,ə Object Pascal fRf“fpfCf% ,ìfo[fWf†“ 9.0 ,Å, ,é,± ,Æ,ðŽ!,μ,Ü,·BŠefo[fWf†“ ,²,Æ,É“ —ì,ì`è` òï,Ýfvf“f{f<,ə`è` ,³,é,é,±,Æ,É,È,èCfo[fWf†“ 9.1 ,Å,í VER91Cfo[fWf†“ 9.5 ,Å,í VER95 ,È,Ç,ì,æ,æ,É,È,è,Ü,·B

WIN32

“® òŠÂ<< ,ə Win32 API ,Å, ,é,±,Æ,ðŽ!,μ,Ü,·B

ŽQÆ03188

ðCEŽw—ß,ìŽg,ç•û

ftfB [f<fhfAf%ofCf“f“fgŽw—B {\$A} C{\$ALIGN} 03189

fRf“fpfCf%oŽw—B

fCEfR [fhCE^, lftfB [f<fh, lAf%ofCf“f“fg, ð\$CEä, µ, Ü, ·B

□\•¶: {\$A+} ,Ü,½,í {\$A-}
 {\$ALIGN ON} ,Ü,½,í {\$ALIGN OFF}

ffftfHf<fg: {\$A+}
 {\$ALIGN ON}

fXfR [fv: f [fv]

'□^ó

\$A Žw—B, ìóó'Ô, Æ, ÍŠÖCEW, È, □C·ï“ , ÆCE^•t, «'è□“ , íí, É□Å“K, ÈfAfNfZfX, a%oÅ“\, É, È, é, æ, x, ÈfAf%ofCf“f“fg, ³, è, Ü, ·B

fif“ {\$A+} C{\$ALIGN ON}

ftfB [f<fhfAf%ofCf“f“fg, a|f“ , ìê#□Cpacked CEÀ'èŽq, aŽw'è, ³, è, Ä, ç, È, çfCEfR [fhCE^, lftfB [f<fh, í<@ŠBCEêf [fh<«ŠE (·ò“fAfhfCEfX) , É“z'u, ³, è, Ü, ·B•K—v, É%ož, ¶, Ä□Cf [fhfAf%ofCf“f“fg, ì, ½, B, É-çŽg—p, lfofCf, a·ï“ , ìŠÖ, É' }“ü, ³, è, Ü, ·B

, ±, ìŽw—B, lfofCf, gTfCfY, ì·ï“ □CfCEfR [fh□'ç, Ü, ½, lflfufWfFfNfg, lftfB [f<fh□C“z—ñ, ì—v'f, É, í

—
p, µ, Ü, ¹, ñBfCEfR [fh, Ü, ½, lflfufWfFfNfg, lftfB [f<fh, í□C, », lftfB [f<fh, ì'O, ì, ·, x, Ä, lftfB [f<fh, ì□#CEvfTfCfY, a<ò□“ , ìê#□, É, ¾, ~□Cf [fh<«ŠE, É“z'u, ³, è, Ü, ·B“z—ñ, ì, ·, x, Ä, ì—v'f, a□ [fh<«ŠE, É“z'u, ³, è, é, ì, í□CSe—v'f, lftfCfY, a<ò□“ , ìê#□, Å, ·B

fift {\$A-} C{\$ALIGN OFF}

ftfB [f<fhfAf%ofCf“f“fg, a|ft, ìê#□CfAf%ofCf“f“fg^—□, ÌŽÀ□s, ³, è, Ü, ¹, ñ□B

fif: f [fhfAf%ofCf“f“fgŽw—B, ímfvf□fWfFfNfg(P)□bflfvfvf“ (O)□n, Å·\Ž, ³, è, émfvf□fWfFfNfg, ìÝ'ènf_fCfAf□Of{fbfNfX, l□mCompiler□nfy□fW, Å, à□Ý'è, Å, «, Ü, ·B

fAfvfŠfP[fVf#f“,iŽí—P03190

fRf“fpfCf%Žw—ß

\$APPTYPE Žw—ß,ífRf“f[f<,ÆfOf
%oftfBfjf<ft[fU[fCf“f^ [ftfF[fX,ì,ç,ì,ç,ìfAfvfŠfP[fVf#f“,ð¶¶—,·,é,©,ð\$CEä,μ,Û,·B

¶\¶: { \$APPTYPE GUI }
{ \$APPTYPE CONSOLE }

fftfHf<fg: { \$APPTYPE GUI }

fXfR[fv: fOf[f<f<

fOf%oftfBfjf<ft[fU[fCf“f^ [ftfF[fX { \$APPTYPE GUI }

{ \$APPTYPE GUI } ¶ó’Ô,Å,íCfRf“fpfCf%o,ífOf
%oftfBfjf<ft[fU[fCf“f^ [ftfF[fXfAfvfŠfP[fVf#f“,ð¶¶—,μ,Û,·B Delphi
fAfvfŠfP[fVf#f“,ìè¶,íC,±,è,ª’Éí,ìó’Ô,Å,·B

fRf“f[f< { \$APPTYPE CONSOLE }

{ \$APPTYPE CONSOLE } ¶ó’Ô,Å,íCfRf“fpfCf%o,ífRf“f
[f<fAfvfŠfP[fVf#f“,ð¶¶—,μ,Û,·B fRf“f[f<fAfvfŠfP[fVf#f“,ðN“®,·,é,ÆCWindows
,ªfLfXfgf, [fh,ífRf“f
[f<fEfBf“fhfE,ð¶¶—,μCft[fU[.í,» ,ífEfBf“fhfE,ð’É,μ,ÄfAfvfŠfP[fVf#f“,Æ’î~b,Å,«,Û,·B
fRf“f[f<fAfvfŠfP[fVf#f“,Å,íC·W¶€fLfXfgftf@fCf<,ì Input ,Æ Output ,ªŽ©“®“l,ÉfRf“f
[f<fEfBf“fhfE,ÖŠÖ~A·t,¯,ç,è,Û,·B

¶à-¾

System ftfjfbfg“à,ÅéCE¾,μ,½ lsConsole ~ _—¶·ï¶”,ðŽg,α,ÆCfvf¶fOf%of€,ªfRf“f
[f<fAfvfŠfP[fVf#f“,ÆfOf
%oftfBfjf<ft[fU[fCf“f^ [ftfF[fXfAfvfŠfP[fVf#f“,ì,ç,ì,ç,Æ,μ,ÄŽÀ[s’t,È,ì,©,ðCEÿo,Å,«,Û,·B

f¶f, **\$APPTYPE** Žw—ß,ífvf¶fOf%of€,ì’t,Å,¾,~^Ó-ì,ª,è,Û,·B %ofCfuf
%ofŠ,âftfjfbfg,ì’t,Å,íŽg,í,È,ç,Å,,¾,¾,ç¶B

Š@‘S~_—□•]‰‰žw—ß {\$B}□C{\$BOOLEVAL}03191

žQ□Æ fRf“fpfCf‰‰žw—ß

AND ,Æ **OR** ,ì _—□‰‰žžžq,É,Â,č,Ä 2 ,Â,ì^Ù,È,éfR□[fh□¶□—f,fff<,ìšÔ,Â□Ø,è‘Ö,ì,đ,μ,Û,·□B
□\•¶: {\$B+} ,Û,½,í {\$B-}

 {\$BOOLEVAL ON} ,Û,½,í {\$BOOLEVAL OFF}

ffftfHf<fg: {\$B-}
 {\$BOOLEVAL OFF}

fXfR□[fv: f□□[ffj<

fif“ {\$B+}□C{\$BOOLEVAL ON}

,±,ìžw—ß,áfif“,ìê□#□CfRf“fpfCf‰‰,í **AND** ‰‰žžžq,Æ **OR** ‰‰žžžq,©,ç\‘z,³,è,½~_—
□ž®,ì,·,×,Ä,ìfifyf‰‰f“fh,đ•]‰‰ž,·,éfR□[fh,đ□¶□—,μ,Û,·□B,±,ìfR□[fh,Â,íž@‘S‘ì,ìĀ<‰‰É,ª,·,Ä,É-
¾Šm,Èêê±,Â,à,·,×,Ä,ìfifyf‰‰f“fh,ª•]‰‰ž,³,è,Û,·□B

fift {\$B-}□C{\$BOOLEVAL OFF}

,±,ìžw—ß,áfift,ìêê#□CfRf“fpfCf‰‰,ìfvf#□[fgfT□[fLfbfg~_—□ž@•]‰‰
ž,đ,·,éfR□[fh,đ□¶□—,μ,Û,·□B

ž@‘S‘ì,ìĀ<‰‰É,ª=¾/4,ç,©,É,È,é,Æ,·,®,É•]‰‰ž,í‘âž~,μ,Û,·□B

fif: Š@‘S~_—□•]‰‰žw—ß,í□mfifvfVf#“(O)□bfvf□fWfFfNfg(P)□n,Â\
žì,³,è,é□mfvf□fWfFfNfg,ìŸ‘è□nf_fCfAf□fOf{fbfNfX,ìmCompiler□nfy□[fW,Â,àŸ‘è,Â,
«,Û,·□B

ŽQÆ03192
~ —□%o%oŽŽŽq

fffofbfOî•ňŽw—ß {\$D}C{\$DEBUGINFO}03193

ŽQÆ fRf“fpfCf%Žw—ß

fffofbfOî•ň,ì¶¶—,ðflf“,Ü,½,íflft,É,µ,Ü,·B

∖•¶: {\$D+} ,Ü,½,í {\$D-}
{ \$DEBUGINFO ON} ,Ü,½,í { \$DEBUGINFO OFF}

ffftfHf<fg: {\$D+}
{ \$DEBUGINFO ON}

fXfR[fv: fOf[fof<

’^ó

fffofbfOî•ň,íŠeŽè±,«,²,Æ,ÉflfufWfFfNfgfR[fhfAfhfÆfX,ð\
[fXfefLfXfg”Ô¶t,Éf}fbfv,·,é”s”Ô¶tfe[fuf<,Á¶—,³,è,Ü,·B

fffofbfOî•ň,ð¶¶—,·,é,Æftfjfbfgtf@fCf<,íTfCfY,ª”¶Á,µCftfjfbfg,ðŽg,xfvfOf%of€
,ðRf“fpfCf<,·,é,Æ,«,É—ì^æ,ª—]•ª,É•K—v,É,È,è,Ü,·,ªCŽÀ¶svf¶Of%of€,íTfCfY,â’—“x,É,í
%oe<¿,µ,Ü,¹,ñBfffofbfOî•ň,íftfjfbfg,íflfufWfFfNfgfR[fh,Æ,Æ,à,É .DCU (ftfjfbfg)
ftf@fCf<,É<L~^,³,è,Ü,·B

fif“ {\$D+}C{\$DEBUGINFO ON}

,±,ìŽw—ß,ªflf“,ìèè¶CfRf“fpfCf%o,ífffofbfOî•ň,ðftfjfbfg (.DCU) ftf@fCf<,É<L~^,µ,Ü,·B

fffofbfOî•ňŽw—ß,ðflf“,É,µ,ÄfRf“fpfCf<,µ,½f,fWf...

[f<,íCfXf^f“fhfAfhf“,ífffofbfK,â“¶fffofbfK,ðŽg,Á,Äfvf“fOf<fXfefbfvŽÀ¶s,µ,½,èCfufC¶[fn
flfCf“fg,ð¶Y’è,µ,½,è,Á,«,Ü,·BŽÀ¶sŽžGf%o[,’¶¶,µ,½èè¶CfRf“fpfCf%o,íGf%o[,ìC
‘^ò,É,È,Á,½•¶,ÉŽ©“®“ì,É^U“®,Á,«,Ü,·BŽ©“®fGf%o[‘ÇÖ,É,Á,ç
,Ä,ìU×,í¶mCÿö(S)¶bfGf%o[.ìCÿö(E)¶n,ðŽQÆ,µ,Ä,¾,¾,çB

¶mfvf¶fWfFfNfg(P)¶bfifvf¶f“(O)¶n,Á•\

Ž,³,è,é¶mfvf¶fWfFfNfg,ì¶Y’è¶nf_fCfA¶fOf{fbfNfX,ì¶mLinker¶nfy¶[fW,É,·,é¶mf}fbfvftf@fCf<
¶n,í%ofWfIf{f^f“,íCfffofbfNî•ňŽw—ß,ðflf“,É,µ,Äf,fWf...

[f<,ðRf“fpfCf<,µ,½èè¶,É,¾,~C,»,í,fWf...[f<,É,Á,ç,Ä,íŠ®’S,È¶sî•ň,ð¶¶—,µ,Ü,·B

fffofbfOî•ňŽw—ß,í’Éí¶¶[fj<fvf“f{f<Žw—ß,Æ,Æ,à,ÉŽg,ç,Ü,·B

Turbo Debugger for Windows ,ðŽg,Á,Äfvf¶fOf%of€

,ðfffofbfO,·,éèè¶,íC¶mfvf¶fWfFfNfg,ì¶Y’è¶nf_fCfA¶fOf{fbfNfX,ì¶mLinker¶nfy¶[fW,Á¶mTD
W ffffofbfOî•ň,ðŠÜ,¶(T)¶nf`fFfbfNf{fbfNfX,Éf`fFfbfNf}¶[fn,ð•t,·,Ä,©,çfv¶fOf%of€
,ðÄfRf“fpfCf<,µ,Ä,¾,¾,çB

f¶f,: ffffofbfOî•ňŽw—
ß,í¶mfvf¶fWfFfNfg,ì¶Y’è¶nf_fCfA¶fOf{fbfNfX,ì¶mCompiler¶nfy¶[fW,Á,à¶Y’è,Á,«,Ü,·
B

ŽQÆ03194

fffofbfOî•ñ,ÆfVf“ff<î•ñ

fVf“f{f<ŋXfCfbf`Žw—B,đŽg,Á,½ffofbfO03195

ŽQAE fRf“fpcf%Žw—B

\$D□C\$L□C\$Y fRf“fpcf%Žw—B,í^ê□□,É'g,Y□#,í,¹ĂŽg,ç,Ü,·□B\$L ,Æ \$Y ,í \$D
,lfTfufZfbfg,Æ□|,!,é,±,Æ,^aĂ,«□C\$D ,lfXfR□[fv,^aĂ,àŠO'x,Ă□C\$L ,lfXfR□[fv,^a»,ìŽŸ□C\$Y
,lfXfR□[fv,^aĂ,à“à'x,Æ,É,è,Ü,·□BŽŸ,ì•\,í,±,ê,ç,ìŽw—
B,đ'g,Y□#,í,¹ĂŽg,Á,½□ê□#,É'ŠCEY,É,Ç,ì,æ,x,É□C□ü,μ, ,x,©,đŽ!,μ,Ü,·□B

fVf“f{f< CE<%oÊ

{ \$D+, L-, Y+ }

fCf“f^□[ftfF□[fXfZfNfVf+f“,ì,·,x,Ă,lfR□[fh,lfffofbfOŋ•ñ,đ□□□-,·,é□BŽÀ
CE»•”,lfVf“f{f<,É,Ă,ç,Ă,ìŋ•ñ,í□□□-,μ,È,ç (\$Y ,í-³Ž<,³,é,é)

{ \$D+, L-, Y- }

fCf“f^□[ftfF□[fXfZfNfVf+f“,ì,·,x,Ă,lfR□[fh,lfffofbfOŋ•ñ,đ□□□-,·,é□BŽÀ
CE»•”,lfVf“f{f<,É,Ă,ç,Ă,ìŋ•ñ,í□□□-,μ,È,ç (\$Y ,í-³Ž<,³,é,é)

{ \$D-, L+, Y+ }

fffofbfOŋ•ñ,đ,Ü,Á,½,□□□-,μ,È,ç (\$L□C\$Y ,í-³Ž<,³,é,é)

{ \$D+, L+, Y- }

fVf“f{f<ŽQAE,â'^{1/4},lfIfufWfFfNfgfuf%ofEfUŋ•ñ,í□□□-,μ,È,ç□B,±
,ìŸ'è,đŽg,x,ÆfŠf“fNŽžŠÖ,^aZ,,É,é

{ \$D+, L+, Y+ }

f,fWf...
□[f<“à,ì,·,x,Ă,lfVf“f{f<,lfffofbfOŋ•ñ,đ□□□-,·,é□Bf□□[fj<•ï□”,ÆCE^,ì□s”
Ô□+,ÆfVf“f{f<ŋ•ñ,đ□□□-,·,é□BfVf“f{f<,lfNf□fXfŠftf@fCEf“fX,Æ'^{1/4},lfuf
%ofEfUŋ•ñ,đ□□□-,·,é

ŽQÆ03196

\$D fffofbfOî•ñ

\$L f[]ff<fVf“ff<î•ñ

\$Y fVf“ff<ŽQÆî•ñ

fIfufWfFfNfguf%ofEfU

“ü□o—Íf`fFfbfNŽw—ß {\$I}□C{\$IOCHECKS}03197

ŽQ□Æ fRf“fpcfCf%oŽw—ß

fTf@fCf<“ü□o—ÍŽè’±

,«,Ö,ìCEÄ,Ñ□o,μ,ìCE<%oÊ,ðf`fFfbfN,·,éfR□[fh,ìŽ©“®□¶□¬,ðfÍf“,Ü,½,ÍfÍft,É,μ,Ü,·□BfTf@fCf<“ü□o—ÍŽè’±,«,É,Í Read, Write, Erase ,É,Ç,ª,è,Ü,·□B

□\•¶: {\$I+} ,Ü,½,Í {\$I-}

 {\$IOCHECKS ON} ,Ü,½,Í {\$IOCHECKS OFF}

ffftfHf<fg: {\$I+}

 {\$IOCHECKS ON}

fXfR□[fv: f□□[f]f<

fÍf“ {\$I+}□C{\$IOCHECKS ON}

,±,ìŽw—ß,ªfÍf“,ìêê¶□CfRf“fpcfCf%o,ÍŠe“ü□o—ÍCEÄ,Ñ□o,μ,ìCEã,É“ü□o—ÍfGf

%o□[,ðf`fFfbfN,·,éfR□[fh,ð□¶□¬,μ,Ü,·□Bf`fFfbfN,ªŽ,“s,μ,½êê¶□C2 ,Ä,ìCE<%oÊ,ª□l,¡,ç,è,Ü,·□B

- ŽÄ□sŽžfGf%o□[,í,·,×,Ä—áŠO,É•ÍŠ,ª,è,é
- ŽÄ□sŽžfGf%o□[,ª“□¶,μ,½êê¶fAfvfŠfP□[fvf+f“,í’âŽ~,·,é

fÍft {\$I-}□C{\$IOCHECKS OFF}

,±,ìŽw—ß,ªfÍft,ìêê¶□CIOResult ŠÖ□“,ðŽg,Á,Ä“ü□o—ÍfGf%o□[,ðf`fFfbfN,μ,È,,Ä,Í,È,è,Ü,¹,ñ□B

f□f,: “ü□o—ÍŽw—ß,í□mfÍfvfVf+f“(O)□bfvf□WfFfNfg(P)□n,Å•\

Ž!,ª,è,é□mfvf□WfFfNfg,ì□Ý’è□nf_fCfAf□Of{fbfNfX,ì□mCompiler□nfy□[fW,Å,à□Ý’è,Å,«,Ü,·□B

ŽQÆ03198

\$l.ftf@fCf<fCf“fNf<[]fh

—áŠO^—

**□',«□ž,Ý%oÄ"\,ÈCE^•t,«'è□"Žw—ß {\$J} ,Æ
{\$WRITEABLECONST}03199**

fRf"fpfCf%oŽw—ß

\$J Žw—ß,ÍCE^•t,«'è□",đ•İ□X,Ä,«,é,©,Ç,κ,©,ð□\$CEä,μ,Û,·□B

□\•¶: {\$J+} ,Û,½,Í {\$J-}
 {\$WRITEABLECONST ON} ,Û,½,Í {\$WRITEABLECONST OFF}

ffftfHf<fg: {\$J-}
 {\$WRITEABLECONST OFF}

fXfR□[fv: f□□[ff<

fIf" {\$J+}□C{\$WRITEABLECONST ON}

{**\$J+**} □ó'Ô,Ä,ÍCE^•t,«'è□",Í•İ□X,Ä,«□CŽÄŽž"l,É,Í□%oSú%o»□İ,Ý•İ□",É,È,è,Û,·□B

fIf< {\$J-}□C{\$WRITEABLECONST OFF}

{**\$J-**} □ó'Ô,Ä,ÍCE^•t,«'è□",Í□³<K,Ì'è□",Ä, ,è□CE^•t,«'è□",đ•İ□X,μ,æ,κ,Æ,·,é,ÆfRf"fpfCf<fGf
%o□[,É,È,è,Û,·□B

□à-¾

Delphi ,Æ Borland Pascal ,\<CEfo□[fWf†f",Ä,Í□CE^•t,«'è□",Í□í,É□',«□ž,Ý%oÄ"\,Ä, ,è□C{**\$J+**}
□ó'Ô,É'í%ož,μ,Ä,ç,Û,μ,½□B□',«□ž,Ý%oÄ"\,ÈCE^•t,«'è□",đŽg,Ä,Ä,ç,éCEÄ,çf\□[fXfR□[fh,Í {**\$J+**}
□ó'Ô,ÄfRf"fpfCf<,μ,È, ,é,Î,È,è,Û,¹,ñ,ª□C□V,μ,çfAfvfŠfP□[fvf†f",Ì□é□‡,É,Í□%oSú
%o»□İ,Ý•İ□",đŽg,κ,æ,κ,É,μ□CffftfHf<fg,Ì {**\$J-**} □ó'Ô,ÄfR□[fh,đfRf"fpfCf<,·,é•Û,ª,æ,ç
,Ä,μ,â,κ□B

ŽQÆ03201

fffofbfOî•ñ,ÆfVf“ff<î•ñ

fi [fvf"fpf%of [f^Žw—B {\$P} C{\$OPENSTRINGS} 03202

ŽQAE —á fRf"fpfCf%Žw—B

string f [f [fh, Žg, Á, Ä é ¼, ¾, ½ • ĩ "fpf%of [f^, Ì Ó-; , ð \$æ ä, µ, Ü, · B f [fvf"fpf %of [f^, Í Š Ž í, ĩ T f C f Y, ĩ • ĩ Ž š — ñ • ĩ " , ð " , ĩ Ž è ' ± , « , â Š Ö " , É " n , ' , é , æ , µ , É , µ , Ü , · B

|\•¶: {\$P+} , Ü, ½, í {\$P-} {\$OPENSTRINGS ON} , Ü, ½, í {\$OPENSTRINGS OFF}

ffftjHf<fg: {\$P-} {\$OPENSTRINGS OFF}

fXfR [fv: fOf [fof<

' ^ Ó

\$P Žw—B, í { \$H- } , ĩ ó Ó , Á f R f " f p f C f < , ¾ , é , é f R [f h , Á , ĩ , Ý Ó - ; , a , , è C ^ È ' O , ĩ f o [f W f # " , ĩ Delphi , Æ Borland Pascal , Æ , ĩ % ° ^ È Ç Ý Š · « , ĩ , ½ , B , É — p ^ Ó , ¾ , é , Á , ç , é Ž w — B , Á , · B

fif" {\$P+} C{\$OPENSTRINGS ON}

, ± , ĩ Ž w — B , a f i f " , ĩ ê ð # C string f [f [fh, Žg, Á, Ä é ¼, µ, ½ • ĩ "fpf%of [f^, ĩ f [fvf" • ĩ Ž š — ñ f p f % o f [f ^ , É , È , è , Ü , · B , ± , ĩ Ž w — B , ĩ Ó ' è , É Š Ö Ç W , È , C O p e n S t r i n g Ž ~ • È Ž q , Ž g , Á , Ä , ç , Á , Ä , à f [fvf" • ĩ Ž š — ñ f p f % o f [f ^ , ð é ¼ , Á , « , Ü , · B

f [fvf" • ĩ Ž š — ñ f p f % o f [f ^ , ĩ Ž Ä f p f % o f [f ^ , É , ĩ " C ^ Ó , ĩ • ĩ Ž š — ñ Ç ^ , ĩ • ĩ " , Ž w ' è , Á , « , Ü , · B Ž è ' ± , « , Ü , ½ , Í Š Ö " " à , Á C % ¼ f p f % o f [f ^ , ĩ T f C f Y ' @ « (Á ' á ') , ĩ Ž Ä f p f % o f [f ^ , Æ " , ¶ , É , È , è , Ü , · B

f [fvf" • ĩ Ž š — ñ f p f % o f [f ^ , ĩ • ĩ Ž š — ñ Ç ^ , ĩ • ĩ " f p f % o f [f ^ , Æ , Ü , Á , ½ , " , ¶ , æ , µ , É " @ ĩ , µ , Ü , · B , ½ , ¾ , µ C ^ È ĩ , ĩ • ĩ " f p f % o f [f ^ , ĩ , æ , µ , É ' ¼ , ĩ Ž è ' ± , « , â Š Ö " , É " n , ' , ± , Æ , í , Á , « , Ü , ' , ñ B

fift {\$P-} C{\$OPENSTRINGS OFF}

, ± , ĩ Ž w — B , a f i f t , ĩ ê ð # C f [fvf"fpf%of [f^, ĩ Ž g — p • s % Á , É , È , è , Ü , · B , ± , ĩ ó Ó , Á , ĩ C string f [f [fh, Žg, Á, Ä é ¼, ¾, ½ • ĩ "fpf%of [f^, ĩ ' É ĩ , ĩ • ĩ "fpf%of [f^, É , È , è , Ü , · B , ± , ĩ , é , æ , è Turbo Pascal , ĩ ^ È ' O , ĩ f o [f W f # " , Æ , ĩ Ç Ý Š · « , a • Ü , ½ , é , Ü , · B

f [f,: f [fvf"fpf%of [f^ Žw—B, ĩ m f v f [f W f F f N f g (P) [b f l f v f v f # " (O) n , Á \ Ž , ¾ , é , é m f v f [f W f F f N f g , ĩ Ó ' è ĩ f C f A f [f o f { f b f N f X , ĩ m C o m p i l e r ĩ n f y [f W , Á , à Ó ' è , Á , « , Ü , · B

—á03203

```
procedure MyProc (var S:string);  
begin  
  S:= 'abcdefghijk';  
end;  
  
var  
  shortstring: string[5];  
begin  
  MyProc (ShortString);  
end.
```

fRf“fpcf%ofXfCbf`

CE<%oÊ

| | |
|-----------------|---|
| \$P-, V+ | MyProc (ShortString) ,íCE ^•s^ê'v,lfRf“fpcf<fGf%o[][,ð[]¶[]¬,·,é |
| \$P+, V- | MyProc (ShortString) ,í<-%oÂ,³,ê[]C[]¶[]¬,³,ê,éfR[][fh,í S ,Ö,ìŠ,,è“- ,Ä,ªŽÀfpf%of[]^,Å[]éCE¾,³,ê,½fTfCfY,ð'´,¡,È,ç,± ,Æ,ð•Ú[]Ø,·,é[]BMyProc ,Ö,ìCEÄ,Ñ[]o,µ,ìCEã[]CShortString ,í 'abcde' ,É,È,é |
| \$P-, V- | MyProc ,ífRf“fpcf<fGf%o[][,ð[]¶[]¬,µ,È,ç,ª[]Cfvf[]fOf %of€“à,Áf[]f,fŠ[]ä[]',«fGf%o[][,É,È,è[]CfVfXfef€,ªfNf%ofbfVf...,·,é%oÂ“\ []«,ª, ,é |

ŽQÆ03204

\$V •i□” •qŽš—ñf`fFbfN

fI[fO[ftf[f`fFbfNžw—B {\$Q}C{\$OVERFLOWCHECKS}03205

žQpÆ fRf“fpfCf%Žw—B

žZp%ŽZfI[fO[ftf[f`fFbfNfR[fh,ìŋŋ¬,ð\$Œä,μ,Û,·B

|\ŋ: {\$Q+} ,Û,½,í {\$Q-}

{\$OVERFLOWCHECKS ON} ,Û,½,í {\$OVERFLOWCHECKS OFF}

ffftfHf<fg: {\$Q-}

{\$OVERFLOWCHECKS OFF}

fXfR[fv: f[fj<

'^ó

žZp%ŽZfI[fO[ftf[f`fFbfNfR[fh,ìŋŋ¬,ð\$Œä,μ,Û,·B
žZp%ŽZfI[fO[ftf[f`fFbfNfR[fh,ìŋŋ¬,ð\$Œä,μ,Û,·B
žZp%ŽZfI[fO[ftf[f`fFbfNfR[fh,ìŋŋ¬,ð\$Œä,μ,Û,·B

fIf“ {\$Q+}C{\$OVERFLOWCHECKS ON}

,±,ìžw—B,ŋfj“,ìèŋŋCfRf“fpfCf%Žw—B,ížŸ,ì@“%ŽZ,É,Â,ç,ÄžZp%
%ŽZfI[fO[ftf[f`fFbfN,·,éfR[fh,ðŋŋ¬,μ,Û,·B

\ + - * Abs Sqr Succ Pred Inc Dec

,±,è,ç,ìžZp%ŽZ,ìfR[fh,ìŒä,ÉC%ŽZŒ<%É,ŋfTf[fg“í“à,Â, ,é,±
,Æ,ðšm”F,·,éfR[fh,ŋ’ç%Á,³,è,Û,·B

fI[fO[ftf[f`fFbfN,ŋž,“s,μ,½èŋŋC2 ,Â,ìŒ<%É,ŋfI,ç,è,Û,·B

- ŽÄsžžfGf%ŋ[,í—áŠQ,É•İŠ,³,è,é
- fvfOf%œ,íŽÄsžžfGf%ŋ[,É,æ,è‘f,·,é

fI[fO[ftf[f`fFbfN,ð,·,é,ÆCfvfOf%œ,ì‘—“x,ŋ’á%º,μfTfCfY,à’â,«,.,È,è,Û,·B,±,ìžw—
B,ìfvfOf%œŠ]” ,ÆffofbfO,ìŠÓ,Éžg,çCÄŋI“l,Èŋ»•i,ð\‘z,·,é,Æ,«,É,ìfIf,É,μ,Ä,,¾,¾,çB

\$Q žw—B,íÈí \$R žw—B directive,Æ^èŋŋ,Éžg,ç,Û,·B

fIf“ {\$Q-}C{\$OVERFLOWCHECKS OFF}

,±,ìžw—B,ŋfj“,ìèŋŋCžZp%ŽZfI[fO[ftf[f`fFbfN,³,è,Û,¹,ŋB

fIf: žZp%ŽZfI[fO[ftf[f`fFbfNžw—B,ìmfvfWfFfNfg(P)bfìfvfVf“f“(O)ŋn,Â•\
žI,³,è,émfvfWfFfNfg,ìŸ’ènf_fCfAfOf{fbfNfX,ìmCompilerŋfy[fW,Â,àŸ’è,Â,
«,Û,·B

ŽQÆ03206

—áŠO^—

"í^Íf`fFfbfNŽw—ß {\$R}□C{\$RANGECHECKS}03207

ŽQ□Æ fRf“fpcfCf%Žw—ß

"í^Íf`fFfbfNfR□[fh,ì□□□→,đf|f“,Ü,½,í {f|ft,É,μ,Ü,·□B

□\•□: {\$R+} ,Ü,½,í {\$R-}
{\$RANGECHECKS ON} ,Ü,½,í {\$RANGECHECKS OFF}

ffftfHf<fg: {\$R-}
{\$RANGECHECKS OFF}

fXfR□[fv: f□□[ffj<

f|f“ {\$R+}□C{\$RANGECHECKS ON}

,±,ìŽw—ß,af|f“,ì□ê□#□CfRf“fpcfCf%“,í“z—ñ,â•□Žš—ñ,ì“Y,;Žš,“í^í“à,Â, ,é,©,Ç,κ,©,Æ□CfXfjf
%□[CE^•í□“,Ö,ìŠ,,,è“-,Ä,“è<“í^í,đ’’,;Ä,ç,È,ç
,©,đf`fFfbfN,·,éfR□[fh,đ□□□→,μ,Ü,·□B“í^Íf`fFfbfN,í Inc ,Æ Dec ,É,í“K—p,³,ê,Ü,¹,ñ□B

f`fFfbfN,“Ž,“s,μ,½□ê□#□C2 ,Â,ìCE<%oÊ,“□l,;ç,ê,Ü,·□B

- ŽÀ□sŽžfGf%□[,í—áŠQ,É•íŠ,·³,é,é
- fvf□fOf%of€,íŽÀ□sŽžfGf%□[,É,æ,Á,Ä’t’f,;é

"í^Íf`fFfbfN,đ,·,é,Æ□Cfvf□fOf%of€,ì’—“x,“á%o°,μfTfCfY,à’â,«,,È,è,Ü,·□B,±,ìŽw—ß,ífvf□fOf
%of€ŠJ”,ÆfffofbfO,ìŠÔ,ÉŽg,ç□C□Á□l“l,È□»•i,đ□\’z,·,é,Æ,«,É,í|ft,É,μ,Ä,,³/₄,³,ç□B

f|ft {\$R-}□C{\$RANGECHECKS OFF}

,±,ìŽw—ß,af|ft,ì□ê□#□C“í^Íf`fFfbfNfR□[fh,í□□□→,³,é,Ü,¹,ñ□B

f□f,: "í^Íf`fFfbfNŽw—ß,í□mfvf□fWfFfNfg(P)□bf|fvfVf#f“(O)□n,Á•\
Ž!,³,é,é□mfvf□fWfFfNfg,ì□Y’è□nf_fCfAf□fOf{fbfNfX,ì□mCompiler□nfy□[fW,Á,à□Y’è,Á,
«,Ü,·□B

ŽQÆ03208

\$Q ŽZp%%ŽZf!foftf`fFbfN

—áŠO^—

fXf^fbfNfi [fo [ftf [f` fFfbfNžw—ß {S} C {STACKCHECKS} 03209

fRf“fpfCf%Žw—ß

fXf^fbfNfi [fo [ftf [f` fFfbfNfR [fh, ðfif“, Ü, ½, ífift, É, µ, Ü, ·B

∖•¶: {S+} , Ü, ½, í {S-}
{STACKCHECKS ON} , Ü, ½, í {STACKCHECKS OFF}

ffftjHf<fg: {S+}
{STACKCHECKS ON}

fXfR [fv: f [fj<

fif“ {S+} C {STACKCHECKS ON}

, ±, ðŽw—ß, ðfif“, ðé [CfRf“ fpfCf% , íŠežè' ±
, «, Ü, ½, íŠÖ“, ðæ“ª, É [Cf [fj<• ð“, Æ, » , ð¼, ðèžž“ l<L% , ð, ½, ß, ð∖•ª, ÈfXf^fbfNfXfy [fX,ª , é,
©, Ç, x, ©, ðf` fFfbfN, , éfR [fh, ð [fj<, µ, Ü, ·B

fif: fvf [Of% f€,ª ðâ' í, ÈfXf^fbfN, ðf [fo [ftf [f` , ð [¶, ¶, È, ç
, ÆŠm [M, Å, «, é [é [ž` ÈŠO, í [Cfvf [Of% f€,ª Š [[µ, Ä, àfXf^fbfNf` fFfbfN, ðžc, µ, Ä, -
,¾,¾, ç [B

fift {S-} C {STACKCHECKS OFF}

, ±, ðŽw—ß, ðfift, Åžg—p% Å“\, ÈfXf^fbfNfXfy [fX,ª ∖•ª, É, È, ç [é [ž` Cžè' ±
, «, Ü, ½, íŠÖ“, ð, ðĀ, ðŃo, µ, É, æ, Å, ÄfvfXfef€,ª Nf% fbfVf... , µ, ½, è [Cž` À [šžžfGf% [, Äfvf [Of
% f€,ª +'f, , é% Å“\ [ª,ª , è, Ü, ·B

fif: fXf^fbfNf` fFfbfNžw—ß, í [mfvf [WfFfNfg(P) [bfifvfVff“(O) [n, Å∖
ž,¾,ª, è [mfvf [WfFfNfg, ðÝ' è [nf_fCfAf [Of {fbfNfX, ðmCompiler [nfy [fW, Å, à [Ý' è, Å,
, Ü, ·B

CE^•t,« @ %%%ŽŽŽqŽw—β {\$T}C{\$TYPEDADDRESS}03210

ŽQAE fRf“fpfCf%Žw—β

@ %%%ŽŽŽq,•i“ŽQAE,ÉŽg,í,è,½,Æ,«C,±,ì%%ŽŽŽq,•Ô,·f|
fCf“f^‘l,ìCE^,ð\$CEä,μ,Û,·B

|\•¶: {\$T+} ,Û,½,í {\$T-}
 {\$TYPEDADDRESS ON} ,Û,½,í {\$TYPEDADDRESS OFF}

ffftjHf<fg: {\$T-}
 {\$TYPEDADDRESS OFF}

fXfR[fv: f[fj<

fift {\$T-}C{\$TYPEDADDRESS OFF}

,±,ìŽw—β,¶fift,ìê#C@ %%%ŽŽŽq,ìCE<%Ê,íCE^,È,μ|fCf“f^ (Pointer) ,É,È,èC¼,ì,·,×,Ä,ì|
fCf“f^CE^,ÆCEÝŠ,·É,È,è,Û,·B

fif“ {\$T+}C{\$TYPEDADDRESS ON}

,±,ìŽw—β,¶fif“,ìê#C@ %%%ŽŽŽq,ìCE<%Ê,í ^T ,É,È,è,Û,·B ^T
,í•i“ŽQAE,ìCE^,ðŽ!,μ,Û,·B,½,Æ,!,ìC@“”,ì•i“”,É“K—p,³,è,é @ ,íí,É@“f|
fCf“f^CE^,ð•Ô,μ,Û,·B

Žè±,«CŠÖ“Cf|f|fbfh,É @ ,ð“K—p,·,éê#C,±,ìŽw—β,ìó‘Ô,ÉŠÖCEW,È,CCE<%Ê,ì|
fCf“f^,ìCE^,íí,É Pointer ,É,È,è,Û,·B

f|f,: CE^•t,« @ %%%ŽŽŽqŽw—β,ímfvf|fWfFfNfg(P)bf|fvfVf#f“(O)n,ð‘l’ð,μ,Ä•\
Ž!,³,è,émfvf|fWfFfNfg,ìÝ`ènf_fCfA|fOf{fbfNfX,ìmCompiler|fy|[fW,ÅmCE^•
t,« @ %%%ŽŽŽq(T)nf`fFfbfNf{fbfNfX,Éf`fFfbfNf}|fN,ð•t,¯,Ä,àÝ’è,Å,«,Û,·B

ŽQÆ03211

@ %o%oŽŽŽq

Pentium 'Í%ž,ì FDIV %%%žžžw—ß {\$U} ,Æ {\$SAFEDIVIDE}03212

fRf“fpfCf%žw—ß

\$U Žw—ß,íC^È'O,ì Pentium fvf[]ZfbfT,Á,ì FDIV -½—
ß,ìCE‡Šx,É”ö,ì,½•,“@[]-[]”“_fR[]fh,ì[][]-,,ð[]\$CEä,μ,Û,·[]B

[]\•[]: {\$U+} ,Û,½,í {\$U-}
 {\$SAFEDIVIDE ON} ,Û,½,í {\$SAFEDIVIDE OFF}

ffftfHf<fg: {\$U-}
 {\$SAFEDIVIDE OFF}

fXfR[]fV: f[][]f[]f<

fif“ {\$U+}[]C{\$SAFEDIVIDE ON}

{\$U+} []ó'Ô,Á,íC,.,x,Ä,ì•,“@[]-[]”“_[]œžž,íf%of“f^fCf€f%ofCfuf
%ofŠf<[]f`f“,ðžg,Á,ÄžÀ[]s,³,è,Û,·[]B•,“@[]-[]”“_[]œžžf<[]f`f“,ð[]%
,ß,ÄCEÄ,Ñ[]o,μ,½,Æ,«,É[]C,±,ìf<[]f`f“,ífv[]fZfbfT,ì FDIV -½—ß,²[]³,μ,“@[]ì,·,é,©,Ç,ª
,©,ðf`fFfbfN,μ[]Cf`fFfbfNCE<%oÉ,É%ž,¶,Ä TestFDIV •ì[]” (System ftffjfbfg,Ä[]éCE¾)
,ð[]X[]V,μ,Û,·[]B^É~,,ì•,“@[]-[]”“_[]œžž%%žž,Á,íCTestFDIV
,ÉŠì”[.,³,è,½'ì,É,æ,Á,Ä[]C,Ç,ì,æ,ª,É^~—[],ð,·,é,©,²CE^,Û,è,Û,·[]B

žŸ,ì\,É TestFDIV ,ì'ì,ðžì,μ,Û,·[]B

'ì ^Ó-ì

-1 FDIV -½—ß,ì•s—Ç,²fefXfg,É,æ,è,í,©,Á,½

0 FDIV -½—ß,ífefXfg,³,è,Ä,ç,È,ç

1 FDIV -½—ß,ì³[]í“@[]ì,²fefXfg,É,æ,è,í,©,Á,½

FDIV ,ÉCE‡Šx,ì,È,çfvf[]fZfbfT,ì[]ê[]+[]C**{\$U+}** []ó'Ô,Á,íC^—[]'—“x,²,í,,©,É'á
%o²,μ,Û,·[]BCE‡Šx,ì, ,é Pentium fvf[]fZfbfT,ì[]ê[]+[]C**{\$U+}** []ó'Ô,Á,ì•,“@[]-[]”“_[]œžž%
%žž,É[]Å[],,Ä 3 ”{,ìžžŠÖ,²šì,©,É,±,Æ,², ,è,Û,·,²[]C•K, ,³,μ,çCE<%oÉ,²¾,ç,è,Û,·[]B

fift {\$U-}[]C{\$SAFEDIVIDE OFF}

{\$U-} []ó'Ô,Á,íC•,“@[]-[]”“_[]œžž%%žž,ífCf“f%ofCf“,ì FDIV -½—
ß,ðžg,Á,ÄžÀ[]s,³,è,Û,·[]B^—[]'—“x,ÆfR[]fhfTfCfY,²[]Ä“K,É,È,è,Û,·,²[]CPentium
fvf[]fZfbfT,ÉCE‡Šx,², ,è,ÍŠÔ^á,Á,½CE<%oÉ,É,È,é%oÄ“\[]«,², ,è,Û,·[]BCE‡Šx,ì, ,é Pentium
fvf[]fZfbfT,Á,ífR[]fh,²žÀ[]s,³,è,È,ç,ÆŠm[]M,Á,«,é[]ê[]‡,É,¾, ^[]C**{\$U-}** []ó'Ô,ðžg,ª,æ,ª,É,μ,Ä,-
,¾,³,ç[]B

• ĩ" • ħŽš—ñf` fFbfNŽw—ß {\$V} C{\$VARSTRINGCHECKS} 03213

fRf"fpfCf%Žw—ß

• ĩ"fpf%of[]f^ ,Æ,μ,Ä"n,³,ê,é'Z,ç • ħŽš—ñ,ìCE^f`fFbfN,ð\$CEä,μ,Ü,·B

[\ • ħ: {\$V+} ,Ü,½,í {\$V-}

 {\$VARSTRINGCHECKS ON} ,Ü,½,í {\$VARSTRINGCHECKS OFF}

ffftfHf<fg: {\$V+} C{\$VARSTRINGCHECKS ON}

fXfR[]fv: f[]fj<

'^Ó

\$V Žw—ß,í'Z,ç • ħŽš—ñ,ðŽg,xfR[]fh,Ä,ì,Ý^Ó-j,^a ,èC^È'O,ìfo[]fWf#",ì Delphi ,Æ Borland Pascal ,Æ,ì%^o^ÈCEÝŠ·<,ì,½,ß,É—p^Ó,³,ê,Ä,ç,Ü,·B

fif" {\$V+} C{\$VARSTRINGCHECKS ON}

,±,ìŽw—ß,afif",ìê[]ÍCEμ-š,ÈCE^f`fFbfN,^as,í,êC%¼fpf%of[]f^ ,ÆŽÀfpf%of[]f^ ,^a"^ê,ì • ħŽš—ñCE^,Ä ,é,±,Æ,^a—v<[],³,ê,Ü,·B

fift {\$V-} C{\$VARSTRINGCHECKS OFF}

,±,ìŽw—ß,afift,ìê[]É,íC'Z,ç • ħŽš—ñCE^ • ĩ",í,·,x,ÄŽÀfpf%of[]f^ ,Æ,μ,Ä<-%oÄ,³,ê,Ü,·BéCE³/₄,³,ê,½[]Á'á',^a%¼fpf%of[]f^ ,ì[]Á'á',Æ^è'v,μ,È,çê[]Ä,à""—l,Ä,·B

fif: • ĩ" • ħŽš—ñf` fFbfNŽw—ß,ímfvf[]fWfFfNfg(P)[]bfifvfVf#"(O)[]n,ð'l'ð,μ,Ä\Ž!,³,ê,émfvf[]fWfFfNfg,ìÝ'è[]nf_fCfAf[]Of{fbfNfX,ìmCompiler[]nfy[]fW,Ä,àÝ'è,Ä, <,Ü,·B

fEjBf"fhfEjXf^fbfNftfCE[f€Žw—ß {\$W}C{\$STACKFRAMES}03214

fRf"fpfCf%Žw—ß

Windows 3.0 fŠfAf<f,[]fh,Å"®[]i,·,éfvf[]fOf%of€,É'í,μ[]Cfar Žè'±,«,Æ far ŠÖ[]",ì,½,ß,ì"ÁŽé,Éfvf[]f[]fOfR[]fh,ÆfGfsf[]fOfR[]fh,ð[]¶[]¬,μ,Ü,·[]B

[]\·¶: {\$W+} ,Ü,½,í {\$W-}
 {\$STACKFRAMES ON} ,Ü,½,í {\$STACKFRAMES OFF}

ffftfHf<fg: {\$W+}
 {\$STACKFRAMES ON}

fXfR[]fv: f[][]fj<

fif" {\$W+}C{\$STACKFRAMES ON}
·,±,ìŽw—ß,¶fif",ì[]ê[]#[]CfRf"fpfCf%°,í•K—v,ì,È,ç,Æ,«,Å, ,Á,Ä,àŽè'± ,«,ÆŠÖ[]",ì,½,ß,lfXf^fbfNftfCE[f€,ð[]¶[]¬,μ,Ü,·[]B

fift {\$W-}C{\$STACKFRAMES OFF}
·,±,ìŽw—ß,¶fift,ì[]ê[]#[]CfRf"fpfCf%°,í•K—v,È,Æ,«,¾,~fXf^fbfNftfCE[f€,ð[]¶[]¬,μ,Ü,·[]B

'[]^Ó
fffofbfMf"fofc[]f<,ì†,É,í,·,×,Ä,ìŽè'±,«,ÆŠÖ[]",É,Â,ç,ÄfXf^fbfNftfCE[f€,ð[]¶[]¬,·,é•K—v,ì, ,é, à,ì,à, ,è,Ü,·,¶[]C,»,é,ð[]œ,¬,î {\$W+} ,ðŽg—p,·,é•K—v,í,Ü,, ,è,Ü,¹,ñ[]B

f[]f,: fEjBf"fhfEjXf^fbfNftfCE[f€Žw—ß,í[]mfvf[]fWfFfNfg(P)[]bflfvfVf#f"(O)[]n,ð'l'ð,μ,Ä·\ Ž!,³,é,é[]mfvf[]fWfFfNfg,ì[]Ý'è[]nf_fCfAf[]fOf{fbfNfX,ì[]mCompiler[]nfy[]fW,Ä,à[]Ý'è,Ä, «,Ü,·[]B

Šg'£\•ŕŽw—ß {\$X}C{\$EXTENDSYNTAX}03215

ŽQ□Æ fRf“fpfCf%Žw—ß

Delphi ,iŠg'£\•ŕ,đfif“,Ü,½,í|ift,É,μ,Ü,·□B

□\•ŕ: {\$X+} ,Ü,½,í {\$X-}
{\$EXTENDSYNTAX ON} ,Ü,½,í {\$EXTENDSYNTAX OFF}

ffftfHf<fg: {\$X+}
{\$EXTENDSYNTAX ON}

fXfR□[fv: fOf□□[fof<

fif“ {\$X+}C{\$EXTENDSYNTAX ON}

,±,ìŽw—ß,ŕfif“,ì□ê□#□Cf+□[fU□[‘è<“,ìŠÖ□“ĀĀ,Ŧ□o,μ,đ (Žè‘±,«,Ā, ,é,©,ì,æ,ŕ,É)
•ŕ,Æ,μ,Ā^μ,ì,é,æ,ŕ,É Object Pascal ,ì□\•ŕ,ŕŠg'£,³,ê,Ü,·□BŠg'£□\•ŕ,Ā,ífkf<,Ā□I,í,é•ŕŽš—
ň,àŽg,ì,Ü,·□B

ŠÖ□“ĀĀ,Ŧ□o,μ,í•ŕ,Æ,μ,Ā^μ,ì,Ü,·□BŠÖ□“ĀĀ,Ŧ□o,μ,ìĀ<%Ē,í“jŠü,Ā,«,Ü,·□B,½,¾,μ□CŠg'£□\
•ŕŽw—ß,í'g,Ý□ž,ÝŠÖ□“ (System ftfjfbfg,Ā'è<“,³,ê,½ŠÖ□“) ,É,í“K—p,³,ê,Ü,¹,ň□B

Šg'£□\•ŕŽw—ß,í'g,Ý□ž,Ý PChar ĀĀ,ÆfCf“fffbfNfX,ŕf[f□,©,çŽn,Ü,é•ŕŽš“z—ň,É“K—
p,³,ê,é“ĀŽè,È<K'ŕ,đ—LĀø,É,·,é,±,Æ,É,æ,Ā,Ā□Cfkf<,Ā□I,í,é•ŕŽš—ň,đfTf|□[fg,μ,Ā,ċ,Ü,·□B

fift {\$X-}C{\$EXTENDSYNTAX OFF}

,±,ìŽw—ß,ŕfift,ì□ê□#□C,±,é,ç,ìŠg'£□\•ŕ,đŽg,ŕ,ÆfRf“fpfCf<fGf%□□[,É,È,è,Ü,·□B

f□f,: Šg'£□\•ŕŽw—ß,í□mfvf□fWfFfNfg(P)□bf|fvfVf#“(O)□n,đ'I'đ,μ,Ā•\
Ž,³,ê,é□mfvf□fWfFfNfg,ì□Ý'è□nf_fCfAf□fOf{fbfNfX,ì□mCompiler□nfy□[fW,Ā,à□Ý'è,Ā,
«,Ü,·□B

ŽQÆ03216

SysUtils.ftjfbfg

ŽQÆ03218

fffofbfOî•ñ,ÆfVf“ff<î•ñ

ftf@fCf<fCf“fNf<[]fhŽw—ß {\$I filename}[]C{\$INCLUDE filename}03219

fRf“fpfCf%oŽw—ß

Žw’è,μ,½ftf@fCf<,đfRf“fpfCf<,ÉfCf“fNf<[]fh,·,é,æ,xfRf“fpfCf%o,ÉŽwŽ!,μ,Ü,·[]B

[]\•¶: {\$I filename}
 {\$INCLUDE filename}

fXfR[]fv: f[][]fjf<

’^ó

filename ,lffftfHf<fg,lšg’£Žq,Í .PAS ,Å,·[]B

filename ,ÉfffBfCEfNfgfŠ,đŽw’è,μ,È,č,Æ[]CDelphi ,íŽŸ,ì,æ,æ,Éftf@fCf<,đCEŸ[]ö,μ,Ü,·[]B

- ,Ü, ,CE»[]Ý,lf[]fX,lfffBfCEfNfgfŠ,đCEŸ[]ö,·,é
- ŽŸ,ÉCEŸ[]öfpfX,đCEŸ[]ö,·,é

fCf“fNf<[]fh,·,éftf@fCf<,lfRf“fpfCf<,·,éfefLfXfg,ì {\$I filename} Žw—ß,ì¼CEă,É’}“ü,³,ê,Ü,·[]B

f[]f: ftf@fCf<fCf“fNf<[]fhŽw—ß,í•¶•”,ì“r’t,Å,íŽw’è,Å,«,Ü,¹,ñ[]B

•¶•”,ì **begin** ,Æ **end** ,lšÖ,ì•¶,í,·,×,Ä˘,¶f[]fXftf@fCf<,É’u,©,ê,È,,Ä,Í,È,è,Ü,¹,ñ[]B

fŠf“fNfifufWfFfNfgftf@fCf<Žw—ß {\$L filename}C{\$LINK filename}03220

fRf“fpfCf%Žw—ß

Žw’è,μ,½ftf@fCf<,ðCfRf“fpfCf<,.éfvf[]fOf%œ,Ü,½,Íftfjfbfg,ÆfŠf“fN,.é,æ,xfRf“fpfCf%
,ÉŽwŽ!,μ,Ü,·B

□\•¶: {\$L filename}
 {\$LINK filename}

fXfR[]fv: f[][]fj<

’□^ó

\$L Žw—ß,Í[]Cexternal ,Æ,μ,Ä[]éœ¾,¾,ê,½Žè’±
,«,ÆŠÖ[]”,ì,½,ß,ì’¼,ìœ¾œê,Å<L[]q,¾,ê,½ŠO•”f<[]f`f“,ðfŠf“fN,.é,½,ß,ÉŽg,ç,Ü,·B

Žw’è,.éftf@fCf<,Í Intel ,ìÄ”z’u%Å”\,ÈfifufWfFfNfgftf@fCf< (.OBJ ftf@fCf<) ,Å,È,-
,Ä,Í,È,è,Ü,¹,ñB

filename ,lffftfHf<fg,ìŠg’£Žq,Í .OBJ ,Å,·B

filename ,ÉfffBfœfNfgfŠ,ðŽw’è,μ,È,ç,Æ[]CDelphi ,íŽŸ,ì,æ,æ,ÉœŸ[]ð,μ,Ü,·B

- ,Ü, ,œ»[]Ÿ,ìf[]fX,lfffBfœfNfgfŠ,ðœŸ[]ð,·é
- ŽŸ,ÉœŸ[]ðfpfX,ðœŸ[]ð,·é

ŽÀ□sŽžCE^□î•ñŽw—ß {\$M} ,Æ {\$TYPEINFO}03221

fRf“fpfCf%Žw—ß

ŽÀ□sŽžCE^□î•ñ,ì□¶□→,ð□\$CEä,μ,Û,·□B

□\•¶: {\$M+} ,Û,½,Í {\$M-}
 {\$TYPEINFO ON} ,Û,½,Í {\$TYPEINFO OFF}

ffftfHf<fg: {\$M-}
 {\$TYPEINFO OFF}

fXfR□[fv: f□□[fjf<

□à-¾

\$M fXfCfbf`Žw—ß,íŽÀ□sŽžCE^□î•ñ,ì□¶□→,ð□\$CEä,μ,Û,·□BfNf%ofX,^a **{\$M+}**

□ó’Ô,Á□éCE¾,¾,é,é,©□C**{\$M+}** □ó’Ô,Á□éCE¾,¾,é,½•É,lfNf%ofX,©,ç”h□¶,μ,Ä,ç
,é□ê□#□CfRf“fpfCf%Í published •”,Á□éCE¾,¾,é,Ä,ç,éftfB□[f<fh□Cf□f\

fbfh□Cfvf□fpfefB,íŽÀ□sŽžCE^□î•ñ,ð□¶□→,μ,Û,·□BfNf%ofX,^a **{\$M-}**

□ó’Ô,Á□éCE¾,¾,é,Ä,“,è□C**{\$M+}** □ó’Ô,Á□éCE¾,¾,é,½•É,lfNf%ofX,©,ç”h□¶,μ,Ä,ç
,É,ç□ê□#,í□CfNf%ofX,Á published •”,íŽg,!,Û,¹,ñ□B

f□f, Delphi ,ì VCL ,É, ,é Classes ftffjfbfg,Á’è<³,é,½ TPersistent fNf%ofX,Í **{\$M+}**

□ó’Ô,Á□éCE¾,¾,é,Ä,ç,Û,·□B,μ,½,^a,Á,Á□CTPersistent ,©,ç”h□¶,μ,½fNf%ofX,É,Í
published •”,ð“ü,é,é,±,Æ,^a,Á,«,Û,·□BVCL ,Í published •”,É,Ä,ç

,Á□¶□→,³,é,½ŽÀ□sŽžCE^□î•ñ,ðŽg,Á,Á□CftfH□[f€ftf@fCf<,ì•Û’¶,âf□□[fh,ì,Æ,«,ÉfRf“fj
□[fjf“fg,lfvf□fpfefB,ì’l,ÉfAfNfZfX,μ,Û,·□B,Û,½□CIDE ,lfRf“fj

□[fjf“fg,íŽÀ□sŽžCE^□î•ñ,ðŽg,Á,Á□CfufWfFfNfjgCf“fXfyfNf^,É•\
Ž!,·,éfvf□fpfefB,lfŠfXfg,ðCE^,ß,Û,·□B

fAfvfŠfP□[fvf#f“,Á,í□C’¼□Ú **\$M** fRf“fpfCf%ofXfCfbf` ,ðŽg,π•K—v,Í,Û,Æ,ñ,Ç, ,è,Û,¹,ñ□B

f f, fšš,, è“- , ÄftfCfYŽw—ß { \$M } □ C { \$MAXSTACKSIZE } □ C { \$MINSTACKSIZE } 03222

fRf“fpfCf%Žw—ß

fvf□fOf%of€, ìfXf^fbfNšš,, è“- , Äfpf%□□[f^ , ðŽw'è, μ, Ü, · □B

□\•¶: { \$M minstacksize, maxstaxksize }
{ \$MAXSTACKSIZE maxstacksize }
{ \$MINSTACKSIZE minstacksize }

ffftfHf<fg: { \$M 16384, 1048576 }

fXfR□[fv: fOf□□[fof<

'□^ó

\$M Žw—ß, ìfAfvfššfP□[fvf#f“ , ìfXf^fbfNšš,, è“- , Äfpf%□□[f^ , ðŽw'è, μ, Ü, · □B minstacksize , í
1024 □` 2147483647

, ì"í^í, ì□@□" , Ä□CfAfvfššfP□[fvf#f“ , ìfXf^fbfN, ì□Ä□-ftfCfY, ðŽw'è, , , é'í, Ä, È, -

, Ä, Í, È, è, Ü, ^, ñ □B maxstacksize , í minstacksize □` 2147483647

, ì"í^í, ì□@□" , Ä□CfAfvfššfP□[fvf#f“ , ìfXf^fbfN, ì□Ä'âftfCfY, ðŽw'è, , , é'í, Ä, È, , Ä, Í, È, è, Ü, ^, ñ □B

□Ä□-fXf^fbfNftfCfY, ì-v<□, ð-ž, ½, , , ¾, , ìf□f, fšš, ä, È, ç□è□#□CfAfvfššfP□[fvf#f“ , ð<N“ @, μ, æ, x
, Æ, μ, ½, Æ, «, É Windows , æGf%□□[, ð•ñ□□, μ, Ü, · □B

fAfvfššfP□[fvf#f“ , ìfXf^fbfN, ä□Ä'âfXf^fbfNftfCfY, ð' , , !, é, ±, Æ, í<-

, ^, è, Ü, ^, ñ □B fXf^fbfN, ð□Ä'âfXf^fbfNftfCfY, æ, è'â, «, , μ, æ, x, Æ, , , é, Æ EStackOverflow —

ášO, ä□¶□- , ^, è, Ü, · □B

\$MINSTACKSIZE Žw—ß, Æ \$MAXSTACKSIZE Žw—ß, ðŽg, x

, Æ□C□Ä□-fXf^fbfNftfCfY, Æ□Ä'âfXf^fbfNftfCfY, ð•È□X, ÈŽw'è, Ä, «, Ü, · □B

f□f, : f□f, fšš,, è“- , ÄŽw—ß, ìf□fCf“ fvf□fOf%of€, Ä, ì, Ý^Ó-i, ðŽ□, ÿ, Ü, · □B f%□fCfuf
%ofšš, âftfjfbfjg, Ä, ÍŽg, í, Ü, ^, ñ □B

<L□q□à-¾Žw—ß {\$D text}□C{\$DESCRIPTION text}03223

fRf“fpfCf%Žw—ß

Žw'è,¾,ê,½feflfXfg,ð EXE ftj@fCf<,Ü,½,Í DLL ,lfwfbf_□[,lf,fWf...
□[f<L□qfGf“fgfŠ,É'}“ü,μ,Ú,·□B

□\•¶: {\$D text}
 {\$DESCRIPTION text}

fXfR□[fv: fOf□□[fof<

'□^Ó

fvf□fof%of€,Ü,½,Í DLL f□[fXftj@fCf<,É,Í<L□q□à-¾Žw—ß,ð^ê“x,¾,~Žw'è,Å,«,Ü,·□Bftfjfbfgf\
□[fXftj@fCf<,É,Í \$D ,ðŽw'è,μ,È,ç,Å,,¾,¾,ç□B

fšf [fXftf@fCf<Žw—ß { \$R filename } C { \$RESOURCE filename } 03224

fRf“fpfCf%Žw—ß

fAfvfšfP [fVf#f“ ,Ü, ½, íf%ofCfuf%ofš, ÉfCf“fNf< [fh, , éfšf [fXftf@fCf<, Ì-¼‘O, ðŽw’è, µ, Ü, · B

□\•¶: { \$R filename }
{ \$RESOURCE filename }

fXfR [fv: f [[f]f<

’ ^ ó

filename , ìffftfHf<fg, Ìšg‘ÉŽq, Í .RES , Å, · B, ±, Ìftf@fCf<, Í Windows , Ìfšf [fXftf@fCf<, Å, È, - , Ä, Í, È, è, Ü, ¹, ñ B

filename , ÉfffBfÇfNfgfš, ðŽw’è, µ, È, ç, Æ [CfRf“fpfCf% , Ìftf@fCf<, ðŽŽ, Ì, æ, µ, ÉÇÿ [ö, µ, Ü, · B
· , Ü, Ç » [Ý, Ìf [fX, ÌfffBfÇfNfgfš, ðÇÿ [ö, , é
· ŽŽ, ÉÇÿ [ö fpx, ðÇÿ [ö, , é

ftfjfbfg, ÅŽg, µ [ê [[Cfšf [fXftf@fCf<-
¼, Í‘P, ÉÇ<%É, Ìftfjfbfgftf@fCf<, É<L~ ^, ³, è, Ü, · BfRf“fpfCf<Žž, Éftf@fCf<, Ì‘¶ [Ý, ðŠm”F, , é, ½, ß, Ìf`
fffbfN, Í, ³, è, Ü, ¹, ñ B

fAfvfšfP [fVf#f“ ,Ü, ½, íf%ofCfuf%ofš, ðfšf“fN, , é [ê [[C, , , x, Ä, Ìftfjfbfg, ÅŽw’è, ³, è, ½fšf [fXftf@fCf<, Æ [Cfv [fOf%of€, Ü, ½, íf%ofCfuf%ofšŽ © ‘Ì, ÅŽw’è, ³, è, ½fšf [fXftf@fCf<, [è ^ — [, ³, è [C, » , è, ¼, è, Ìfšf [fXftf@fCf<“ à, Ìšefšf [fX, Í [¶ [- , ³, è, é .EXE ftf@fCf<, Ü, ½, Í .DLL ftf@fCf<, ÉfRfs [, ³, è, Ü, · B

f [f.: , ±, ÌŽw—ß, Å, Í 1 ftfjfbfg, É• i [, Ì .RES ftf@fCf<, ðŽw’è, Å, «, Ü, · BfRf“fpfCf<Žž, É .RES ftf@fCf<, Ì“à—e, É, Å, ç, Ä, Ìšm”F, à [C—LÇø, È .RES ftf@fCf<, Å, , é, © (, » , Ìftf@fCf<, [è [Ý, , é, ©) , Ìšm”F, Í, ³, è, Ü, ¹, ñ B \$R Žw—ß, ÅŽw’è, , éftf@fCf<, Ìfšf“fNŽž, É, Ì‘¶ [Ý, µ, È, - , Ä, Í, È, ç, , [C‘¶ [Ý, µ, È, ç [ê [[C, É, Í [uftf@fCf<, [è © , Å, ©, è, Ü, ¹, ñ (<ftf@fCf<- ¼> .RES) [v, Æ, ç, µfGf% [f [fbfZ [fW, [è [Ž, ³, è, Ü, · B

CEx□□Žw—β {\$WARNINGS}03226

ŽQ□Æ fRf“fpcfCf%Žw—β

\$WARNINGS fRf“fpcfCf%Žw—β,íRf“fpcfCf%É,æ,éCEx□□,ì□¶□→,ð□\$CEä,μ,Û,·□B

□\•¶: {\$WARNINGS ON} ,Û,½,í {\$WARNINGS OFF}

ffftfHf<fg: {\$WARNINGS OFF}

fXfR□[fv: f□□[ffj<

□à-¾

,±,ìŽw—β,í□mfvf□fWfFfNfg(P)□bfifvfVf#“(O)□bCEx□□,ð•\Ž!(W)□nfIfvfVf#“ ,É’Š“- ,μ,Û,·□B

{\$WARNINGS OFF} Žw—β,Æ **{\$WARNINGS ON}** Žw—β,ìŠÔ,ÉfR□[fh,ð“ü,ê,é,Æ□C□d—
v,Å,È,ç,ÆŽv,í,ê,éCEx□□,ð’l’ð,μ,Äfift,É,Å,«,Û,·□B

fif“ {\$WARNINGS ON}

CEx□□,³fif“,ì□ó’Ô,Å,í□CfRf“fpcfCf% ,í□%Šú%» ,³,ê,Ä,ç,È,ç•í□“,âŠÖ□“CE<%É,ìCE‡—
Ž□C’Š□ÛfifufWfFfNfg,ì□ì□→,È,Ç,ðCEÿ□o,μ,½,Æ,«,ÉCEx□□f□bfZ□[fW,ðf□bfZ□[fWfEfBf“fhfE,É□
¶□→,μ,Û,·□B

fift {\$WARNINGS OFF}

fift,ì□ó’Ô,Å,í□CfRf“fpcfCf% ,íCEx□□f□bfZ□[fW,ð□¶□→,μ,Û,¹,ñ□B

ŽQÆ03227

fqf“fgŽw—ß

fqf“fgŽw—ß {\$HINTS}03228

ŽQ□Æ —á fRf“fpfCf%Žw—ß

\$HINTS Žw—ß,ífRf“fpfCf%É,æ,éfqf“fgf□fbfZ□[fW,ì□¶□¬,ð□\$CEä,μ,Ü,·□B

□\•¶: {\$HINTS ON} ,Ü,½,Í {\$HINTS OFF}

ffftfHf<fg: {\$HINTS OFF}

fXfR□[fv: f□□[ffj<

fif“ {\$HINTS ON}

fqf“fg,³fif“,ì□ó‘Ô,Å,í□CfRf“fpfCf%Í-çŽg—p,ì•í□“□C-çŽg—p,ì‘ä“ü□CCE^,μ,ÄŽÀ□s,³,ê,È,ç **for**
,Ü,½,Í **while**

,ìf<□[fv,È,Ç,ðCEÿ□o,μ,½,Æ,«,Éfqf“fgf□fbfZ□[fW,ð□fbfZ□[fWfEfBf“fhfE,É□¶□¬,μ,Ü,·□B

fift {\$HINTS OFF}

fift,ì□ó‘Ô,Å,í□CfRf“fpfCf%Ífqf“fgf□fbfZ□[fW,ð□¶□¬,μ,Ü,¹,ñ□B

□à-¾

{\$HINTS OFF} Žw—ß,Æ {\$HINTS ON} Žw—ß,ìŠÔ,ÉfR□[fh,ð“ü,ê,é,Æ□C□d—v,Å,È,ç
,ÆŽv,í,ê,éfqf“fg,ð‘I‘ð,μ,Äfift,É,Å,«,Ü,·□B

,±,ìŽw—ß,í□mfvf□fWfEfNfg(P)□bfIfvfVf†f“(O)□bfqf“fg,ð•\Ž!(N)□nfIfvfVf†f“,É‘Š“- ,μ,Ü,·□B

—á03229

```
{ ŽŸ,lfR□[fh—á,í□C-čŽg—p,ì•ĭ□”,ÉŠÖ,·,éfqf“fg,đfRf“fpfCf%o,ª□¶□¬,μ,È,č,æ,κ,É,·,é•û-  
@,đŽ!,· }  
{ $HINTS OFF }  
procedure Test;  
var  
    I: Integer;  
begin  
end;  
{ $HINTS ON }
```

ŽQÆ03230

ExŽw—ß

fR [fhfCf [fWfx [fXŽw—B { \$IMAGEBASE address} 03231

fRf“fpfCf%Žw—B

\$IMAGEBASE Žw—B, ífAfvfŠfP [fVf#f“ ,Ü,½,í DLL ,lffftfHf<fg,lff [fhfAfhfCefX,đŽw’è,µ,Ü,·B

[\•¶: { \$IMAGEBASE number }

ffftfHf<fg: { \$IMAGEBASE \$00400000 }

fXfR [fv: fOf [fof<

à-¾

^ø” number ,íCf [fWfx [fXfAfhfCefX,đŽw’è,·,é 32 frfbfg @”l,Á,È,·,ê,î,È,è,Ü,¹,ñB^ø” number ,í \$00010000 ^Èä,Á,È,·,ê,î,È,ç,·C,±,í^ø” ,ì%º^È 16 frfbfg,í³Ž<,³,êCf [f,Á,È,·,ê,î,È,è,Ü,¹,ñB

f,fWf... [f< (fAfvfŠfP [fVf#f“ ,Ü,½,í DLL) ,đfvf [fZfX,ífAfhfCefX— í^æ,í’t,Ö [fh,µ,½ê [CWindows ,í,» ,f,fWf...

[f<,đffftfHf<fg,lff [fhfAfhfCefX,É”z’u,µ,æ,ª ,Æ,µ,Ü,·B,» ,è,ª [C±,µ,È,© ,Á,½ê [C,Á,Ü,è—^ ,!,ç,ê,½fAfhfCefX”í^í,ª ,Á,É—\—ñí,Ý,íê [f,É,íCf,fWf... [f<,í Windows ,ªŠ,,è—,Ä,éfAfhfCefX,ÖÄ”z’u,³,ê,Ü,·B

fAfvfŠfP [fVf#f“ ,lff [fWfx [fXfAfhfCefX,đ•íX,·,é— [R,íC,Ü,Æ,ñ,ç, ,è,Ü,¹,ñB,µ,©,µ DLL ,íê [f,íC \$IMAGEBASE Žw—

ß,đŽg,Á,ÄffftfHf<fg ^ÈŠO,lff [fWfx [fXfAfhfCefX,đŽw’è,·,é,æ,ª ,”Š© ,ß,µ,Ü,·B,È,º,È,ç [CffftfHf<fg,lff [fWfx [fXfAfhfCefX,Á, ,é \$00400000 ,íC,Ü,Æ,ñ,çŽg —p%Å”\,Èê [f,ª,È,ç,©,ç,Á,·B,, [f,³,ê,é DLL fCf [fW,ífAfhfCefX”í^í,í \$40000000 ` \$7FFFFFFF ,Á,·B,±,í”í^í,ífAfhfCefX,í Windows NT ,Æ Windows 95 ,í—¼•ù,ífvf [fZfX,©,çí,ÉŽg—p%Å”\,Á,·B

Windows ,ª DLL ,đ,» ,ì DLL

,lff [fWfx [fXfAfhfCefX,Ö³í,Éf [fh,Á,« ,éê [CÄ”z’u,É,æ,éC³,ª•K—v,È,ç,ì,ÁCDLL ,lff [fhŽžŠÓ,í’Z,,È,è,Ü,·B,³,ç,ÉC—^ ,!,ç,ê,½fAfhfCefX”í^í,ª,» ,ì DLL ,đŽg,ª•í” ,ífvf [fZfX,©,çŽg—p%Å”\,Èê [f,É,íCDLL ,lff [fW,ífR [fh•”•ª ,đfvf [fZfXŠÓ,Á<ª —L,Á,« [C,» ,è,É,æ,Á,Äf [fhŽžŠÓ,Æf [f,fs [f,ªCE ,µ,Ü,·B

'·,¢•¶Žš—ñŽw—ß {\$H} ,Æ {\$LONGSTRINGS}03232

ŽQ□Æ%HDirectivSA fRf“fpfCf%Žw—ß

\$H Žw—ß,íĀĒ^□éĀĒ¾,ì†,Á'P'Æ,ÁŽg,í,ê,é—\—ñĀĒê **string** ,ì^Ó—i,đ□\$ĀĒä,μ,Û,·□B

□\•¶: {\$H+} ,Û,½,í {\$H-}
 {\$LONGSTRINGS ON} ,Û,½,í {\$LONGSTRINGS OFF}

ffftfHf<fg: {\$H+}
 {\$LONGSTRINGS ON}

fXfR□[fv: f□□[fjf<

□à-¾

"Ä—pĀĒ^,ì **string** ,í"®"IŠ,,è"—,Ä,ì'·,¢•¶Žš—ñ (Šî—{ĀĒ^,í AnsiString) ,Æ□C□Ä"ÍŠ,,è"—
,Ä,ì'Z,¢•¶Žš—ñ (Šî—{ĀĒ^,í ShortString) ,ì,Ā,ž,ç,Á,à•\,¹,Û,·□B

fif" {\$H+}□C{\$LONGSTRINGS ON}

ffftfHf<fg,ì {\$H+} ,Á,í□C"Ä—p•¶Žš—ñĀĒ^,ì'·,¢ AnsiString ,Æ,μ,Ä'è<`³,ê,Û,·□BfrfWf...
fAf<fRf“fj□[fif“fgf%ofCfuf%ofŠ (VCL) “à,ì,·,x,Ä,ìfRf“fj□[fif“fg,í□C,±
,ìó'Ó,ÁfRf“fpfCf<³,ê,Û,·□BfRf“fj□[fif“fg,đ□□—,·,é□é□#□CVCL •¶Žš—
ñĀĒ^fvf□pfefB,©,çff□f^,đŽó,~Žæ,é,·,x,Ä,ìfR□[fh,Æ“—l,É□C,» ,ìfRf“fj□[fif“fg,à'·,¢•¶Žš—
ñ,đŽg,í,É,~ ,ê,î,È,è,Û,¹,ñ□B

fift {\$H-}□C{\$LONGSTRINGS OFF}

{ \$H- } □ó'Ó,ì'Z,¢•¶Žš—ñ,đffftfHf<fg,ÁŽg,Á,Ä,¢,½ Object Pascal
fo□[fWf†f“ ,ìfR□[fh,đŽg,±□é□# ,É,à,Á,Æ,à•Ö—~ ,Ä,·□BŠj” ,É , ½,Á,Ä'Z,¢•¶Žš—
ñ,đŠmŽÄ,É□¶□—,·,é,½,ß□C•¶Žš—ñĀĒ^è<` ,ì^Ó—i,đf□□[fjf<,Éf□[fo□[f%ofCfh,·,é,±
,Æ,à,Á,« ,Û,·□B'Z,¢•¶Žš—ñĀĒ^,ì□éĀĒ¾,đ **string**[255] ,Û,½,í ShortString ,É•ï□X,μ,Ä,à,© ,Û,¢
,Û,¹,ñ□B,±,ê,ç,ì□éĀĒ¾,í^è^Ó,É%đŽß,³,ê□C**\$H** ,ì□Y'è,É^É'¶,μ,Û,¹,ñ□B

ŽQÆ03233

'.,ç•¶Žš—ňĀĒ^

'Z,ç•¶Žš—ňĀĒ^

Ä“K%»Žw—ß {\$O} ,Æ {\$OPTIMIZATION}03234

fRf“fpfCf%»Žw—ß

∖•¶: {\$O+} ,Û,½,Í {\$O-}
{\$OPTIMIZATION ON} ,Û,½,Í {\$OPTIMIZATION OFF}

ffftfHf<fg: {\$O+}
{\$OPTIMIZATION ON}

fXfR[fv: f[fj<

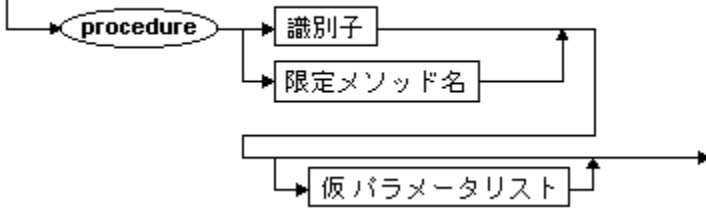
\$O Žw—ß,íR[fh,ìÄ“K%»»,ð\$CEä,μ,Û,·B{\$O+} ð’Ô,Ä,ÍCfRf“fpfCf%»,í CPU
fCfWfXf^,Ö,ì•ï”,”z’uC<æ’É,μ,½•”•ž®,”í’œC—U“±•ï”,”í¶—,É,ÇC’½”,”íR[fhÄ“K
%»»,ðŽÀ[s,μ,Û,·B{\$O-} ð’Ô,Ä,ÍC,»,ì,æ,æ,É,·,×,Ä,ìÄ“K%»»,ÍŽg—p•s%»Ä,É,È,è,Û,·B

“ÁŽê,ÈfffofbfO¶Æ,ìê±,ðœ,̄,îCÄ“K%»»,ðlft,É,·,é•K—v,Í,Û,Á,½,, ,è,Û,¹,ñBDelphi ,ì
Object Pascal fRf“fpfCf%»,žÀ[s,·,é,·,×,Ä,ìÄ“K%»»,íCCE^,μ,Äfvf¶fOf%of€,ì’Ó-
; ,ð•ïX,μ,Û,¹,ñB,Ä,Û,èCDelphi ,ívf¶fOf%of},ž“Á,É’^Ó,μ,È,̄,è,Í,È,ç,È,ç,æ,æ
,Èu^‘S,Ä,È,çvÄ“K%»»,Í,μ,Û,¹,ñB

識別子, 限定メソッド名, 仮パラメータリスト

Object Pascal での識別子, 限定メソッド名, 仮パラメータリストの定義と使用法について説明します。

手続きヘッダー



識別子, 限定メソッド名, 仮パラメータリストの定義と使用法について説明します。

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識別子, 限定メソッド名, 仮パラメータリスト

識別子, 限定メソッド名, 仮パラメータリスト

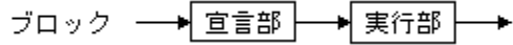
識別子, 限定メソッド名, 仮パラメータリスト

fufjbfN03238

ŽQÆ

fufjbfN, í•ŕ, Åŕ, ě, ü, ·B

ŠefufjbfN, ěžè'±, «éŕCŠÖ"éŕCfŕfjbfh"éŕCfvfŕOf
%œ€ŕCfŕfjbfŕg, ě, ç, ěšü, ü, ě, ü, ·B



éŕC•"

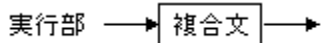
fufjbfN, ěéŕC•", ě, ěžŕ, ě—v'f, šü, ü, ě, ü, ·B

- f%œfxf<
- 'è"
- é^
- •í"
- žè'±, «
- SÖ"
- exports ŕŕ

fufjbfN, ÅéŕC, ·, é, ·, ×, Ä, ěž·Êžq, œf%œfxf<, ě, Å, ç
, ÅŕCfXfRŕ[fv, œ, »), ěfufjbfN, ěfŕŕfjŕ<, ě, ě, è, ü, ·B

ŽÄŕs•"

fufjbfN, ěžÄŕs•", ěŕŕŕ•ŕ, Å, ·B, Å, ü, èŕC—ŕñœè, ě **begin** ,œ **end** , Å'è, ŕ, ç, ě, ½"í^í"à, ě•ŕ, œ 1
, Å^Èŕä, , è, ü, ·B



ŽQÆ03239

begin..end

fufbfN,ifXfRfv

•¶

ŽQÆ03241

fXfR[fv

CE^•t,«'è”

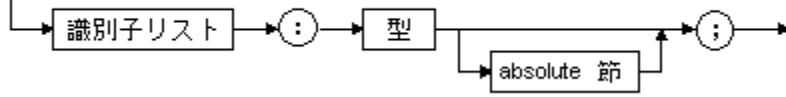
• ĩ"03242

ŽQÆ —á

• ĩ", í• ĩX, Å, «, é' l, ð• \, Ž• ÊŽq, Å, · Bftfjfbfg CŽè' ±, « CŠÖ" CfvfOf%of€
 , ĩ" éCE¾•", Å• ĩ", ðéCE¾, Å, «, Ü, · B

• ĩ" éCE¾, Å, í CŽ• ÊŽq, Å, » , ìCE^, ðéCE¾, µ, È, , Å, í, È, è, Ü, ^, ñ B

変数宣言



• ĩ", ìCE^, Å, µ, Å CŽŸ, ì, ç, , , è, ©, Å, ·, Å, É éCE¾, ^, è, Å, ç, éCE^ Ž• ÊŽq, ðŽg, x, ±, Å, Å, Å, «, Ü, · B

- " , fufbfN "à, ĩ **type** éCE¾•"
- ŠO' x, lfufbfN
- ftfjfbfg

• ĩ", É, í V, µ, çCE^, à éCE¾, Å, «, Ü, · B

• ĩ" Ž• ÊŽq, lfXfR [fv, í, » , ĩ" , ì éCE¾, ^, , éfufbfN "à, ÉCEÀ, ç, è, Ü, · B" à' x, É•• "ü, ^, è, Å, ç
 , éfufbfN, Å Ž• ÊŽq, ð Å éCE¾, µ, È, çCEÀ, è CfvfOfbfN "à, ì, Ç, ±, Å, Å, à, » , ĩ" , ðŽQÆ, Å, «, Ü, · B
 Å éCE¾, ð, , é, Å CCE³, ĩ" , ì' l, É%œ< z, ð<y, Ú, ^, , É C" , ĩ Ž• ÊŽq, Å V, µ, ç ĩ" , à ì ¬, ^, è, Ü, · B

ŽQÆ03243

fOf□□[fof<•ï□”,Æf□□[ffj<•ï□”

fXfR□[fv

ftfjfbfg

var (—\-ñÆê)

•ï□”ŽQ□Æ

•ï□”Æ^flfffXfg

□%oŠú%o»•ï□”

—á03244

var

X, Y, Z: Real;

I, J, K: Integer;

Digit: 0..9;

C: Color;

Done,Error: Boolean;

Operator: (Plus, Minus, Times);

Hue1, Hue2: **set of** Color;

Today: Date;

Matrix: **array**[1..10, 1..10] **of** Real;

fOf [fof<•i] ,Æf [ff<•i] 03245

ŽQÆ •i

fOf [fof<•i] ,íŽè±,«,âšÖ,ìšO•,ÅéĚ¼,³,è,Ü,·BfOf [fof<•i] ,í^È
%º,ì,·,×,Ä,ÅŽg,!,Ü,·B

- Žè±,«
- ŠÖ
- ffbfh

f [ff<•i] ,íŽè±,«CŠÖ Cffbfh,ì“à•,ÅéĚ¼,³,è,Ü,·Bf [ff<•i] ,íŠO’
,lfufbfN“à,¾,~,ÅŽg,!CŽè±,«,âšÖ,ªĚÄ,Ňo,µ’x,É-ß,é,Æ”jŠü,³,è,Ü,·B

f [ff<•i] ,ÆfXf^fbfN

Žè±

,«,âšÖ,ì“à•,ÅéĚ¼,³,è,½•i,íf [ff<•i] ,ÆĚÄ,î,êCfAfvfŠf [fvf] ,lfXf^fbfN,É•ŮŽ,³
è,Ü,·BŽè±,«,âšÖ,ìĚÄ,Ňo,µ,ì,½,Ň,ÉCf [ff<•i] ,æfXf^fbfNä,ÉŠ,,è“-,Ä,ç,è,Ü,·B—
¹Žž,ÉŠef [ff<•i] ,í”jŠü,³,è,Ü,·B

fAfvfŠf [fvf] ,lfXf^fbfN,í minimum stack size ,Æ maximum stack size ,ì 2
,Ä,ì!,É,æ,Ä,Ä’è<³,è,Ü,·B,±,ì 2 ,Ä,ì!,í \$MINSTACKSIZE ,Æ \$MAXSTACKSIZE ,lfRf”fpfCf
%ºŽw—ß,Å\$Ěä,µ,Ü,·B\$MINSTACKSIZE ,Æ \$MAXSTACKSIZE ,lffftfHf<fg,í,»,è,¼,è 16,384
(16K) ,Æ 1,048,576 (1M) ,Ä,·BfAfvfŠf [fvf] ,ìÄ—fXf^fbfNfTfCfY,ðí,É—~
p,Ä,«,é,æ,ª•ŮØ,³,è,Ä,“,èC,»,µ,ÄfAfvfŠf [fvf] ,lfXf^fbfN,ªÄ’âfXf^fbfNfTfCfY,æ,è’â,«,-
,É,é,±,Æ,íĚ^,µ,Ä, ,è,Ü,¹,ŇB

fAfvfŠf [fvf] ,ìÄ—fXf^fbfNfTfCfYðĚ,ð-ž,½,·ff, fŠ,ª~—
p,Ä,«,É,†Ě±,íC,»,lfAfvfŠf [fvf] ,ð<N”®,µ,æ,ª,Æ,·,é,Æ Windows ,©,cfGf
% [,ªo,³,è,Ü,·B

Ä—fXf^fbfNfTfCfY,ÅŽw’è,³,è,é,æ,è,à’½,†fXf^fbfN—ì^æ,æfAfvfŠf [fvf] ,É•K—v,Ä, ,è,îC
'Ç%Á,lfff, fŠ,ª 4K 'P^Ê,ÅŽ©“®“! ,ÉŠ,,è“-,Ä,ç,è,Ü,·B'Ç%Áff, fŠ,ª~—p,Ä,«,É,†
,©CfXf^fbfN,ì±ĚvfTfCfY,ªÄ’âfXf^fbfNfTfCfY,ð’ ,!,é,½,ß'Ç%ÁfXf^fbfN—ì^æ,ìŠ,,è“-
,Ä,ÉŽ,“s,·,é,ÆĚCEStackOverflow —áŠO,ªŇ—,³,è,Ü,·B

f, Delphi ,Æ Borland Pascal
,ìĚfo [fwf] ,Ä,íCfXf^fbfNf [fo [ftf] fFfbfN,ð\$Ěä,·,é \$S fRf”fpfCf%ºŽw—
ß,æfTf [fg,³,è,Ä,†,Ü,µ,½B; %ñfXf^fbfNf [fo [ftf] ,lf` fFfbfN,íŠ®’S,ÉŽ©“®
%º,³,è,Ä,†,Ü,·,ªC%º^ÊĚYŠ·«,ì,½,ß,É \$S Žw—ß,í^ø,«±,«Žg,!,Ü,·B

ŽQÆ03246

fXfRlfv

□%Šú%»□İ,Ý•İ□"03247

ŽQ□Æ •İ□"

•İ□"□éĚ¾,Å'P^è,İfOf□□[fof<•İ□",đ□éĚ¾,·,é□ê□#□C,»,"İ•İ□",É,Í□éĚ¾,Å□
%Šú'l,đŽw'è,Å,«,Ü,·□BfOf□□[fof<•İ□"□éĚ¾,ª□%Šú'l,đ-
¾Ž|"l,É,ÍŽw'è,μ,È,ç□ê□#□C,»,"İ•İ□",ª□è—L,·,é□f□f,š,İ□%Šú'l,Íf[□f□,É□Ý'è,³,ê,Ü,·□B
f□□[f□f<•İ□",É,Í□%Šú'l,đŽw'è,Å,«,·,□CŽè'±,«,Ü,½,ÍŠÖ□",ì"üĚù,Å,Í,·,x,Ä,İf□□[f□f<•İ□",ì'l,a-
ç'è<`,İ□ó'Ô,Å,·□B

ŽQÆ03248

Ā^•t,«'è

fOf[fof<•i",Æf[fjf<•i"

• ĩ"ŽQAE03249

ŽQAE

• ĩ"ŽQAE, AE, ížÿ, ì, ç, , ê, ©, ð, \, μ, Ü, ·B

- ĩ"
- \‘ç%o»CE^• ĩ", Ü, ½, Í•ŕŽš—ñCE^• ĩ", ì—v‘f
- f|fCf“f^CE^• ĩ", aŽw, “ @“l• ĩ"

• ĩ"ŽQAE, ì□•ŕ, Ížÿ, ì, æ, x, É, È, è, Ü, ·B



• ĩ"ŽQAE, ì□•ŕ, Á, í□Cf|

fCf“f^CE^, ì, ðCEvžZ, , éž @, aŽg, ì, Ü, ·BžÀ□Ù, É• ĩ"ŽQAE, ðŕ□ŕ, , , é, É, í□Cf|

fCf“f^, ì, ð<tŽQAE, , éCEÀ'èžq ({\$X+} Žw—ß, É, æ, Á, ÁŠg'£□\•ŕ, a—LCEø, É, E, Á, Ä, ç, é□ê□#, íf|

fCf“f^, ì, É“Yžš•t, , , éCEÀ'èžq) , ð, ±, Ìž @, ìCEã, É•t, , È, , Á, Í, È, è, Ü, , ñ□B

ŽQÆ03250

f|fCf“f^CE^•i”

CEÀ'èŽq

•ŕŽš—ñCE^•i”

□\‘č%o»CE^•i”

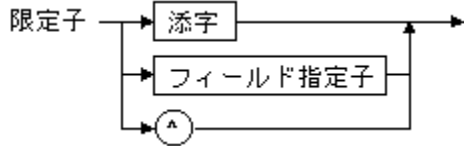
•i”

•i”CE^fLfffXfg

CEÀ'èŽq03251

ŽQÆ Variable references

CEÀ'èŽq,í•ï"ŽQÆ,ì^Ó-ì,đCEÀ'è,μ,Û,•B•ï" ,É,í,ç,,Á,Â,àCEÀ'èŽq,đ•t, ,é,± ,Æ,ª,Â,«,Û, ,ªC•t, ,È,ç,±,Æ,à, ,è,Û,•B



"z-ñŽ•ÊŽq,ÉCEÀ'èŽq,đ•t, ,È, ,é,îC"z-ñ'S'ì,ªŽQÆ,ª,è,Û,•B
 "z-ñŽ•ÊŽq,ìCEä,É"YŽš,đ•t, ,é,ÆC"z-ñ,ì"A'è-v'f,đ•\,¹,Û,•B
 fCEfR[fhCE^,âflfufWfFfNfgCE^,ì-v'f,ìê#îC"YŽš,ìCEä,ÉftfB[f<fhŽw'èŽq,đ•t, ,é,ÆC"z-
 ñ,ì"A'è-v'f"à,ì"A'èftfB[f<fh,đ•\,¹,Û,•B
 flfCf"f^CE^ftfB[f<fh,ìftfB[f<fhŽw'èŽq,ìCEä,Éf]fCf"f^fvf"f{f<(^),đ•t, ,é,ÆCf|
 fCf"f^CE^ftfB[f<fh,Æ,» ,ìftfB[f<fh,ªŽw, " "I•ï" ,Æ,đ<æ•Ê,Â,« ,Û,•B
 flfCf"f^CE^ftfB[f<fh,ªŽw,•ï" ,ª"z-ñ,ìê#îC"YŽš,đ•t, ,é,Æ,» ,ì"z-ñ,ì-
 v'f,đŽw'è,Â,« ,Û,•B
 Ì\ç%»CE^,đ<tŽQÆ, ,é,Æ,« ,É,ìf]fCf"f^fvf"f{f<,íÈ-ª,Â,« ,Û,•B

ŽQÆ03252

"z—ňĀ^

ftfB[f<fh,ÆflfufWfEfNfgĀ^—v'f,ìŽw'èŽq

"YŽš

f|fCf"f^,Æ"®"l•i"

f|fCf"f^Ā^

•i"ŽQÆ

ŽQÆ03254

"z—ňĀ^

Ā'èŽq

•ŕŽš—ňĀ^

•ŕŽš—ňſſfg,É'í,,:é'€i

—á03255

ŽŸ,ì—á,í"z—ñ,ìfzf<,ÉfAfNfzfX,μ,Ü,·□B

Matrix[I, J];

ŽŸ,ì 2 ,Â,ì—á,í,Ü,Á,½,"~,¶,Å□Cf□f,œ^ftfB□[f<fh,ì 1 □s-Ú,ÉfefLfXfg,ð□Ý'è,μ,Ü,·□B

Memol.Lines.Strings[0] := 'This is the first line.';

Memol.Lines[0] := 'This is the first line.';

ftfB[f<fh,ÆfIfufWfFfNfg,ìŽw'èŽq03256

ŽQÆ —á Variable references

ftfB[f<fhŽw'èŽq

ftfB[f<fhŽw'èŽq,ÍfCFR[fh,ì“Á'èftfB[f<fh,ÉfAfNfZfX,·,é,Æ,«,ÉŽg,ç,Ü,·B



with •¶†,ì•¶,Á,ÍCftfB[f<fhŽw'èŽq,ì'O,ÉC,»,ìftfB[f<fh,^a, ,éfCFR[fh,Ö,ì•ï”ŽQÆ,ð•t,¯,é•K
—v,Í, ,è,Ü,¹,ñB

fIfufWfFfNfgÆ^—v'fŽw'èŽq

fIfufWfFfNfgÆ^—v'fŽw'èŽq,ÍfIfufWfFfNfg,ì“Á'è—v'f,ÉfAfNfZfX,·,é,Æ,«,ÉŽg,ç,Ü,·Bf\fbfh,ðŽw'è,·,é—v'fŽw'èŽq,Íf\fbfhŽw'èŽq,Æ,ç,ç,Ü,·B

ŽŸ,ìèè‡,ÍfCf“fXf^f“fX,ÆfsfŠfIfh,ðÈ—^a,Á,«,Ü,·B

- **with** •¶,ðŽg,Á,Ä—v'f,ðŽQÆ,·,éèè‡
- f\fbfhfuf\fbfN“à (—v'fŽQÆ,ì'O,É Self ,ÆfsfŠfIfh,^a•t,ç,½èè‡,Æ“¯,¶,É,È,é,½,ß)

ŽQÆ03257

fNf%ofXCE^

fCEfR[]fhCE^

with •¶

—á03258

ŽŸ,ì—á,íſŒfR[fh“à,ìftfB[f·fh,ÉfAfNfZfX,μ,Ü,·B

Today.Year

Results[1].Count

Results[1].When.Month

f|fCf“f^,Æ”®“l•i”03259

ŽQÆ —á

f|fCf“f^•i”,í nil ‘l,Ü,½,í“®“l•i”,l|fAfhfCfX,đ•ÚŽ,μ,Ü,·B

f|fCf“f^•i”,žw,“®“l•i”,l|f|fCf“f^•i”,l|CĚã,Éf|fCf“f^fVf“f{f< (^) ,đ•t, ,ÄŽQÆ,μ,Ü,·B

New Žè‘±,«,Æ GetMem Žè‘±,«,đŽg,ꝛ,ÆC“®“l•i”,Æ,»,l|f|fCf“f^‘l,đ¶¶→,Å,«,Ü,·B

@ (fAfhfCfX) %%%ŽŽŽq,Æ Addr ŠÖ,đŽg,ꝛ,ÆC“®“l•i”,Ö,l|f|fCf“f^,Æ,μ,Ä^—,³,ê,é|fCf“f^‘l,đ¶¶→,Å,«,Ü,·B

nil ,í,Ç,ì•i”,àŽw,μ,Ü,¹,ñBf|fCf“f^,ì‘l,ª nil ,Ü,½,í-
ç‘è<` ,l,Æ,«,É“®“l•i”,ÉfAfnfZfX,μ,½ê¶CCE<%É,í-ç‘è<` ,Å,·B

ŽQÆ03260

f|fCf“f^CE^

•i”

—á03261

ŽŸ,ì—á,í“®“l•i□”,Ö,ìŽQ□Æ,Å,·□B

P1^

P1^.Siblings^

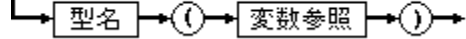
Results[1].Data^

• ĩ"CE^fLfffXfg03262

ŽQAE —á Variable references

• ĩ"CE^fLfffXfg,É,æ,èC, ,éCE^, ĩ"ŽQAE,ª•Ê, ĩCE^, ĩ"ŽQAE,É•ĭ,í,è,Ü, ·B

変数型キャスト



• ĩ"ŽQAE,É'í,µ,Ä•ĭ"CE^fLfffXfg,ð,·,é,ÆC,», ĩ"ŽQAE, íCE^Ž•ÊŽq,ÅŽw'è,µ,½CE^, ĩfC"fxf^f
 "fX,Æ,µ,Ä^—,³,é,Ü, ·B•ĭ", ĩfTfCfY, íCE^Ž•ÊŽq,ÅŽw'è,µ,½CE^, ĩfTfCfY,Æ"~,¶,Ä,É,-
 ,Ä,í,É,è,Ü,¹,ñB**as** %%%ŽŽŽq,ðŽg,Ä,ÄCE^fLfffXfg,ð,·,é,ÆCCE^fLfffXfg, ĩ—
 LCø«,ªf`fFbfN,³,éCCE^fLfffXfgCEã, ĩCE^,Æ,í'ã"ü, ĩCEÝŠ·«,ª•ĭ",É,É,çê±, í—
 áŠO,ª¶¶→,³,é,Ü, ·BCE^Ž•ÊŽq, ĩCEã,É•ĭ"—
 ¼,ðfjfbfR,É"ü,é,ÄCE^fLfffXfg,ð,·,é,ÆCCE^fLfffXfg, ĩf`fFbfN,³,é,Ü,¹,ñB

• ĩ"CE^fLfffXfg, ĩCEã,ÉCŽw'è,µ,½CE^,Ä<-%Ä,³,é,Ä,ç,é,¾, ~CEÀ'èŽq,ð•t, ~,é,±,Æ,ª,Ä,«,Ü, ·B

Object Pascal ,Ä, ĩCŽè±,«CE^,ðŠÜ,ª,³,Ü, ',Ü,È•ĭ"CE^fLfffXfg,ªTf[]fg,³,é,Ä,ç,Ü, ·B

ŽQÆ03263

Ā'èžq

'Ā^fLffXfg

•i”

—á03264

ŽŸ,ì,æ,α,Èé€¾,â, ,é,Æ,μ,Û,·□B

type

Func = **function**(X: Integer): Integer;

var

F: Func;

P: Pointer;

N: Integer;

ŽŸ,ì,æ,α,È'ã"ü,â,Ä,«,Û,·□B

| | |
|------------------|-------------------------------------|
| F := Func(P); | { P ,ìžè'±,«'l,đ F ,É'ã"ü,μ,Û,· } |
| Func(P) := F; | { F ,ìžè'±,«'l,đ P ,É'ã"ü,μ,Û,· } |
| @F := P; | { P ,ìf fCf"f^'l,đ F ,É'ã"ü,μ,Û,· } |
| P := @F; | { F ,ìf fCf"f^'l,đ P ,É'ã"ü,μ,Û,· } |
| N := F(N); | { F ,đžg,Ä,ÄšÖ" ,đ€Ä,Ń□o,μ,Û,· } |
| N := Func(P)(N); | { P ,đžg,Ä,ÄšÖ" ,đ€Ä,Ń□o,μ,Û,· } |

Ž•Êžq03265

—á Ć¾ĀĒ'è<`

Ž•Êžq, í Object Pascal fvfĴOf%ofĒ, ÌžŸ, Ìše—v'f, ð•\, , Ì, Ēš,, è"—, Ā, é-¼'O, Ā, .ĴB
'èĴ"

fĀfRĴ[fh, ÌftfBĴ[fcfh

šÖĴ"

f%ofxf<

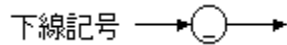
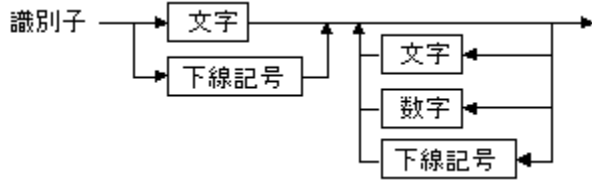
Žè'±, <<

fvfĴOf%ofĒ

Ā^

ftfjfbfg

•ĴĴ"



Ž•Êžq, É, Í, ð•Ĵžš, ĀĴĴ—Ĵ•Ĵžš, Ìkæ•Ē, Í, , è, Ü, ¼, ģĴB

Ž•Êžq, Ì-¼'O, É, ÌžŸ, ÌĴšĀž-ĴĒ, ð"K—p, ¾, é, Ü, .ĴB

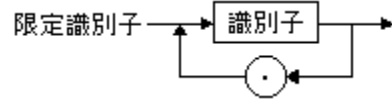
- ' , ¾, Í"Ā^Ó, ¾, ðĀ^Ó-Ĵ, Ì, , é, Ì, ÌĴĀĴ%o, Ì 63 •Ĵžš, ¾, -, Ā, , é
- %opžš, Ü, ¼, Ì%ooĴü<ĴĴ† () , Āžn, ß, Ē, , Ā, Ē, ç, Ē, Ą
- 2 •Ĵžš-Ú^ĒĴ~ , É, Ì%opžšĴĴ"žšĴĴ%ooĴü<ĴĴ†, Ì, Ą, , , é, ©, ðžg, Í, Ē, , Ā, Ĵ, Ē, ç, Ē, Ą
- <ó", ð"ü, è, Ā, Ĵ, Ē, ç, Ē, Ą

ĀĒ'èž•Êžq

" , Ĵž•Êžq, ÌĴĴf"fxf^f"fx, ð•ĴĴ", , éĴĴĴĴĴĴ-¼'O, ÌkĴĴĴ, ðkN, ±, ç, Ē, Ą, æ, Ą

, É, , é, Ì, ĒĀĒ'èž•Êžq, ð-ð—

š, Ì, Ü, .ĴBž•Êžq, ð•Ē, ÌžŸ•Êžq, ðžg, Ā, ĀĀĒ'è, , é, ĀĴĴĴĴĴĴ"Ā'èĴĴf"fxf^f"fx, ð'Ĵ, Ā, <<, Ü, .ĴB



—á03266

ŽŸ,ì—á,í•W□€,ìŽ˘•ÊŽq,Å,·□B

TextFile

Exit

Real2String

ŽŸ,ì—á,í☉À'èŽ˘•ÊŽq,Å,·□B

System.MemAvail (* ftjfbfg = System, Ž˘•ÊŽq = MemAvail *)

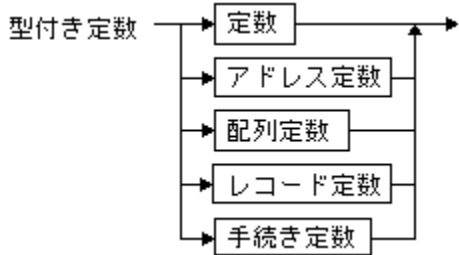
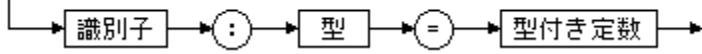
System.CloseFile;

CE^•t,«'è"03267

ŽQAE —á

CE^•t,«'è",)éCE¾,í"Ç,Ýo,μê—p•ï",)éCE¾,É'S"—,μ,Ü,·BCE^•t,«'è",)•ïX,Å,«,È,ç,±,Æ,ðœ,ç,ÄC"~,¶CE^,i•ï",)i,æ,α,ÉŽg,!,Ü,·B

型付き定数宣言



'Éí,ì'è"Ž®,!,Ü,©,ÉCE^•t,«'è",)ì,í'è"ƒAfhfCEfXŽ®,Å,àŽw'è,Å,«,Ü,·B

CE^•t,«'è",É,í^È%º,ì 5 Ží—p,a, ,è,Ü,·B

f|fCf"f^CE^'è"

Žè'±,«CE^'è"

'PƒCE^'è"

•¶Žš—ñCE^'è"

□\`ç%º»CE^'è"

fƒ, **\$J**fRf"ƒpfCf%ºŽw—β,í•ïX,Å,«,éCE^•t,«'è",)éCE¾,ð%ºÅ"\,É,μ,Ü,·BffftfHf<fg,ì
 {**\$J**-} □ó'Ô,ÅéCE¾,μ,½CE^•t,«'è",)í"Ç,Ýo,μê—p,Å•ïX,í,Å,«,Ü,¹,ñB Delphi ,Æ
 Borland Pascal ,ì<CEfo□[ƒWfƒf",Æ,ì%ºº^ÉCEYS·□«,ì,½,β,É□C{**\$J**+}
 □ó'Ô,ÅéCE¾,μ,½CE^•t,«'è",)í•ïX,Å,«□CŽÅŽž;"l,É,»,è,ç,í□%ºŠú
 %º»□İ,Ý•ï",Å,·B□V,μ,çAfvfšƒP□[ƒVfƒf",Å,í {**\$J**+} □ó'Ô,ðŽg,í,È,ç,Å,,¾,¾,ç□B

ŽQÆ03268

'è"éE¾

Šú»•i"

—á03269

(* É^•t,«'è"éÉ¾ *)

type

Point = **record** X, Y: real **end**;

const

Minimum: Integer = 0;

Maximum: Integer = 9999;

Factorial: **array**[1..7] **of** Integer = (1, 2, 6, 24, 120, 720, 5040);

HexDigits: **set of** Char = ['0'..'9', 'A'..'Z', 'a'..'z'];

Origin: Point = (X: 0.0; Y: 0.0);

□\‘¢%o»CE^’è□”03270

ŽQ□Æ Typed constants

□\‘¢%o»CE^’è□”,ì□éCE¾,í□\‘¢,ìŠe—v’f,ì’l,ðŽw’è,μ,Û,·□B

Object Pascal ,Å,í□CŽŸ,ìCE^,ì’è□”,ì□éCE¾,³fTf|□[fg,³,ê,Ä,¢,Û,·□B

”z—ñ

fCEfR□[fh

□W□‡

f|fCf“f^

ftf@fCf<CE^’è□”,Æ□Cfile CE^—v’f,ðŠÛ,p array CE^’è□”,â record CE^’è□”,íŽg,l,Û,¹,ñ□B

ŽQÆ03271

f|fCf“f^Ā^è”

Žè'±,«Ā^è”

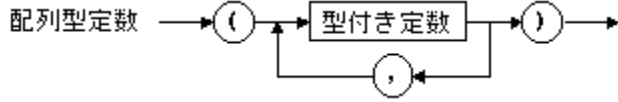
'P|fĀ^è”

•¶Žš—ňĀ^è”

"z-ñĀ^'è"03272

—á Structured-type constants

"z-ñĀ^'è",í—v'f,â%Šú%»ï,Ý,ì"z-ñ,ðéĀ¾,μ,Û,·B



"z-ñĀ^'è",ìéĀ¾,í—v'f,ì'l,ðŽw'è,μ,Û,·B"z-ñĀ^'è",í—v'f,ìĀ^,É,íCftf@fCf<Ā^ÈŠO,Ā, ,e,í,ç,ìĀ^,Ā,àŽg,ì,Û,·B

•ŦŽš"z-ñ

fpfbfN•ŦŽš—ñĀ^'è" (•ŦŽš"z-ñ) ,í 1 •ŦŽš,Æ,μ,Ā,Ā,à•ŦŽš—ñ,Æ,μ,Ā,Ā,àŽw'è,Ā,«,Û,·B

"YŽš,â 0 ,©,çŽn,Û,é•ŦŽš"z-ñ

•ŦŽš"z-ñ,ìĀ%»,ì—v'f,ì"YŽš,í 0 ,ĀCĀĀĀ,ì—v'f,ì"YŽš,í 0 ^ÈŠO,ì®,ì®,Ā,·B

"YŽš,â 0 ,©,çŽn,Û,é•ŦŽš"z-ñ,íC,»,ì"z-ñ,É'í,μ,ĀéĀ¾,¾,é,½',¾,æ,è,à'Z,ç•ŦŽš—ñ,ðŽg,Ā,Ā%Šú%»,Ā,«,Û,·B

•ŦŽš—ñ,â"z-ñ,ì',¾,æ,è,à'Z,çéçCŽc,è,ì•ŦŽš,í NULL (#0) ,ÉÝ'è,¾,éC"z-ñ,É,íkf<,Ā,ì,é•ŦŽš—ñ,â"ü,é,±,Æ,É,È,è,Û,·B

'½ŽŸĀ³"z-ñ'è"

'½ŽŸĀ³"z-ñ'è",íCŠeŽŸĀ³,ì'è",ðff"ff}

,Āæ∅,Ā,ĀffbfR,Ā'í,ÝC,¾,ç,É,»,ìŽü,è,ðffbfR,Ā'í,ñ,Ā'è<,μ,Û,·B

Ā,à"à'α,ì'è",âĀ,à%E'α,ìŽŸĀ³,É'í%ž,μ,Û,·B

—á03273

ŽŸ,ì—á,í"z—ñĀ^'è" StatStr ,đi—,μ,Û,·B

type

```
Status = (Active, Passive, Waiting);  
StatusMap = array[Status] of string[7];
```

const

```
StatStr: StatusMap = ('Active', 'Passive', 'Waiting');
```

StatStr ,ì—v'f,đŽŸ,ÉŽ,μ,Û,·B

```
StatStr[Active] = 'Active'  
StatStr[Passive] = 'Passive'  
StatStr[Waiting] = 'Waiting' }
```

ŽŸ,ì—á,í%Šú%»i,Ÿ,ì'½ŽŸĀ³"z—ñ Maze ,đéĀ¾,μ,Û,·B

type

```
Cube = array[0..1, 0..1, 0..1] of Integer;
```

const

```
Maze: Cube = (((0, 1), (2, 3)), ((4, 5), (6, 7)));
```

"z—ñ Maze ,ì'l,đŽŸ,ÉŽ,μ,Û,·B

```
Maze[0, 0, 0] = 0  
Maze[0, 0, 1] = 1  
Maze[0, 1, 0] = 2  
Maze[0, 1, 1] = 3  
Maze[1, 0, 0] = 4  
Maze[1, 0, 1] = 5  
Maze[1, 1, 0] = 6  
Maze[1, 1, 1] = 7
```

f|fCf“f^Ā^'è”03274

ŽQĀĒ —á Typed constants%TypedConstants

f|fCf“f^Ā^'è”,í|fCf“f^'l,đŽ-'O,É□%Šú%»»,·,é,Ā,«,ÉŽg,ϕ,Ü,·□B

^è”Ē,É□Cf|fCf“f^Ā^'è”,ì□éĀ³/₄,Ā,í'è□”fAfhfĀfXŽ®,đŽg,Ā,Āf|fCf“f^'l,đŽw'è,μ,Ü,·□B

PChar Ā^,ìĀ^·t,«'è□”,í·ŕŽš—ň'è□”,đŽg,Ā,Ā□%Šú%»»,Ā,«,Ü,·□B

ŽQÆ03275

PChar

f|fCf“f^E^

—á03276

ŽŸ,ì—á,í|fCf“f^Ĉ^'è”,đéĈ¼,μ,Ü,·B

type

```
TDirection = (Left, Right, Up, Down);
TStringPtr = ^String;
TNodePtr = ^Node;
TNode = record
  Next: TNodePtr;
  Symbol: TStringPtr;
  Value: TDirection;
end;
```

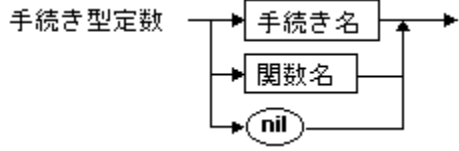
const

```
S1: string[4] = 'DOWN';
S2: string[2] = 'UP';
S3: string[5] = 'RIGHT';
S4: string[4] = 'LEFT';
N1: TNode = (Next: nil; Symbol: @S1; Value: Down);
N2: TNode = (Next: @N1; Symbol: @S2; Value: Up);
N3: TNode = (Next: @N2; Symbol: @S3; Value: Right);
N4: TNode = (Next: @N3; Symbol: @S4; Value: Left);
DirectionTable: TNodePtr = @N4;
```

Žè'±,«Ĉ^'è"03277

ŽQĀĒ —á Typed constants%TypedConstants

Žè'±,«Ĉ^'è",íŽè'±,«Ĉ^,đŽ-'O,É%Šú%»,:é,Ā,«,ÉŽg,č,Ü,·B



Žè'±,«Ĉ^'è",Å,ÍC,»,ì'è",ìĈ^,Ā,ì'ã"ü,ìĈÝŠ·«,ì, ,éŽè'±,«,Ü,½,ÍŠÖ",ìŽ·ĒŽq,©C'I nil
,đŽw'è,μ,È,,Ä,Í,È,è,Ü,¹,ňB

ŽQÆ03278

Žè'±,«Ĉ^

Ĉ^•t,«'è□"

—á03279

ŽŸ,ì—á,íŽè'±,«,ðŒ^,ì'è",É'ã"ü,μ,Û,·B

type

ErrorProc = **procedure**(ErrorCode: Integer);

procedure DefaultError(ErrorCode: Integer); **far**;

begin

WriteLn('Error ', ErrorCode, '.');

end;

const

ErrorHandler: ErrorProc = DefaultError;

レコード型定数

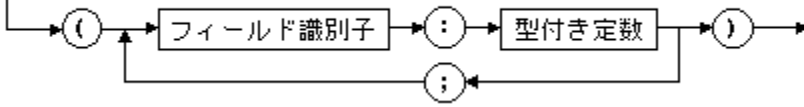
Structured-type constants %StructuredTypeConstants

レコード型定数の文法記法

レコード型定数の要素

レコード型定数の要素

レコード型定数



レコード型定数の要素

- レコード型定数の要素
- レコード型定数の要素
- レコード型定数の要素

ŽQÆ03281

fÆfR[]fh

Æ^•t,«'è[]

—á03282

ŽŸ,ì—á,íƒĈfR[]fhĈ^'è" TPoint ,đĈéĈ¾,μ,Û,·ĈB

type

TPoint = **record**

X, Y: Real;

end;

TVector = **array**[0..1] **of** Point;

TMonth = (Jan, Feb, Mar, Apr, May, Jun, Jly, Aug, Sep, Oct, Nov, Dec);

TDate = **record**

D: 1..31;

M: Month;

Y: 1900..1999;

end;

const

Origin: TPoint = (X: 0.0; Y: 0.0);

Line: TVector = ((X: -3.1; Y: 1.5), (X: 5.8; Y: 3.0));

SomeDay: TDate = (D: 2; M: Dec; Y: 1960);

W⊕CE^'è"03283

ŽQ⊕Æ —á Structured-type constants%StructuredTypeConstants

W⊕CE^'è",íW⊕,ì—v'f,đŽ-'O,É%Šú%»,: ,é,Æ,«,ÉŽg,ϕ,Ü,·B

W⊕CE^'è",ìéCE¾,Á,íC'è"Ž®,đŽg,Á,ÄW⊕,ì'l,đŽw'è,μ,Ü,·B

ŽQÆ03284

W‡

W‡Ĉ

Ĉ•t,«'è

—á03285

ŽŸ,ì—á,í Digits ,Æ Letters ,ìW□#CE^`è□",ð□éCE¾,μ,Ü,·□B

type

Digits = **set of** 0..9;

Letters = **set of** 'A'..'Z';

const

EvenDigits: Digits = [0, 2, 4, 6, 8];

Vowels: Letters = ['A', 'E', 'I', 'O', 'U', 'Y'];

HexDigits: **set of** '0'..'z' = ['0'..'9', 'A'..'F', 'a'...'f'];

'P□fCE^'è□"03286

ŽQ□Æ —á Typed constants%TypedConstants

'P□fCE^'è□",ì□éCE¾,Á,í□C'è□",ì'l,ǒŽw'è,μ,Û,·□B

'è□"fAfhfCEfXŽ@,ǒŽg,κ,Æ□CCE^•t,«'è□",ì'l,ǒŽw'è,Á,«,Û,·□B

CE^•t,«'è□",íŽÀ□Ú,É,í'è□"l,ǒŽ□,Á•ï□",È,ì,Á□C'¼,ì'è□",ì□éCE¾,ì't,ÁŽg,κ,±,Æ,í,Á,«,Û,¹,ñ□B

ŽQÆ03287

Ĉ

Ĉ•t,«'è

—á03288

ŽŸ,ì—á,í'P□fCE^'è□",đ□éCE¾,μ,Ü,·□B

const

Maximum: Integer = 9999;

Factor: Real = -0.1;

Breakchar: Char = #3;

• **¶Žš—ňĀ^'è"03289**

ŽQÆ —á Typed constants%TypedConstants

• ¶Žš—ňĀ^,Ā^•t,«'è",Āé¼,ÍP¶f,É•¶Žš—ň'è",đŽw'è,μ,Û,·B

'Z,¶•¶Žš—ň,Ā^•t,«'è",đé¼,·,é,É,ÍCé¼,É',Žw'èŽq,đŽw'è,μ,Û,·B

ŽQÆ03290

•řžš—ňĚ^

Ě^•t,«'è"

—á03291

ŽŸ,ì—á,í'·,ç•¶Žš—ňĀ^'è",đéĀ¾,μ,Û,·B

const

Heading: **string**[7] = 'Section';

NewLine: **string**[2] = #13#10;

TrueStr: **string**[5] = 'Yes';

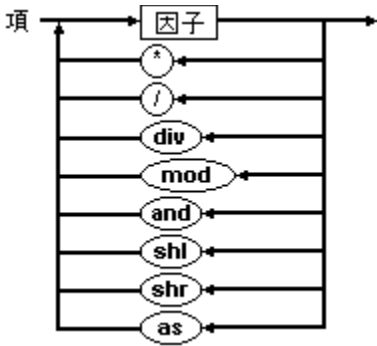
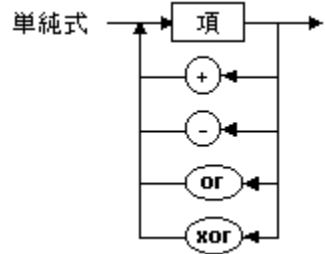
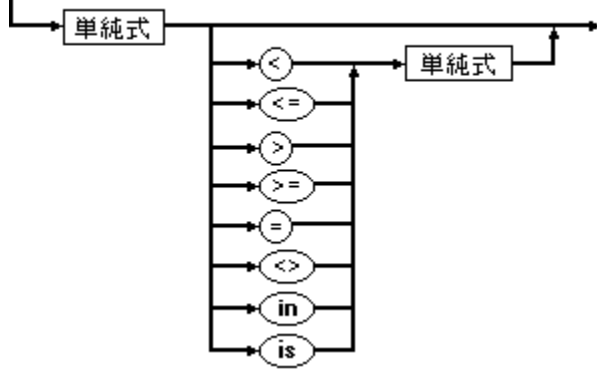
FalseStr: **string**[5] = 'No';

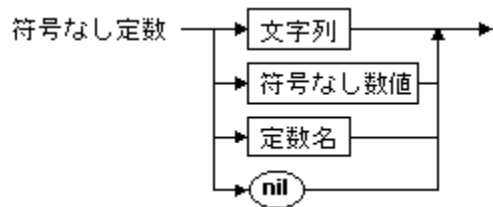
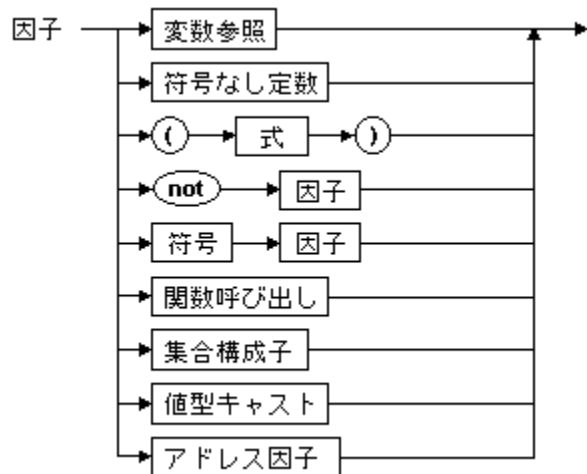
ŽŸ,ì—á,í'Z,ç•¶Žš—ňĀ^'è",đéĀ¾,μ,Û,·B

Ž®03292

ŽQÆ

Ž®,í%%ŽŽžq,Æflfyf%of“fh,ì'g,Ý‡,í,¹,Å, ,èC•]%%ž,É,æ,Á,ÄÆ<%Ê,ì'l,ª 1 ,Å“¾,ç,ê,Û,·B
式





f|fyf%of“fh,đŽŸ,ÉŽ!,μ,Û,·□B

‘è□”

ŠÖ□”ĈĀ,Ń□o,μ

Žè‘±,«•¶

□W□‡□\□→Žq

•ĭ□”

•”•až®,đffbfR,Ā^í,p,Æ□C—D□æ□‡^Ê,đ•ĭ□X,Ā,«,Û,·□B

ŽQÆ03293

@ %%%ŽŽŽq

BASM Ž®

fufbfN

fRf“fg

'è"é¾

ŠÖ"ÆÄ,Ño,µ

%%ŽŽŽq,ì—Dæ#^É

W#Æ^

•¶

'lÆ^fLffXfg

•İ"ŽQÆ

ŠÖ"CEÄ,Ño,μ03294

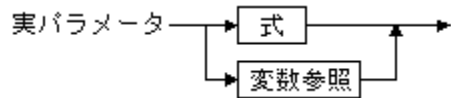
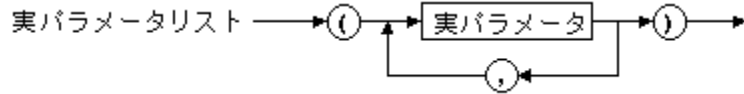
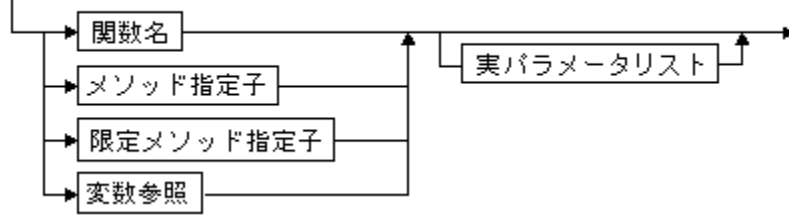
ŽQAE

ŠÖ"CEÄ,Ño,μ,ÍŽÿ,ì,ç,,é,©,ÁŽw'è,³,ê,½ŠÖ",ð«N"®,μ,Ü,·B

- ŠÖ"Ž·ÉŽq
- ffbfhŽw'èŽq
- CEÄ'èfbfhŽw'èŽq
- Žè±,«CE^·í"ŽQAE

'í%ž,·,éŠÖ"CE³⁄,É%¼fpf%ff^,ìfšfXfg,ª, ,éê#CŠÖ"CEÄ,Ño,μ,É,ÍŽÀfpf
%ff^,ìfšfXfg,ª"ü,Á,Ä,ç,É,,Á,Í,È,è,Ü,¹,ñBfpf%ff^,ì«K'¥,É],Á,Ä,Cšefpf%ff^,ªí
%ž,·,é%¼fpf%ff^,ì,©,í,è,ÉŽg,í,è,Ü,·B

関数呼び出し



Object Pascal ,Á,ÍŠÖ"CEÄ,Ño,μ,ìCE<%É,ð"jŠü,·,é,±,Æ,ª%Á\
,ÁCŽÄž; "I,ÉŠÖ"CEÄ,Ño,μ,ðŽè'±,«·¶,Æ,μ,Ä^μ,±,Æ,ª,Á,«,Ü,·B

ŽQÆ03295

Method activation

Qualified-method activations

Parameters

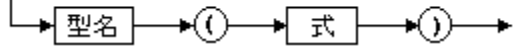
Procedural types

'ICE^fLfffXfg03296

ŽQAE —á

'ICE^fLfffXfg,É,æ,è,CŽ®,ìCE^,ª•Ê,ìCE^,É•í,í,è,Ü,·B

値型キャスト



Ž®,ìCE^,ÆŽw'è,μ,½CE^,í—¼•û,Æ,àŽŸ,ì,ç,ç,©,ìCE^,Å,È,,Ä,Í,È,è,Ü,¹,ñB

- ¶~CE^
- fjCf"j^CE^

¶~CE^,É,Å,ç

,Ä,ÍCCÉ<%oÊ,ì'l,ÍŽ®,ì•İŠ,É,æ,Á,Ä"¾4,ç,è,Ü,·BŽw'è,μ,½CE^,ìTfCfY,ªŽ®,ìTfCfY,Æ^Ü,È,Á,Ä,ç

,éê¶CCÉ³,ì'l,ì∅,èŽì,Ä,Ü,½,ÍŠg'£,ª•K—v,É,È,é,±,Æ,ª, ,è,Ü,·B'l,ªŠg'£

,³,è,éê¶C'l,ì•,¶t,ìí,É•ÚŽ,³,è,Ü,·B

'ICE^fLfffXfg,í'l,É∅—p,μ,Ü,·BCEã,ÉCEÀ'èŽq,ð•t,¯,é,±,Æ,í,Å,«,Ü,¹,ñB

—á03297

ŽŸ,ì—á,í'ICE^fLfffXfg,ì•¶,Á,·□B

Integer ('A')

Char (48)

Boolean (0)

Color (2)

Longint (@Buffer)

BytePtr (Ptr (\$40, \$49))

ŽQÆ03298

•i"CE^LfffXfg

Ž® ,Ä, ðžè'±, «CE^, ðžg, ç • û03299

ŽQÆ —á

Ž®, ð, Äžè'±, «•ï" , ðžg, æ, ÆC•ï" , Éši" [, è, ½žè'±
, «, âšÖ" , ÄÄ, Ño, è, Û, ·B, ½, ¼, µC'ä" ü•ï, ðï•Ö, Éžè'±, «•ï" , ä, , éé#C%E•Ó, Éžè'±
, «'l, ä•K—v, É, È, é, ±, Æ, ðfRf"fpfCf% , ä" FŽ , µ, Û, ·BŽc"O, È, ä, çC\•ï, ©, ç, Í•K—v, È^—
, ðfRf"fpfCf% , ä" »'f, Ä, «, È, ç, ±, Æ, ä, , è, Û, ·B

Žè'±, «CE^, Æ @ %%%žžžq

Žè'±, «Ž•Éžq, âšÖ"Ž•Éžq, ÉfAfhfÆfX%%žžžq (@) , ð•t, , é, ÆC^ø" , äf|
fCf" f^, É•iš , èCfRf"fpfCf% , äžè'±, «, ðÄÄ, Ño, , È, È, è, Û, ·B

@ %%%žžžq, íC^, È, µf|fCf" f^'l, ðžè'±, «•ï" , É'ä"ü, , é, Æ, «, È, æ, Žg, ç, Û, ·B

Žè'±, «•ï" , Éši" [, è, Ä, ç, éfAfhfÆfX, Ä, Í, È, CŽè'±
, «•ï" , ðf, fšfAfhfÆfX, ðžæ"¾, , é, È, íC"ñdfAfhfÆfX%%žžžq (@@) , ðžg, ç, Û, ·B

—á03300

type

IntFunc = **function**: Integer;

var

F: IntFunc;

N: Integer;

function ReadInt: Integer: **far**;

var

I: Integer;

begin

Read(I);

ReadInt := I;

end;

begin

F := ReadInt; { Žè'±,«'l,đ'ã"ü,μ,Û,· }

N := ReadInt; { ŠÖ",ìĚ<%oÊ,đ'ã"ü,μ,Û,· }

end.

ŽQÆ03301

@ %%%ŽŽŽq

Žè'±,«Ě^

“ÁŽêfVf”f{f<03302

ŽQ□Æ

“ÁŽêfVf”f{f<,í“Á`è,ì`Ó-; ,đŽ□,Â ASCII •ŕŽšfZfbfg,ì•ŕŽš,Â, □B,μ,½,ª,Á,Ä□Cfvf□fOf%of€
 ,Á“ÁŽêfVf”f{f<,đŽg,æ,Æ,«,í□CObject Pascal Ą¾¾Æê,Á,ìSefVf”f{f<,ì`è<` ,É•K, □,ç,Ü, □B
 ŽŸ,ìŠe•ŕŽš,í“ÁŽêfVf”f{f<,Á, □B

+ - * / = < > [] . , () : ;
 ^ @ { } \$ #

ŽŸ,ì•ŕŽš,ì'g,à“ÁŽêfVf”f{f<,Á, □B

<= >= := .. (* *) (. .) <>

“ÁŽêfVf”f{f<,É,í%%ŽŽŽq,à, ,è,Ü, □B

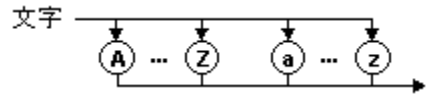
“ÁŽêfVf”f{f<,Á,í□C1 •ŕŽš,Æ•ŕŽš,ì'g,Æ,Á“,«,ª“˘,ŕ□ê□†,ª, ,è,Ü, □B

•ŕŽš ‘Š“-.,,é•ŕŽš,ì'g

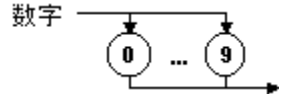
| | |
|---|----|
| [| (. |
|] | .) |
| { | (* |
| } | *) |

Object Pascal ,Á,í□CASCII •ŕŽšfZfbfg,ìŽŸ,ìfTfufZfbfg,ªŽg,í,è,Ü, □B

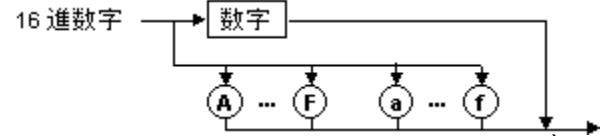
- %opŽš□BA □` Z, a □` z



- □`Žš□B0 □` 9



- 16 □i□`Žš□B0 □` 9, A □` F, a □` f



- <ó“□BfXfy□lfX (ASCII 32) ,Æ□C□s,ì□l,í,è,â•œ<A•ŕŽš (ASCII 13) ,É,Ç,ì,.,x,Ä,ì ASCII □šÆä•ŕŽš (ASCII 0 □` 31)

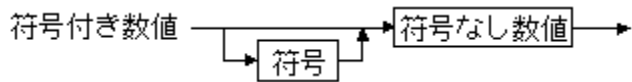
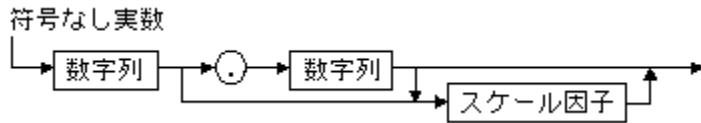
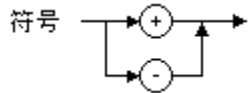
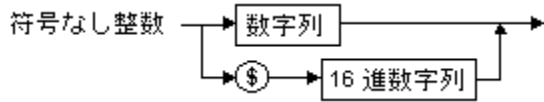
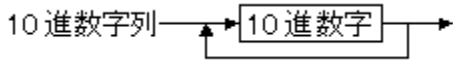
ŽQÆ03303

fRf“fg

%o%ožžžq

03304

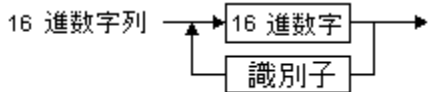
①②③④⑤⑥⑦⑧⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳㉑㉒㉓㉔㉕㉖㉗㉘㉙㉚㉛㉜㉝㉞㉟㊱㊲㊳㊴㊵㊶㊷㊸㊹㊺㊻㊼㊽㊾㊿



①②③④⑤⑥⑦⑧⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳㉑㉒㉓㉔㉕㉖㉗㉘㉙㉚㉛㉜㉝㉞㉟㊱㊲㊳㊴㊵㊶㊷㊸㊹㊺㊻㊼㊽㊾㊿

16進

16進①②③④⑤⑥⑦⑧⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳㉑㉒㉓㉔㉕㉖㉗㉘㉙㉚㉛㉜㉝㉞㉟㊱㊲㊳㊴㊵㊶㊷㊸㊹㊺㊻㊼㊽㊾㊿



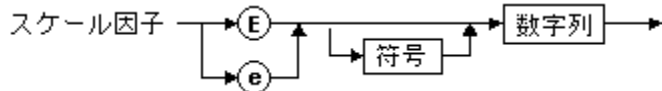
16進①②③④⑤⑥⑦⑧⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳㉑㉒㉓㉔㉕㉖㉗㉘㉙㉚㉛㉜㉝㉞㉟㊱㊲㊳㊴㊵㊶㊷㊸㊹㊺㊻㊼㊽㊾㊿

Žw㉘㉙㉚㉛㉜㉝㉞㉟㊱㊲㊳㊴㊵㊶㊷㊸㊹㊺㊻㊼㊽㊾㊿

Žw㉘㉙㉚㉛㉜㉝㉞㉟㊱㊲㊳㊴㊵㊶㊷㊸㊹㊺㊻㊼㊽㊾㊿

7E-2 ,í 7 x 0.01 ,đ Ó-j,μ,Ü,⊠B

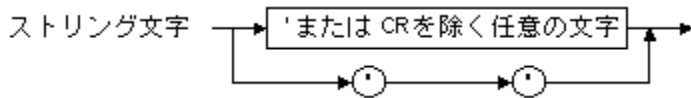
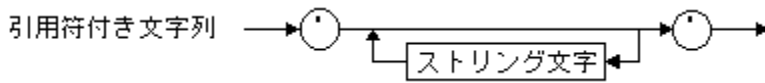
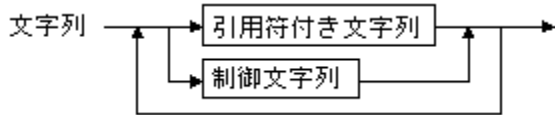
12.25e+6 ,Æ 12.25e6 ,Í-¼•û,Æ,à 12.25 x 1000000 ,đ Ó-j,μ,Ü,⊠B



• ¶Žš—ñ03305

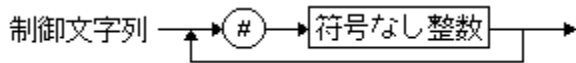
—á

- ¶Žš—ñ, íŠg'£ ASCII • ¶ŽšfZfbfg, ì• ¶Žš, ì—ñ, Å, · (• ¶Žš, ¢
%½, àŠÜ, Ü, é, È, ç, è, ù, ·) BfvfOf%€f, Å, íC• ¶Žš—ñ, í'P^ø—p•, Å^í, ñ, Å 1
□s, Å□', «, Ü, ·□B
- 'P^ø—p•, ìŠÔ, É%½, à, È, ç • ¶Žš—ñ, ífj<• ¶Žš—ñ, É, È, è, Ü, ·□B
- ¶Žš—ñ't, ì~A'±, μ, ½ 2 , Å, ì'P^ø—p•, í 1 , Å, ì'P^ø—p•, ð•\, μ, Ü, ·□B
- ¶Žš—ñ, ì', ¢, ì'@□, í'P^ø—p•, ìŠÔ, É, , é• ¶Žš, ìŽÅ□Ü, ì□", ð•\, μ, Ü, ·□B • ¶Žš—ñ, ì□Å'á', í 255
• ¶Žš, Å, ·□B



□§Eä• ¶Žš

- W□€ Object Pascal, ìŠg'£, Æ, μ, Å□C• ¶Žš—ñ"à, Å□§Eä• ¶Žš, ¢Žg, ì, Ü, ·□B
- # • ¶Žš, ìEä, É 0 , ©, ç 255 , Ü, Å, ì•, □t, È, μ□@'è□", ð'±, ¯, é, Æ□C'í%ž, ·, é ASCII 'ì, ì• ¶Žš, ¢\, ¢, é, Ü, ·□B



- # • ¶Žš, Æ□@'è□", Æ, ìŠÔ, ÉfZfpfE□[f^, ð"ü, é, Å, í, È, è, Ü, ¸, ñ□B
- ¶Žš—ñ, É•;□", ì□§Eä• ¶Žš, ð"ü, é, é□è□#□C□§Eä• ¶ŽšŠÔ, ÉfZfpfE□[f^, ð"ü, é, Å, í, È, è, Ü, ¸, ñ□B

• ¶Žš—ñ, ìEÝŠ•□«

- '., ¢, ¢ 0 , ì• ¶Žš—ñ (fkf<• ¶Žš—ñ) , ì• ¶Žš—ñE^, Æ, ¢/4, ¯EÝŠ•□«, ¢, , é
- '., ¢, ¢ 1 , ì• ¶Žš—ñ, í, Ç, ì Char E^, â string E^, Æ, àEÝŠ•□«, ¢, , é
- '., ¢, ¢ N (N, í 2 ^É□ã) , ì• ¶Žš—ñ, ìŽÝ, ì, à, ì, ÆEÝŠ•□«, ¢, , é
- "C^Ö, ì• ¶Žš—ñE^
- N • ¶Žš, ìfpfbfN"z—ñ
- { \$X+ } fRf"fpfCf%žw—β, É, æ, Å, ÅŠg'£□\ • ¶Žš—ñ—LCEø, É, È, Å, Å, ç, é□è□# , í PChar E^

—á03306

| | |
|---------------|----------------|
| 'BORLAND' | { BORLAND } |
| 'You''ll see' | { You'll see } |
| '''' | { ' } |
| '' | { fkf•¶Žš—ñ } |
| ' ' | { fXfy□[fX } |

ŽQÆ03308

fufbfN

—á03309

```
{ "r't,É%oE'tfjfbfR,ì,È,ç"C^Ó,ìfefLfXfg }  
(* fAfXf^fŠfXfN,Æ%oEfjfbfR,ì,È,ç"C^Ó,ìfefLfXfg *)  
// 2 ,Â,ìfXf%ofbfVf...,©,ç□s--,Ü,Å,ì"C^Ó,ìfefLfXfg
```

fg [fNf" 03310

ŽQAE

fg [fNf" , í Object Pascal fv [fOf %of € , ìfeflfXfg , Å^ Ó- ; ì , , é Å - , ì' P^ Ê , Å , · Bfg [fNf" , ìŽí—
p , ðŽŸ , ÊŽ , ì , ð , · B

- • ¶ Ž š — ñ
- Ž · Ê Ž q
- f % of x f <
- □
- — \ - ñ Ç è
- " Å Ž è f v f " f { f <

fv [fOf %of € , Åfg [fNf" , ð' ± , - , Ä 2 , Å Ž g , x ð è # □ C , » , ìfg [fNf" , ì , Ç , ù , ç , © , ð — \ - ñ Ç è □ C Ž - · Ê Ž q □ C f
% of x f < □ C " , ì , Å , « , ìfg [fNf" Š Ô , É f Z f p f Ç E □ f ^ , ð " ü , è , é • K — v , ð , , è , ð , · B • ¶ Ž š —
ñ ' è " ^ È Š O , Å , ì □ C f Z f p f Ç E □ f ^ , ðfg [fNf" , ì ^ è • " , Å , ì , Å Ž g , x , ± , Å , ì , Å , « , ð , ð , ñ □ B

ŽQÆ03311

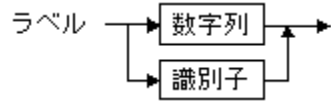
fRf“fg

•W€Žw—ß

f%ofxf<03312

ŽQÆ

f%ofxf<,í goto •¶,ì"ò,Ñæ,ðf}[]fN,·,é 0 ,©,ç 9999 ,ì"í"ì"Žš,ì—ñ,Å,· (æ"ª,ìf[]É,í^Ó-
j,ª, ,è,Ü,¹,ñ)B



•W€ Pascal ,ìŠg'£,Æ,μ,ÄCOobject Pascal ,Å,àŽˆ•ÊŽq,ðf%ofxf<,Æ,μ,ÄŽg,!,Ü,·B

ŽQÆ03313

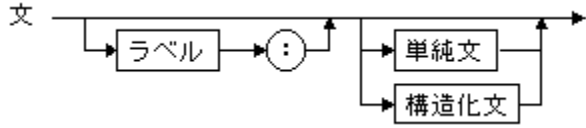
fufbfN

label (—\-ñĈĚ)

• ¶ 03314

ŽQAE

• ¶, ífvf fOf %of€ , ĀŽÀ s%oĀ" \, ÈfAf < fSfŠfYf€ " l □ ^ — □, ð • \, μ, Ü, · □ B



• ¶, ìŠî - { " l, ÈŽí — p, Æ, μ, ĀŽŸ, ì 2 , Ā, a, , è, Ü, · □ B

- 'P □ f • ¶
- □ \ ' ç % o o » • ¶

'P □ f • ¶

'P □ f • ¶, Ā, í l, ì " ä " ü □ CŽè ±, «, âŠÖ □ " , ì < N " ® □ C f R □ [f h, ì • È, ì • ¶, Ö, ì ŽÀ □ s f v f fOf % of € , ì "] ' — , a, Ā, «, Ü, · □ B



Object Pascal , Ā f T f l □ [f g, ³, è, Ā, ç, é ' P □ f • ¶, ð ŽŸ, ÈŽí, μ, Ü, · □ B

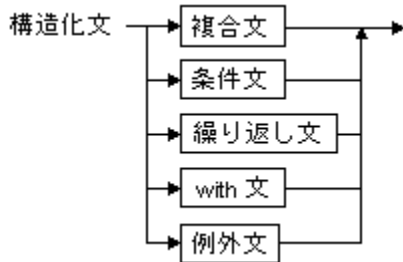
'ä"ü (:=) • ¶

goto • ¶

Žè ±, « • ¶

□ \ ' ç % o o » • ¶

□ \ ' ç % o o » • ¶, í □ ‡, ÈŽÀ □ s, ³, è, é • ¶ □ C □ ð Ç □ • t, «, ĀŽÀ □ s, ³, è, é • ¶ □ C Ç J, è • Ö, μ ŽÀ □ s, ³, è, é • ¶, Ā □ □ →, ³, è, Ü, · □ B



Object Pascal , Ā, í □ CŽŸ, ì □ \ ' ç % o o » • ¶, a f T f l □ [f g, ³, è, Ā, ç, Ü, · □ B

• j □ ‡ • ¶

□ ð Ç □ • ¶

f < □ [f v

with • ¶

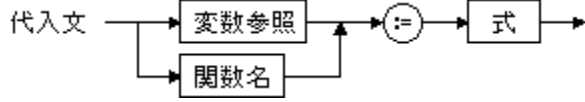
ŽQÆ03315

fufbfN

'ă"ü•ŋ03316

ŽQ□Æ —á

'ă"ü•ŋ,í'ă"ü%ŽŽŽq,ì%E'α,É, ,éŽ®,ì'l,đŋŋ'α,É, ,éŽ•ÉŽq,É—^,|,Ü,·□B'ă"ü%
%ŽŽŽq,Æ,μ,Ä□C'ă"ü•ŋ,ì—¼•Ö,ìŠÖ,Ä := ,đŽg,ç,Ü,·□B



'ă"ü•ŋ,đŽg,α,ÆŽŸ,ì□—□,ª,Ä,«,Ü,·□B

- $\frac{\cdot\dot{\square}}{\dot{\square}}$, ìCE»Ÿ,ì'l,đŽ®,ÄŽw'è,μ,½□V,μ,ç'l,Ä'u,«Š,|,é
- ŠÖ□,ª•Ö,·l,đŽ□,ÄŽ®,đŽw'è,·,é

f|fufWfFfNfgCE^,ì'ă"ü•ŋ

f|fufWfFfNfgCE^,ìfCf"fxf^f"fx,É,Í□C,»,ì%°^ÊCE^,Ä, ,é,Î,Ç,ìCE^,ìfCf"fxf^f"fx,Ä,à'ă"ü,Ä,«,Ü,·□
B,±,ì,æ,α,É'ă"ü,Í□C□ă^ÊCE^,ìy,Ô•óŠÖ,Ö,ì%°^ÊCE^,ìŽĚ%oe,É,È,Ä,Ä,ç,Ü,·□B

f□f,: f|fufWfFfNfgCE^,ìfCf"fxf^f"fx,đ'ă"ü,μ,Ä,à□C,»,ìfCf"fxf^f"fx,Í□%Šú%»³,é,Ü,¹,ñ□B

ŽQÆ03317

‘ă”ü,ìĈÝŠ·□«

‘ă”ü%‰‰žžžq

f|fufWfFfNfgĈ^

Ĉ^,ìĈÝŠ·□«

—á03318

X := Y + Z;

Done := (I >= 1) **and** (I < 100);

Hue1 := [Blue, Succ(C)];

I := Sqr(J) - I * K;

goto • ¶03319

ŽQÆ

goto • ¶, íŽw'è, ìf%ofxf<, Åf} [fN, ³, ê, ½ • ¶, Öfvf [fOf%of€, ìŽÀ [s, ð"]' —, µ, Ü, · □B



goto • ¶, ðŽg, ¼, Æ, «, í [CŽŸ, ì<K'¥, É [], í, È, , Ä, í, È, è, Ü, ¹, ñ □B

- goto • ¶, ÅŽQÆ, ·, éf%ofxf<, í goto • ¶, Æ“~ ¶fuf [fbfN, É, È, , Ä, í, È, ç, È, ç □BŽè' ±, «, âŠÖ [], ÉfWfff“fv, µ, ½, è [CŽè' ±, «, âŠÖ [], ©, ç" ð, Ñ [o, ·, ±, Æ, í, Å, «, È, ç
 - [\ ' ç % » • ¶, ÉŠO' ¼, ©, çfWfff“fv, ·, é, Æ [CfRf“fpfCf%o, ³fGf%o [[, ð [o, µ, Ä, ç, È, , Ä, à [C—\ Šú, µ, È, ç Æ<%oÉ, È, é, ±, Æ, ², , é
- ŠÈÆ%o, Èfvf [fOf%of~f“fO, ì, ½, ß, É, í [Cgoto • ¶, í, Å, «, é, ¾, ~Žg, í, È, ç, æ, ¼, É, µ, Ä, , ¾, ³, ç □B

ŽQÆ03320

goto (-\-ñĈê)

fXfR[fv

ŽQÆ03322

ŠÖ"CEÄ,Ño,μ

f\fbfh,ì<N"®

fpf%of[f^

Žè'±,«CE^

procedure (—\-ñCEè)

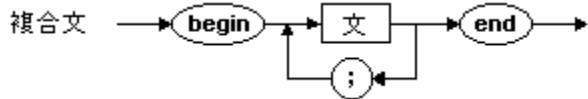
CEÀ'èf\fbfh,ì<N"®

•ï"ŽQÆ

• i 03323

ŽQÆ —á Ć¼Ćè'è<`

• i, Ā, íC, » , ê, ð\ - , , é• , ð , © , ê, Ā, ç , é , ÅŽÀs , , é , æ , x , ÉŽwŽ! , μ , Ü , • B • i , í 1 , Ā , ì • , Æ , μ , Ā ^ - , ³ , ê , Ü , • B , ± , ì , ± , Æ , í C Object Pascal , ì \ • ĩ ä 1 , Ā , ì • , μ , © Žg , ì , È , ç , Æ , « , É d - v , É , È , è , Ü , • B



• i , í - \ - ñ Ć è , ì **begin** , Æ **end** , Ā ^ í , Ý C • i , ð \ - , , é Še • , í f Z f ~ f R f f " , Ā < æ Ø , è , Ü , • B

—á03324

ŽŸ,ì—á,í•j□±•¶,ìfR□[fh,Á,·□B

begin

 Z := X;

 X := Y;

 Y := Z;

end;

ŽQÆ03325

begin..end

fufbfN

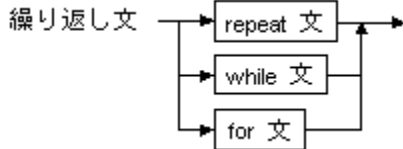
f<[]fv03326

ŽQ[]Æ CE¾Æê'è<`

f<[]fv, í[]C, , é[]ð[]CE[], º-ž, ½, ¾, º, é, Ü, Å, Ü, ½, í-ž, ½, ¾, º, é, Ä, ¢, , éŠÓ[]C•¶, ð[]CEJ, è•Ô, µŽÀ[]s, , é, Æ, «, ÉŽg, ¢, Ü, ·[]B

f<[]fv, É, íŽŸ, ì 3 Ží—p, º, , è, Ü, ·[]B

- for..to/downto..do
- while...do
- repeat..until



, Ç, ìf<[]fv, ðŽg, º, ©, íŽŸ, ì 2 , Ä, ÌŠì[]€, É, æ, Ä, ÄÆ^, Ü, è, Ü, ·[]B

- ŽÀ[]s, µ, ½, ¢^—[]
- f<[]fv, É“ü, é‘O, É[]^—[], É, Ä, ¢, Ä, Ç, ì“ö“x—[]%øð, µ, Ä, ¢, é, ©

f<[]fv Žg, º, Æ, «

for f<[]fv, ì[]CEJ, è•Ô, µ%øñ[], º[]³Šm, É, í, ©, Ä, Ä, ¢, é

while...do f<[]fv, É“ü, é‘O, É[]ð[]CE[], ðfefXfg, µ, ½, ¢

repeat...until []ð[]CE[], ðfefXfg, , é‘O, Éf<[]fv, ð[], È, , Æ, à 1 %øñŽÀ[]s, µ, ½, ¢

•W[]€Žè±, «, ì Break , Æ Continue , ðŽg, º, Æ[]Cf<[]fv, ì—, è, ð[]\$Æä, Ä, «, Ü, ·[]B

ŽQÆ03327

ðE•¶

~—Ž®

ŽQÆ03329

~—Ž®

f<fv

~_—□Ž®03330

ŽQ□Æ

~_—□Ž®,í **True** ,Ü,½,í **False** ,É·]‰ž,³,ê,Ü,·□B,·,x,Ä,lf<□[fv,Æ□ðCE□•¶,ª~_—□Ž®,É□¶
‰E,³,ê,Ü,·□B

~_—□Ž®,Ä,í 2 ,Ä,lflyf%of“fh,ð”äŠr,μ,Ü,·□B,» ,ìCE<‰É,í~_—□CE^ ,ì•ï□” ,É‘ä“ü,³,ê,È,-
,Ä,í,É,è,Ü,¹,ñ□B

~_—□‰‰ŽŽžq,ì **and** ,Æ **or** ,í~_—□‘l,ì‘g,É□ì—p,μ,Ü,·□BObject Pascal ,Ä,í□C~_—□‰
‰ŽŽžq,É,Ä,ç,Ä,lfR□[fh□¶□¬,ìf,fff<,Æ,μ,ÄŽŸ,ì 2 Ží—p,ª¶¶f|□[fg,³,ê,Ä,ç,Ü,·□B

▪ Š®‘S•]‰ž

▪ fVf#□[fgfT□[fLfbfg•]‰ž

•]‰žf,fff<,í \$B fRf“fpfCf‰Žw—ß,É,æ,Ä,Ä□\$CEä,μ,Ü,·□BffftfHf<fg,ì **{ \$B- }** □ó‘Ô,Ä,lfRf“fpfCf
‰,ÄfVf#□[fgfT□[fLfbfg•]‰ž,lfR□[fh,ª¶¶□¬,³,ê□C**{ \$B+ }** □ó‘Ô,Ä,íŠ®‘S•]‰
ž,lfR□[fh,ª¶¶□¬,³,ê,Ü,·□B

ŽQÆ0331

~ —□%o%oŽŽŽq

~ —□CE^

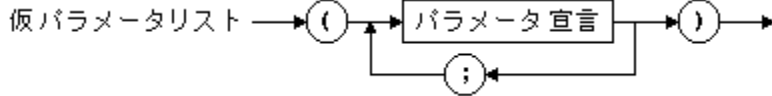
ŠÖCEW%o%oŽŽŽq

関数宣言の構文

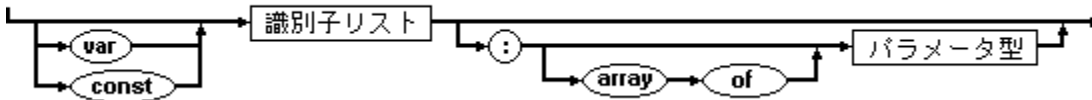
関数宣言

関数宣言の構文: `関数名(パラメータ宣言) { 関数体 }`

関数宣言の構文: `関数名(パラメータ宣言) { 関数体 }`



パラメータ宣言



関数宣言の構文: `関数名(パラメータ宣言) { 関数体 }`

`var` 宣言

`var` 宣言: `var 識別子リスト : パラメータ型`

`const` 宣言

`const` 宣言: `const 識別子リスト : パラメータ型`

`var` 宣言

`var` 宣言: `var 識別子リスト : パラメータ型`

`var` 宣言

`var` 宣言: `var 識別子リスト : パラメータ型`

`return` 宣言

`return` 宣言: `return パラメータ型`

ŽQÆ0333

ŠÖ"CEÄ,Ño,μ

ŠÖ"

Žè'±,«

'lfpf%of[]f^03334

ŽQAE

%¼'lfpf%of[]f^,í,»,ê,éCE¾,³,ê,Ä,ç,éŽè'±,«,âŠÖ",Éf[]fj<,Èfpf
%of[]f^,Ä,·B,½,¾,μCCEÄ,Ño,μ'α,ìŽè'±,«,âŠÖ",ì'í%ž,·,éŽÀfpf%of[]f^,©,ç
%Šú'l,ðŽæ"¾,μ,Û,·B

%¼'lfpf%of[]f^,Ö,ì•ïX,íŽÀfpf%of[]f^,ì'l,É,í%e<¿,ð<y,Ú,μ,Û,¹,ñB

Žè'±,«•¶,âŠÖ"CEÄ,Ño,μ,Ä,íC'lfpf%of[]f^,É'í%ž,·,éŽÀfpf%of[]f^,íŽ®,Ä,È,-
,Ä,í,È,è,Û,¹,ñB,±,ìŽÀfpf%of[]f^,ì'l,íftf@fCf<CE^,âCftf@fCf<CE^,ðŠÛ,þ\ç%»CE^,Ä, ,Á,Ä,í
,È,è,Û,¹,ñB

ŽÀfpf%of[]f^,É,í%¼'lfpf%of[]f^,ìCE^,Æ,ì'ã"ü,ìCEÝŠ·«,ª,È,,Ä,í,È,è,Û,¹,ñB

ŽQÆ03335

ŠÖ"CEÄ,Ño,μ

fpf%of[f^

•i"fpf%of[f^

'è"fpf%of□□[f^03336

ŽQ□Æ

%o¼'è"fpf%of□□[f^,í□□[ffj<,È"Ç,Ý□o,μ□ê—p•ï□",Å□C'í%ž,·,éŽÀfpf
%of□□[f^,©,ç'l,đŽæ"¾,μ,Ü,·□B

%o¼'è"fpf%of□□[f^,Ö,ì'ã"ü,í,Å,«,Ü,¹,ñ□B%o¼'è"fpf%of□□[f^,đ•É,ìŽè'±
,«,âŠÖ□",ÉŽÀ•ï□"fpf%of□□[f^,Æ,μ,Ä"n,·,±,Æ,à,Ä,«,Ü,¹,ñ□B

Žè'±,«•¶,âŠÖ□",Å,í□C'è"fpf%of□□[f^,É'í%ž,·,éŽÀfpf%of□□[f^,íŽ®,Å,È,,Ä,í,È,è,Ü,¹,ñ□B,±
,ìŽÀfpf%of□□[f^,ì'l,íftf@fCf<CE^,â□Cftf@fCf<CE^,đŠÜ,þ□\ 'ç%»CE^,Å, ,Ä,Ä,í,È,è,Ü,¹,ñ□B

Žè'±,«,âŠÖ□",ìŽÀ□s't,É%o¼fpf%of□□[f^,ì'l,đ•ï□X,μ,½,,È,ç□ê□#,É□C'lfpf
%of□□[f^,ì,©,í,è,É'è"fpf%of□□[f^,đŽg,ç,Ü,·□B'è"fpf%of□□[f^,đŽg,κ,Æ□C%oß,Á,Ä%o¼fpf
%of□□[f^,Ö'ã"ü,·,é,ì,đ-h,°,Ü,·□B

□\ 'ç%»CE^fpf%of□□[f^,Æ•¶Žš—ñCE^fpf%of□□[f^,ì□ê□#□C'lfpf%of□□[f^,ì,©,í,è,É'è"fpf
%of□□[f^,đŽg,κ,Æ□CfRf"fpfCf%o,Å□¶□¬,³,é,éfR□[fh,ìCEø—,ª□ã,^a,è,Ü,·□B

ŽQÆ03337

ŠÖ"CEÄ,Ño,μ

fpf%of[f^

• ĩ"fpf%of□□[f^03338

ŽQ□Æ

• ĩ"fpf%of□□[f^, ÍŽQ□Æ, É, æ, Á, ÄŽè'±, «, âŠÖ□", É• ĩ" , ð"n, μ, Ü, ·□B, Á, Ü, è□Cfpf
%of□□[f^, Ì'Í, É'Í, μ, ÄfAfNfZfX, â• ĩ"X, â, Ä, «, é, æ, x, É□Cfpf%of□□[f^, ÍfAfhfÆfX, â"n, ³, ê, Ü, ·□B

ŽÄfpf%of□□[f^, ð• ĩ"fpf%of□□[f^, É, ·, é, É, Í□C, » , ÌŽÄfpf%of□□[f^, ð• ĩ" ŽQ□Æ, É, æ, Á, Ä"n, ³, È, -
, Ä, Í, É, è, Ü, ¹, ñ□B• ĩ" ŽQ□Æ, ÍŽè'±, «□éÆ¾, âŠÖ□"□éÆ¾, Ífpf%of□□[f^fŠfXfg, É—\—ñÆè, Ì var
, ð"ü, ê, Ä□ì□¬, μ, Ü, ·□B

¼• ĩ"fpf%of□□[f^, ÍŽè'±, «, âŠÖ□", Ì<N" ® Žž, ÌŽÄ• ĩ" , ð• \, μ, Ü, ·□B, μ, ½, â, Á, Ä□C%¼• ĩ"fpf
%of□□[f^, Ì'Í, Ö, Ì• ĩ"X, ÍŽÄfpf%of□□[f^, É"½%of, ³, ê, Ü, ·□B

f□f, : ftf@fCf<Æ^, Í• ĩ"fpf%of□□[f^, Æ, μ, Ä, ¾, "n, ·, ±, Æ, â, Ä, «, Ü, ·□B

Žè'±, «, âŠÖ□", Ì"à•", Á, Í□C%¼• ĩ"fpf%of□□[f^, Ö, ÌŽQ□Æ, ÍŽÄfpf
%of□□[f^, » , Ì, à, Ì, ÉfAfNfZfX, μ, Ü, ·□BŽÄfpf%of□□[f^, ÌÆ^, Í¼• ĩ"fpf%of□□[f^, ÌÆ^, Æ"¬, ¶, Á, È, -
, Ä, Í, É, è, Ü, ¹, ñ (Æ^, È, μfpf%of□□[f^, ðŽg, x, Æ, ±, Ì□§—ñ, ð-³Ž<, Á, «, Ü, ·)□B

ŽÄ• ĩ"fpf%of□□[f^, Ö, ÌŽQ□Æ, Á"z—ñ, É"YŽš•t, ¬, μ, ½, èf|fCf"f^, Ì'í□Ù, ð'T, ·•K—v, â, , é□ê□†□C, » , Ì,
æ, x, È□^—□, ÍŽè'±, «, âŠÖ□", Ì<N" ®, Ì'O, ÉŽÄ□s, ³, ê, Ü, ·□B

ŽQÆ03339

'ă"ü,ìĈÝŠ·□«

ŠÖ□"ĈĚ,Ñ□o,μ

fpf%of□□[f^

Ĉ^,È,μfpf%of□□[f^

CE^,È,μfpf%of□□[f^03340

ŽQ□Æ —á

%o¼4fpf%of□□[f^,ªCE^,È,μfpf%of□□[f^,ìê#□C'í%ž,;éŽÀfpf%of□□[f^,í,»,)ICE^,ÉŠÖCEW,È,-
,Ç,ì•ï"ŽQ□Æ,â'è"ŽQ□Æ,Ā, ,Ā,Ā,à,©,Û,ç,Û,¹,ñ□B

—\-ñCEê,ì var ,ðŽg,Á,ĀéCE¾,μ,½CE^,È,μfpf%of□□[f^,í•ïX,Ā,«,Û,·□B

—\-ñCEê,ì const ,ðŽg,Á,ĀéCE¾,μ,½CE^,È,μfpf%of□□[f^,í"Ç,Ý□o,μê—p,Ā,·□B

Žè'±,«,âŠÖ□",ì"à•",Ā,í□CE^,È,μfpf%of□□[f^,ìCE^,íCE^,Û,Ā,Ā,ç

,Û,¹,ñ□B,Ā,Û,è□C•ï"CE^fLfffXfg,É,æ,Ā,Ā"Ā'è,ìCE^,ð—

^,ì,È,çCEĀ,è□C,Û,©,ì,Ç,ìCE^,ì•ï",Æ,àCEÝŠ□«,^ª,è,Û,¹,ñ□B

CE^,È,μfpf%of□□[f^,ðŽg,α,Æ□_ "î«,^ª□,μ,Û,·□B,½,¾,μ□C—LCEø,È%%žZ,ìÆ□#,ªfRf"fpfCf
%o,Ā,Ā,«,È,ç,½,β,É□CE^,È,μfpf%of□□[f^,ðŽg,α,ì,íŠëCE^,È,±,Æ,^ª,è,Û,·□B

—á03341

function Equal(**var** Source, Dest; Size: Word): Boolean;

type

TBytes = **array**[0..65534] **of** Byte;

var

N: Word;

begin

N := 0;

while (N < Size) **and** (TBytes(Dest) [N] = TBytes(Source) [N]) **do**

Inc(N);

Equal := N = Size;

end;

fl[fvf""z—ñfpf%of[f^03342

ŽQAE —á

fl[fvf""z—ñfpf%of[f^, íŠeŽíTfCfY,ì"z—ñ, ðŽè'±, «, âŠÖ", É"n, ·, Æ, «, ÉŽg, ç, Ü, ·, B

ŽŸ, ì, \, ·, ¶, ðŽg, Á, Ä%¼fpf%of[f^, ðfl[fvf""z—ñfpf%of[f^, Æ, µ, Ä, éCE¾, µ, Ü, ·, B

array of T

T, íCE^Ž·ÉŽq, Ä, È, ·, Ä, í, È, è, Ü, ¹, ñ, BŽÄfpf%of[f^, í T CE^, ì·ì", ©, C—v'f,ª T CE^, ì"z—ñ·ì", Ä, È, ·, Ä, í, È, è, Ü, ¹, ñ, B

Žè'±, «, âŠÖ", ì"à·, Ä, í, C%¼fpf%of[f^, íŽŸ, ì, æ, x, É, éCE¾, µ, ½, è, ð, Æ"·, ¶, æ, x, É"®, ì, µ, Ü, ·, B

array[0..N - 1] of T

N, íŽÄfpf%of[f^, ì—v'f, ì", Ä, ·, BŽÄfpf%of[f^, ì"YŽš, ì"í'í, í 0, ·, ç, N-1

, ì, ©, ·, É, È, è, Ü, ·, BŽÄfpf%of[f^,ª T CE^, ì"p, ·, ì", ì, è, ð, CT CE^, ì—v'f,ª 1, Ä, ·, é"z—ñ, Æ, µ, Ä, é—,ª, è, Ü, ·, B

%¼fl[fvf""z—ñfpf%of[f^, Ö, ìfAfNfZfX, ì—v'f^É, Ä, µ, ©, Ä, «, Ü, ¹, ñ, Bfl[fvf""z—ñ'S'ì, Ö, ì"ä"ü, í, Ä, «, Ü, ¹, ñ, B

fl[fvf""z—ñ, ìfl[fvf""z—ñfpf%of[f^, Ü, ½, íCE^, È, µ·ì"fpf%of[f^, Æ, µ, Ä, ¾, ·, Ü, ©, ìŽè'±, «, âŠÖ", É"n, ·, ±, Æ,ª, Ä, «, Ü, ·, B

fl[fvf""z—ñfpf%of[f^, Æ, µ, Ä'lfpf%of[f^C"è"fpf%of[f^C·ì"fpf%of[f^,ªŽg, ì, Ü, ·, BŞefpf%of[f^, ì, §CEÄŽ—,ª, ±, ì, è, ð, à"K—p,ª, è, Ü, ·, B

f, f, : fl[fvf""z—ñ'lfpf%of[f^, ì, è, ð, CŽè'±, «, âŠÖ", ìfXf^fbfNftfCE[fé"à, ÉŽÄfpf%of[f^, ìf[f]fRfs[ªfRf"fpfCf%o, É, æ, Ä, Ä, ì, ñ,ª, è, Ü, ·, B, µ, ½,ª, Ä, Ä, C'á, «, É"z—ñ, ðfl[fvf""z—ñ'lfpf%of[f^, Æ, µ, Ä"n, ·, Æ, «, É, C, Xf^fbfN, ìf[f]fo[f]ftf[ª,ª"¶, µ, È, ç, æ, x, É"ó, µ, Ä, ¾,ª, ç, BfXf^fbfN, ìf[f]fo[f]ftf[ª,ª"¶, µ, È, ç, æ, x, É, ·, é, É, í, C, fl[fvf""z—ñ'lfpf%of[f^, ð"n, ·, Æ, «, É var, Ü, ½, í const, ðŽg, ç, Ü, ·, B

fl[fvf""¶Žš"z—ñ, Æ, µ, Ä"n, ·, è, ð, C, ó, ì·¶Žš—ñ, ìf, k, f, ·, ¶Žš, ì—v'f,ª 1, Ä, ·, é·¶Žš—ñ, É·íŠ,ª, è, Ü, ·, B, µ, ½,ª, Ä, Ä, CPrintStr("") , Æ, ç, x·¶, í PrintStr(#0) , Æ, ç, x·¶, Æ"·, ¶, Ä, ·, B

fl[fvf""z—ñfpf%of[f^, ì—v'f, íCE^,ª Char, ì, è, ð, CŽÄfpf%of[f^, Æ, µ, Ä·¶Žš—ñ"è",ªŽg, ì, Ü, ·, B

fl[fvf""z—ñfpf%of[f^, É'í, µ, ÄŽŸ, ì·W, ¶€ŠÖ",ªŽg, ì, Ü, ·, B

ŠÖ" -ß, è'í

Low flf

High ŽÄ"z—ñfpf%of[f^, ì, ÅCEä, ì—v'f, ì"YŽš

SizeOf ŽÄ"z—ñfpf%of[f^, ì, T, f, C, f, Y

fl[fvf""z—ñfpf%of[f^, ì, ì, ñ

·K—v, È"z—ñ—v'f, ðfj"j}, Ä, æ, Ø, Ä, ÄšpfjfbfR [] , Ä'í, Ý, C,ª, ç, É, » , ìŽü, è, ðfjfbfR, Ä'í, p, Æ, C·ì", à"è", ì, è, CE¾, à"ä"ü, ð, µ, È, ·, Ä, à, ·, ®, É, fl[fvf""z—ñfpf%of[f^, ð, ì, ñ, Ä, «, Ü, ·, B, µ, ½,ª, Ä, Ä, C"z—ñ, ð, éCE¾, µ, Ä·K—v, È—v'f, ð"ü, è, é, ©, í, è, É, C"z—ñ, ð, ì, ñ, µ, Ä"Žž, É"n, ¹, Ü, ·, B

MyProcedure([3, 2, 1900, 42]);

ŽQÆ03343

"z—ñĈ^

f[]f[]f[]"fpf%of[]f^

•j",ìĈ^,ð<-,:f[]f[]f[]"z—ñ

—á03344

```
procedure Clear(var A: array of Real); { Real  $\mathbb{C}^n$ ,  $z \in \mathbb{C}$ ,  $f: \mathbb{C} \rightarrow \mathbb{C}$  }  
  ,đ'ă"ü,μ,Ü,· }
```

```
var
```

```
  I: Word;
```

```
begin
```

```
  for I := 0 to High(A) do A[I] := 0;
```

```
end;
```

```
function Sum(const A: array of Real): Real; { Real  $\mathbb{C}^n$ ,  $z \in \mathbb{C}$ ,  $f: \mathbb{C} \rightarrow \mathbb{C}$  }  
  v'f,  $\int_0^1 f(x) dx$ ,  $\beta, \mu, \cdot$  }
```

```
var
```

```
  I: Word;
```

```
  S: Real;
```

```
begin
```

```
  S := 0;
```

```
  for I := 0 to High(A) do S := S + A[I];
```

```
  Sum := S;
```

```
end;
```

```
procedure PrintStr(const S: array of Char); {  $\mathbb{C}^n$ ,  $z \in \mathbb{C}$ ,  $f: \mathbb{C} \rightarrow \mathbb{C}$  }  
  ,É,μ,Ü,· }
```

```
var
```

```
  I: Integer;
```

```
begin
```

```
  for I := 0 to High(S) do
```

```
    if S[I] <> #0 then Write(S[I]) else Break;
```

```
end;
```

CE^%oÂ•İfi[]fvf""z—ñfjpf%of[][]f^03345

ŽQ[]Æ

array of const ,Æ,ç,ı,ıV,ı,ç[]\•ı,ı•ı[]",ıCE^,ıfıfufWfFfNfg,©,ç,È,éfi[]fvf""z—
ñ,đCE^•Ú[]á•úŽ@,ÅŽè'±,«,âŠÖ[]",É"n,•,Æ,«,ÉŽg,ç,Ü,•[]B,±,ê,É,æ,è[]C•ı[]",ıCE^,ı[]€-Ú,đ,ç,-
,Å,Å,à—LCEø,É,•,éCE`Ž@f<[]f`f",đ[]éCE¾,Å,«,Ü,•[]B

ŽŸ,ıŽè'±,«[]éCE¾,Å,ı[]C•ıŽš—ñCE`Ž@ŠÖ[]",ı[]éCE¾,Å **array of const** ,đŽÀ[]Ú,É,ç,ı,æ,ı
,ÉŽg,ı,©,đŽı,ı,Ü,•[]Bfjpf%of[][]f^,ı Args ,ı"C^Ó,ıCE^,ı•ı[]",đ,ç,,Å,Å,à"ü,ê,é,±
,Æ,ª,Å,«,éfi[]fvf""z—ñ,đ—LCEø,É,ı,Ü,•[]B

```
procedure FmtStr(var Result: string; const Format: string; const Args:
  array of const);
```

array of const ,ıfRf"fjpfCf%o,Å **array of TVarRec** ,Æ"~,ı,æ,ı,É[]^—[],ª,ê,Ü,•[]B

ŽQÆ03346

f[]fvf""z—ňfpf%of[]f^

TVarRec CE^

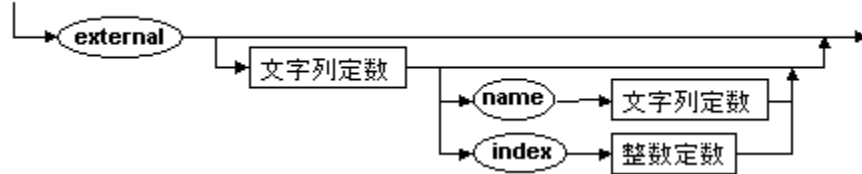
external 指令

external 指令

external 指令的语法格式如下：

- external 指令的语法格式如下：
- external 指令的语法格式如下：

external 指令



external 指令的语法格式如下：

external 指令的语法格式如下：

external 指令的语法格式如下：

external 指令的语法格式如下：

external 指令的语法格式如下：

external 指令的语法格式如下：

—á03348

ŽŸ,íŠO•"Žè'±,«,ìéŒ¾,ì—á,Â,·B

ŽŸ,íŠO•"éŒ¾,íCuser32.dll ,Æ,ç,¤ DLL (Windows API ,ì^ê•") ,©,ç MessageBox ,Æ,ç
,¤ŠÖ" ,ðfCf"f|fg,μ,Û,·B

ŽQÆ03349

f_fCfif~fbfNfŠf“fNf%ofCfuf%ofŠ

ŠÖ”

Žè'±,«

—á03351

{ f f f b f h, i q é E 3/4 — á, Å, . }

```
procedure TRectangle.Intersect(var R: TRectangle);
```

```
begin
```

```
  if A.X < R.A.X then A.X := R.A.X;
```

```
  if A.Y < R.A.Y then A.Y := R.A.Y;
```

```
  if B.X > R.B.X then B.X := R.B.X;
```

```
  if B.Y > R.B.Y then B.Y := R.B.Y;
```

```
  if (A.X >= B.X) or (A.Y >= B.Y) then Init(0, 0, 0, 0);
```

```
end;
```

```
procedure TField.Display;
```

```
begin
```

```
  GotoXY(X, Y);
```

```
  Write(Name^, ' ', GetStr);
```

```
end;
```

```
function TNumField.PutStr(S: String): Boolean;
```

```
var
```

```
  E: Integer;
```

```
begin
```

```
  Val(S, Value, E);
```

```
  PutStr := (E = 0) and (Value >= Min) and (Value <= Max);
```

```
end;
```

ŽQÆ03352

fRf“fXfgf%oofNf^,ÆffXfgf%oofNf^

f□fbfh

flfufWfFfNfgCE^

fRf“fXfgf%ofNf^ ,ÆffXfgf%ofNf^ 03353

ŽQ□Æ —á

fRf“fXfgf%ofNf^ ,ÆffXfgf%ofNf^ ,lflfufWfFfNfg,ì□□¬,Æ”pŠü,ð□\$CEä,·,é“ÁŽè,Èf□f\fbfh,Á,·□B
fNf%ofX,É,í□C,» ,lflfufWfFfNfg,É,í,μ,ÄfRf“fXfgf%ofNf^ ,âffXfgf%ofNf^ ,ð,ç,-
,Á,Á,àŽg,ì,Ü,·,â□CŽg,í,É,ç,±,Æ,à, ,è,Ü,·□B,» ,è,¼,è,lflfufWfFfNfg,âffXfgf%ofNf^ ,íŽè±
,«f□f\fbfh,âŠÖ□”f□f\fbfh,ì□è±,Æ”¬,¶,æ,æ,É□CfNf%ofX,ì—
v’f,Æ,μ,ÄŽw’è,μ,Ü,·□B,½,¾,μ□C**procedure** ,â **function** ,ì,©,í,è,É—\-ñCEè,ì **constructor** ,â
destructor ,ÁŠe□èCE¾,ðŽn,ß,Ü,·□B,Ü,©,lflfufWfFfNfg,Æ”¬,¶,æ,æ,É□CfRf“fXfgf%ofNf^ ,âffXfgf
%ofNf^ ,íCEp³,Á,«,Ü,·□B

fRf“fXfgf%ofNf^

fRf“fXfgf%ofNf^ ,í□V,μ,çflfufWfFfNfg,ð□□¬,μ,Ä□%Šú%» ,·,é,Æ,«,ÉŽg,ç,Ü,·□B^è”É,É□Cfj
%of□□f^ ,Æ,μ,ÄfRf“fXfgf%ofNf^ ,É“n,³,è,é’l,ÉŠí,Á,ç,ÄfufWfFfNfg,â□%Šú%» ,³,è,Ü,·□B
’Éí,ìf□f\fbfh,ìfufWfFfNfgŽQ□Æ,ÁCEÄ,Ñ□o,³,È,Á,í,È,è,Ü,¹,ñ,â□CfRf“fXfgf%ofNf^ ,lflf
%ofXŽQ□Æ,Á,âfufWfFfNfgŽQ□Æ,Á,àCEÄ,Ñ□o,¹,Ü,·□B

□V,μ,çflfufWfFfNfg,ð□□¬,·,é,É,í□CfRf“fXfgf%ofNf^ ,ðfNf%ofXŽQ□Æ,ÁCEÄ,Ñ□o,³,È,-
,Á,í,È,è,Ü,¹,ñ□BfRf“fXfgf%ofNf^ ,ðfNf%ofXŽQ□Æ,ÁCEÄ,Ñ□o,·,Æ□CŽÿ,ì,æ,æ,É,È,è,Ü,·□B

- V,μ,çflfufWfFfNfg—p,ì<L%¬æ,âf□□f\,©,çŠ,,è“- ,Á,ç,è,é
 - Š,,è“- ,Á,ç,è,½<L%¬æ,âfNfŠfA,³,è,é□B,±
- è,É,æ,è,·,x,Ä,ì□□~CE^ftfB□□f\fh,ì□□~’l,âf□□,É,È,è□C,·,x,Ä,ìf□Cf“f^CE^ftfB□□f\fh,ÆfNf
%ofXCE^ftfB□□f\fh,ì’l,³ **nil** ,É,È,è□C,·,x,Ä,ì•¶Žš—ñCE^ftfB□□f\fh,ì’l,³ó,É,È,é
- fRf“fXfgf%ofNf^ ,lft□□fU□□[’è< ,ì□—□,²ŽÄ□s,³,è,é
 - V,μ,Š,,è“- ,Á,ç,è□%Šú%» ,³,è,½fufWfFfNfg,Ö,ìŽQ□Æ,âfRf“fXfgf
%ofNf^ ,©,ç•Ö,³,è,è□B-ß,è’l,ìCE^ ,lflfufWfFfNfg^CEÄ,Ñ□o,μ,ÄŽw’è,μ,½fNf%ofXCE^ ,Æ”¬,¶,Á, ,
é

fRf“fXfgf%ofNf^ ,ðfufWfFfNfgŽQ□Æ,ÁCEÄ,Ñ□o,·,Æ□C□V,μ,çflfufWfFfNfg,ìŠ,,è“-
,Á,âfNfŠfA,à,³,è,·,□CfRf“fXfgf
%ofNf^ CEÄ,Ñ□o,μ,ÄfufWfFfNfgŽQ□Æ,â•Ö,³,è,Ü,¹,ñ□B,» ,ì,©,í,è,É□CfRf“fXfgf
%ofNf^ ,âŽw’è,ìfufWfFfNfgŽQ□Æ,É□ì—p,μ□CfRf“fXfgf
%ofNf^ ,ìŽÄ□s” ,ÉŽì,³,è,½ft□□fU□□[’è< ,ì□—□,¾,¬,ðŽÄ□s,μ,Ü,·□B^è”É,É□CfRf“fXfgf
%ofNf^ ,ðfufWfFfNfgŽQ□Æ,ÁCEÄ,Ñ□o,·,ì,ì□CfL□□f□□f\fh,ì **inherited**
,ð^è□□,ÉŽg,Á,ÁCEp³fRf“fXfgf%ofNf^ ,ðŽÄ□s,·,é□è±,¾,¬,Á,·□B

,Ü,Æ,ñ,ç,ì□è□□CfRf“fXfgf%ofNf^ ,í,Ü,·,CEp³fRf“fXfgf
%ofNf^ ,ðCEÄ,Ñ□o,μ,Ä□CfufWfFfNfg,ìCEp³ftfB□□f\fh,ð□%Šú%» ,μ,Ü,·□BŽÿ,É□CfNf
%ofX,É“±“ü,³,è,½fufWfFfNfg,ìftfB□□f\fh,ð□%Šú%» ,μ,Ü,·□BfRf“fXfgf
%ofNf^ ,ì□V,μ,çflfufWfFfNfg—p,ÉŠ,,è“- ,Á,½<L
%¬æ,ð•K,·fNfŠfA,·,é,½,ß□C,·,x,Ä,ìftfB□□f\fh,ÉffftfHf<fg’l,Æ,μ,Äf□□ (□□~CE^)□C**nil** (f
fCf“f^CE^ ,ÆfNf%ofXCE^)□C<ó (•¶Žš—ñCE^)□CUnassigned (Variant CE^),²Ž©“@’l,É—
^ ,ì,ç,è,Ü,·□BftfB□□f\fh,ìffftfHf<fg’l,âf□□^ÈŠÖ,ì’l,Á,È,¬,è,ì□CfRf“fXfgf%ofNf^ ,lftfB□□f\fh,ð□%Šú
%» ,·,é•K—v,ì, ,è,Ü,¹,ñ□B

fNf%ofXŽQ□Æ,ÁCEÄ,Ñ□o,μ,½fRf“fXfgf%ofNf^ ,ìŽÄ□s’t,É—áŠÖ,â□□¬,³,è,½□è□□C**Destroy**
ffXfgf%ofNf^ ,²Ž©“@’l,ÉCEÄ,Ñ□o,³,è,Á-çŠ@□¬,lflfufWfFfNfg,â”pŠü,³,è,Ü,·□B

,Ü,©,ìf□f\fbfh,Æ”¬,¶,æ,æ,É□CfRf“fXfgf%ofNf^ ,ì%¼’z,É,Á,«,Ü,·□BfNf
%ofXCE^ Ž”ÉŽg,ðŽg,Á,ÁCEÄ,Ñ□o,·,É□ì,ì□è□□C%¼’z fRf“fXfgf%ofNf^ ,ì□Ä”lRf“fXfgf
%ofNf^ ,Æ”¬,¶,Á,·□B,½,¾,μ□CfufWfFfNfgŽQ□ÆCE^ ,ð^è□□,ÉŽg,æ,Æ□C’½’Ö□« ,ð□—
¶,μ,½fufWfFfNfg,ì□□¬□C,Á,Ü,èfRf“fpfCf<Žž,É,íCE^ ,â,í,©,ç,É,çflfufWfFfNfg,ì□□¬,â
%¼’z fRf“fXfgf%ofNf^ ,Á,Á,«,é,æ,æ,É,È,è,Ü,·□B

fffXfgf%ofNf^

fffXfgf%ofNf^,lfufWfFfNfg,ð"pšü,·,é,Æ,«,ÉŽg,ç,Ü,·BfffXfgf%ofNf^,ðCEÄ,Ño,·,ÆCfffXfgf%ofNf^,lfufWfFfNfg—p,ÉŠ,,è"—,Ä,ç,ê,Ä,ç,é<L%o^æ,â^•â,³,ê,Ü,·B^ê"É,ÉCfffXfgf%ofNf^,lfufWfFfNfg—p,ÉŠ,,è"—,Ä,ç,ê,Ä,ç,é<L%o^æ,â^•â,³,ê,Ü,·B^ê"É,ÉCfffXfgf%ofNf^,lfufWfFfNfg,È,æ,Ä,ÄŠ,,è"—,Ä,ç,ê,½fŠf[fX,ì%ð•ú,ª, ,è,Ü,·B

'ÉíCfffXfgf%ofNf^,íÄCEä,ÉEp³fffXfgf%ofNf^,ðCEÄ,Ño,µ,ÄCfufWfFfNfg,ìEp³ftfB[f<fh,ð"pšü,µ,Ü,·B

fNf%ofX,É'í,µ,Ä•;í",ìfffXfgf%ofNf^,ðéCE¾,Ä,«,Ü,·,ªC,Ä,«,é,¾,¯Ep³fffXfgf%ofNf^ Destroy,lfufWfFfNfg,¾,¯,ðfNf%ofX,ÄŽÄCE»,·,é,æ,µ,Ä,¾,¾,çBDestroy,íTObject,ÄéCE¾,¾,è,éfpf%of[f^,È,µ,ì%¼'zfffXfgf%ofNf^,Ä,·BTOobject,í,·,x,Ä,lfNf%ofX,É,Æ,Ä,Ä,ìÄä^ÉfNf%ofX,È,ì,ÄCDestroy fffXfgf%ofNf^,í,ç,lfufWfFfNfg,É'í,µ,Ä,Ä,àí,ÉŽg,ì,Ü,·B

fRf"fxfgf%ofNf^,ìŽÄs't,É—áŠO,ªíí—,³,è,½ê#CDestroy fffXfgf%ofNf^,ªCEÄ,Ño,³,è,Ä-çŠ@í-,lfufWfFfNfg,ª"pšü,³,è,Ü,·B,Ä,Ü,èC•"ª"l,É,µ,©Š@í-,µ,Ä,ç,È,çfufWfFfNfg,ì"pšü^—,ì,½,ß,ÉfffXfgf%ofNf^,ðíí-,µ,Ä,·,©,È,,Ä,í,È,è,Ü,¹,ñBfRf"fxfgf%ofNf^,íV,µ,çfufWfFfNfg,ì,·,x,Ä,ìftfB[f<fh,ðkf<'l,ÉÝ'è,µ,Ä,©,çt[fU['è<,ì^—,ðŽÄs,·,é,½,ßC•"ª"l,É,µ,©Š@í-,µ,Ä,ç,È,çfufWfFfNfg,lfNf%ofXCE^ftfB[f<fh,Æf]fCf"f^CE^ftfB[f<fh,í•K, nil,É,È,è,Ü,·B,µ,½,ª,Ä,ÄCfffXfgf%ofNf^,íí,É nil'í,lf`fFbfN,ð,µ,Ä,©,çNf%ofXCE^ftfB[f<fh,âf]fCf"f^CE^ftfB[f<fh,ì'€í,ð,µ,È,,Ä,í,È,è,Ü,¹,ñB

flufWfFfNfgŽQAE,Ä,í Destroy,ðCEÄ,Ño,·,©,í,è,É Free f\fbfh,ðCEÄ,Ño,·,ÆCnil,lf`fFbfN,ª,³,è,é,ì,Ä•Ö—~,Ä,·BfNf%ofXCE^ftfB[f<fh,É'í,µ,Ä Destroy,ì,©,í,è,É Free,ðCEÄ,Ño,·,ÆCfRf"fxfgf%ofNf^,Ä,ì—áŠO,ì,½,ß,É•"ª"l,É,µ,©Š@í-,µ,Ä,ç,È,çfufWfFfNfg,ð^—,·,éfffXfgf%ofNf^,ªŽ©"ª"l,Éíí—,³,è,Ü,·B,µ,½,ª,Ä,ÄCDestroy,í,Ä,«,é,¾,¯¼ÜCEÄ,Ño,³,È,ç,æ,µ,Ä,,¾,¾,çB

—á03354

ŽŸ,ì—á,í TShape ,É'í,·,éƒRf“fXfgf%ofNf^ ,ÆffXfgf%ofNf^ ,Á,·□B

type

```
TShape = class(TGraphicControl)
private
    FPen: TPen;
    FBrush: TBrush;
    procedure PenChanged(Sender: TObject);
    procedure BrushChanged(Sender: TObject);
public
    constructor Create(Owner: TComponent); override;
    destructor Destroy; override;
    :
end;
```

```
constructor TShape.Create(Owner: TComponent);
```

```
begin
```

```
    inherited Create(Owner);           { Cp□³·”·ª,đ□%Šú%»„μ,Ü,· }
    Width := 65;                       { Cp□³fvf□fpfefB,đ·Ī□X,μ,Ü,· }
    Height := 65;
    FPen := TPen.Create;                { □V,μ,čftfB□[f·fh,đ□%Šú%»„μ,Ü,· }
    FPen.OnChange := PenChanged;
    FBrush := TBrush.Create;
    FBrush.OnChange := BrushChanged;
```

```
end;
```

```
destructor TShape.Destroy;
```

```
begin
```

```
    FBrush.Free;
    FPen.Free;
    inherited Destroy;
```

```
end;
```

```
procedure TObject.Free;
```

```
begin
```

```
    if Self <> nil then Destroy;
```

```
end;
```

ŽQÆ03355

flfufWfFfNfg.lfCf“fXf^f“fX%oo»

f\Fbfh.léCE^{3/4}

flfufWfFfNfgCE^

ŠŌÚftjjfbfgŽQÆ03356

ŽQÆ —á

f,fWf...[f<,l **uses** [B,Á,íC,»,lf,fWf...[f<,Á'¼ÚŽg,æftjjfbfg,¾, -,É-¼'O,đ•t, -,é•K—
v,ª, ,è,Ü,·B

,½,¾,µC, ,éf,fWf...[f<,ª•É,lf,fWf...[f<,É'¼Ú^È'¶,µ,Ä,ç,é,±,Æ,ª,æ,, ,è,Ü,·Bf,fWf...
[f<,đfRf"fpfCf<·,é,É,íC'¼Ú"l,©ŠŌÚ"l,©,ÉŠŌÆW,È,,»,lf,fWf...[f<,ª^È'¶,µ,Ä,ç
,é,·,×,Ä,lf,tjjfbfg,đfRf"fpfCf%o,Á'T,¹,È,,Ä,í,È,è,Ü,¹,ñB

ftjjfbfg,l **interface** •",đ•íX,µ,½êë¶C•íX,µ,½ftjjfbfg,đŽg,æ
,Ü,©,ì,·,×,Ä,lf,tjjfbfg,đÄfRf"fpfCf<,µ,È,-
,Ä,í,È,è,Ü,¹,ñBmfvf[fWfFfNfg(P)¶bÄ\z(B)¶n,đŽg,æ,ÆC,±,ìÄfRf"fpfCf<,íRf"fpfCf%o
,É,æ,Á,ÄŽÀ[s,³,é,Ü,·B

,½,¾,µ **Implementation** •",à **initialization**

•",¾, -,đ•íX,µ,½êë¶,íC•íX,µ,½ftjjfbfg,đŽg,æ,Ü,©,lf,tjjfbfg,đÄfRf"fpfCf<·,é•K—v,í, ,è,Ü,
¹,ñB

f f: C ,È,ç,ìCE¾CEè,ìft[fU[íŽŸ,ì" _É'□^Ó,µ,Ä,,¾,³,çBDelphi fvf[fOf%of€,l **uses**
[B,É,íC'¼,ìCE¾CEè,ìfCfNftf@fCf<,âfvf[fWfFfNfgftf@fCf<,É□—^,©,ç, ,é□umake□v,
l~_□□î•ñ,ªŽ!,³,é,Ä,ç,Ü,·B,±,ì **uses** [B,É,æ,èC^È'¶ŠŌÆW,ì,·,×,Ä,ìî•ñ,đf,fWf...
[f<,»,ì,à,ì,É'g,Ýž,ñ,ÁCfGf%o[.l%oÄ"\□«,đ□,È,,Ä,«,Ü,·B

Delphi

,Á,íCftjjfbfg,đfRf"fpfCf<·,é,Æ,«,Éftjjfbfg,ìfo[fWf¶f""Ō□t,ªÆvŽZ,³,é,é,½,ßCftjjfbfg,ì
interface •",ª,ç,Á•íX,³,é,½,©,ª,í,©,è,Ü,·B

ŽQÆ03357

fvfWfFfNfg.lfRf“fpfCf<C\’zCŽÀs

ftfjfbfg

Uses

—á03358

```
{ ŽŸ,ì—á,íftfjfbfgŠÔ,ì^È'ŕŠÖŒW,ðŽ!,μ,Û,·□BUnit2 ,a Unit1 ,É'¼□Ú^È'ŕ,μ, Prog ,a  
Unit2 ,É'¼□Ú^È'ŕ,μ,Ä,ç,é,±,Æ,É'□^Ó,μ,Ä,,¾,¾,ç }
```

```
program Prog;  
uses Unit2;  
const a = b;  
begin  
end.
```

```
unit Unit2;  
interface  
uses Unit1;  
const b = c;  
implementation  
end.
```

```
unit Unit1;  
interface  
const c = 1;  
implementation  
const d = 2;  
end.
```

ftfjfbfg zŠĂŽQÆ03359

ŽQÆ —á

ftfjfbfg, l zŠĂŽQÆ, lftfjfbfg, ŠŒÝ, É Ě ħ, μ, Ä, ç, é, Æ, «, É Ÿ è, ³, è, Ü, · B

ftfjfbfg, l **implementation •**, É uses

β, ð ü, è, é, Æ C ŠŒÝ, É Ě ħ, ·, éftfjfbfg, ³ Ÿ è, ³, è Cuses β, ĂŽQÆ, ³, è, Ä, ç, éftfjfbfg, l “à •”, l Ú ×, ³ Š @ ‘S, É % B, è, Ü, · B ŽQÆ, ³, è, Ä, ç, éftfjfbfg, l fvf % Cf × [fg, Èftfjfbfg, É, È, è C, » , è, ð ŽQÆ, μ, Ä, ç, éftfjfbfg, ð Žg, ɤfvf [fOf % of € , âftfjfbfg, Ă, Í — ~ — p, Ă, «, È, , È, è, Ü, · B

Delphi , Ă, Í Š @ ‘S, È **interface •** , ð fRf “fpfCf < , Ă, «, é, ½, β C2 , Ă, lftfjfbfg, Í, » , è, ¼, è, l **implementation •** , l uses β, Ă ŠŒÝ, É ŽQÆ, Ă, «, Ü, · B 2 , Ă, lftfjfbfg, l **interface •** , ³ ŠŒÝ, É Ě ħ, μ, Ä, ç, È, ç C È, è C ^ ê • û, lftfjfbfg, l **implementation •** , É Ž !, ³, è, Ä, ç , é • ” • ɤ fRf “fpfCf < ftfjfbfg, Ö, l ŽQÆ, ð fRf “fpfCf % , Í Ž ó, - • t, - , Ü, · B, μ, ½, ³, Á, Ă C , ±, l 2 , Ă, lftfjfbfg, l Pascal , Ă, l é C ¾ [# ~ , É Š Ö , · , é C μ - \$, È < K ‘ ¥ , É [] , ç, Ü, · B

interface • , ³ ŠŒÝ, É Ě ħ, μ, Ä, ç, é è [# C ftfjfbfg, l zŠĂŽQÆ, l fGf % [, ³ ħ [- , ³, è, Ü, · B

ŠŒÝ, É Ě ħ, · , éftfjfbfg, ³ - ð - \$, Ă, l , Í “Ă Ž è, È è [# , Ă, · , ³ C , ç, Ă Ž g, ɤ , © , ð [- ħ , μ, Ä, , ¾, ³, ç B • K — v, à, È, ç, l , É, ±, l , æ, ɤ , Èftfjfbfg, ð Ž g, ɤ , Æ C fvf [fOf % of € , ³ Š Ç — [, μ, É , , È, è C fGf % [, ð < N , ±, μ, â , · , - , È, é, ±, Æ, ³ , , è, Ü, · B

ŽQÆ03360

ftjfbfg

Uses

—á03361

```
{ ŽŸ,ĵvĵfĵOf%ĵf€,Í 2 ,Â,ĵfĵĵfĵbfg,ªŒÉŸ,ċ,É ŠŽè,đĵuŽg,ªĵv•û-@,đŽĴ,μ,Û,· }
```

```
program Circular;  
{ WriteXY ,đŽg,Á,ÄfefĴfXfg,đ•\ŽĴ,μ,Û,· }
```

uses

```
WinCrt, Display;
```

begin

```
ClrScr;  
WriteXY(1, 1, 'Upper left corner of screen');  
WriteXY(1000, 1000, 'Way off the screen');  
WriteXY(81 - Length('Back to reality'), 15, 'Back to reality');
```

end.

unit Display;

```
{ 'Pĵf,ÉfĵĵfĴ•\ŽĴf<ĵf`f“,đŠÛ,ň,Â,ċ,Û,· }
```

interface

```
procedure WriteXY(X, Y: Integer; Message: String);
```

implementation

uses

```
WinCrt, Error;
```

```
procedure WriteXY(X, Y: Integer; Message: String);
```

begin

```
if (X in [1..80]) and (Y in [1..25]) then
```

begin

```
GoToXY(X, Y);
```

```
Write(Message);
```

end

else

```
ShowError('Invalid WriteXY coordinates');
```

end;

end.

unit Error;

```
{ 'Pĵf,ÉfGf%ĵĵfċfĵĵfĵf<ĵf`f“,đŠÛ,ň,Â,ċ,Û,· }
```

interface

```
procedure ShowError(ErrMsg: String)
```

implementation

```
uses Display;  
  
procedure ShowError(ErrMsg: String);  
begin  
  WriteXY(1, 25, 'Error: ' + ErrMsg);  
end;  
  
end.
```

fq{fv}fl{fWff03362

ŽQÆ

Windows ,Á,íCŽÿ,ì 2 Ží—p,lfq{fv,Á“®“lf{f,šš,,è“-,Ä,³Tf|{fg,³,è,Ä,ç,Ü,·B

- fOf{fof{fq{fv
- f{f{f{fq{fv

Delphi ,É,íCŽÿ,ì•W€žè'±,«,ðžÀ»:,éfq{fv}fl{fWff,ª, ,è,Ü,·B

- New
- Dispose
- GetMem
- FreeMem

fq{fv}fl{fWff,í,·,x,Ä,ìš,,è“-,Ä,ÉfOf{fof{fq{fv,ðžg,ç

,Ü,·BfOf{fof{fq{fv,É,ífVfXfef€'S'ì,Å 8192 f{f,ššfuf{fbfN,Æ,ç,æ,³CEÀ,ª, ,é,½,ß

(fAfvfššP{fVf#“ ,É,æ,Á,Ä,í,±,è,æ,è'½,,ìf{f,ššfuf{fbfN,ª•K—v,É,È,é{é{±,ª, ,è,Ü,·)Cf{fv}fl

{fWff,ífZfOf{f“fgfTfufAf{fP{f^,ífAf{fSfYf€ ,É,æ,Á,Ä^—CEø—|,ðä,°C8192 ,ð,©,È,èä

%ñ,é“ ,íf{f,ššfuf{fbfN,ðš,,è“-,Ä,ç,è,é,æ,æ,É,µ,Ä,ç,Ü,·B

fuf{fbfN,ífZfOf{f“fgfAfhfCEfX,ª•ìX,³,è,É,ç,æ,æ,ÉCfOf{fof{fuf{fbfN,íš,,è“-,Ä,ì¼CEä,É

GlobalLock ,É,æ,Á,Äf{fbfN,³,è,Ü,·Bš,,è“-,Ä%ðœ,ì¼'O,Ü,Ä,±,íf{fbfN,í%ðœ,³,è,Ü,¹,ñB

Windows ,ífXf^f“f_{fhf,_{fh,Æ 386 fGf“fnf“fXfhf,_{fh,Ä,íC•—

{f{f,šš,ìCEÁ'èfuf{fbfN,ð^Ú“® ,µ,ÄC,Ü,©,íf{f,šš,,è“-,Ä—v<{,ì,½,ß,É<ó,«—

ì^æ,ðšm•Û,Ä,« ,Ü,·B,µ,½,ª,Á,ÄCDelphi ,lfq{fv}fl{fWff,ðžg,Á,Ä,à^—CEø—|,ª%ª,ª,é,±

,Æ,í, ,è,Ü,¹,ñB

ŽQÆ03363

fqfv•i

DLL

□I—¹Zè'±,«03364

ŽQ□Æ —á

□I—¹Zè'±,«,ífvf□fOf%of€,ì□I—¹fvf□fZfX,ð□§CEä,·,é,Æ,«,ÉŽg,ç,Ü,·□Bfvf□fOf%of€,ð□I—¹,·,é'O,É"Á"è,ì□^—□,ð,μ,½,ç,Æ,«,É (,½,Æ,ì,íftf@fCf<,ð□X□V,μ,Ä·Ä,¶,é□^—□,É,Ç,ª^è"É"í,Ä,·)□C,±,ì□§CEä,ª-ð-§,¿,Ü,·□B

fAfvfŠfP□[fvf#f",ì□I—¹,É,íŽÝ,ì 3 Ží—p,ª, ,è,Ü,·□B

- □³□í□I—¹
- Halt ,ìCEÄ,Ñ□o,μ,É,æ,é□I—¹
- ŽÄ□sŽžfGf%□[,É,æ,é□I—¹ (Delphi ,Ä,íAfvfŠfP□[fvf#f",ð□I—¹,μ,È,,Ä,à—áŠO□^—□,É,æ,Ä,ÄŽÄ□sŽžfGf%□[,ð□^—□,Ä,«,é)

□I—¹Zè'±,«,ðfCf"fxfg□[f<,·,é,É,í□Cf|fCf"f^·ï□",ì ExitProc ,ðŽg,ç,Ü,·□B

□I—¹Zè'±,«,ífpf%□f□[f^,ð,Æ,è,Ü,¹,ñ□B

□³,μ,ŽÄCE»,μ,½□I—¹Zè'±,«,í□C□I—¹Zè'±,«,ì~A□½,É'g,Ý□ž,Ü,è,Ä,ç,Ü,·□B,± ,è,É,æ,è□Cftfjfbfg,Æfvf□fOf%of€,ì—¼·ù,Ä□I—¹Zè'±,«,ðfCf"fxfg□[f<,Ä,«,Ü,·□Bftfjfbfg,Ä□ %Šú'%'%'fR□[fh,ì^è·",Æ,μ,Ä□I—¹Zè'±,«,ðfCf"fxfg□[f<,μ,½□è□#□C,»,ìŽè'± ,«,ªftfjfbfg,ìCEäŽn-- ,ì,½,β,É·K, ,CEÄ,Ñ□o,³,é,é,æ,æ,É,È,è,Ü,·□B

□I—¹Zè'±,«,ì~A□½,Ä,í□CfCf"fxfg□[f<,ì,Æ,«,Æ,í<t,ì□#□~ ,ÄŽè'± ,«,ªŽÄ□s,³,è,Ü,·□B,μ,½,ª,Ä,Ä□CŠeftfjfbfg,ì□I—¹fR□[fh,í□C,»,íftfjfbfg,É^É'¶,μ,Ä,ç,éftfjfbfg,ì□I—¹fR□[fh,ª□I,í,é,Ü,ÄŽÄ□s,³,è,Ü,¹,ñ□B

□I—¹Zè'±,«,ì~A□½,ð·ùŽ□,·,é,É,í□CŽÝ,ì 2 ,Ä,ðŽÄ□s,μ,È,,Ä,í,È,è,Ü,¹,ñ□B

- ExitProc ,ð□I—¹Zè'±,«,íAfhfCEfX,É·ï□X,·,é'O,É□CEExitProc ,ìCE»□Ý,ì"à—e,ð·ù'¶,·,é
- ·ù'¶,μ,½ ExitProc ,ì'ì,ð□I—¹Zè'±,«,ì□Ä□%,ì·¶,É□Ä,Ñ'·"ü,·,é

f%ofCf"f^fCf€f%ofCfuf%ofŠ,ì□I—¹f<□[f" f",í ExitProc ,ª nil ,É,È,é,Ü,Ä□I—¹Zè'±,«,ðCEÄ,Ñ□o,μ'± ,·,Ü,·□B

-³CEÄf<□[fv,ð"ð,·,é,½,β,É□C,Ç,ìCEÄ,Ñ□o,μ,ì'O,Ä,à ExitProc ,ª nil ,É□Ý'è,³,é,é,ì,Ä□CE»□Ý,ì□I—¹Zè'±,«,Ä ExitProc ,ÉfAfhfCEfX,ª"ä"ü,³,è,½,Æ,«,¾,~ŽÝ,ì□I—¹Zè'±,«,ªCEÄ,Ñ□o,³,é,Ü,·□B□I—¹Zè'±,«,ÄfGf%□[,ª"¶,μ,½□è□#□C,»,ì□I—¹Zè'±,«,ª□Ä,ÑCEÄ,Ñ□o,³,é,é,±,Æ,í, ,è,Ü,¹,ñ□B

□I—¹Zè'±,«,Ä,í□C□@·ï□",ì ExitCode ,Æf|fCf"f^·ï□",ì ErrorAddr ,ð²,x,é,±,Æ,É,æ,è□C□I—¹,ìCE'^ò,ª,í,©,è,Ü,·□B□I—¹,ìŽí—p,É%ž,¶,Ä□CEExitCode ,Æ ErrorAddr ,ì'ì,íŽÝ,ì,æ,æ,É,È,è,Ü,·□B

| ·ï□" | □ ³ □í□I— ¹ | 'áž~ | ŽÄ□sŽžfGf%□[|
|-----------|-----------------------------------|--------------------------------|--------------------|
| ExitCode | f f□ | Halt ,É"n, ³ ,è,½'l | fGf%□[fR□[fh |
| ErrorAddr | nil | nil | fGf%□[·¶,íAfhfCEfX |

□ÄCEä,ì□I—¹Zè'±,« (f%ofCf"f^fCf€f%ofCfuf%ofŠ,É,æ,Ä,ÄfCf"fxfg□[f<,³,è,½□I—¹Zè'±,«) ,í Input ftf@fCf<,Æ Output ftf@fCf<,ð·Ä,¶,Ü,·□BErrorAddr ,ª nil ,Ä,È,·,è,ì□CŽÄ□sŽžfGf %□[f□fbfZ□[fW,ð□o—í,μ,Ü,·□B

fGf%□[f□fbfZ□[fW

ŽÄ□sŽžfGf%□[f□fbfZ□[fW,ðŽ©·ª,Ä·\Ž'l,μ,½,ç,è□# ,í□CErrrorAddr ,ð²,x,Ä nil ,Ä,È,·,è,í□fbfZ□[fW,ð□o—í,·,é,æ,æ,È□I—¹Zè'±,«,ðfCf"fxfg□[f<,μ,Ü,·□B□§CEä,ð-β,·'O,É·K, ErrorAddr ,ð nil ,É□Ý'è,μ□C"- ,¶fGf%□[,ª,Ü,©,ì□I—¹Zè'±,«,Ä□Ä,ÑfCEf|□[fg,³,é,È,ç,æ,æ,É,μ,Ü,·□B

,·,x,Ä,ì□I—¹Zè'±,«,ðCEÄ,Ñ□o,·,Æ□Cf%ofCf"f^fCf€f%ofCfuf%ofŠ,í Windows ,É□§CEä,ð-β,μ□CErrrorAddr ,ì'ì,ð-β,èfR□[fh,Æ,μ,Ä"n,μ,Ü,·□B

ŽQÆ03365

DLL

—áŠO^—

-á03366

{ ŽŸ,ì-á,í□l-¹Žè'±,«,ìŽÀÆ»•û-@,ìŠT-a,ðŽ|,μ,Ä,ç,Û,· }

program Testexit;

var

ExitSave: Pointer;

procedure MyExit; **far**;

begin

ExitProc := ExitSave; { •K,„ÆÄ,çfxfNf^,©,ç□æ,É%oñ•œ,μ,Û,· }

end;

begin

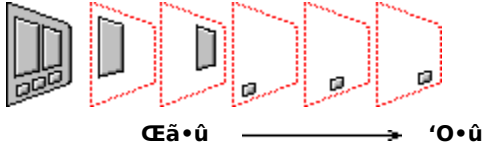
ExitSave := ExitProc;

ExitProc := @@MyExit;

end.

fRf“f|[]f|f“fg,ì Z f|[]f_[][,ì•ïX03367

ftfH[]f€[]ã,ÅfRf“f|[]f|f“fg,ª[]d,È,è[]±,Á,Ä,ç,é[]ê[]±[]C[]ÅCEã,É'Ç%°Á,³,ê,½fRf“f|[]f|f“fg,ðŠÜ,þ-
 Ê,ª[]C,» ,ê^Ê'O,É'Ç%°Á,³,ê,Ä,ç,éfRf“f|[]f|f“fg,ðŠÜ,þ-
 Ê,æ,è[]í,É'O,É,« ,Ü,·[]B,Á,Ü,è[]CftfH[]f€[]ã,Å[]d,È,è[]±,±fRf“f|[]f|f“fg,í'w[]ó,É,È,è,Ü,·[]B



•Žì,µ,½,ç[]±,É•À,Ô,æ,±,ÉfRf“f|[]f|f“fg,ð'Ç%°Á,µ,Ä,ç,È,ç[]ê[]±,à, ,è,Ü,·[]B,» ,ì[]ê[]±[]CfRf“f|
 []f|f“fg,ð•Ê,ìfRf“f|[]f|f“fg,ìCEã,è,É^Ú“ @,Á,« ,Ü,·[]BfRf“f|[]f|f“fg,ð^Ú“ @,·,é,É,í[]C,» ,ì•\
 Žì'w,ì^Ê'u,ð•ì[]X,µ,È,,Á,í,È,è,Ü,¹,ñ[]BfRf“f|[]f|f“fg,ìfCEfCfAfEfg,ì Z Ž² ([][,³)
 []ã,É, ,é,½,ß[]CftfH[]f€[]ã,ìfRf“f|[]f|f“fg,ì•Žì'w,ì Z f|[]f_[][,Æ,ç,ç,Ü,·[]B,Ç,ìfRf“f|[]f|f“fg,ì'O,É
 (,Ü,½,í[]ã,É) ,Ç,ìfRf“f|[]f|f“fg,ª,é,©,ì Z f|[]f_[][,É,æ,Á,ÄCE^,Ü,è,Ü,·[]B

ftfH[]f€[,ì" wCEi,É•Žì,µ,½,çfOf%°ftfBfbfN,â[]}CE` ,ð'Ç%°Á,·,é,Æ,« ,É[]CZ f|[]f_[][,ª" ñ[]í,É-ð,É—
 š,ì,Ü,·[]B

fRf“f|[]f|f“fg,ì Z f|[]f_[][,ð•ïX,·,é,É,í

1. fRf“f|[]f|f“fg,ð'í'ð,µ,Ü,·[]B
2. fRf“f|[]f|f“fg,ì^Ú“ @•ûCEü,É%ž,¶,Ä[]m•Ò[]W(E)[]b'O_
 Ê,Ö^Ú“ @ (F)[]n,Ü,½,í[]m•Ò[]W(E)[]b"w-Ê,Ö^Ú“ @ (B)[]n,ð'í'ð,µ,Ü,·[]B

f|f: fEfBf“fhfEfRf“fgf[][]f<,Æ”ñfEfBf“fhfEfRf“fgf[][]f<,É,í[]C,» ,é,¼,ê[]ê—p,ì Z f|[]f_[][~ _—
 [][,ª, ,è,Ü,·[]B”ñfEfBf“fhfEfRf“fgf[][]f< (Label fRf“f|[]f|f“fg,â Shape fRf“f|[]f|f“fg)
 ,ìfEfBf“fhfEfRf“fgf[][]f< (f{f^f“,É,Ç) ,ì Z f|[]f_[][,É,í' }“ü,Á,« ,Ü,¹,ñ[]B

ŽQÆ03370

Žè'±,«

ŠÖ"

%%ŽŽžq,ì—Dæž^Ê03371

ŽQÆ

%%ŽŽžq,í 1 ,Â,Û,½,í•;” ,lff[]f^ ,É’í,µ,Ä%%ŽŽ,ð,·,é,±,Æ,ðž!,·fVf“f{f<,Û,½,í—\—
ñÆé,Â,·B

Object Pascal ,ì%%ŽŽžq,ì—Dæž^Ê,ðžÿ,Éž!,µ,Û,·B

| %%ŽŽžq | —Dæž^Ê | fjfefSfš |
|----------------|-------------|--------------------------|
| @ not | 1 "Ô-Ú (,) | 'P€%%ŽŽžq |
| * / div mod as | 2 "Ô-Ú | ææœ,ÆÆ^fLfffXfg,ì |
| and shl shr | | %%ŽŽžq |
| + - or xor | 3 "Ô-Ú | %%ÁÆ,%%ŽŽžq |
| = <> < > | 4 "Ô-Ú ('á) | ŠÖÆW[]C[]W[]ž<A'®ŠÖÆW[]C |
| <= >= in is | | Æ^"äšr,ì%%ŽŽžq |

—Dæž^Ê,ì<K'Ÿ

1. —Dæž^Ê,è^Û,È,é 2 ,Â,ì%%ŽŽžq,ìŠÔ,ìfifyf%of“fh,ì—Dæž^Ê,è,·ç,·ù,ì%%ŽŽžq,ÆÆ<,Ñ,Â,«,Û,·B
2. “™%%ž,È 2 ,Â,ì%%ŽŽžq,ìŠÔ,ìfifyf%of“fh,ì[]‘¼,ì%%ŽŽžq,ÉÆ<,Ñ,Â,«,Û,·B
3. fffbR“à,ìž®,í•]%%ž,³,è,½Æă,É 1 ,Â,ì%%ŽŽžq,Æ,µ,Äžæ,è^µ,í,è,Û,·B

ŽQÆ03372

@ %%%ŽŽŽq

‘ă“ü%%ŽŽŽq

“ñ€ŽŽp%%ŽŽŽq

frfbfg%%ŽŽŽq

~ —%%ŽŽŽq

•ŕŽš|fCf“f^%%ŽŽŽq

ŠÖEW%%ŽŽŽq

ŽÀsŽžCE^%%ŽŽŽq

W#%%ŽŽŽq

•ŕŽš—ñ%%ŽŽŽq

‘P€ŽŽp%%ŽŽŽq

Variant %%%ŽŽŽq

“ñ€ŽŽp%%ŽŽq03373

ŽQÆ %%ŽŽq

“ñ€ŽŽp%%ŽŽq, í 2 ,Á,lflyf%of“fh,Éí,μ,ÄŽŽp%%ŽŽ,δ,μ,Û,·B
 Žÿ,ì“ñ€ŽŽp%%ŽŽq,ª, ,è,Û,·B

| %%ŽŽq | %%ŽŽ | flyf%of“fh | €<%É |
|------------|---------|------------|-------|
| + | %%ÁŽŽ | Ⓜ“€^ | Ⓜ“€^ |
| | | ŽÀ“€^ | ŽÀ“€^ |
| - | €,ŽŽ | Ⓜ“€^ | Ⓜ“€^ |
| | | ŽÀ“€^ | ŽÀ“€^ |
| * | ⓂæŽŽ | Ⓜ“€^ | Ⓜ“€^ |
| | | ŽÀ“€^ | ŽÀ“€^ |
| / | ⓂœŽŽ | Ⓜ“€^ | ŽÀ“€^ |
| | | ŽÀ“€^ | ŽÀ“€^ |
| div | ⓂⓂ“ⓂœŽŽ | Ⓜ“€^ | Ⓜ“€^ |
| mod | Ⓜè—] | Ⓜ“€^ | Ⓜ“€^ |

€^,ªⓂⓂ“€^,ì••ª“íí,Á, ,éflyf%of“fh,íⓂⓂ“€^,Æ,μ,ÄŽæ,è^μ,í,è,Û,·B

+ⓂC-ⓂC*ⓂC**div**, **mod** %%ŽŽq,ì^è•ù,Û,½,Í—¼•ù,lflyf
 %of“fh,ªⓂⓂ“€^,ìⓂⓂⓂC€<%É,ì€^,í 2 ,Á,lflyf%of“fh,ì<ª’É€^,Á,·B

+ⓂC-ⓂC* %%ŽŽq,ì—¼•ù,lflyf%of“fh,ªŽÀ“€^,ìⓂⓂⓂC€<%É,ì€^,í Extended ,Á,·B

X/Y ,ìl,lflyf%of“fh,ì€^,ÉŠÖ€W,È,í,É Extended €^,Á,·B Y ,ª 0 ,ìⓂⓂⓂC ŽÀsŽžfGf
 %%[,É,È,è,Û,·B ŽÀsŽžfGf%%[,Í—áŠÖ,ðŽg,Á,Ä^—,Á,«,Û,·B

l **div** J ,í l / J ,ìŽŽpⓂ,ð 0 ,ì•ù€ü,ìⓂⓂ“€^l,ÉŠÛ,ß,½l,Á,·B J ,ª 0 ,ìⓂⓂⓂC fGf
 %%[,É,È,è,Û,·B ŽÀsŽžfGf%%[,Í—áŠÖ,ðŽg,Á,Ä^—,Á,«,Û,·B

mod %%ŽŽq, í 2 ,Á,lflyf%of“fh,É,æ,éⓂœŽŽ,ìⓂè—],ð•Ô,μ,Û,·B

$$I \text{ mod } J = I - (I \text{ div } J) * J$$

mod ,ì€<%É,ì•,ⓂⓂ,í l ,ì•,ⓂⓂ,Æ“^,¶,Á,·B J ,ª 0 ,ìⓂⓂⓂCfGf%%[,É,È,è,Û,·B

fjf : +ⓂC-ⓂC* %%ŽŽq,íⓂWⓂⓂ%%ŽŽqⓂC•¶Žšf|fCf“f^%%ŽŽqⓂC’P¶€%%
 %%ŽŽq,Æ,μ,Ä,àŽg,ì,Û,·B+ %%ŽŽq,í•¶Žš—ñ%%ŽŽq,Á,à, ,è,Û,·B

ŽQÆ03374

CE^

Is %%%ŽŽŽq03375

ŽQÆ

is %%%ŽŽŽq,í“®“ICE^f`fFfbfN,đ,·,é,ì,ÉŽg,ç,Û,·**Bis** %%%ŽŽŽq,đŽg,κ
,ÆCfIfufWfFfNfgŽQÆ,ìŽÀÛ (ŽÀsŽž) ,ICE^,ª“Á’è,ìfNf%ofX,É’®,·,é,©,Ç,κ
,©,đf`fFfbfN,Á,«,Û,·**Bis** %%%ŽŽŽq,ì\·¶,đŽÿ,ÉŽì,μ,Û,·B

ObjectRef **is** ClassRef

ObjectRef ,ìfIfufWfFfNfgŽQÆ,ÁCClassRef ,ìfNf%ofXŽQÆ,Á,·**Bis** %%%ŽŽŽq,ì~—
¶l,đ•Ô,μ,Û,·BCE<%É,í ObjectRef ,ª ClassRef ,É,æ,Á,ÄŽì,³,è,éfNf%ofX,ìfCf“fXf^f“fX,Û,½,í
ClassRef ,É,æ,Á,ÄŽì,³,è,éfNf%ofX,©,ç“h¶¶,μ,½fNf%ofX,ìfCf“fXf^f“fX,È,ç,í True
,Á,·B,» ,é^ÈŠO,ìê¶,íCFalse ,Á,·BObjectRef ,ª **nil** ,È,ç,ICE<%É,í¶í,É False ,Á,·BObjectRef
,Æ ClassRef ,ìéCE¾,³,è,½CE^,ªŠÖCEW,È,ç,±,Æ,ª,í,©,Á,Ä,ç,éêê¶C,·,È,í,¿ ObjectRef
,ìéCE¾,³,è,½CE^,ª ClassRef ,ìãâÊC“™ %%%žC%%ºÉ,ì,ç,·,é,Á,à,È,ç,±,Æ,ª,í,©,Á,Ä,ç
,éêê¶CfRf“fpfCf%o,ICE^·s^é’vfGf%o[,đ•ñ¶,μ,Û,·B

is %%%ŽŽŽq,í·ÛCEì,³,è,½CE^flffXfg,ì,½,β,É **if** ·¶,Æ^ê¶,ÉŽg,κ,±,Æ,ª,æ,-
, ,è,Û,·B,½,Æ,ì,ìCŽÿ,ì,æ,κ,ÉŽg,ç,Û,·B

if ActiveControl **is** TEdit **then** TEdit(ActiveControl).SelectAll;

,±,±,Á,í **is** fefXfg,ª True ,ìêê¶CActiveControl ,đ^À’S,ÉfNf%ofX TEdit
,ÉCE^flffXfg,Á,«,Û,·B

%%ŽŽŽq—D¶æ¶^Ê,ì<K’¥,Á,í **is** %%%ŽŽŽq,ÍŠÖCEW%%ŽŽŽq
(=C<>C<C>C<=C>=Cin) ,Æ“~,¶fOf<¶[fv,É’®,μ,Û,·B,Á,Û,èC**and** ,Æ **or** %
%%ŽŽŽq,đŽg,Á,Ä’¼,ì~—¶Ž®,ÆCE<¶,·,éêê¶C**is** fefXfg,ìfjfbfR,Á^í,Û,È,,Ä,í,È,è,Û,¹,ñB

if (Sender **is** TButton) **and** (TButton(Sender).Tag <> 0) **then** ...;

ŽQÆ03376

ðŒ•Œ

ŽÀsžžĤî•ň

As %oo%ooŽZZžq03377

ŽQ□Æ

as %oo%ooŽZZžq,Íf`fFfbfN•t,«,ìCE^fLfffXfg,đ,·,é,ì,ÉŽg,ç,Ü,·□Bas %oo%ooŽZZžq,ì□\
•¶,đŽŸ,ÉŽ!,μ,Ü,·□B

ObjectRef as ClassRef

ObjectRef ,ÍfÍfufWfFfNfgŽQ□Æ,Å□CClassRef ,ÍfNf%ofXŽQ□Æ,Å,·□BCE<%oÉ,ì!í ObjectRef
,Æ“~,¶ÍfÍfufWfFfNfg,Ö,ìŽQ□Æ,Å,·,ª□CClassRef ,É,æ,Á,Ä—^,!,ç,é,éCE^,Å,·□BŽÄ□sŽž,É•]‰
¿,·,é□ê□#□CObjectRef ,í nil, ClassRef ,É,æ,Á,ÄŽ!,ª,é,fNf%ofX,ÍfCf“fXf^f“fX□CClassRef
,É,æ,Á,ÄŽ!,ª,é,fNf%ofX,©,ç“h□¶,μ,½fNf%ofX,ÍfCf“fXf^f“fX,ì,ç,,é,©,Á,È,,Á,Í,È,è,Ü,¹,ñ□B,ç
,,é,ì□đCE□,à True ,Á,È,ç□ê□#□C—áŠO,ª□¶□¬,ª,é,Ü,·□BObjectRef ,Æ ClassRef
,ì□éCE¾,ª,é,½CE^,ªŠÖCEW,È,ç,±,Æ,ª,í,©,Á,Ä,ç,é□ê□#□C,·,È,í,¿ ObjectRef
,ì□éCE¾,ª,é,½CE^,ª ClassRef ,ì□ã^É□C“™ %oo¿□C%ooº^É,ì,ç,,é,Á,à,È,ç,±,Æ,ª,í,©,Á,Ä,ç
,é□ê□#□CfRf“fpfCf%oo,ÍCE^•s^é'vfGf%oo□[,đ•ñ□□,μ,Ü,·□B

as %oo%ooŽZZžq,í with •¶,Æ^é□□,ÉŽg,±,±,Æ,ª,æ,, ,è,Ü,·□B,½,Æ,!,î□CŽŸ,ì,æ,±,ÉŽg,ç,Ü,·□B

with Sender as TButton do

begin

Caption := '&Ok!';

OnClick := OkClick;

end;

%oo%ooŽZZžq—D□æ□#^É,ì<K'¥,Á,Í as %oo%ooŽZZžq,í□æ□œŽZ%oo%ooŽZZžq (*□C/□Cdiv, mod,
and, shl, shr) ,Æ“~,¶ÍfOf<□[fv,É'®,μ,Ü,·□B,Á,Ü,è□C•'î□“ŽQ□Æ“à,ÁŽg,±□ê□#□Cas
CE^fLfffXfg,ÍfÍfufWfFfNfg,Å^Í,Ü,È,,Á,Í,È,è,Ü,¹,ñ□B

(Sender as TButton).Caption := '&Ok!';

ŽQÆ03378

ŽÀsŽžĈî•ñ

•i",ìĈ^fLfffXfg

With •¶

'P€ŽŽp%%ŽŽq03379

%%ŽŽq

'P€ŽŽp%%ŽŽq,íflyf%of“fh,ì•,„†,đŽ,μ,Û,·B

ŽŸ,ì'P€ŽŽp%%ŽŽq,ª, ,è,Û,·B

| <u>%%ŽŽq</u> | <u>%%ŽŽ</u> | <u>flfyf%of“fh</u> | <u>CE<%É</u> |
|----------------|-----------------|--------------------|-----------------|
| + •„†Ž˘•É | ⊗“CE^ ŽÀ“CE^ | ⊗“CE^ ŽÀ“CE^ | |
| - •„†“Ù'è | ⊗“CE^ ŽÀ“CE^ | ⊗“CE^ ŽÀ“CE^ | |

f f: CE^,ª⊗“CE^,ì•”•ª“íí,íflyf%of“fh,í⊗“CE^,Æ,μ,ÄŽæ,è^μ,í,è,Û,·B

+ ,Û,½,í - %%ŽŽq,íflyf%of“fh,ªŽÀ“CE^,ìé⊗“CE<%É,ìCE^,í Extended ,Å,·B

f f: + ,Æ - %%ŽŽq,íW⊗“CE^,í•Žšf|fCf“f^%%ŽŽqC“ň€%%
ŽŽq,Æ,μ,Ä,àŽg,ì,Û,·B + %%ŽŽq,í•Žš—ň%%ŽŽq,Å,à, ,è,Û,·B

frfbfg%oo%oZZZq03380

%oo%oZZZq

frfbfg%oo%oZZZq,í@,lfrfbfg'l,đ•iX,μ,Ü,·B
ŽŸ,lfrfbfg%oo%oZZZq,ª, ,è,Ü,·B

| %oo%oZZZq | %oo%oZZ | flfyf%of"fh | CE<%oÊ |
|-----------------------------|---------|-------------|--------|
| not frfbfg"Ù`è | @"CE^ | @"CE^ | |
| and frfbfg,ì~_—□□ī | @"CE^ | @"CE^ | |
| or frfbfg,ì~_—□~a | @"CE^ | @"CE^ | |
| xor frfbfg,ì | | | |
| "r'¼"l~_—□~a | @"CE^ | @"CE^ | |
| shl frfbfg,ì□¶fVftfg | @"CE^ | @"CE^ | |
| shr frfbfg,ì%EfVftfg | @"CE^ | @"CE^ | |

not ,lfrfbfg'l,đ"½",μ,Ü,·B,½,Æ,!,lfrfbfg,ª 1 ,É,ç,ÎC**not** ,É,æ,Á,Ä 0 ,É,È,è,Ü,·B

not ,íP□€%oo%oZZZq,Á,·B**not** %oo%oZZZq,lflfyf
%of"fh,ª@□□"CE^,ìê□#□CCE<%oÊ,í"~,¶@□"CE^,Á,·B

frfbfg%oo%oZZZq **and**, **or**, **xor** ,íí%ž,·,éfrfbfgŠÔ,ì~_—□%oo%oZZ,đ,μ,Ü,·B

and, **or**, **xor** %oo%oZZZq,ì—¼•ù,lflfyf%of"fh,ª@□□"CE^,ìê□#□CCE<%oÊ,ìCE^,í 2 ,Â,lflfyf
%of"fh,ì<α'ÊCE^,Á,·B

%oo%oZZ | **shl** J ,Æ | **shr** J ,í | ,ì'l,đ□¶,Ü,½,í%oE,É J frfbfg,¾,~fVftfg,μ,Ü,·BCE<%oÊ,ìCE^,í |
,ìCE^,Æ"~,¶,Á,·B

not, **and**, **or**, **xor** ,í~_—□%oo%oZZZq,Á,à, ,è,Ü,·B

~_—□%o%oŽŽŽq03381

ŽQ□Æ %o%oŽŽŽq

~_—□%o%oŽŽŽq,íŽ®,đ•]‰ı,ı,é,½,β,É~_—□f□fWfjbfN,đŽg,ç,Ü,·□B

ŽŸ,ì~_—□%o%oŽŽŽq,ª, ,è,Ü,·□B

| %o%oŽŽŽq | %o%oŽŽ | fıfyf%of“fh | œ<%oÉ |
|------------|--------------|-------------|-------|
| not | ~_—□”Ù’è | ~_—□ | ~_—□ |
| and | ~_—□□ı | ~_—□ | ~_—□ |
| or | ~_—□~a | ~_—□ | ~_—□ |
| xor | ”r’¼“ı~_—□~a | ~_—□ | ~_—□ |

not ,í~_—□’ı,đ”½“],μ,Ü,·□B,½,Æ,ı,ı **not** True ,ı False ,Á,·□B**not** ,ı’P□€%o%oŽŽŽq,Á,·□B

and ,ı—¼•û,ıfıfyf%of“fh,ª True ,È,ç,ı□CTrue ,đ•Ô,μ,Ü,·□B

or ,ı,ç, ,è, ©,Ü,½,ı—¼•û,ıfıfyf%of“fh,ª True ,È,ç,ı□CTrue ,đ•Ô,μ,Ü,·□B

xor ,ı—¼•û,Á,ı,È, ,ç, ,è, © ^è•û,ıfıfyf%of“fh,¾, ¯,ª True ,È,ç,ı□CTrue ,đ•Ô,μ,Ü,·□B—¼•û,ıfıfyf%of“fh,ª True ,ı□ê□‡,ı□CFalse ,đ•Ô,μ,Ü,·□B

and ,Æ **or** %o%oŽŽŽq,ı~_—□’ı,ıfyfA,É’ı,μ,Äı—p,μ□CObject Pascal ,ı,±,è,ç,ı‰%o%oŽŽŽq,É,Á,ç,Ä 2 Žı—p,ıfR□[fh□ı□¬f,fff<,đfTfı□[fg,μ,Ä,ç,Ü,·□B

▪ Š®’S•]‰ı

▪ fVf‡□[fgfT□[fLfbfg•]‰ı

•]‰ııf,fff<,ı \$B fRf“fpfCf‰Žw—β,É,æ,Á,Ä□\$Eä,μ,Ü,·□BfffHf<fg□ó’Ô **{\$B-}** ,Á,ıfRf“fpfCf‰ı,ıfVf‡□[fgfT□[fLfbfg•]‰ııfR□[fh,đ□ı□¬,μ,Ü,·□B **{\$B+}** □ó’Ô,Á,ıfRf“fpfCf‰ı,ıŠ®’S•]‰ıı,đ□ı□¬,μ,Ü,·□B

not, and, or, xor ,ıfıfbfg%o%oŽŽŽq,Á,à, ,è,Ü,·□B

ŽQÆ03382

~ — □ Ž®

~ — □ Ć^

ŽQÆ03384

ŠÖCEW%%ŽŽq

• Žšf|fCf“f^%o%oŽŽŽq03385

%o%oŽŽŽq

□³•„□† (+) ,Æ•%o•„□† (-) %o%oŽŽŽq,|f|fCf“f^‘l,đfCf“fNfŠf□f“fg,μ,½,èffNfŠf□f“fg,μ,Û,·□B•
%o•„□†%o%oŽŽŽq,Í 2 ,Â,Ì•Žšf|fCf“f^,|f|fCfZfbfg•”•ŠÔ,Ì<—£ (□·) ,đÆvŽŽ,Â,«,Û,·□B

P ,Æ Q ,ª PChar ĆĚ^,Ì‘l,Â□Cl ,ª Integer ĆĚ^,Ì‘l,¾,Æ,·,é,Æ□CŽÿ,Ì□\•,ª<- ,ª,ê,Û,·□B

| □\• | ĆĚ<%oÊ |
|------|--------|
|------|--------|

P + I P ,É l ,đ%oÁŽŽ,·,é

I + P P ,É l ,đ%oÁŽŽ,·,é

P - I P ,©,ç l ,đĆ,ŽŽ,·,é

P - Q P ,©,ç Q ,đĆ,ŽŽ,·,é

%o%oŽŽ P + I ,Æ I + P ,Í P ,É,æ,Á,Ä—^,Ì,ç,ê,½fAfhfĆfX,É I ,đ%oÁŽŽ,μ□CP ,æ,è I
•ŽšĆě,ë,Ì•Žš,đŽw,·f|fCf“f^,đ□□¬,μ,Û,·□B

%o%oŽŽ P - I ,Í P ,É,æ,Á,Ä—^,Ì,ç,ê,½fAfhfĆfX,©,ç I ,đĆ,ŽŽ,μ□CP ,æ,è I
•Žš‘O,Ì•Žš,đŽw,·f|fCf“f^,đ□□¬,μ,Û,·□B

%o%oŽŽ P - Q ,Í Q (%o^ÊfAfhfĆfX) ,Æ P (□ă^ÊfAfhfĆfX) ŠÔ,Ì<—£,đÆvŽŽ,μ□CQ ,Æ P
,ÌŠÔ,Ì•Žš□”,đ—^,Ì,é Integer ĆĚ^,Ì‘l,đ□□¬,μ,Û,·□B

,±,Ì%o%oŽŽ,Â,Í P ,Æ Q ,ª“~ ,•Žš”z—ñ”à,đŽw,·,à,Ì,Æ,μ,Û,·□B2 ,Â,Ì•Žšf|fCf“f^,ª•Ê,Ì•Žš”z
—ñ,đŽw,·□ê#□CĆ<%oÊ,Í-ŧ‘è<` ,É,È,è,Û,·□B

WZq03386

ZZq

WZq, í 2, Á, W, ã, a, C, C, i, ð, ð, ß, ½, è, C, W, ð, ð, A' ® ŠÖEW, ð, f, e, f, X, f, g, , , é, ð, È, Ž, g, ð, Û, ·, B

Ž, Ÿ, ð, W, Z, q, ð, ð, è, Û, ·, B

| ZZq | ZZ | fhfh |
|-----|------------|--|
| + | ã | ÝŠ·«, ð, , é, W, ð, ^ |
| - | · | ÝŠ·«, ð, , é, W, ð, ^ |
| * | ï | ÝŠ·«, ð, ð, , é, W, ð, ^ |
| in | <A' ® ŠÖEW | ¶, ð, fhfh: "C^Ó, ð, ð, ^ T %E, ð, fhfh: Šî- { ^, ð T , ð, ÝŠ·«, ð, , é, W, ð, ð |

WZ, ð, <%, È, ð, W, ð, ð, _- , ð, Ž, Ÿ, ð, <K'¥, È, ð, ð, ð, Û, ·, B

- ð, ð, ~'I C , í A , Û, ½, í B , È, Š, Û, Û, è, é, è, ð, ð, ð, ¾, ð, CA + B , È, Š, Û, Û, è, é
- ð, ð, ~'I C , í A , È, Š, Û, Û, è, è, C, µ, ©, à B , È, Š, Û, Û, è, È, ð, è, ð, ð, ¾, ð, CA - B , È, Š, Û, Û, è, é
- ð, ð, ~'I C , í A , ð, B , ð-¼·ù, È, Š, Û, Û, è, é, è, ð, ð, ð, ¾, ð, CA * B , È, Š, Û, Û, è, é

WZ, ð, <%, È, È, <A' ® , , é, ð, ð, à, ð- , ð, È, ð, ð, ~'I, ð, A , ð, C, ð, ð, à, ð, «, È, ð, ð, ~'I, ð, B , ð, è, ð, ð, C, ð, <%, È, ð, ^, í set of A..B , ð, ·, B+ C- C* %Z, ð, <%, È, ð, W, ð, ð, ð, C, in %Z, ð, <%, È, ð, _- ð, ^, ð, ·, B

ŽQÆ03388

~ — Ž®

~ — %%%ŽŽŽq

Ā^,ìĀÝŠ·«

—á03390

{ŽŸ,}fR[fh,ífpf%of[f^,}fRfs[,đ•ï[X,μ,Ü,·}

procedure ValueEx (X :Integer);

var

ptr : ^integer;

begin

ptr := @X;

writeln(Ptr^);

Ptr^ := 15;

end;

var

Fred : integer;

begin

Fred := 10;

ValueEx (Fred);

Writeln (Fred); {10}

end.

{ŽŸ,}fR[fh,íŽÀfpf%of[f^,đ•ï[X,μ,Ü,·}

procedure VarEx(var Y : integer);

var Ptr : ^integer;

begin

Ptr := @Y;

writeln (Ptr^);

Ptr^ := 15;

end;

var Fred : integer;

begin

Fred := 10;

VarEx (Fred);

writeln (Fred); {15}

end.

ŽQÆ03391

Žè'±,«'l

'lfpf%of□□f^

•i□"fpf%of□□f^

'ã"ü%%%ŽŽŽq03392

ŽQ□Æ =á %%%ŽŽŽq

□\•¶

□à-¾

'ã"ü%%%ŽŽŽq := ,í (%E•Ó,ì) Ž®,ì'ì,đ (□¶•Ó,ì) " ,¶Æ^,ì•i□",É—^,ì,Ü,·□B

—á03393

X := Y;

Done := (I > 0) **and** (I < 100)

A[I] := A[I] + 1;

ŽQÆ03394

‘ă”ü,ìĈÝŠ·□«

Ž®

•¶

•î”

fofŠfAf“fg%oo%oZZŽq03395

ŽQ□Æ %oo%oZZŽq

+□C-□C*□C/□Cdiv□Cmod□Cshl□Cshr□Cand□Ccor□Cxor□Cnot ,iše%oo
%oZZŽq,ífofŠfAf“fgCE^ ,íflyf%of“fh,đfTf|□[fg,μ,À,ç,Û,·□B“ñ□€%oo%oZZŽq,ìè#□C^ê•û,íflyf
%of“fh,³fofŠfAf“fgCE^ ,È,ç,Î,à,π^ê•û,íflyf%of“fh,àfofŠfAf“fgCE^ ,ÉŽ©“®•İ·³,ê,Û,·□B

ŽQÆ03396

fofŠfAf“fgCE^

fofŠfAf“fgŽ®

—\-ñĈĕ03397

ŽQĀĒ

—\-ñĈĕĒ,É,Í Object Pascal ĈĒ¼ĈĕĒ,ì†,ĀĈĒ^,β,ç,ĕ,½^Ó-ı,ª, ,è,Û,·□B—\-ñĈĕĒ,Í□Ā'è<`,Ā,«,Û,¹,ñ□B

Object Pascal ,í'â•ŕŽš,Ē□→•ŕŽš,ð<æ•Ē,μ,È,ç,ì,Ā□C—\-ñĈĕĒ,ð<L□q,·,é,Ē,«,í'â•ŕŽš,Ē□→•ŕŽš,ð"Ĉ^Ó,É'g,Ÿ□‡,í,¹,ĀŽg,ı,Û,·□B

f{□[f%of"fh,ìf}ffj...fAf<,â,±,ìfwf<fvfvfXfef€Ā,Í□C—\-ñĈĕĒ,ð'¾Žš'ı,Ā•\<L,μ,Ā,ç,Û,·□B

Object Pascal ,ì—\-ñĈĕĒ,ìfAf<ftf@fxfbfg□‡^ĕ—,ðŽŸ,ÉŽı,μ,Û,·□B

and

as

asm

array

begin

case

class

const

constructor

destructor

div

do

downto

else

end

except

exports

file

finalizationfinally

for

function

goto

if

implementation

in

inherited

inline

initialization

interface

is

label

library

mod

nil

not

object

of

onor

packed

procedure

program

property

raise

record

repeat

set

shl

shr

string

then

threadvarto

try

type

unit

until

uses

var

while

with

xor

ŽQÆ03398

•W€Žw—ß

•W□€Žw—B03399

ŽQ□Æ

Object Pascal ,ì•W□€Žw—B,É,í'è<□ī,Ý,ì^Ó—i,ª, ,è□C□Ä'è< ,à%oÁ"\
,Ä,·□B,½,¾,μ□Ä'è< ,í,È,é,x,,μ,È,ç,Ä,,¾,³,ç□BŽw—

ß,íft□[fU□['è< ,ìŽ~•ÉŽq,ª□oCE»,Ä,«,È,çfRf"fefLfXfg,Ä,ì,ÝŽg,ç,Ü,·□B

f{□[f%of"f'h,ìf}fjf...fAf<,â,±,ìfwf<fvfVfXfef€,Ä,í□C•W□€Žw—B,ð'¾Žš'í,Ä•\<L,μ,Ä,ç,Ü,·□B

Object Pascal ,í'â•¶Žš,Æ□¬•¶Žš,ð<æ•É,μ,È,ç,ì,Ä□CŽw—

ß,ð<L□q,·,é,Æ,«,í'â•¶Žš,Æ□¬•¶Žš,ð"C^Ó,É'g,Ý□‡,í,¹,ÄŽg,ì,Ü,·□B

Object Pascal ,ì•W□€Žw—B,ìfAf<ftf@fxfbfq□‡^ê—,ðŽŸ,ÉŽì,μ,Ü,·□B

absolute

abstract

assembler

at

automated

cdecl

default

dispid

dynamic

external

forward

index

message

name

nodefault

on

override

pascal

private

protected

public

published

read

register

resident

stdcall

stored

virtual

write

private **protected** **public** **published** **Automated** ,išeŽw—β,íƒNf

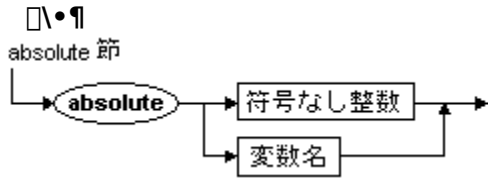
%ofXĈ^□éĈ^{3/4},l'†,Å,Í—\-ñĈê,Æ,μ,Ä“,«,Ü,·,ª□C,»ê^ÈŠO,l□ó<μ,Å,Í—\-ñĈê,Æ,μ,Ä^μ,í,ê,Ü,·□B

ŽQÆ03400

—\-ñĈê

Absolute03401

—á •W□€Žw—β



□à-¾

•W□€Žw—β **absolute** ,í“Á’è,ìf□f,fšfAfhf□fX,É^Ê’u,·,é•ï□”,đ□é□¾,μ,Û,·□B

ŽŸ,ì,ç,¿,ç,©,ìžw’è,ª,À,«,Û,·□B

- ï□”,đ“Á’è,ìfAfhf□fX,É’¾□Úš,,è“- ,Ä,é
- É,ì•ï□”,Æ“~,ñf□f,fšfAfhf□fX,É^Ê’u,·,é•ï□”,đ□é□¾,·,é

□Å□%o,ì□€`Ž®,À,í•ï□”,ìfAfhf□fX (fZfOf□f“fg,ÆfìftfZfbfg) ,đ’¾□Úžw’è,μ,Û,·□B□Å□%o

,ì•,□t,È,μ□@□”’è□”,ìfZfOf□f“fgfX□fX,đžw’è,μ□C2 “Ô-

Ú,ì•,□t,È,μ□@□”’è□”,ì,»,ìfZfOf□f“fg“à,ìfìftfZfbfg,đžw’è,μ,Û,·□B,ç,¿,ç,ì’è□”,à \$0000 ,©,ç

\$FFFF (0 ,©,ç 65535) ,ì“í“à,À,È,,À,í,È,è,Û,¹,ñ□B

’□^Ó: fvf□fefNfgf,□fñ,ÀžÀ□s,·,é Windows fvf□fOf%of€,À,í **absolute** ,ì□Å□%o

,ì□€`Ž®,đžg,í,È,ç,À,,¾,ª,ç□BWindows

,đfvf□fefNfgf,□fñ,ÀžÀ□s,·,é□é□#□CfAfvfšfP□fVfñ”,ìfvf□fOf%of€šO•”,ìf□f,fš—

ì^æ,Ö,ìfAfNfZfX□€ ,đž□,½,È,ç%oÀ“\□«,^a, ,è,Û,·□B,±,è,ç,ìf□f,fš—ì^æ,ÉfAfNfZfX,μ,æ,κ

,Æ,·,é,Æ□CfAfvfšfP□fVfñ““à,À^è”É•Ú□€ì□ášQ,^a□ñ,·,é%oÀ“\□«,^a, ,è,Û,·□B

2 “Ô-Ú,ì□€`Ž®,ìšù‘ñ,ì•ï□”,ì□ã (“~,ñfAfhf□fX^Ê’u) ,É□V,μ,ç•ï□”,đ□é□¾,μ,Û,·□B

•ï□”□é□¾,É **absolute** □B,^a, ,é□é□#□Cž~•ÉžqfšfXfg,É,í 1 ,À,ìž~•Éžq,¾,~,đžw’è,À,«,Û,·□B

fvf□fefNfgf,□fñ—p,ì Windows fvf□fOf%of~f“fO,À,í□C2 “Ô-Ú,ì□€`Ž®,ì **absolute** □B,đžg,κ

,Æ^À’S,À,·□BfAfNfZfX,·,é□f,fš,ìfvf□fOf%of€,ìfhf□fCf““à,É□€À,ç,è,Û,·□B

—á03402

var

CrtMode: Byte **absolute** \$0040:\$0049; {Å%,ìĚ`Ž®}

Str: **string**; {2 "Ô-Ú,ìĚ`Ž®}

StrLen: Byte **absolute** Str;

Abstract 03403

—á •W□€Žw—β

□à-¾

abstract Žw—β, ífífufWfFfNfg'è< , ĀŽg, í, ê□C, ±, iŽw—β, āŽw'è, ¾, ê, ½fífufWfFfNfg"à, Ā, í
%o¼'zf□f□fbfh, Ü, ½, í" @ "íf□f□fbfh, á□éC¾¾, ¾, ê, È, ç, ±, Æ, ðŽ!, μ, Ü, ·□B, ±, í'è< , í%o°^É, ífNf
%ofX, É, àCep□¾, ¾, ê, Ü, ·□B—LÆø, È'ŠŮf□f□fbfh, ífCf"f^□ftfF□fX, ð'è< , μ, Ü, ·, á□CSî-
{'€□i, í'è< , í, μ, Ü, ¹, ñ□B

f□f□fbfh, ð'ŠŮ, Æ, μ, Ä□éC¾¾, ·, é, É, í□æ, É **virtual** , Ü, ½, í **dynamic** , Æ□éC¾¾, μ, È, -
, Ā, í, È, è, Ü, ¹, ñ□B'ŠŮf□f□fbfh, íf□f□f□f%ofCfh, ¹, , ÉCÄ, Ñ□o, μ, Ä, í, È, è, Ü, ¹, ñ□B'ŠŮf□f□
fbfh, íf□f□f□f%ofCfh, í'É□í, í%o¼'zf□f□fbfh, Ü, ½, í" @ "íf□f□fbfh, íf□f□f□f
%ofCfh, Æ" , ¶, Ā, ·, á□Cf□f□f□f%ofCfh, ·, é'α, íf□f□fbfh, iŽÄC» , Ā **inherited** f□f
fbfh, ðCÄ, Ñ□o, ¹, È, ç" _ , á^Ü, È, è, Ü, ·□B

f□f□f□f%ofCfh, ¾, é, Ä, ç, È, ç'ŠŮf□f□fbfh, ðCÄ, Ñ□o, » , α, Æ, ·, é, Æ□Cf%of"f^fCf€f%ofCfuf
%ofŠ, iŽè'±, « Abstract , áCÄ, Ñ□o, ¾, é□Cfvf□fOof%of€, íf%of"f^fCf€fGf%o□[, Ā□i—¹, μ, Ü, ·□B

—á03404

type

 TMyObject = class

 procedure Something; virtual; abstract;

 end;

Array03405

ŽQAE =á

|\•¶

array [index-type] **of** element-type

à-¾

—\-ñĈê **array**, í"z—ñĈ^, ð'è<` , μ, Ů, · □B

•;□", ìfCf"ffbfNfXĈ^, ðff" f}, Å<æ□Ø, Á, ÄŽw'è, Å, «, Ů, · □B

—v'fĈ^, í, Ç, ìĈ^, Å, à, ©, Ů, ç, Ů,¹, ñ, ^a□CfCf"ffbfNfXĈ^, í□±□Ĉ^, Å, È, , Ä, í, È, è, Ů,¹, ñ □B

—á03406

type

```
IntList = array[1..100] of Integer;  
CharData = array['A'..'Z'] of Byte;  
Matrix = array[0..9, 0..9] of real;
```

ŽQÆ03407

"z—ñĈ^

"z—ñĈ^'è"

fCf"ffbfNfX

Asm03408

ŽQAE —\-ñĀĒ

□\•¶

asm

AssemblerStmt <Separator AssemblerStmt>

end

- AssemblerStmt ,ÍfAfZf“fuf%•¶,đŽ!,·
- Separator ,ÍfZf~fRf□f“□C%ü□s□CPascal fRf□f“fg,ì,ç,,é,©,Å, ,é

□à-¾

—\-ñĀĒ **asm** ,Í'g,Ý□ž,ÝfAfZf“fuf%•¶,ÉfAfNfZfX,μ,Ü,·□B

•j□”,ÍfAfZf“fuf%•¶,đ 1 □s,ÉŽw'è,·,é□ê□#□C,»é,¼,è,đfZf~fRf□f“,Å<æ□Ø,è,Ü,·□BfAfZf“fuf%•¶,đ•É□X,ì□s,É'u,□ê□#,ÍfZf~fRf□f“,Í•s—v,Å,·□B

asm •¶,Å,í□CfZf~fRf□f“,í□s,ìŽc,è•”•ª,ªfRf□f“fg,Å, ,é,±,Æ,đ^Ó-i,μ,Ü,¹,ñ□BfRf□f“fg,í { ,Æ } ,Ü,½,í (* ,Æ *) ,đŽg,¤ Pascal fXf^fCf<,Å,È,,Å,í,È,è,Ü,¹,ñ□B

fĀfWfXf^,ìŽg,ç•û

asm •¶,Å,ìfĀfWfXf^,ìŽg,ç•û,ì<K'¥,íŠO•”,ìŽè'±,«Ü,½,íŠÖ□”,Å,ì<K'¥,Æ“-,¶,Å,·□B

asm •¶,Å,íŽŸ,ìfĀfWfXf^,đŠm•û,μ,È,,Å,í,È,è,Ü,¹,ñ□B

EDI ESI

EBP EBX

asm •¶,Å,íŽŸ,ìfĀfWfXf^,đŽ©—R,É•i□X,Å,«Ü,·□B

EAX EBX ECX

EDI, ESI, EBP, EBX fĀfWfXf^èŠO,É,Å,ç,Ä,í□C**asm** •¶,ìfĀfWfXf^,ì“à—e,É,Å,ç,Ä%½,à'z'è,μ,Ü,¹,ñ□B

ŽQÆ03409

Assembler Žw—ß

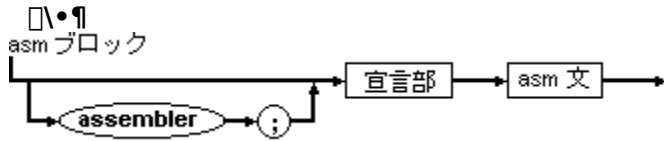
fAfZf“fuf%o•¶

fRf“fg

External

Assembler03410

ŽQAE •W€Žw—ß



□à-¾

•W€Žw—ß **assembler** ,đŽg,ɤ,Æ□C**begin...end** •¶,đŽg,í,„,ÉfCf“f
%ofCf“fAfZf“fufŠCE¾AEê,ÁŠ®‘S,ÈŽè‘±,«,âŠÖ□” ,đ<L□q,Á,«,Ü,·□B

assembler ,đŽg,ɤ,ÆfRf“fpcf%o,íŽŸ,ì,æ,ɤ,ÈfR□[fh□¶□→,ì□Á“K%o»,đŽÀ□s,μ,Ü,·□B

- 'lfpf%of□□[f^: fRf“fpcf%o,í'lfpf
%of□□[f^,đf□□[fjf<•ï□”,ÉfRfs□[„,ÉfR□[fh,đ□¶□→,μ,È,¢□B,±,ì□Á“K%o»,í,„,x,Ä,ì•¶Žš—ñCE^,ì'lfpf
%of□□[f^,ÆfTfCfY,^a 1, 2, 4 fofCfg^ÉŠO,ì'lfpf%of□□[f^,É□ì—p,„,é
Žè‘±,«,âŠÖ□”“à,Á,í□C,±,ê,¢,ìfpf%of□□[f^,í **var** fpf%of□□[f^,Æ,μ,Ä^μ,í,È,,Ä,í,È,¢,É,¢
▪ ŠÖ□”CE<%oÊ•ï□”: fRf“fpcf%o,íŠÖ□”CE<%oÊ•ï□”,đŠ,,è“-„Ä,„□C@Result
fvf“f{f<,Ö,ìŽQ□AE,ífGf%o□[„,É,È,é
•¶Žš—ñŠÖ□”,íŠÖ□”CE<%oÊ,ì□Á“K%o»,Á,í—áŠO,Æ,μ,Ä^μ,í,È,é□B•¶Žš—
ñŠÖ□”,íCEÄ,Ñ□o,μ'ɤ,É,æ,Á,ÁŠ,,è“-„Ä,¢,ê,½ @Result fJfCf“f^,đ□í,ÉŽ□,Á,Ä,¢,é
▪ fXf^fbfNftfCE□[f€: fRf“fpcf%o,ìfpf%of□□[f^,âf□□[fjf<•ï□”,đŽ□,½,È,¢Žè‘±
,«,ÆŠÖ□”,É,ífXf^fbfNftfCE□[f€,đ□¶□→,μ,È,¢
fAfZf“fuf%oŽè‘±,«,Ü,½,íŠÖ□”,ÉŽ©“®“í,É□¶□→,³ê,ÉfGf“fgfŠfR□[fh,Æ□ì—¹fR□[fh,íŽŸ,ì,æ,ɤ
,É,È,è,Ü,·□B

```

PUSH    BP                ;Locals <> 0 ,Ü,½,í Params <> 0 ,È,¢,í□¶□→,μ,Ü,·
MOV     BP, SP            ;Locals <> 0 ,Ü,½,í Params <> 0 ,È,¢,í□¶□→,μ,Ü,·
SUB     SP, Locals        ;Locals <> 0 ,È,¢,í□¶□→,μ,Ü,·
.
.
.
MOV     SP, BP            ;Locals <> 0 ,È,¢,í□¶□→,μ,Ü,·
POP     BP                ;Locals <> 0 ,Ü,½,í Params <> 0 ,È,¢,í□¶□→,μ,Ü,·
RET     Params            ;í,É□¶□→,3ê,Ü,·
    
```

Locals ,Æ Params ,^a,Æ,à,Éf[f□,ìé□#□CfGf“fgfŠfR□[fh,í□¶□→,³ê,„□C□ì—¹fR□[fh,í RET -½—
ß,¾,„,É,È,è,Ü,·□B

assembler ,đŽg,ɤŠÖ□”,íCE<%oÊ,đŽŸ,ì,æ,ɤ,É•Ö,³È,,Ä,í,È,è,Ü,¹,ñ□B

ŠÖ□”,ìCE^ **•Ö,³ê,éCE<%oÊ**

| | |
|----------|--|
| □#□~ | AL (8 frfbfg'l) AX (16 frfbfg'l) DX:AX (32 frfbfg'l) |
| ŽÀ□” | DX:BX:AX |
| 8087 | 8087 fRfvf□fZfbfT,ífCEfWfXf^fXf^fbfN□ă,ì ST(0) |
| fJfCf“f^ | DX:AX |

• ¶Žš—ň

@Result ,ÅŽ|,³,ê,é^êŽž“|,È^È'u

ŽQÆ03411

@Result

Asm

'g.Ýž.ÝfAfZf"fu f%o.)fGf"fgfŠfR[fh,ÆI—¹fR[fh

ŽQÆ03413

fRf“f□[f]f“fg,ì%oÂŽ<□«

private

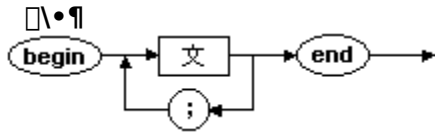
protected

public

published

begin ... end fuf

ŽQÆ á ÑÊ



à-¾

ÑÊ **begin** ,Æ **end** ,íê~A,ì,đfOf<[fv%» ,μ,Ä•i#•,É,μ,Ü,·B

•i#•,í 1 ,Â,ì,Æ,μ,Ä^μ,í,ê,Ü,·B

—á03415

(* •i□#•¶,ð if •¶“à,ÅŽg,ç,Ü,• *)

if First < Last **then**

begin

Temp := First;

First := Last;

Last := Temp;

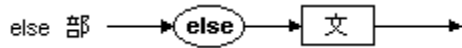
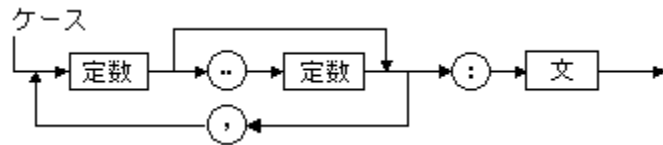
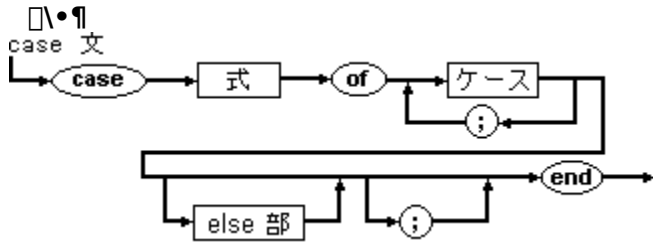
end;

ŽQÆ03416

•9

Case 03417

ŽQ□Æ =á =\-ñCEê



□à-¾

case •¶, ífR□[fh“à, ÅCEÿ□o, ¾, ê, ½CE<%oÊ, Ü, ½, í'l, ÉŠî, Ā, ç, ÄfR□[fh, ð•³Šð, ·, é, ½, ß, ÉŽg, ç, Ü, ·□B

case •¶, íŽ® (fZfCEfNf^), Æ•¶, ífŠfXfg, Å□□¬, ¾, ê□CŠe•¶, ì□æ“ª, É, í 1, Ā, Ü, ½, í•j□”, ì'è□” (case 'è□”) , Ü, ½, í—\-ñCEê **else** ,ª'u, ©, ê, Ü, ·□BfZfCEfNf^, ì□#□~CE^, Ā, È, , Ā, í, È, ç, È, ç, ½, ß□C•¶Žš—ñCE^, ífZfCEfNf^, ìCE^, Æ, µ, Ā, í-³CEø, Ā, ·□B

, ·, x, Ā, ì case 'è□”, íf†j□[fN, Ā, È, , Ā, í, È, ç, , □CfZfCEfNf^CE^, ÆCEÿŠ·, ì□#□~CE^, Ā, È, -, Ā, í, È, è, Ü, ¹, ñ□B

fVf□[fOf%of€,ª **case** •¶, É“ü, é, Æ□C^è'v, ·, é'l,ªCE©, Ā, ©, é, Ü, ĀŠeŽ®,ª•]‰
 ž, ¾, ê, Ü, ·□Bè'v, ·, é'l,ªCE©, Ā, ©, é, ÆfVf□[fOf%of€, í, »), íŽ®, ÉŠÖ~A•t, -, ç, è, Ā, ç
 , éfAfNfVf†j“, ðŽÀ□s, µ, Ü, ·□Bè'v, ·, é'l,ªCE©, Ā, ©, ç, È, ç□é□#□C**else**

•¶, ðff†fHfçfg, Æ, µ, ĀŽg, í, è, Ü, ·□B**else** •”,ª, È, ç□é□#□C**case** •¶, íŽŸ, ì•¶,ª±, ç, ĀŽÀ□s, ¾, ê, Ü, ·□B

case •¶, ì"í'í, ì□d•j, µ, Ā, í, È, è, Ü, ¹, ñ□B, µ, ½,ª, Ā, Ā□CŽŸ, ì **case** •¶, í" F, ß, ç, è, Ü, ¹, ñ□B

```

case MySelector of
  5: Writeln('Special case');
  1..10: Writeln('General case');
end;
  
```

case 'è□”, ð□, □#É”z'u, ·, é, ÆfRf“fpfCf%o, í **case** , ð□Ā“K%o», µ, ĀfWfff“fv, É'u, «Š·, ì, é, ½, ß□C-^%oñCEvŽŽ, ð, ·, é•K—v,ª, È, È, è, Ü, ·□B, ½, Æ, í, î□CfRf“fpfCf%o, íŽŸ, ì **case** •¶, ðfWfff“fv, É'u, «Š·, ì, Ü, ·□B

```

case MySelector of
  1: Writeln('One');
  2: Writeln('Two');
  else Writeln('More');
end;
  
```

ŽŸ, ì□é□#, íCEvŽŽ,ª•j□”‰oñŽÀ□s, ¾, ê, Ü, ·□B

```

case MySelector of
  
```

```
2: Writeln('Two');  
1: Writeln('One');  
  else Writeln('More');  
end;
```

—á03418

```
case Ch of
  'A'..'Z', 'a'..'z': WriteLn('Letter');
  '0'..'9':          WriteLn('Digit');
  '+', '-', '*', '/': WriteLn('Operator');
else
  WriteLn('Special character');
end;
```

ŽQÆ03419

Else

Ž®

•¶

Cdecl03420

ŽQÆ •W€Žw—β

∅\•¶

procedure A; cdecl;

∅à-¾

cdecl Žw—β, íCŽè'±, «, Ü, ½, íŠÖ", aƒpf%of∅∅[f^, ÌŽó, ~"n, μ, É C/C++ , ÌÄ, Ñ∅o, μ<K-ñ, ðŽg, x, ±, Æ, ðŽw'è, μ, Ü, ∅B

C/C++ Ä, Ñ∅o, μ<K-ñ, Å, íCƒpf%of∅∅[f^, í%oE, ©, ç¶, Ì¶, Å"n, ³, êCfXf^fbfN∅ã, Ìƒpf%of∅∅[f^, íÄ, Ñ∅o, μ'x, aŽæ, è∅æ, «, Ü, ∅B

C/C++ Ä, Ñ∅o, μ<K-ñ, íCC/C++ , , é, ç, í'¼, Ì¾Äê, Å', ©, ê, ½f_fCfif~fbfNfŠf"fnf%ofCfuf%ofŠ (DLL) , ©, çGfNfXf∅∅[fg, ·, éf<∅[f`f", ðÄ, Ñ∅o, ·, ½, β, É, íÅ, à•Ö—~ , Å, ∅B

ŽQÆ03421

CEÄ.Ño,μK-ñ

pascal

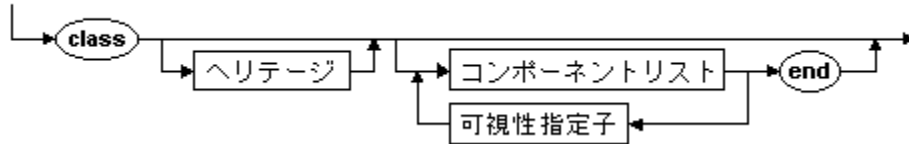
register

stdcall

Class03422

ŽQAE —\-ñĈĕ

□\•¶
オブジェクト型



□à-¾

—\-ñĈĕ **class** ,ílfufWfFfNfgĈĕ^,Ü,½,íNf%ofXf□fBfh,đĈĕ¾,·,é,½,β,ÉŽg,ç,Ü,·□BfNf %ofXŽQ□AEĈĕ^,đ'è<` ,·,é,½,β,É,àŽg,ç,Ü,·□B

flfufWfFfNfgĈĕ^,íĈĕ^,β,ç,é,½ĈĕĀ□” ,íRf“f□lf“fg,đŽ□,Āff□f^□'ç,Ā,·□BŞefRf“fj □lf“fg,íftfB□f<fh (“Ā'è,íĈĕ^ ,)ff□f^ ,đŠÜ,β)□CflfufWfFfNfg,É'í,µ,Ā'€□,đŽĀ□s,·,é□f\ fbfh□C,Ü,½,ífv□pfefB,ì,ç,·,é,©,Ā,·□B

ftfB□f<fh,ìĈĕ¾,Ā,íftfB□f<fh,ì-¼'O,đŽw'è,·,éŽ·ÉŽq,ĀĈf□f^Ĉĕ^,đŽw'è,µ,Ü,·□B

f□fBfh,ìĈĕ¾,Ā,íŽè'±,«□CŠÖ□□CfRf“fXfgf%ofNf^□C,Ü,½,íffXfgf %ofNf^,ífwbf_□,đŽw'è,µ,Ü,·□B

fv□pfefB,ì'è<` ,Ā,ífv□pfefB,Ā,» ,íAfnfZfXf□fBfh,đŽw'è,µ□C,³,ç,É□^—□,ì— —,è,ìŠÖ,Éfv□pfefB,³,ç,ì,æ,α,É“@□ì,·,é,©,É,Ā,ç,Ā,ì□î•ñ,đŽw'è,Ā,« ,Ü,·□B

flfufWfFfNfgĈĕ^,í•É,ílfufWfFfNfgĈĕ^,©,çRf“fj □lf“fg,đĈp□³,Ā,« ,Ü,·□BĈp□³,é,éflfufWfFfNfg,í%o^ÉflfufWfFfNfg,Ā ,è□ĈĈp□³Ĉĕ³,ílfufWfF fNfg,í□ā^ÉflfufWfFfNfg,Ā,·□B

flfufWfFfNfgĈĕ^,íhf□fç“ ,í,» ,ílfufWfFfNfgŽ©'ì,Ā,·,x,Ā,ì%o^ÉflfufWfFfNfg,Ā□□—,³,é,Ü,·□B

fNf%ofXŽQ□AEĈĕ^,í—\-ñĈĕĕ **class of** ,ĀfNf%ofX-

¼,©,ç,É,éfv□fP“fX,đŽg,Ā,Ā'è<` ,µ,Ü,·□BfNf

%ofXŽQ□AEĈĕ^,ì•í□” ,đŽĀ□sŽž,É□Y'è,µ□ĈĈĕ¾,ĀŽw'è,³,é,½fNf%ofX,Ü,½,í,» ,íNf%ofX,ì %o^ÉfNf%ofX,đŽQ□AE,Ā,« ,Ü,·□B

ŽQÆ03423

ftfB[f<fh,ÆflfufWfFfNfgCE^—v'f,ižw'èŽq

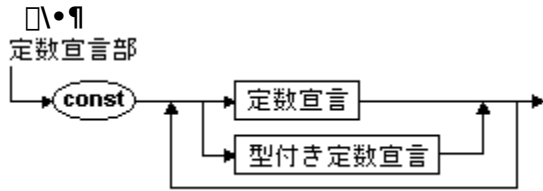
flfufWfFfNfgŽQÆ

flfufWfFfNfgCE^,lfXfR[fv

flfufWfFfNfgCE^

Const03424

ŽQ□Æ —á —\-ñŒê



□à-¾

—\-ñŒê **const** ,í,±

,ì□éŒ¾,đŠÛ,pfuf□fbfN“à,Ā'ì,ì•ï□X,ª,Ā,«,È,çŽ•ÊŽq,đ'è<` ,μ,Û,□B'è□”Ž•ÊŽq,đ,» ,êŽ©'ì,ì□éŒ¾

¾,ÉŠÛ,β,é,±,Æ,Ā,«,Û,¹,ñ□B

Delphi ,Ā,í'è□”Ž®,ªŽg,ì,Û,□B

'è□”□éŒ¾,ĀŽg,ªŽ®,íRf“fpfCf%o,ªRf“fpfCf<Žž,É,» ,ìŽ®,đ•]‰o¿,Ā,« ,é,æ,ª,É<L□q,μ,È,-

,Ā,Ā,È,è,Û,¹,ñ□B

ŽQÆ03425

'è"é¾

ž®

Ĉ^•t,«'è"

—á03426

(* 'è"é¼ *)

const

MaxData = 1024 * 64 - 16;

NumChars = Ord('Z') - Ord('A') + 1;

Message = 'Hello world...';

(* Ć^•t,«'è" *)

const

identifier: type = value;

...

identifier: type = value;

Constructor 03427

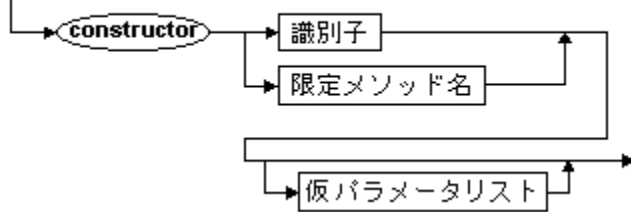
ŽQAE =\-ñĈê

□\•¶

コンストラクタ宣言



コンストラクタヘッダー



□à-¾

fRf“fXfgf%ofNf^,ílfufWfFfNfg,ì□i□-,ÉŠÖ~A,·,éfAfNfVf#f“,ð'è<` ,μ,Û,·□BfRf“fXfgf%ofNf^,í—\-\-ñĈê **constructor** ,ðŽg,Á,Ä□éĈ¾¾,μ,É,,Ä,í,É,è,Û,¹,ñ□BDelphi ,ì,·,×,Ä,ílfufWfFfNfg,í□Á'á,Ä,à TObject ,©,çŠî- {fRf“fXfgf%ofNf^,ðĈep□³,μ,Û,·□B

fRf“fXfgf%ofNf^,íĈÄ,Ñ□o,³,è,é,Æ□CfNf%ofXĈ^,ì□V,μ,Š,,,è“- ,Ä,ç,è,½□%Šú %o»fCf“fXf^f“fX,Ö,ìŽQ□AE,ð•Ô,μ,Û,·□B

ŽQÆ03428

fRf"fxfgf%ofNf^,ÆffXfgf%ofNf^

Destructor

Fail

fIfufWfFfNfg,lfCf"fxf^f"fx%o»

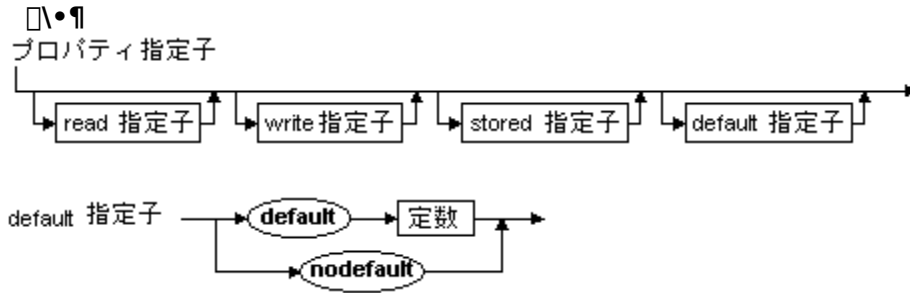
fIfbfh

Object

Virtual

Default03429

ŽQ□Æ •W□€Žw—β



□à-¾

default Žw—β, ífufWfFfNfg, ìfftfHf<fg, ì"z—ñfvf□fpfefB, ðŽw'è, ·, é, ½, β, ÉŽg, †, Ü, ·□B
 "z—ñfvf□fpfefB, ðfftfHf<fg, Æ, μ, Ä□éCE¾, ·, é, Æ□CfufWfFfNfg-¼, ¾, ¯, ðŽg, Á, Ä"z—
 ñfvf□fpfefB, ÉfAfNfZfX, Å, «, Ü, ·□B

default Žw'èŽq, í□#~CE^, Æ□-, ³, †□W□#CE^, ìfvf□fpfefB, É'í, μ, Ä, ¾, ¯fTf□[fg, ³, è, Ä, †
 , Ü, ·□Bfvf□fpfefB'è<, Å **default** , ðŽw'è, ·, é□ê#□Cfvf□fpfefB, Æ"¯, ¶CE^, ì'è□, ð'±
 , ¯, ÄŽw'è, μ, È, , Á, Í, È, è, Ü, ¹, ñ□B

fvf□fpfefB'è<, É **default** , Ü, ½, í **nodefault** Žw'èŽq, ðŠÜ, β, È, †□ê# (, Ü, ½, íŠÜ, β, é, ±
 , Æ, ², Å, «, È, †□ê#)□CCE<%oÊ, í **nodefault** Žw'èŽq, ðŠÜ, β, ½□ê# , Æ"¯, ¶, É, È, è, Ü, ·□B

ŽQÆ03430

fftfHf<fg,ì”z—ñfvf[]pfefB

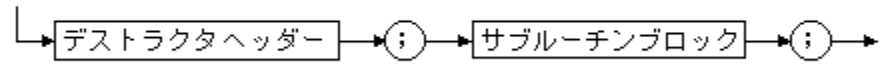
Nofault

Ši”[Žw’èŽq

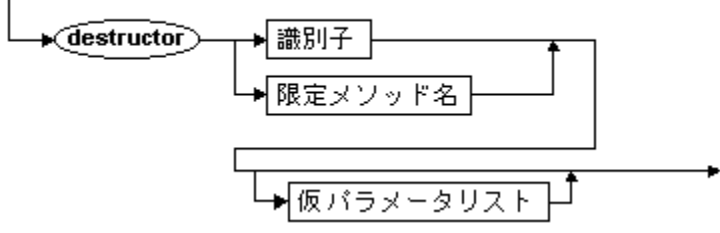
Destructor03431

ŽQAE =\-ñCEè

☐\•¶
デストラクタ宣言



デストラクタヘッダー



☐à-¾

fffXfgf%ofNf^,ílfufWfFfNfg,ì”pŠü,ÉŠÖ~A,.,éAfnfvfjf“,đ’è<` ,μ,Û,·☐BfffXfgf%ofNf^,í—\-ñCEè
destructor ,đŽg,Á,Ä☐éCE¾,μ,È,,Á,í,È,è,Û,¹,ñ☐B

fffXfgf%ofNf^,íCEÄ,Ñ☐o,¾,è,é,Æ☐CfRf“fXfgf%ofNf^,É,æ,Á,ÄflfufWfFfNfg,ÉŠ,,è“-
,Ä,ç,è,½f☐f,š,š,,è“-,Ä,đ%đ☐œ,μ,Û,·☐B

fffXfgf%ofNf^,í **virtual** ,Æ,μ,Ä☐éCE¾,Ä,«☐Cfpf%of☐☐lf^,đ,Æ,é,±,Æ,í,Û,Æ,ñ,ç, ,è,Û,¹,ñ☐B

ŽQÆ03432

Constructor

fRf“fXfgf%ofNf^,ÆffXfgf%ofNf^

Object

Virtual

Dispid03433

ŽQÆ •W€Žw—ß

à-¾

dispid •W€Žw—ß,íCfNf%ofX,ìf[fgf[fgfZfNfVf+f“ ,ÁéÆ¾,¾,è,Ä,ç,éf\fbfh,Ü,½,ívf[pfefB,ì OLE f[fgf[fVf+f“fffBfXfpfbf` ID ,ðŽw`è,·,é,½,ß,ÉŽg,ç,Ü,·B

ŽQÆ03434

Automated

Do03435

ŽQÆ =á =\-ñĚê

-\-ñĚê **do**, í **while**, **for**, **on**, **with** •ŋ, Æ'g, Ý†, í, ¹, ÄŽg, †CđĚ, ^a True
, ĨŠŌ, ÉŽĀs, , é•ŋ, đŽw'è, μ, Ů, ·B

—á03436

```
while Ch = ' ' do Ch := GetChar;  
for Ch := 1 to 100 do Ch := GetChar;  
with Date[I] do month := 1;  
on <exception> do...
```

ŽQÆ03437

Except

For

While

With

Dynamic03438

ŽQAE •W€Žw—β

à-¾

dynamic Žw—β, íf\fbfh, ð“@“I, É, μ, Ü, ·B“@“If\fbfh, í^Ó-;“I, É, í¼‘zf\fbfh, Æ“·, ¶, Å, ·B
%¼‘zf\fbfh, Æ“@“If\fbfh, íŽÀsŽŽ, íf\fbfhCEÄ, Ño, μffBfXfpbf, íŽÀCE»•û-
@, ¾, ·, ^Ü, È, è, Ü, ·B, »; í¼, Ì-Ú“I, Å, íC, ±, Ì 2 , Å, íf\fbfh, í“·, ¶, Æ, Ý, È, ^, Ü, ·B

%¼‘zf\fbfh, ÌŽÀCE», Å, íCfRf“fpfCf%, íR[fhfTfCfY, æ, è, àCEÄ, Ño, μffBfXfpbf, Ì-“x, ð—
Dæ, μ, Ü, ·B”½‘í, É“@“If\fbfh, ÌŽÀCE», Å, íCCEÄ, Ño, μffBfXfpbf, Ì-“x, æ, è, àfR[fhfTfCfY, ð
—Dæ, μ, Ü, ·B

^ê”Ê, ÉC’½‘Ô«; Ì, , é“@ì, ðŽÀCE», ·, é•û-@, Æ, μ, Ä, í¼‘zf\fbfh, Å, àCE—|“I, Å, ·B“@“If\fbfh, Å•Ö—~ , È, Ì, íCŠî- {fNf%ofX, Å½, , Ì¼‘zf\fbfh, ðéCE¾, μCfAfvfŠfP[fVf†f“, Å½, , Ì
%ÅÊfNf%ofX, ðéCE¾, μCp¾¼‘zf\fbfh, íf[f%ofCfh, Å-
, È, çó<μ, ÅŽg, xê†, ¾, ·, Å, ·B

ŽQÆ03439

f\bfh

Else 03440

ŽQÆ á ¬ñÊ

¬ñÊ **else**, í **if**, **case**, **try** •¶, ÿfHf<fg, ðÆ, µ, ÄŽg, ç, Ü, ·B

—á03441

```
(* if •¶,đŽg,¢,Ü, • *)
if ParamCount <> 2 then
begin
  WriteLn('Bad command line');
  Halt(1);
end
else
begin
  ReadFile(ParamStr(1));
  WriteFile(ParamStr(2));
end;
(* case •¶,đŽg,¢,Ü, • *)
case Ch of
  'A'..'Z', 'a'..'z': WriteLn('Letter');
  '0'..'9':           WriteLn('Digit');
  '+', '-', '*', '/': WriteLn('Operator');
else
  WriteLn('Special character');
end;
```

ŽQÆ03442

Case

If

Try

End03443

ŽQÆ —á —\-ñÊ

—\-ñÊ **end** ,íuf[]fbfN,ì[]í,è,ðf}[]fN,μ,Ü,·[]Bend ,íŽÿ,ì,æ,α,ÉŽg,ç,Ü,·[]B

- **begin** ,Æ,Æ,à,ÉŽg,ç·i[]±·¶,ðÊ`[]-,·,é
- **case** ,Æ,Æ,à,ÉŽg,ç case ·¶,ðÊ`[]-,·,é
- **record** ,Æ,Æ,à,ÉŽg,çf[]R[]f[]h[]^,ðéÊ¾,·,é
- **object** ,Æ,Æ,à,ÉŽg,çf[]f[]f[]W[]f[]f[]N[]f[]g[]^,ðéÊ¾,·,é
- **asm** ,Æ,Æ,à,ÉŽg,ç'g,Ý[]ž,ÝfAfZf"fu f%o,ðÊÄ,Ñ[]o,·
- **except** ,Æ,Æ,à,ÉŽg,ç—áŠOfŠfXfg,ð[]l—¹,·,é
- **finally** ,Æ,Æ,à,ÉŽg,ç finally fuf[]fbfN,ð[]l—¹,·,é

f,fWf...[]f<,ì[]ÁÊä,ì **end** ,É,í,»,ìÊä,É%½,à,È,ç,±,Æ,ðŽ!,·,½,ßfsfŠf[]fh,ð·t,·,Ü,·[]B

ŽQÆ03444

Asm

Begin

Case

Except

Finally

Object

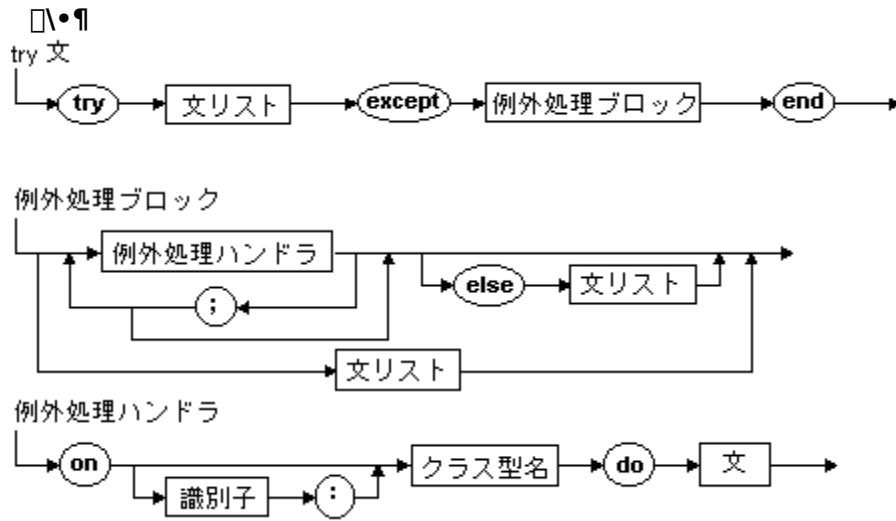
Record

—á03445

```
(* begin ,Æ,Æ,à,ÉŽg,ç,•;□‡•¶,ðŒ`□¬,μ,Ü,· *)
if First < Last then
begin
  Temp := First;
  First := Last;
  Last := Temp;
end;
(* case •¶,Æ,Æ,à,ÉŽg,ç,Ü,· *)
case Ch of
  'A'..'Z', 'a'..'z': WriteLn('Letter');
  '0'..'9':           WriteLn('Digit');
  '+', '-', '*', '/': WriteLn('Operator');
else
  WriteLn('Special character');
end;
(* fŒfR□[fhŒ^□éŒ¾,ÅŽg,ç,Ü,· *)
type
  MyClass = (Num, Dat, Str);
  Date    = record
    D, M, Y: Integer;
  end;
  Facts = record
    Name: string[10];
    case Kind: MyClass of
      Num: (N: real);
      Dat: (D: Date);
      Str: (S: string);
    end;
(* flfufWfFfNfgŒ^□éŒ¾,ÅŽg,ç,Ü,· *)
type
  Location = object
    X, Y: Integer;
    procedure Init(PX, PY: Integer);
    function GetX: Integer;
    function GetY: Integer;
end;
(* asm ,Æ,Æ,à,ÉŽg,ç,Ü,· *)
asm
  mov ax, 1
  mov cx, 100
end;
```


Except03446

ŽQ□Æ ≡\-ñĈÈè



□à-¾

—\-ñĈÈ **except** ,í—áŠO□^—□fuf□fbfN,Ā—áŠOfnf“fhf%,,ìſſfXfg,ìŽn,Ü,è,đf}□[fn,μ,Ü,·□B

except •”,í“Á’è,ì—áŠO,Æ,»,è,É’í,·,é%ž“š,ìſſfXfg,Ā□C,»,è,¼,è **on...do**

•¶,Ā<L□q,³,è,Ü,·□B**on..do** •¶,ì,Ç,è,àĈ»□Ý,ì—áŠO,ÉŠY“- ,μ,È,ç□ê□#□C**else** •”,É, ,éfftfHf<fg,ì—áŠOfnf“fhf%,,žÀ□s,³,è,Ü,·□B

—áŠO□^—□fuf□fbfN,Ā—áŠO,ª”□¶,μ,½□ê□#□CŽÀ□s,í,·,® ,É **except**

•”,ÉfWfff“fv,μ□C,»,ì□ê,ĀfAfvſſfP□[fvf#“ ,í,»,è,¼,è,ì **on..do** •¶,đ², x”□¶,μ,½—áŠO,ÉŠY“- ,·,é,à,ì,đ’T,μ,Ü,·□Bfuf□fbfN“à,ÉŠY“- ,·,éfnf“fhf%,,

,ª’¶□Ý,μ,È,ç□ê□#□CfAfvſſfP□[fvf#“ ,ìfftfHf<fg,ìfnf“fhf%,, (—\-ñĈÈ **else** ,đŽg,Ā,ĀŽw’è,³,è,½fnf“fhf%,,) ,ª, ,è,Ī,»,è,đŽÀ□s,μ,Ü,·□B

fnf“fhf%,, (“Á’è,ìfnf“fhf%,,Ü,½,ìfftfHf<fgfnf“fhf%,,) ,ª—áŠO,đ^μ,α,Æ□C,»,ì—áŠO,í□^— □,³,è,½,Æ,Ý,È,³,è□C—áŠOfufWfFfNfg,í”pŠü,³,è□C—áŠO□^— □fuf□fbfN,ìĈă,©,çŽÀ□s,ª’±□s,³,è,Ü,·□B

”□¶,μ,½—áŠO,ÉŠY“- ,·,é—áŠOfnf“fhf%,,ª,È,ç□ê□#□C—áŠO,đ□^—□,μ,È,ç ,Ü,Üfuf□fbfN,ìŽÀ□s,ª□I—¹,μ,Ü,·□B

ŽQÆ03447

Else

—áŠO^—

Finally

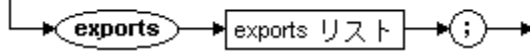
Try

Exports03448

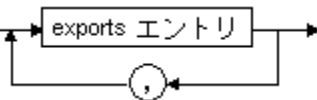
ŽQAE —\-ñĈĕ

—\-ñĈĕ **exports** ,í DLL “à,ĀŽg,ċCDLL ,É,æ,Ā,ĀfGfNfXfj[]fg,³,é,éŽè± ,«,ĀŠÖ”,đŽ!,μ,Ū,·B

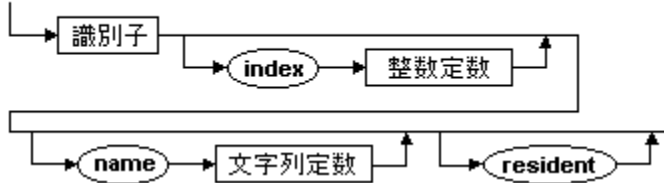
exports 節



exports リスト



exports エントリ



exports B,Ívf[]Of%of€,Ū,½,Íf%ofCfuf%ofŠ,ìéĈ¼•,ì†,Ā^Ē'u,â%oñ”,ì\$ĈĀ,Ē,Žg,!,Ū,·B

exports B,ìŠefGf“fgfŠ,ÍfGfNfXfj[]fg,·,éŽè±,«,Ū,½,ÍŠÖ”,ìŽ`•ĒŽq,đŽw`è,μ,Ū,·B

fGfNfXfj[]fg,·,éŽè±,«,Ū,½,ÍŠÖ”,í **exports** B,ªoĈ»,·,é'O,ÉéĈ¼,μ,Ē,,Ā,Í,Ē,è,Ū,¹,ñB

exports B,ìŽ`•ĒŽq,ì'O,ÉftfjfbfgŽ`•ĒŽq,ĀfsfŠfjh,đ•t,` ,é,±,Ā,ª,Ā,Ū,·B,±,ì,æ,ª ,ÉŽw`è,μ,½Ž`•ĒŽq,ÍŠ®'SĈĀ'èŽ`•ĒŽq,ĀĈĀ,Ā,é,Ū,·B

exports B,É,íŽŸ,ì,à,ì,đ“ü,é,ç,é,Ū,·B

- index B
- name B

DLL fgf“fgfŠ,đĀ,à'¬,ŽQAE,·,é,É,ÍfCf“ffbfNfX,đŽg,ċ,Ū,·B

fvf[]Of%of€,É,à **exports** B,đ“ü,é,ç,é,Ū,·,ªCWindows ,Ā,ÍfAfvfŠfP[]fVf#f“f,fWf...

[]f<,ªŠÖ”,đfGfNfXfj[]fg,μ,Ā,à,» ,é,đ•Ē,ÍfAfvfŠfP[]fVf#f“,©,çŽg,ª,±,Ā,Ā,« ,Ē,ċ,½,βĈĒí,í

exports B,đ“ü,é,Ū,¹,ñB

ŽQÆ03449

f_fCfif~fbfNfŠf“fNf%ofCfuf%ofŠ

DLL ,iŽg,č•û

DLL ,iîî

External03450

ŽQÆ —á •W€Žw—β

external Žw—β,đŽg,α,Æ□CfAfZf“fufŠCE¾CEê,Å<L□q,³,ê•Ê□X,ÉfRf“fpfCf<,³,ê,½Žè'±
,«,âŠÖ□”□C,Û,½,í DLL ,ìŽè'±,«,âŠÖ□”,Æ□C□i□—,·,évf□fOf%of€,Æ,ð~ACE<,Å,«,Û,·□B

DLL ,©,çfCf“f|□[fg,³,ê,éŽè'±,«,âŠÖ□”,Å,í□C—{—^,È,ç,î□éCE¾•”,Æ•¶•”,ª¶□Ý,·,é,í,·,ì□é□Š,É
external Žw—β,ª'u,©,ê,Û,·□B

ŠO•”fR□[fh,í \$L filename fRf“fpcf%Žw—β,É,æ,Á,Ä Pascal ftfjfbfg,Û,½,ívf□fOf%of€
,ÆfŠf“fN,³,ê,Û,·□B

-á03451

function GetMode: Word; **external**;

procedure SetMode(Mode: Word); **external**; {\$L CURSOR.OBJ}

function GlobalAlloc(Flags: Word; Bytes: Longint): THandle; **far**; **external**
 'KERNEL' index 15;

ŽQÆ03452

DLL

ŠÖ”

\$L filename

Žè'±,«

File03453

ŽQ□Æ =á =\-ñŒê

□\•¶



□à-¾

file Œ^, íüó, É•À, ñ, ¾ff[f^, ìfv[fPf“fX, Å□□→, ¾, ê, Ü, ·□B—\—ñŒê **of**, ðŽg, Á, Ä **file**, ð“Á’è, ìŒ^, ÉŠ,,, è“-

, Ä, Å, «, Ü, ·□Bftf@fCf<, ìftf@fCf<Œ^, Ü, ½, ìfufWfFfNfgŒ^ ÈŠO, ì, Ç, ìŒ^, Å, à□□→, Å, «, Ü, ·□B

of, ÆfRf“f□[fj“fgŒ^, ðÉ—ª, µ, ½ê#□Œ^, È, µftf@fCf<, É, È, è, Ü, ·□B

▪ ‘è< □ĭ, Ý, ì **file** Œ^ Text, ís’P^Ê, É•Ò□→, ¾, ê, ½^óü%oÅ“\, È ASCII

•¶Žš, ðŠÜ, pftf@fCf<, ð^Ó-i, ·, é

-á03454

(* ftj@fCf<CE^,ìéCE¾ *)

type

Person = **record**

 FirstName: string[15];

 LastName : string[25];

 Address : string[35];

end;

PersonFile = **file of** Person;

NumberFile = **file of** Integer;

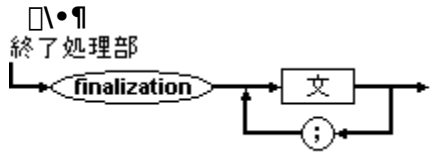
SwapFile = **file;**

ŽQÆ03455

Of

finalization03456

ŽQ□Æ ≡\-ňĀĒê



□à-¾

□I-¹□^—□•", ílfvfVf#f", Å, ,è□Cftfjfbfg,É□%Šú%»•",^a, ,é□ê□#,É,^¾,-Žg,!,Ü,·□B□I-¹□^—□•",í
 -\-ňĀĒê **finalization** ,Æ□Cftfjfbfg,ð□I-¹,·,é•¶,lfŠfXfg,Å□\□-,^¾,ê,Ü,·□B□I-¹□^—□,í□%Šú
 %»•,É'í%ž,·,é,à,ì,Å□C□%Šú%»•",ì't,Åftfjfbfg,^aŽæ"^¾,μ,^½fŠf\□[fX (f□f,fŠ□Cftf@fCf<,É,Ç)
 ,í^ê"É,É□I-¹□^—□•",Å%ð•ú,^¾,ê,Ü,·□B

ftfjfbfg,ì□I-¹□^—□•",í□%Šú

%»•,Æ<t,ì□#□~ ,ÅŽÀ□s,^¾,ê,Ü,·□B,^½,Æ,|,î□CfAfvfŠfP□[fvf#f",Åftfjfbfg A□CB□CC ,ð,±,ì□#□~ ,Å□
 %Šú%»•,μ,^½□ê□#,í□CC□CB□CA ,ì□#,É□I-¹□^—□,²□s,í,ê,Ü,·□B

,ç,Á,^½,ňftfjfbfg,ì□%Šú%»•fR□[fh,^aŽÀ□s,ðŠJŽn,·,é,Æ□C,»,é,É'í%ž,·,é□I-¹□^—

□•",²fAfvfŠfP□[fvf#f",lfVfffbfgf_fEf"Žž,É•K,ŽÀ□s,^¾,ê,Ü,·□B,μ,^½,²,Á,Ä□C□I-¹□^—□•",í□%Šú
 %»•,^a•sŠ@'S,^¾,Á,^½ff□[f^,ð□^—□,Å,«,È,-,é,î,È,è,Ü,¹,ň□B,»,ì—□—R,í□C—

áŠO,^a¶□□-,^¾,ê,^½□ê□#,É□C□%Šú%»•fR□[fh,^aŠ@'S,É,íŽÀ□s,^¾,ê,È,ç%Å"□«,^a, ,é,©,ç,Á,·□B

ŽQÆ03457

interface

implementation

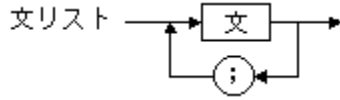
initialization

ftjfbfg

Finally03458

ŽQ□Æ ≡\-ñĈĖê

□\•¶



□à-¾

—\-ñĈĖê **finally** ,í—áŠO,ª”-

□¶,μ,½□ê□†,Å,à•K, ŽÀ□s,³,ê,évf□fēfNfgfuf□fbfN,ìfZfNfVf†f“,đf}□[fN,μ,Ü,•□B

—áŠO,ª”□¶,μ,½□ê□†□C—áŠO,đ□^—□,•,é’O,É□CŠ,,,è“-,Ä,ç,ê,½fŠf□[fX,đ%đ•ú,•,é,È,Ç
%½,ç,©,ìfNfŠ□[f“fAfbfVfR□[fh,đŽÀ□s,•,é•K—v,ª, ,è,Ü,•□B**try..finally** fuf□fbfN,đŽg,α,Æ,±
,ì,æ,α,È’€□ì,ª%Å”\,Å,•□B

try..finally fuf□fbfN“à,ì,•,×,Ä,ì•¶,í—áŠO,ª”□¶,μ,È,†ĈÆÀ,è³□í,ÉŽÀ□s,³,ê□C—áŠO,ª”-

□¶,μ,½ŽŽ”_ ,Å,•,® ,É **finally** •”,ì•¶,ÉŽÀ□s,ªfWfff“fv,μ,Ü,•□B

try..finally fuf□fbfN,í“Á’è,ì—áŠO,đ□^—□,•,é,à,ì,Å,í,È,†,ì,Å’□^Ó,μ,Ä,,¾,¾,†□B,±

,ìfuf□fbfN,ìfuf□fbfN“à,ì“Á’è,ìfR□[fh,đ—áŠO,ì—L-³,ÉŠÖĈEW,È,•K, ŽÀ□s,•,é,½,β,ì,à,ì,Å,•□B

ŽQÆ03459

Except

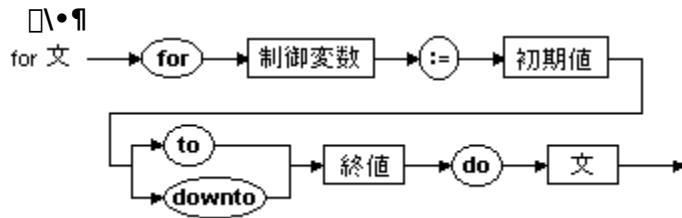
—áŠO^—

Try

fŠf[fXŠ,,è“-,Ä,ì•ÚŒì

For ... To, For ... Downto 03460

ŽQAE —á —\-ñCEê



制御変数 → 変数名 →

初期値 → 式 →

終値 → 式 →

à-¾

for •¶, í"í"í"à, ì%Šú'l, ©, çÅ¶l'l, Ü, Å, ìŠe'l, ², Æ, É 1 %ñ, , Å **do**
 , ìCEä, ì•¶, ðŽÀ¶s, µ, Ü, ·¶Bf<¶[fv, ð%½%ñŽÀ¶s, ·, é, © 'O, à, Á, Ä³Šm, É, í, ©, éêê¶, É **for**
 f<¶[fv, ðŽg, µ, Æ•Ö—~, Å, ·¶B

¶\$CEä•ï¶", í¶í, É¶%Šú'l, ©, çŽn, Ü, è, Ü, ·¶B

to f<¶[fv, ², Æ, É¶\$CEä•ï¶", ð 1 , , Åfçf"fnfŠf¶f"fg, µ, Ü, ·¶B¶%Šú'l, í¶Å¶l'l, æ, è, à¶-, ³, -, È, , Å, í, È, è, Ü, ¹, ñ¶B

downto f<¶[fv, ², Æ, É¶\$CEä•ï¶", ð 1 , , ÅffnNfŠf¶f"fg, µ, Ü, ·¶B¶%Šú'l, í¶Å¶l'l, æ, è, à'å, «, , È, -, Å, í, È, è, Ü, ¹, ñ¶B

¶\$CEä•ï¶", É, íŽŸ, ì<K'¥, a"K—p, ³, è, Ü, ·¶B

- ¶\$CEä•ï¶", í **for** •¶, ðŠÜ, ¶fuf¶fbfN, ì"í"í"à, ìf¶¶[ff<, È•ï¶"Ž- •ÉŽq, Å, È, , Å, í, È, ç, È, ç
- ¶¶~CE^, Å, È, , Å, í, È, ç, È, ç

¶%Šú'l, ÆÅ¶l'l, í¶\$CEä•ï¶", ì¶¶~CE^, Æ'ã"üCEÝŠ-¶«, ì, , éCE^, Å, È, , Å, í, È, è, Ü, ¹, ñ¶B

for •¶, aŽÀ¶s, ³, è, ½CEä¶C**goto** •¶, É, æ, Á, Ä **for**

•¶, ìŽÀ¶s, ÉŠ, , è¶ž, Ý, a, ©, -, ç, è, È, çCEÄ, è¶C¶\$CEä•ï¶", ì'l, í-ç'è<, É, È, è, Ü, ·¶B

—á03461

```
(* for ... to, for ... downto *)  
for I := 1 to ParamCount do  
  WriteLn(ParamStr(I));  
for I := 1 to 10 do  
  for J := 1 to 10 do  
    begin  
      X := 0;  
      for K := 1 to 10 do  
        X := X + Mat1[I, K] * Mat2[K, J];  
      Mat[I, J] := X;  
    end;
```


ŽQÆ03462

goto •¶

f<fv

¶#~CE^

fXfRfv

Forward03463

ŽQAE —á •W€Žw—ß

•W€Žw—ß, ðŽg, æ, ÆŽè'±, «, Ü, ½, ÍŠÖ", ðŽÀÛ, É, Í'è' , 1, , ÉéÉÉ¾, Å, «, Ü, ·B

forward éÉ¾, ð' n" , ©, çC'¼, ðŽè'±, «, âŠÖ", Í forward éÉ¾, ¾, è, ½f<[f`f", ðÉÄ, Ño, ·, ±, Æ, ª, Å, «C'ŠÉYÄ<A, ª%Å"\, É, È, è, Ü, ·B

forward éÉ¾, ðÉã, ÅCf<[f`f", ð•¶", ðŽw'è, ·, ééÉÉ¾, ðŽ, ÂŽè'±, «, Ü, ½, ÍŠÖ", ð'è' , µ, È, -, Ä, Í, È, è, Ü, 1, ñB

'è' éÉ¾, Å, ðŽè'±, «"ª", Ü, ½, ÍŠÖ""ª", ©, çfþf%o f [f^fŠfXfg, ðÈ—ª, Å, «, Ü, ·B

Žè'±, «, Ü, ½, ÍŠÖ", ð'è' éÉ¾, Æ, µ, Ä, Í **external** éÉ¾, Ü, ½, Í **assembler** éÉ¾, ª%Å"\, Å, ·, ªC•É, ð **forward** éÉ¾, Å, , Ä, Ä, Í, È, è, Ü, 1, ñB

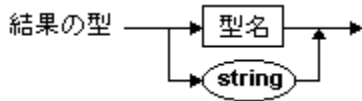
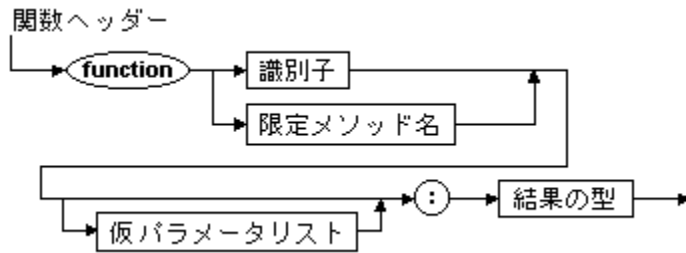
ŽQÆ03465

Assembler

External

Function03466

関数宣言



関数宣言

関数宣言 **function** 識別子 限定メソッド名 仮パラメータリスト 結果の型 ;

function 識別子 限定メソッド名 仮パラメータリスト 結果の型 ;

関数宣言は、識別子、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。識別子は、識別子、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。限定メソッド名は、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。仮パラメータリストは、仮パラメータリスト、結果の型、セミコロンで構成される。結果の型は、結果の型、セミコロンで構成される。セミコロンは、セミコロンで構成される。

関数宣言は、識別子、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。

function 識別子 限定メソッド名 仮パラメータリスト 結果の型 ;

- ・ 識別子
- ・ 限定メソッド名
- ・ 仮パラメータリスト
- ・ 結果の型
- ・ ;

関数宣言は、識別子、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。

関数宣言は、識別子、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。

- ・ **forward** 関数宣言
- ・ **external** 関数宣言

関数宣言は、識別子、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。

関数宣言は、識別子、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。識別子は、識別子、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。限定メソッド名は、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。仮パラメータリストは、仮パラメータリスト、結果の型、セミコロンで構成される。結果の型は、結果の型、セミコロンで構成される。セミコロンは、セミコロンで構成される。

関数宣言は、識別子、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。

関数宣言は、識別子、限定メソッド名、仮パラメータリスト、結果の型、セミコロンで構成される。

ŽQÆ03467

Ž®

ŠÖ"CEÄ,Ño,μ

‡~

fpf%of[f^

f|fCf"f^

ŽÀ"

•¶Žš—ň

—á03468

(* ŠÖ"é¼ *)

function UpCaseStr(S: **string**): **string**;

var

I: Integer;

begin

for I := 1 **to** Length(S) **do**

if (S[I] >= 'a') **and** (S[I] <= 'z') **then**

Dec(S[I], 32);

UpCaseStr := S;

end;

Goto03469

ŽQÆ —á —\-ñĈê

·\•¶

à-¾

—\-ñĈê **goto** ,í,±,ì•¶,ÅŽQÆ,·,éf%ofxf<,æ“ª,É•t,ç,Ä,ç,é•¶,Évf[]fOf%of€ŽÀ[s,ð“]’—
,μ,Û,·B

f%ofxf<,í **goto** •¶,Æ“~,¶fuf[]fbfN,É,È,,Ä,í,È,è,Û,¹,ñBŽè’±
,«,Û,¹/₂,ÍŠÖ”,ìŠÖ,Ö,íWfff“fv,Å,«,Û,¹,ñB

ŽQÆ03470

Label

—á03471

```
label 1, 2;
```

```
goto 1
```

```
.
```

```
.
```

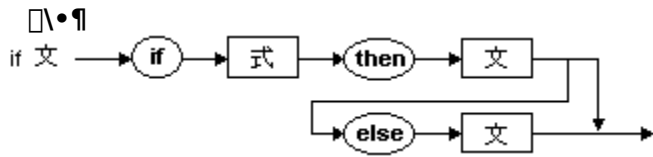
```
.
```

```
1: WriteLn ('Abnormal program termination');
```

```
2: WriteLn ('Normal program termination');
```

If ... Then ... Else

if 文 → if 文



if 文

if, then, else

if, True, **then**, **else**

, False, **else**

if, **else**

if, **else**

ŽQÆ03473

~—CE^

ðCE•¶

Else

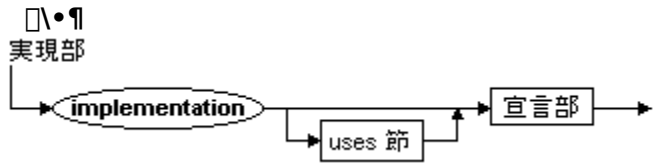
—á03474

```
(* if •¶ *)  
if (I < Min) or (I > Max) then I := 0;  
if x < 1.5 then  
  z := x + y  
else  
  z := 1.5;
```

Implementation03475

ŽQ□Æ —\-ñĈĕ

ftfjfbfg,ìŽÀĈ»•",Ā,í□Cftfjfbfg,ìfCf"f^□[ftfF□[fX•",Ā□éĈĈ³⁄₄,³,ê,½pfufŠfbfN,ìŽè'±
,«,ÆŠÖ□",ì,·,×,Ā,ìfuf□fbfN,ð'è<` ,μ,Ü,·□B,Ü,½,±,±,Ā,í□Cfvf
%ofCfx□[fg,ì'è□"□CĈĈ^□C•ĭ□"□CŽè'±,«□C,·,æ,ÑŠÖ□",à□éĈĈ³⁄₄,μ,Ü,·□B



□à-¾

ftfjfbfg,ì **implementation** •",ĀŽw'è,³,ê,½□éĈĈ³⁄₄,ìfvf
%ofCfx□[fg,É□éĈĈ³⁄₄,É,È,èftfjfbfg,ì,»,"•"à"à,Ā,¾,~Žg—p%oĀ"\,Ā,·□Binterface
•",Ā□éĈĈ³⁄₄,³,ê,½,·,×,Ā,ì'è□"□CĈĈ^□C•ĭ□"□CŽè'±,«□CŠÖ□",í **implementation** •",Ā,à
%oĀŽ<,É,È,è,Ü,·□B

fCf"f^□[ftfF□[fX•",Ā□éĈĈ³⁄₄,³,ê,½Žè'±,«,ÆŠÖ□",ìŽÀ'•,í□CŽÀĈ»•""à,Ā,Ç,ì,æ,κ
,É□#□",Ā'è<` ,μ,Ā,à,æ,□C,Ü,½ŽÀĈ»•""à,ì,Ç,±,©,ç,Ā,àŽQ□Æ,Ā,«,Ü,·□B

ŽÀĈ»•",Ā,í—\-ñĈĕ **implementation** ,ì'¼ĈĈă,É uses
□B,ðŽw'è,Ā,«,Ü,·□Bftfjfbfg,ìfCf"f^□[ftfF□[fX•",É **uses** □B,ð'u,ç,½□é□#□C,»,"ì **uses**
□B,ĀŽw'è,³,ê,½ftfjfbfg,ì'è<` ,κ,ìftfjfbfg,©,ç,í•s%oĀŽ<,É,È,è,Ü,·□B

external ,Æ,μ,Ā□éĈĈ³⁄₄,³,ê,½Žè'±,«,"ª, ,é□é□#□Cf□[fxftf@fCf<"à,ìftfjfbfg,ì□ĀĈĈă,ì end ,ì'O,É
1 ,Ā,Ü,½,í•i□",ì \$L filename Žw—B,ª,È,,Ā,í,È,è,Ü,¹,ñ□B

ŽÀĈ»•",ìŽè'±,«"à•",ÆŠÖ□"à•",ìŽŸ,ì,ç, ,ê,©,Ā,È,,Ā,í,È,è,Ü,¹,ñ□B

- fCf"f^□[ftfF□[fX,Ā,ì□éĈĈ³⁄₄,Æ""è,Ā, ,é
- Z,ç□\•¶,Ā, ,é

ŽQÆ03476

\$L filename

Interface

Initalization

Finalization

ffjfbfg

Initialization 03477

ŽQAE =-ŃĈĚ



□à-¾

ffjfbfg, ì **initialization** •", íĚ—â%Ō" \, Å□C—\-ŃĈĚ **initialization** , ÅŽn, ß□Cftfjfbfg, ð□%Šú
%» , , é, ½, ß, ÉŽÀ□s, , é•¶, ìŃŃXfg, ð, » , ìĈă, ÉŽw'è, μ, Ü, ·□B

fvf□fOf%of€, âŽg, πftfjfbfg, ì□%Šú%»•", ìf□fCf"fvf□fOf%of€, ì **uses**
□ß, Éftfjfbfg, â□oĈ» , , é, ì, Ĉ" , ¶□‡, ÉŽÀ□s, ¾, ê, Ü, ·□B

ŽQÆ03478

Finalization

ftjfbfg

'Z,č\•¶,ìfwfbf_[]03479

ŽQÆ

'Z,č\•¶,ìfwfbf_[],Æ,í **implementation** •",ÅéCE¾,³,è,éŽè'±,«,âŠÖ",ì,κ,ìpf
%of[]f^,ðŽw'è,μ,È,ç,à,ì,ðŽw,μ,Û,·B,±,ì,æ,κ,Èfwfbf_[],ìpf%of[]f^,í **interface**

•",Å'O,à,Á,ÄŽw'è,³,è,é,©C**forward**

éCE¾,Û,½,ííufufWffNfgCE^,ì^è•",Æ,μ,ÄéCE¾,³,è,Û,·B

'Z,č\•¶,ìfwfbf_[],ðŽw'è,·,é,É,íC—\-ñCê (**procedure** ,Û,½,í **function**) ,É'±

, ,Äf<[]f`f"Ž-•ÉŽq,ð"ü—í,μ,Û,·B

ŽÀCE»" ""à,ìf[]fj<,Èf<[]f`f" (fCf"f^[]ftfF[]fX•",ÅéCE¾,³,è,Ä,ç,È,ç<[]f`f") ,É,ÍŠ®'S,ÈŽè'±
,«"a•",Û,½,ÍŠÖ""a•",ðŽw'è,μ,È,,Ä,Í,È,è,Û,¹,ñB

ŽQÆ03480
Implementation

Index03481

ŽQÆ —á •W€Žw—ß

index ß,Å,ífCfif~fbfNfŠf“fNf%ofCuf%ofŠ (DLL) , © ,çŽè'±,«,Ü,½,ÍŠÖ“ ,đGfNfXf|
[fg,·,é,½,ß,ì#~“ ,đŽw'è,μ,Ü,·Bexports ß,Å **index** ß,đŽg,í,É,çê#CfRf“fpfCf%o
,ª#~“ ,đŠ,,è“-,Ä,Ü,·B

index ß,Í **exports** ß,ÉŠÜ,Ü,êC**index** ,Æ,ç,æCê,Æ,»,ê,É'±, 1 , © ,ç 32767
,Ü,Å,ìŠÔ,ì@~“è“ ,Å\~³,ê,Ü,·B

fvffpfefB,Å,ífCf“ffbfNfX,ìŽg,ç•û,É,Ä,ç,Ä,ìÚ×,ífCf“ffbfNfXŽw'èŽq,đŽQÆ,μ,Ä,,¾,³,çB

—á03482

```
procedure ImportByOrdinal; external 'TESTLIB' index 5;
```

ŽQÆ03483

f_fCfif~fbfNfŠf“fNf%ofCfuf%ofŠ

Forward

DLL ,iŽg,č•û

DLL ,iîî=

Inherited03484

ŽQÆ —\-ňÆê

—\-ňÆê **inherited** ,ÍŠO'α,ìf\fbfh,ìfufWfFfNfg^,ìã^ÊfufWfFfNfg,ďŽw'è,μ,Û,·B

inherited ,íã^ÊfufWfFfNfg,ďŽ,½,È,çfufWfFfNfg^,ìf\fbfh"à,Å,ÍŽg,ì,Û,¹,ňBÆp³Æ³,ìéÆ¾fufWfFfNfg,ª,È,ç,©,ç,Å,·B

ŽQÆ03485

CEp³f³fbfZ³[fWfnf“fhf%oo,ìCEÄ.Ñ³o,μ

flfufWfFfNfgCE^

Inline03486

—\-ñĈê

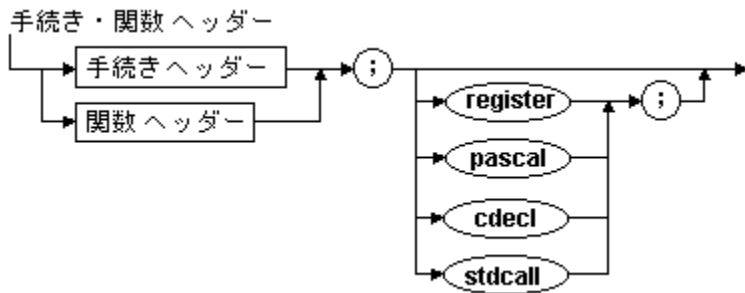
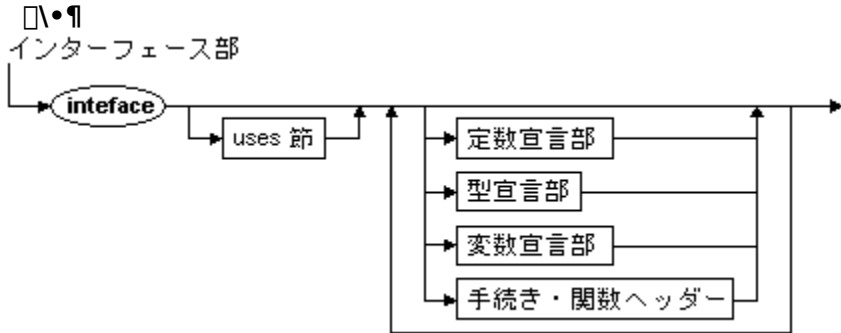
□à-¾

Ĉ»Ÿ,ìfo□[fWf†f“,ì Object Pascal ,Á,í—\-ñĈê **inline** ,íŽg,í,ê,Û,¹,ñ□B,^½,^¾,μ□«—^,ìŽg—
p,ì,^½,ß,É—\-ñ,³,ê,Ä,φ,Û,·□B

Interface 03487

ŽQAE —\-ñĈĕ

ftfjfbfg, l **interface** •", í, » , lftfjfbfg, đŽg, xfvfOf%of€ (, Ü, ½, í'¼, lftfjfbfg) , É'í, μ, Ä%½, đ
%oÄŽ<, É, μfAfNfZfX%oÄ" \, É, ·, é, ©, đĈĕ^, β, Ü, ·B



□à-¾

interface •", lftfjfbfgfwfbf_□[, ÌĈĕă, É'u, ©, é, é—\-ñĈĕĕ **interface** , ÅŽn, Ü, è□C—\-ñĈĕĕ
implementation , ì'O, Å□I, í, è, Ü, ·B

interface •", Å, í□C'è□"□Cff□[f^Ĉĕ^□C•í□"□CŽè'±, «□CŠÖ□", đ□éĈĕ¾, μ, Ü, ·B, ±, ±
, Å□éĈĕ¾, ¾, é, ½, à, Ì, í□C'¼, lfvfOf%of€ , Ü, ½, lftfjfbfg, ©, çŽg, !, é, æ, x, É, È, è, Ü, ·B

interface •", É, íŽè'±, «, Ü, ½, ÍŠÖ□", ì"ª•", ¾, -, đ—ñ<" , μ, Ü, ·BŽè'±
, «, Ü, ½, ÍŠÖ□", lfuf□fbfN, í□C, » , ÌĈĕă, Ì **implementation** •", ÉŽw'è, μ, Ü, ·Bforward Žw—
ß, ÍŽg, í, è, Ü, ¾, ñ,ª□Cinterface •", ÌŽè'±, «, ĄŠÖ□", Ì□éĈĕ¾, ÍŽÀŽì"l, É, í forward □éĈĕ¾, Ą" —
l, ÈĈĕø%oÉ, đŽ□, ç, Ü, ·B

fCf" f^□[ftfF□[fX•", É, í uses □β, đŽw'è, Å, «, Ü, · (uses □β, đŽw'è, ·, é□ĕ□#□C—\-ñĈĕĕ **interface**
, Ì'¼Ĉĕă, É **uses** , đŽw'è, μ, È, , Å, í, È, è, Ü, ¾, ñ)□B

ŽQÆ03488

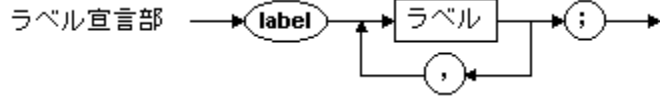
Implementation

ffjfbfg

Label03489

ŽQÆ —á —\-ñÊ

∅•¶



∅à-¾

—\-ñÊ **label** ,í'î%ž,·,é•¶•",)•¶,đf}∅[fN,·,éfvf∅∅[fXfzf<f_,đé∅¾,μ,Ü,·∅B∅∅ä,í **goto**
•¶,É,æ,Á,Äf%∅f<,É"']'—,³,ê,Ü,·∅B

Šef%∅f<,í 1 ,Â,∅•¶,¾, ¯,đf}∅[fN,μ,È,,Ä,í,È,è,Ü,¹,ñ∅B

Ž-•Êžq,ì,ù,©,É∅C0 ,©,ç 9999 ,Ü,Å,∅"Žš,ìfV∅[fPf"fX,đf%∅f<,Æ,μ,Äžg,!,Ü,·∅B

ŽQÆ03490

Goto

Library03491

ŽQAE =\-ňĀĒé

▪ \•¶

▪

□à-¾

f_fCjif~fbfNfŠf“fNf%ofCfuf%ofŠ (DLL) ,í **library** fwfbf_□[,Åžn,Ü,è,Ü,·□B

f%ofCfuf%ofŠfwfbf_□[,íŠg'£Žq .EXE ,ì,©,í,è,É .DLL ,đŽ□,ÅŽÀ□s%oÅ“\

ftf@fCf<,đ¶¶□¬,·,é,æ,¶fRf“fpfCf%o,ÉŽwŽ!,μ,Ü,·□B

ŽQÆ03492

Exports ␣␣

fC“f|␣[fgftfjfbfg

Index ␣␣

Name ␣␣

DLL ,i␣i␣-

MaxInt ,Æ MaxLongInt03493

MaxInt ,Æ MaxLongInt ,Í'è<`□İ,Ý,ì'è□",Å,·□BCE»□Ý,ìfo□[fWf#f" ,ì Object Pascal ,Å,Í 2 ,Å,Í" ,¶'I,Å,·□B

- MaxInt ,ÍŽg—p%oÅ"\,È□Å'â□@□" (2,147,483,647) ,đ•\,·
- MaxLongInt ,ÍŽg—p%oÅ"\,È□Å'â Longint (2,147,483,647) ,đ•\,·

Name03494

ŽQÆ •W€Žw—ß

exports ß,É,í **name** ß,đŽw'è,Á,«,Ü,·B**name** ß,í **name** ,Æ,ç,æÆè,Æ,»,ê,É'±,•¶Žš—
ñ'è",Ā\→,³,ê,Ü,·B

name ß,đŽg,æê#CŽè'±,«,Ü,½,ÍŠÖ",í•¶Žš—ñ'è",ĀŽw'è,³,ê,½-¼'O,đŽg,Á,ÄfGfNfXf|
[fg,³,ê,Ü,·B

name ß,đŽg,í,È,çê#CŽè'±,«,Ü,½,ÍŠÖ",íŽ·ÊŽq,đŽg,Á,ÄfGfNfXf|
[fg,³,ê,·,Ä'å•¶Žš,É·ÍŠ,³,ê,Ü,·B

ŽQÆ03495

DLL ,iŽg,ç•û

Exports

Index

Nil03496

Reserved words

Description

The reserved word **nil** denotes a pointer type constant that does not point to anything.

nil is compatible with all pointer types.

Nodefault03497

ŽQÆ •W€Žw—β

□\•¶

▪

□à-¾

nodefault Žw—β,ívf□pfefB,ìfftfHf<fg'l,Æ,Ý,È,³,ê,é'l,ð\$CEä,μ,Ü,·□B

fvf□pfefB,ìéCE¾,Å,í□**nodefault**,íÈ—ª%oÅ"\,ÈŽw'èŽq,Å,·□B,±,ìŽw'èŽq,ðŠÜ,β,È,-
,Ä,à□**nodefault** Žw'èŽq,ðŽw'è,μ,½□ê□‡,Æ“˘,¶CE<%oÊ,É,È,è,Ü,·□B

ŽQÆ03498

Default

Ši"Žw'èŽq

ŽQÆ03500

ftfB[f<fh,ÆflfufWfFfNfgCE^—v'f,iŽw'èŽq

flfufWfFfNfgCE^,lfXfR[fv

flfufWfFfNfgCE^

Of03501

ŽQÆ —á —\-ñÆê

—\-ñÆê **of**, í"z—ñC□W□#□CfNf%ofX□Cftf@fCf:Æ^, ìéÆ¾, ÅÆ^, ì'O, É'u, ©, ê, é, Ù, ©□Ccase
•¶, ÅŽg, í, ê, Û, ·□B

ŽQÆ03502

Array

Case

Class

File

Set

On03504

ŽQÆ =-ñĀê

·\•¶

à-¾

-ñĀê **on** ,í—áŠO,É'í,·,é%ž“š,đ'è<` ,μ,Ü,·**Bon** ,íí,É—ñĀê **do** ,Æ'g,Ý¶,í,¹,ÄŽg,ϕC,±
,ê,É,æ,è—áŠOfnf“fhf%‘S'í,āĀ` ¶-,³,ê,Ü,·B

try..except fuf¶fbfN,ì **except** •” ,í“Á'è,ì—áŠO,đ^—,·,é,½,β,ì 1 ,Â,Ü,½,í•j” ,ì **on..do**
•¶,ìfšXfg,Å\¶-,³,ê,Ü,·B

ŽQÆ03505

—áŠO^—•¶

—áŠO,Ö,ì%ž“š

Do

Except

Try

Override03506

—á •W□€Žw—β

override Žw—β, í%¼'zf□\fbfh, Ü, ½, í“®“lf□\fbfh, ð□Ä'è<` , , é, ½, β, ÉŽg, ç, Ü, ·□B

f□\fbfh, ì□éCE¾, É override , ðŽw'è, μ, ½□ê□#□C, » , ìf□\fbfh, íCEp□³, μ, ½f□\fbfh, ìŽÀ' • , ðf□□fo□□f%ofCfh, μ, Ü, ·□B%¼'zf□\fbfh, ìf□□fo□□f%ofCfh, Ä, í□CE³, ìf□\fbfh, ìfpf%of□□f^, ì□#□~, ÆCE^□C, “, æ, ÑŠÖ□”, ì□ê□#, í, » , ìCE<%oÉCE^, ð³Šm, É^è'v, μ, Ä, ç, È, ¯, ê, Î, È, è, Ü, ¹, ñ□B

%¼'zf□\fbfh, É, í VMT fx□□fX, ìfffBfXfpfbf` , Æ“®“lfffBfXfpfbf` , ì 2 Ží—

p, ìfffBfXfpfbf` , ð, , é, ½, β□C%¼'zf□\fbfh, â“®“lf□\fbfh, ðf□□fo□□f%ofCfh, ·, éf□\fbfh, í **virtual**, Ü, ½, í **dynamic** , ðCEJ, è•Ô, ·, ©, í, è, É override Žw—β, ðŽg, ç, Ü, ·□B

—á03507

ŽŸ,lfR[fh,íCep³Žè±,« P ,đ'uŠ.,,é,½,β,É **override** ,đŽg,Á,Ä,φ,Ü,·B

type

TAnObject = **class**

procedure P; **virtual**;

end;

TAnotherObject = **class**(TAnObject)

procedure P; **override**;

end;

Packed03508

ŽQÆ —\-ñĈê

à-¾

\'ç%»Ĉ^éĈ¾,ÅŽg,í,ê,é—\-ñĈê **packed** ,íff[f^<L%¯,ð^³k,·,é,æ,ʌfRf“fjpfCf%
,ÉŽwŽ!,μ,Û,·B^³k,·,é,ÆC,±,ìĈ^,ì•í”,íRf“fj[fif“fg,Ö,íAfNfZfX,²x,,È,é,Æ,ç,ʌ-Ê,ª, ,è,Û,·
B

,½,¾,μCDelphi ,Å,í^³k,íŽ©“®,ì,½,ßC,±,ì—\-ñĈê,í-³Ĉø,Å,·B

ŽQÆ03509

Ŧ'ç%o»CE^

Pascal03510

ŽQAE =\-ñCEê

à-¾

pascal Žw—ß,íCŽè'±,«,Ü,½,ÍŠÖ",³fpf%of[f^,ìŽó,-"n,μ,É Pascal ,ìCEÄ,Ño,μ<K-ñ,ðŽg,x
,±,Æ,ðŽw'è,μ,Ü,·B

Pascal CEÄ,Ño,μ<K-ñ,Á,íCfpf%of[f^,í¶,©,ç%oE,ì¶,Å"n,³,êCfXf^fbfNã,ìfpf
%of[f^,ìŽè'±,«,Ü,½,ÍŠÖ",³Žæ,èœ,«,Ü,·B

Pascal CEÄ,Ño,μ<K-ñ,íCC/C++ , ,é,ç,í¼,ìCE¾CEê,Å',©,ê,½f_fCfif~fbfNfŠf"fNf%ofCfuf
%ofŠ (DLL) ,©,çGfNfXf|fg,·,éf<[f'f",ðCEÄ,Ño,·,½,ß,É,íÅ,à•Ö—~ ,Å,·B

ŽQÆ03511

CEÄ.Ño,μK-ñ

cdecl

register

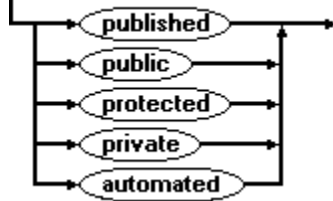
stdcall

Private03512

ŽQ□Æ •W□€Žw—β

□\•¶

可視性指定子



□à-¾

private Žw—β, ífufWfFfNfg“à, ÅRf“f|□[flf“fg□éCE¾•”, ðŽw’è, ·, é, ½, β, ÉŽg, ç, Ü, ·□B

- f, fWf...□[f<“à, Å, í□**private**, ÈfRf“f|□[flf“fgŽ~•ÉŽq, í **public**, ÈfRf“f|□[flf“fgŽ~•ÉŽq, Å“~, ¶, æ, x, É“@□ì, ·, é
- f, fWf...□[f<ŠO, Å, í□**private**, ÈfRf“f|□[flf“fgŽ~•ÉŽq, í•s-¾, É, È, èfAfNfZfX•s“\, Å, , é, » , è, ¼, è, ¾ŠeŽ©, ì **private** fRf“f|□[flf“fg, ð’¼, ìf, fWf...□[f<, É’m, ç, ¹, È,, Å, à□CEÝ, ç, ì **private** fRf“f|□[flf“fg, ÈfAfNfZfX, Å, «, é, æ, x, É, ·, é, ½, β□CSÖ~A, ·, éfufWfFfNfgCE^, ð“~, ¶f, fWf...□[f< (, Ü, ½, ìftffjfbfg), É’u, ç, Ä,, ¾, ¾, ç□B

private, Æ, μ, Å□éCE¾, μ, ½fRf“f|

□[flf“fgŽ~•ÉŽq, ìfXfR□[fv, ífufWfFfNfgCE^□éCE¾, ðŠÜ, bf, fWf...□[f<“à, É□\$CEÀ, ¾, è, Ü, ·□B

ŽQÆ03513

f|fufWfFfNfg

fv%ofCfx[]fg•”

Protected

Public

fXfR[]fv,ìK'¥

f|fufWfFfNfgĈ^,|fXfR[]fv

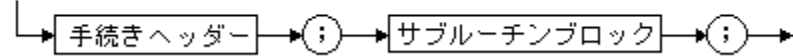
ftfjfbfg

Procedure03514

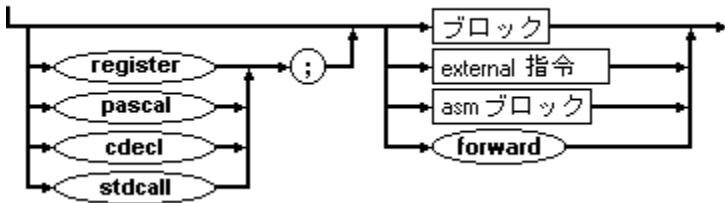
Žè±,« ,đŽg,⌘,Æf□□Cf“fvf□□Of%of€fuf□□bfN“à,É•Ê,ìfuf□□bfN,đflfXfg,^{3,1},é,±,Æ,^a,Å,« ,Ü,·□BŠe

□\•¶

手続き宣言



サブルーチンブロック



□à-¾

Žè±,« ,đŽg,⌘,Æf□□Cf“fvf□□Of%of€fuf□□bfN“à,É•Ê,ìfuf□□bfN,đflfXfg,^{3,1},é,±,Æ,^a,Å,« ,Ü,·□BŠe
procedure □éCE¾,É,ìfwfbf_□[,^aŽw'è,³,é,»,ìCEã,É•¶,ìfuf□□bfN,^a±,« ,Ü,·□B

procedure fwfbf_□[,íŽè'±,« ,ìŽ'•ÊŽq,Æ%¼fpf%□□f^ ("C^Ó) ,đŽw'è,μ,Ü,·□B

procedure ,íŽè'±,« ,¶,ÅfAfnfefBfu,É,È,è,Ü,·□BŽè'±,« ,¶,Å,íŽè'±,« ,ìŽ'•ÊŽq,Æ□CŽÀfpf
 %of□□f^ ,^a ,é,ì,»,é,đŽw'è,μ,Ü,·□B

procedure fwfbf_□[,ìCEã,ÉŽŸ,ì,à,ì,đŽw'è,μ,Ü,·□B

- f□□[ffj<flfufWffFNfg,đ□éCE¾,·,é□éCE¾•"
- **begin** ,Æ **end** ,Å^í,Ü,é,½•¶□BŽè'±,« ,^aCEÄ,Ñ□o,³,é,½,Æ,«ŽÀ□s,·,é"à—e,đŽw'è,·,é

f□f,: Žè'±,« ,ìŽ'•ÊŽq,đ,»,ìŽè'±,« ,ìfuf□□bfN“à,ìŽè'±,« ,¶,ÅŽg,⌘,Æ□CŽè'±
 ,« ,ìŽÀ□s't,ÉŽ©•^aŽ©□g,đCEÄ,Ñ□o,μ,Ü,·□B,±,ìCE<%É,í-¾CEÀf<□[fv,É,È,è,Ü,·□B

□éCE¾•",â•¶•",ì,©,í,è,É□CŽè'±,« ,□éCE¾,ÅŽŸ,ìŽw—B,đŽw'è,Å,« ,Ü,·□B

- assembler
- external
- forward

—á03515

```
{ procedure }  
procedure NumString(N: Integer; var S: string);  
var  
  V: Integer;  
begin  
  V := Abs(N);  
  S := '';  
  repeat  
    S := Chr(N mod 10 + Ord('0')) + S;  
    N := N div 10;  
  until N = 0;  
  if N < 0 then  
    S := '-' + S;  
end;
```

ŽQÆ03516

šÖ”

fpf%of[f^

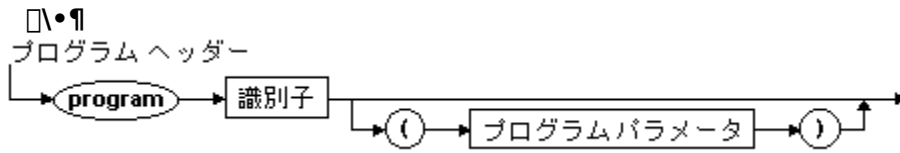
žè'±,«•¶

žè'±,«Ĉ^'è”

ĈÄ.Ño,μ<K-ñ

Program03517

ŽQ□Æ ≡\-ñŒÈ



□à-¾

≡\-ñŒÈ **program** ,Ífvf□fOf%of€,ì□æ“ª,É'u,©,ê□Cfvf□fOf%of€,ì-¼'O,ðŽw'è,μ,Û,·□B

ŽQÆ03518

Uses β

f%ofxf<

'è”

Æ^

•i”

Žè'±,«

šÖ”

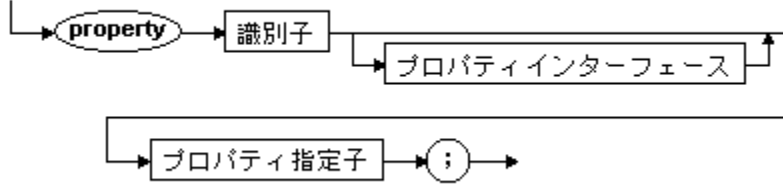
•¶

Property03519

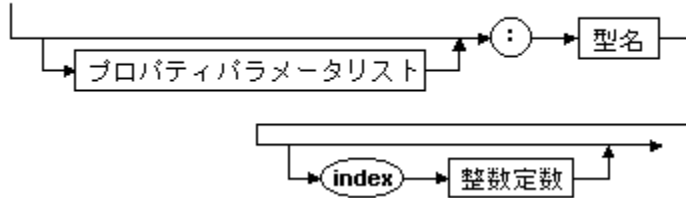
ŽQAE

□\•¶

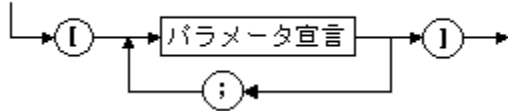
プロパティ定義



プロパティインターフェース



プロパティパラメータリスト



□à-¾

—\-ñCEê **property** ,Ífvf□fpfefB,ðéCE¾,·,é,½,β,ÉŽg,ç,Ü,·□BfNf%ofX,Å,Ífvf□fpfefB'è<`,í,»,ÍfNf %ofX,ÍfÍfufWfFfNfg,É'Í,μ,Ä- ¼'O•t,«'®□«,ðéCE¾,μ□C,»,ì'®□«,ì"Ç,Ý□o,μ,Æ□',«ž,Ý,ÉŠÖ~A•t,¯,éfAfnfVf+f",ðéCE¾,μ,Ü,· □B

ŽQÆ03520

Read

Write

Stored

f|fufWfFfNfgCE^

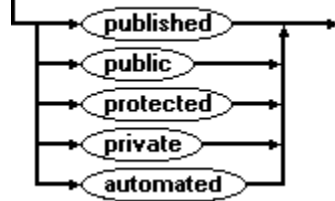
fvf|fpfefB

Protected03521

ŽQ□Æ •W□€Žw—β

□\•¶

可視性指定子



□à-¾

protected Žw—β, ífufWfFfNfgĈ□éĈ¾, ÅŽg, ç, Ü, ·□B

protected ,Æ, μ, Ä□éĈ¾, μ, ½fRf“f|□[flf“fg, í, ±, ê, ð□éĈ¾, μ, ½Ĉ^, ì
%oo^ÊflufWfFfNfg, É‘í, μ, Ä, ¾, ~fAfNfZfX%ooÄ“\, É, È, è, Ü, ·□B

fRf“f|□[flf“fg, ð **protected** ,Æ, μ, Ä□éĈ¾, ·, é, ±, Æ, É, æ, Á, Ä **public** fRf“f|□[flf“fg, Æ **private**
fRf“f|□[flf“fg, ì—“_ ,ªĈ<, Ñ•t, ~, ç, ê, Ü, ·□B

private fRf“f|□[flf“fg, ìê□±, Æ“—l, É□Cprotected fRf“f|
□[flf“fg, Å, ÍŽÀĈ», ìÚ□×, ðfGf“fhft□[fU□[, ©, ç%ooB, ¹, Ü, ·□B, ½, ¾, μ□C**private** fRf“f|
□[flf“fg, Æ, í^ù, È, è□C**protected** fRf“f|□[flf“fg, Å, Í□Cfv□fOf%of}
,ªflufWfFfNfg, ©, ç□V, μ, çflufWfFfNfg, ð”h□¶, ³, ¹, é□é□±, É□C
%oo^ÊflufWfFfNfg,ª“~ ,¶ftfjfbfg“à, Å□éĈ¾, ³, ê, È, , Ä, Í, È, ç, È, ç, Æ, ç, x□\$-ñ, ðŽó, ~, , , É□ĭ, Ý, Ü, ·□B

ŽQÆ03522

fRf“f□□[f]f“fg,ì%oÂŽ<□«

Private

Public

Published

Automated

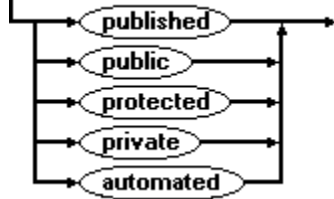
f]fufWfFfNfgCE^,]fXfR□[fv

Public03523

ŽQ□Æ •W□€Žw—β

□\•¶

可視性指定子



□à-¾

public Žw—β, íNf%ofXCE^□éCE¾, ÅŽg, ç, Ü, ·□B

public fRf“f|□[f|f“fg•”, Å□éCE¾, ¾, ê, ½fRf“f|

□[f|f“fgŽ’•ÊŽq, É, íXfR□[fv, ÉŠÖ, ·, é“Á•Ê, È□\$CEÀ, Í, , è, Ü, ¹, ñ□B

ŽQÆ03524

fRf“f□□[f]f“fg,ì%oÂŽ<□«

Private

Protected

Published

Automated

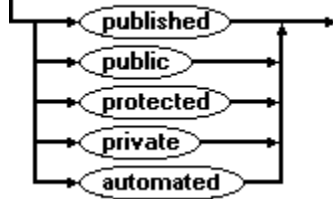
f]fufWfFfNfgCE^,]fXfR□[fv

Published03525

ŽQ□Æ •W□€Žw—β

□\•¶

可視性指定子



□à-¾

published Žw—β, ílfufWfFfNfgĈ^□éĈ¾, ÅŽg, ç, Ü, ·□B

flfufWfFfNfg, ìê•”, ðpfufŠfbfVf..., Æ, μ, Ä□éĈ¾, ·, é, Æ□C, »), ì•”•ª, É, Â, ç, Ä, ÌŽÀ□sŽžĈ^□î•ñ, ª□¶□¬, ³, ê□CfAfvfŠfP□[fVf†f“, ÌpfufŠfbfVf...fCf“f^□[ftfF□[fX, ÉŠÜ, Ü, ê, Ü, ·□B

fAfvfŠfP□[fVf†f““à•”, Å, í□C**published** •”, í **public** •”, Æ“¬, ¶, æ, x, É“®□ì, μ, Ü, ·□B—
B^ê, ÌŠ^á“_”, Ì¼, ÌfAfvfŠfP□[fVf†f“, ª **published** fCf“f^□[ftfF□[fX, ð’É, ¶, ÄpfufŠfbfVf...
•”, Ìî•ñ, ðŽæ“¾, Å, <, é, Æ, ç, x“_”, Å, ·□B

Delphi flfufWfFfNfgfCf“fXfyfNf^, ÌRf“f□[f“fgfpfĈfbfg, ÅflfufWfFfNfg, ÌpfufŠfbfVf...
fCf“f^□[ftfF□[fX, ðŽg, Á, Ä□C•Ž!, ·, éfv□pfefB, ÆfCxf“fg, ðĈ^, ß, Ü, ·□B

ŽQÆ03526

fRf“f□[f]f“fg,ì%oÂŽ<□«

Private

Protected

Public

fpufŠfbVf...•”

Automated

fIfufWfEfNfgCE^,IfXfR□[fv

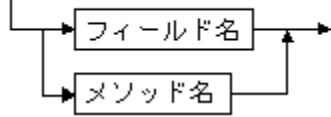
Read03527

ŽQAE =á

·\•¶

read 指定子 → **read** → フィールドまたはメソッド →

フィールドまたはメソッド



à-¾

read Žw—ß,Ífvf[]pfefB,©,ç'l,ðŽæ“¾,;éf<[]f`f“,Ü,½,ÍftfB[]f<fh,ðŽw'è,;é,½,ß,ÉŽg,ç,Ü,·[]B

ŽQÆ03528

fAfNfZfXf\fbfh

fv\fpfefB

Write

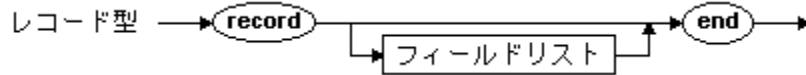
—á03529

property Color: TColor **read** GetColor **write** SetColor;

Record03530

ŽQ□Æ —á —\-ñŒê

□\•¶



□à-¾

record ,É,ÍfRf"j□[fj"fg,Á,Ü,èftfB□[f<fh,ªŠÜ,Ü,ê□CŠeftfB□[f<fh,Í^Ù,È,éŒ^,Á□□¬,Á,«,,Ü,·□B
ŠeftfB□[f<fhfŠfXfg,Á,íŽ~•ÉŽq,ðfj"j},Á<æ□∅,Á,ÄŽw'è,μ□CfRf□" ,ÆŒ^,ð'±,¬,ÄŽw'è,μ,Ü,·□B
fŒfR□[fhŒ^□éŒ¾,Á,ÍftfB□[f<fh,í-¼'O,ðŽw'è,μftfB□[f<fhŒ^,ðŠ,,,è"-,Ä,È,,Á,Í,È,è,Ü,¹,ñ□B
fŒfR□[fhŒ^□\•¶□},ì%Á•í•",Íf□f,fŠ—Í^æ,ð•;□",ÍftfB□[f<fhfŠfXfg,É"z•ª,μ□C•;□",ì•û-
@,Á□î•ñ,ÉfAfNfZfX,·,é,½,ß,ì,à,ì,Á,·□BŠeftfB□[f<fhfŠfXfg,Íf□f,fŠ"à,ì""è—Í^æ,Éf□[fo□[fŒfC,·,é
%Á•Íf^fo,Á,·□BŠe%Á•Íf^fo,Í'è□",É,æ,Á,Á<æ•É,³,ê□C,ç,Á,Á,à,·,x,Ä,ì
%Á•Íf^fo,ì,·,x,Ä,ÍftfB□[f<fh,ÉfAfNfZfX,Á,«,,Ü,·□B

fÍvfVf†",ìŽ~•ÉŽq,Á, ,éf^foftfB□[f<fhŽ~•ÉŽq,í□CfŒfR□[fh,ì'Ç
%ÁŒÁ'èftfB□[f<fh□C,Á,Ü,èf^foftfB□[f<fh,ìŽ~•ÉŽq,Á,·□Bfvf□fOf%of€,í,Ç,ì
%Á•Íf^fo,ªŒ»□YfAfNfefBfu,©,ðŽ!,·,½,ß,Éf^foftfB□[f<fh,ì'l,ðŽg,ç,Ü,·□B

fŒfR□[fh,Ö,ÍfAfNfZfX

fŒfR□[fh'S'ì,ÉfAfNfZfX,μ,½,èŠeftfB□[f<fhŒÁ•É,ÉfAfNfZfX,μ,½,è,Á,«,,Ü,·□BŒÁ□X,ÍftfB□[f<fh,
©,ç□î•ñ,ðŽæ,è□o,·,É,ÍŒfR□[fh-¼□CfsfŠfÍfh□CftfB□[f<fhŽ~•ÉŽq,ð"ü—Í,μ,Ü,·□BŽŸ,É—
á,ðŽ!,μ,Ü,·□B

TDateRec.Year

fŒfR□[fh,ÉfTfufŒfR□[fh,ªŠÜ,Ü,ê,é□ê□†,Í□CŒÁ'èŽq,ðŽg,Á,ÄfAfNfZfX,Á,«,,Ü,·□B

—á03531

```
{ fĈfR[]fhĈ^,ì'è<' }
```

type

```
TClass = (Num, Dat, Str);
```

```
TDate = record
```

```
  D, M, Y: Integer;
```

```
end;
```

```
Facts = record
```

```
  Name: string[10];
```

```
  case Kind: TClass of
```

```
    Num: (N: Real);
```

```
    Dat: (D: TDate);
```

```
    Str: (S: string);
```

```
end;
```

ŽQÆ03532

ftfB[f<fh,ÆflfufWfFfNfgĈ—v'f,ižw'èŽq

fĈfR[fhĈ^'è"

fĈfR[fh,ifXfR[fv

with •¶

register03533

ŽQÆ •W€Žw—ß

à-¾

register Žw—ß, íCŽè'±, «, âŠÖ", Åfpf%of[f^, ð"n, ·, Ì, É register ĄÄ, Ño, µ<K-ñ, ðŽg, ±, Æ, ðŽw'è, µ, Ü, ·BObject Pascal, Ì, ±, Ìfo[fWf#f", Å, ÍCregister, æfftfHf<fg, ÌĄÄ, Ño, µ<K-ñ, Å, ·B

register ĄÄ, Ño, µ<K-ñ, Å, Ìfpf%of[f^, í¶, ©, ç%oE, Ö"n, ³, êCSÖ", æXf^fbfN, ©, çpf %of[f^, ðíœ, µ, Ü, ·B

register <K-ñ, Å, í 3, Â, Ü, Å, Ì CPU fĄfWfXf^, ðŽg, Å, Åfpf%of[f^, æ"n, ³, ê, Ü, ·, æC, »), Ì'¼, Ì<K-ñ, Å, ÌfXf^fbfNã, É, , é, ·, x, Å, Ìfpf%of[f^, æí, É"n, ³, ê, Ü, ·Bregister <K-ñ, ÌfXf^fbfNftfĄ[f€ , Ìì¬, ð%ñ"ð, ·, éê¶, æ'½, ç, Ì, Å, à, Á, Æ, àĄø—! "l, ÈĄÄ, Ño, µ<K-ñ, Å, ·B

ŽQÆ03534

CEÄ.Ño,μK-ñ

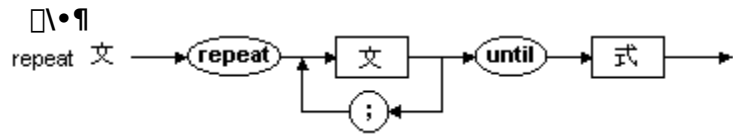
cdecl

pascal

stdcall

Repeat...Until03535

ŽQÆ —á —\-ñÆê



□à-¾

repeat ,Æ **until** ,ìšÔ,ì•¶,í **until** •¶,ì~ —□Ž®,ª True ,Æ•]‰ž,³,ê,éšÔ~A'±
,μ,ĂŽĂ□s,³,ê,Û,·□B

,±,ìf<□[fv,đŽg,¤,ÆŠefV□[fPf“fX,đŽÀ□s,μ,½Æă,É~ —□Ž®,ª•]‰

ž,³,ê,é,½,β□Cfv□[fPf“fX,ªĀ'á,Ā,à 1 ‰ñ,íŽÀ□s,³,ê,é,±,Æ,ª•Û□Ø,³,ê,Û,·□B

—á03536

```
{ repeat •¶ }  
  repeat Ch := GetChar until Ch <> ' '  
  repeat  
    Write('Enter value: ');  
    ReadLn(I);  
  until (I >= 0) and (I <= '9');
```

ŽQÆ03537

f<fv

Resident03538

•W☐€Žw—β

•W☐€Žw—β **resident** ,í exports ☐β,ÁŽg,ϕ,Ü,·☐B

resident ,đŽg,ϣ☐ê☐#☐Cf_fCfif~fbfNfŠf“fNf%ofCfuf%ofŠ (DLL) ,af☐☐[fh,³,ê,^{1/2},Æ,«fGfNfXf|
☐[fg☐î•ň,af☐f,fŠ“à,É☐í““ ,μ,Ü,·☐B

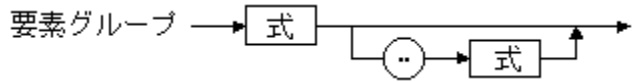
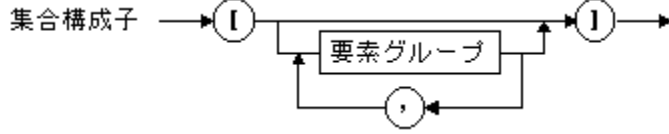
resident fIfvfVf#f“ ,đŽw'è,·,é,Æ Windows ,^a DLL fGf“fgfŠ,đ-
^{1/4}'O,đŽg,Á,ÄŽQ☐Æ,·,é,Æ,«,ìžžŠÖ,^a'Z☐k,³,ê,Ü,·☐B

DLL ,đŽg,ϣfNf%ofCfAf“fgfvf☐fOf%of€,^a“Á'è,IfGf“fgfŠ,đ-^{1/4}'O,đŽg,Á,ÄfCf“f|
☐[fg,·,é☐ê☐#☐C•W☐€Žw—β **resident** ,đŽg,Á,Ä,»,ê,ç,IfGf“fgfŠ,đfGfNfXf|☐[fg,·,é•K—
v,^a ,è,Ü,·☐B

Set03540

ŽQ□Æ =á =\-ñCEê

□\•¶



□à-¾

—\-ñCEê **set** ,í 256 CEÁ-ç-ž,ì'l,đŽ□,Á“~,¶□#□~CE^,©,ç,È,éflfufWfFfNfg,ì□W□#,đ'è<`,μ,Ü,·□B

Šî- {CE^,ì□ãCEÀ,Æ%°°CEÀ,ì□#□~'l,í 0 ,©,ç 255 ,)“í'í,Á,È,,Ä,í,È,è,Ü,¹,ñ□B

□W□#CE^,ì'l,đŽw'è,·,é□W□#fRf“fXfgf%ofNf^,í□CŽ@,đ []

,Á^í,ñ,Á<L□q,μ,Ü,·□B,»,ê,¼,ê,ìŽ@,í□W□#,ì'l,đ•\,μ,Ü,·□B

[],ì•\<L,í<ó,ì□W□#,đ^Ó-i,μ□C,·,×,Ä,ì□W□#CE^,ÆCEÝŠ,Á,·□B

—á03541

```
{ [W[+CE^ ]
  type
    Day = (Sun, Mon, Tue, Wed, Thu, Fri, Sat);
    CharSet = set of Char;
    Digits = set of 0..9;
    Days = set of Day;
{ [W[+Rf“fXfgf%oofNf^ }
  ['0'..'9', 'A'..'Z', 'a'..'z', '_']
  [1, 5, I + 1 .. J - 1]
  [Mon..Fri]
```

ŽQÆ03542

Of

WÆ^

WÆ^'è"

stdcall03543

ŽQÆ •W€Žw—ß

à-¾

stdcall Žw—ß,íCŽè‘±,«,âŠÖ” ,Åfpf%of[f^ ,ð“n,·,ì,É Windows ,ì•W€CEÄ,Ño,µ<K-
ñ,ðŽg,±,±,Æ,ðŽw’è,µ,Ü,·B

stdcall <K-ñ,Å,í **cdecl** <K-ñ,Æ“—l,Éfpf%of[f^ ,í
%oE,©,ç¶,Ö“n,³,ê,Ü,·,ªCSÖ” ,ªfXf^fbfN,©,çfpf%of[f^ ,ðíœ,·,é“^a cdecl <K-
ñ,Æ,í^Ù,È,è,Ü,·B

stdcall CEÄ,Ño,µ<K-ñ,í Windows API f<[f`f“ ,ðCEÄ,Ño,·,½,ß,ÉŽg,í,ê,Ü,·B

ŽQÆ03544

CEÄ.Ño,μK-ñ

cdecl

pascal

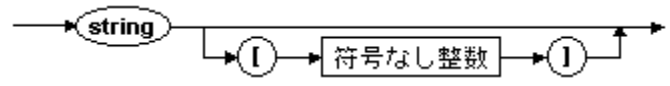
register

String03545

ŽQÆ =-ñÊ

∅•¶

文字列型



∅à-¾

-ñÊ **string** ,∅¶Žš-ñÊ^,∅•i",∅é¾,∅,é,½,β,ÉŽg,φ,Ü,∅B

ŽQÆ03546

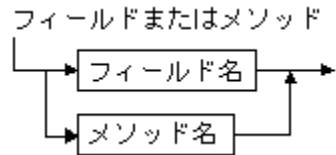
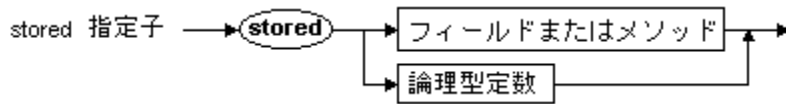
fCf"ffbfNfX

•ŕŽš—ňĚ^

Stored03547

ŽQ□Æ •W□€Žw—β

□\•¶



□à-¾

stored Žw—β, ívf□fpfefB, ð•Ú'¶, ·, é, ©, Ç, ʌ, ©, ð□\$CEä, μ, Ü, ·□B

fvf□fpfefB'è<` ,É **stored** Žw—β, ðŠÜ, β, é□ê□#□CŽŸ, ì, ç, , , ê, ©, ð'±, -, ÄŽw'è, μ, È, , Ä, Í, È, è, Ü, ¹, ñ□B

- ~_—□'è□" (True ,Ü, ½, Í False)
- ~_—□CE^, ìftfB□[f<fh, ìŽ~•ÊŽq
- ~_—□CE^, ì'1, ð•Ô, ·fpf%□f□□[f^, È, μ, ìšÖ□"f□f□bfh, ìŽ~•ÊŽq

fvf□fpfefB'è<` ,É **stored** Žw'èŽq, ðŠÜ, β, È, ç□ê□#□CCE<%oÊ, Í **stored** True

Žw'èŽq, ðŠÜ, β, ½□ê□# ,Æ"~, ¶, É, È, è, Ü, ·□B

ŽQÆ03548

Ši" [Žw'èŽq

Threadvar03549

ŽQÆ —\-ñÊ

—\-ñÊ **threadvar**, íCfXfÆfbfhf[]fj<•ï”, ðéÆ¾, ·, é, ½, ß, ÉŽg, ç, Ü, ·B**threadvar**, ì\

•¶, í—\-ñÊ **var**, Æ“”, ¶, Å, ·B

ŽQÆ03550

Var

-á03552

ŽŸ,lfR[fh,í•ÚCEì,³,é,½fŠf\[]fX,ðŽ!,μ,Ü,·[]Bfuf[]fbfN,ì **finally** •”,Åftf@fCf<,ð•Â,¶,é,±
,Æ,É,æ,Á,Ä[]C—áŠO,ª”[]¶,μ,½[]é[]‡,Á,àfAfvfŠfP[]fVf‡f”,ª•K, ,ftf@fCf<,ð•Â,¶,é,æ,‡,É,È,Á,Ä,ç
,Ü,·[]B

```
var  
    F: File;  
begin  
    Assign(F, 'SOMEFILE.EXT');  
    Reset(F);  
    try  
        { ftf@fCf< F ,ÉfAfNfZfX,·,é•¶ }  
    finally  
        Close(F);  
    end;  
end;
```

ŽQÆ03553

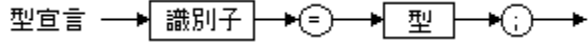
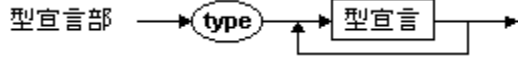
—ášO^—

fš\ [fxš,,è"-,Ä,ì•ŮĚì

Type03554

ŽQAE —\-ñCEé

□\•¶



□à-¾

type □éCE¾, íCE ^, ðŽ!, ·Ž·ÊŽq, ðŽw'è, μ, Û, ·□B·i□", ì **type** , í, » , ì·i□", ðŽ□, Â, ±, /E, ì, Â, <, é'ì, ì□W□#, /E□C, » , ì·i□", É'í, μ, ÄŽÄ□s%oÂ"\, É'€□i, ð'è<, μ, Û, ·□B

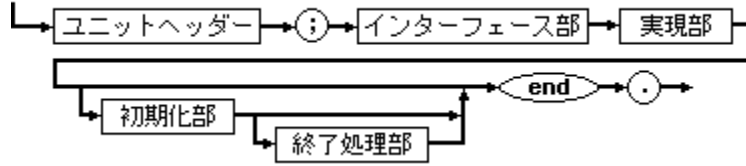
ŽQÆ03555

Ā^éĀ³/₄

Unit03556

ŽQAE -\-ñĈĖê

□\•¶
ユニット



□à-¾

ftfjfbfg,íf,fWf...□[f<fvf□fOf%of~f“fO,ìŠî-{-,Á,·□Bftfjfbfg,đŽg,Á,Äf%ofCfuf
%ofŠ,đ□□-,μ,½,è□C'á,«,Èfvf□fOf%of€,đ~_□“l,ÉŠÖ~A,·,éf,fWf...□[f<,É•ªŠ,,,μ,½,è,μ,Ü,·□B

ftfjfbfg,ìŠe•” ,đŽŸ,ÉŽl,μ,Ü,·□B

- **unit** fwfbf_□[
- fCf“f^□[ftfF□[fX•”
- ŽACE»•”
- □%ooŠÚ%oo»•”
- □l-¹□^—□•”

ftfjfbfgfwfbf_□[

unit fwfbf_□[,íftfjfbfg,ì-¼'O,đŽw'è,μ,Ü,·□B,±,ì-¼'O,í uses

□β,Áftfjfbfg,đŽQAE,·,é,Æ,«,ÉŽg,ç,Ü,·□B



-¼'O,íftfj□[fN,Á,È,,Ä,í,È,è,Ü,¹,ñ□B“~,¶-¼'O,đŽ□,Â 2 ,Á,íftfjfbfg,đ“~Žž,ÉŽg,±,±,Æ,í,Á,«,Ü,¹,ñ□B

ŽQÆ03557

ftjfbfg.ìzŠÂŽQÆ

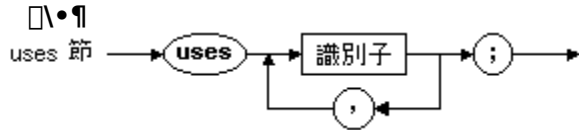
ftjfbfg.ìŠÔÚŽQÆ

•WÆftjfbfg

Uses03558

—á —\-ñĀĒē

uses □β,Ā,lfvf□fOf%of€,,āŽg—p,.,éftfjfbfg,đŽw'è,μ,Ü,·□B



□à-¾

uses □β,ìŠeŽ-•ĒŽq,íĀ»□Ý,lfvf□fOf%of€,Ü,½,lfvfjfbfg,afAfNfZfX,;éŠÖ□",Ü,½,íŽè'±,«,đŠÜ,Pftfjfbfg,đŽw'è,μ,Ü,·□B

System ftfjfbfg,í□í,ÉŽ©"®"l,ÉŽg—p,³,è,Ü,·□BSystem ftfjfbfg,í□Cftf@fCf<"ü□o—í□C•¶Žš—ñ□^—□□C•,"®□-□"□" %%%ŽŽ□C"®"lf□f,fŠŠ,,è"-,Ā,Ā,ç,Ā,½'áfĀfxf<,lf %of"f^fCf€f<□lf`f",đŽĀ'•,μ,Ā,ç,Ü,·□B

System ftfjfbfg,Ā,í•Ē,É□CObject Pascal ,Ā,í□CŽ©"®"l,É,íŽg—p,³,è,Ē,ç'½□",ì•W□€ftfjfbfg,đŽĀ'•,μ,Ā,ç,Ü,·□B,±,è,ç,lfvfjfbfg,đŽg,πê□#,í uses □β,ÉŽw'è,μ,Ē,̄,è,Ā,Ē,è,Ü,¹,ñ□B

uses □β,ÉŽw'è,³,è,½ftfjfbfg,ì□#□~ ,É,æ,Ā,Ā□Cftfjfbfg,ì□%Šú%»»,ì□#□~ ,āĀ^,Ü,è,Ü,·□B

fRf"fpfCf<□İ,Ý,lfvfjfbfg,đ'T,μ□o,.,½,β,É□CfRf"fpfCf%o,í **uses** □β,ĀŽw'è,³,è,½ftfjfbfg-¼,Éftf@fCf<Šg'ÉŽq .DCU ,đ•t%oĀ,μ,Ü,·□B

fRf"fpfCf%o,lfvfĀf"fgfffBfĀfNfgfŠ,É, ,éftfjfbfg,Ā□C□mfvf□fWfFfNfg,ì□Ý'è□nf_fCfAf□fOf{fbfNf X,ì□mDirectories/
Conditionals□nfy□[fW,ì□mĀĀ□đfpfX(S)□nfŠfXfgf{fbfNfX,ĀŽw'è,³,è,½fffBfĀfNfgfŠ,É, ,éftfjfb fg,đĀĀ□đ,μ,Ü,·□B

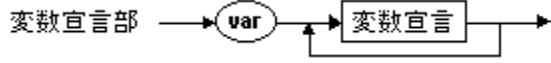
—á03559

```
program MyProgram;  
uses Controls, Unit1 {Form1};
```

Var03560

ŽQÆ —á —\-ñÆê

∅\•¶



∅à-¾

•i" (var) ∅é¾,íŽ•ÉŽq,ÆÆ^,ð,»,ìÆ^,ì'ì,ðŠi"[%Å"\,Èf,f,š"à,ì^É'u,ÆŠÖ~A•t,¯,Ü,·B

absolute ∅β,í∅â'í∅f,šfAfhfX,ðŽw'è,·,é,½,β,ÉŽg,ç,Ü,·B

—\-ñÆê var ,ðŽg,Á,Ä•i"fpf%ff^,ðé¾,·,é,±,Æ,à,Å,«,Ü,·B

—á03561

{ •ï"é¼ }

var

X, Y, Z: real;

I, J, K: Integer;

Done, Error: Boolean;

Vector: **array**[1..10] **of** real;

Name: **string**[15];

InFile, OutFile: Text;

Letters: **set of** 'A'..'Z';

ŽQÆ03562

fOf□□[fof<•i□”,Æf□□[ff<•i□”

fXfR□[fv

•i□”□éÆ¾

Virtual03563

ŽQŒ •W€Žw—ß

à-¾

virtual Žw—ß, í%¼'zfbfh, ðé¾, , é, ½, ß, ÉŽg, ç, Ü, ·B

virtual fŒ

fbfh, ífCfCgfofCf“ffBf“fo, ÆÄ, î, è, évfƒfZfX, É, æ, Á, ĀŽÀsŽž, ÉfR[fh, ÉfŠf“fN, ³, ê, Ü, ·B

fŒfbfh, ð **virtual** , Æ, µ, Āé¾, , é, ÆC“ , ¶-¼'O, ðŽ, ĀfŒ

fbfh, ðfufWfFfNfgĈ, ĨŠ'w“à, Ā•É, ĩ•û-@, ĀŽÀĈ», Ā, «, é, æ, ɹ, É, È, è, Ü, ·B

fŒfbfh, ð%¼'z, É, , é, É, ĨCfufWfFfNfgĈ, ĩfŒfbfhé¾, ĩĈă, ÉfZf~fRfŒ“ , ðŽw'è, µC—\-

ñĈê **virtual** , ð'±, , ĀŽw'è, µ, Ü, ·B

ŽQÆ03564

“@”lf\fbfh

flfufWfFfNfg

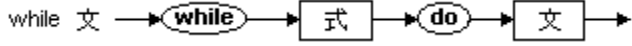
Self

%o¼'zf\fbfh

While03565

ŽQÆ —á —\-ñĈê

□\•¶



□à-¾

while •¶, í'P^ê•¶, Ü, ½, í•; □#•¶, ìĈJ, è•Ô, μŽÀ□s, ð□\$Ĉä, μ, Ü, •□B

do , ìĈã, ì•¶, í~ —□Ž®, ³ True , Å, , éĈÈ, èŽÀ□s, ³, ê, Ü, •□B

Ž®, í•¶, ðŽÀ□s, , é'O, É•]‰, ³, ê, é, ½, ß□CŽ®, ³□Å□‰, ©, ç False , É, É, Á, ½□ê□#□C•¶, íŽÀ□s, ³, ê, Ü, ¹, ñ□B

ŽQÆ03566

•j#•¶

Do (—\~ñĈê)

For (—\~ñĈê)

f<¶fv

Repeat (—\~ñĈê)

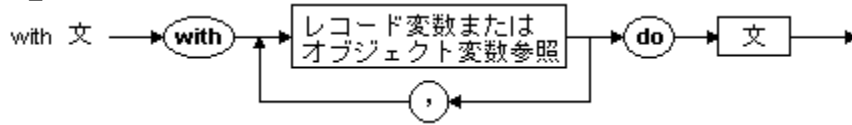
—á03567

```
{ while •¶ }  
  while Ch = ' ' do Ch := GetChar;
```

With03568

ŽQ□Æ —á —\-ñŒê

□\•¶:



レコード変数または
オブジェクト変数参照 → 変数参照 →

□à-¾

with •¶, íŒfR□[fh], ìftfB□[f<fh, âf|fufWfFfNfg, ìftfB□[f<fh, Æf□\fbfh, ð, ·, î, â, -
ŽQ□Æ, ·, é, ½, ß, ì, à, ì, Å, ·□B

with •¶, Å, í□C1

, Å, Ü, ½, í•i□", ìŒfR□[fh•ï□", ìftfB□[f<fh, ðftfB□[f<fhŽ~•ÊŽq, ¾, -, ðŽg, Å, ÄŽQ□Æ, Å, «, Ü, ·□B

with •¶, Å, í□CŠe•ï□"ŽQ□Æ, í, Ü, , fŒfR□[fh, ìftfB□[f<fh, Æ, µ, Ä%øŽß, Å, «, é, ©, Ç, x

, ©Šm"F, ¾, é, Ü, ·□B%øŽß%øÅ"\, Èêê□#, í□C"-, ¶-¼'O, ì•ï□", ðfAfNfZfX%øÅ"\

, Èêê□#, Å, à□C□í, ÉfŒfR□[fh, ìftfB□[f<fh, Æ, µ, Ä%øŽß, ¾, é, Ü, ·□B

fŒfR□[fh•ï□", ì'l'ð, É"z—ñ, ìfCf"fffbfNfX•t, -, âf|

fCf"f^, ìktŽQ□Æ, ðŠÖ~A, ·, éêê□#□C•i□#•¶, ðŽÅ□s, ¾, é, é'O, É^ê"x, » , é, ç, ìfAfNfVf¶f", ðŽÅ□s, ¾, é, Ü, ·□
B

ŽQÆ03569

fEfrfh

—á03570

type

 TDate = **record**

 Day : Integer;

 Month: Integer;

 Year : Integer;

end;

var OrderDate: TDate;

with OrderDate **do**

if Month = 12 **then**

begin

 Month := 1;

 Year := Year + 1

end

else

 Month := Month + 1;

Write03571

ŽQAE =á

□\•¶

write 指定子 → write → フィールドまたはメソッド →

▪

□à-¾

write Žw—β,Ífvf□fpfefBfAfNfZfXŽw'èŽq,Å□C,±
,ê,ðŽg,Á,Äfvf□fpfefB,l'l,ð□Ý'è,·,éf<□[f`f",ðŽw'è,Å,«,Ü,·□B

ŽQÆ03572

fAfNfZfXf\fbfh

fv\fpfefB

Read

Delphi ,iftfjfbfg03573

ŽŸ,ifšfXfg,□CDelphi ,if%ofCfuf%ofš,ÉŠÜ,Ü,ê,Ä,ç,é•W□€ftfjfbfg,Å,·□B

Šeftfjfbfg,É,Ä,ç,Ä,ì□Ú□×,Í Delphi f%ofCfuf%ofššfštf@fĈf“fXfwf<fv,đŽQ□Æ,μ,Ä,,¾,¾,ç□B

Buttons ftfjfbfg

Classes ftfjfbfg

ClipBrd ftfjfbfg

Controls ftfjfbfg

DB ftfjfbfg

DBCtrls ftfjfbfg

DBGrids ftfjfbfg

DBLookup ftfjfbfg

DBTables ftfjfbfg

DDEMan ftfjfbfg

Dialogs ftfjfbfg

DsgnIntf ftfjfbfg

ExtCtrls ftfjfbfg

FileCtrl ftfjfbfg

Forms ftfjfbfg

Graphics ftfjfbfg

Grids ftfjfbfg

IniFiles ftfjfbfg

Mask ftfjfbfg

Menus ftfjfbfg

Messages ftfjfbfg

MPlayer ftfjfbfg

Outline ftfjfbfg

Printers ftfjfbfg

Report ftfjfbfg

StdCtrls ftfjfbfg

System ftfjfbfg

SysUtils ftfjfbfg

TabNotBk ftfjfbfg

Tabs ftfjfbfg

TOCtrl ftfjfbfg

WinCrt ftjffbfg

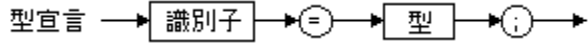
WinProcs ftjffbfg

WinTypes ftjffbfg

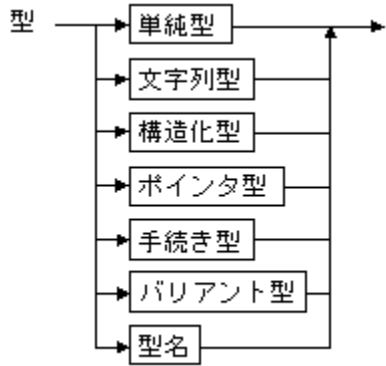
CE^□éCE¾03574

ŽQ□Æ CE¾CEè'è<

•i□",đ□éCE¾,·,é□ê□#□CCE^,đŽw'è,μ,È,-
 ,Ä,Í,È,è,Ü,¹,ñ□BCE^,Í'è<□í,Ý,ìCE^,©ft□[fU□['è<CE^,ì,ç,.,ê,©,Ä,·□Bft□[fU□['è<),ìCE^,ífv□fof
 %of€,Ü,½,íftfjfbfg,ìCE^□éCE¾•",Ä□éCE¾,μ,Ü,·□B



•i□",ìCE^,í,»),i□i□",ª•ÚŽ□,Ä,«,é'l,ì□W□#,Æ•i□",É'í,μ,ÄŽÀ□s%oÄ"\,È'€□,đ'è<,μ,Ü,·□B
 CE^□éCE¾,ìfXfR□[fv,í,»,ìCE^,đ□éCE¾,μ,½fuf□fbfN"à,É,È,è,Ü,·□B
 CE^Ž•ÉŽq,ìfXfR□[fv,É,ì□Cf|fCf"f^CE^,đ—áŠO,Æ,μ,Ä□C,»,ìŽ•ÉŽqŽ©'ì,ÍŠÜ,Ü,è,Ü,¹,ñ□B



CE^,É,Í 6 ,Ä,ìŽâ,ÈfNf%ofX,ª, ,è,Ü,·□B

1. 'P□fCE^,í□#□~•t,¯,³,ê,½'l,ì□W□#,đ'è<,μ,Ü,·□B
2. •qŽš—ñCE^,Í" @ "l,È',³' @ □«,ÆCEÄ'èfTfCfY' @ □«,đŽ□,Ä•qŽš,ìfv□[fPf"fX,đ'è<,μ,Ü,·□B
3. □\ç%o»CE^,í•i□",ì'l,đ•ÚŽ□,Ä,«,é□\ç,đ'è<,μ,Ü,·□B
4. f|fCf"f^CE^,ìŽw'è,³,ê,½CE^,ì•i□",đf|fCf"fg,.,é'l,ì□W□#,đ'è<,μ,Ü,·□B
5. Žè'±,«CE^,ìŽè'±,«,ÆŠÖ□",đf|fufWfFfNfg,Æ,μ,Ä^μ,π,½,β,ÉŽg,ç,Ü,·□B
6. fofŠfAf"fqCE^,í•i□",ª^Ü,È,éCE^,ì'l,đŽ□,Ä,±,Æ,đ'z'è,μ,Ü,·□B

ŽQÆ03575

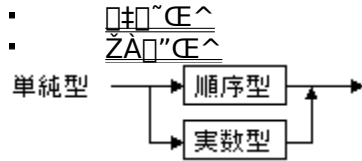
fXfR[fv

CE^,iCEÝŠ·«

'P□fCE^03577

CE^

'P□fCE^,í□#□~•t,¯,³,ê,½'l,ì□W□#,ð'è<`,μ,Ü,·□B'P□fCE^,É,í 2 ,Á,ìŠî- {fNf%ofX,ª, ,è,Ü,·□B



ŽÀ□"CE^Ž•ÉŽq,í•W□€Ž•ÉŽq Real, Single, Double, Extended, Comp ,ì,ç, ,ê,©,Å,·□B

'P□fCE^,ì"äŠr

'P□fCE^,ð"äŠr,·,é□ê□#□Cfìfyf%of"fh,íCEÝŠ·,ìCE^,Á,È,,Ä,í,È,è,Ü,¹,ñ□B,½,¾,μ□C^ê•ù,ìfìfyf %of"fh,ªŽÀ□"CE^,ì□ê□#□C,à,κ^ê•ù,í□@□"CE^,Å,à,©,Ü,ç,Ü,¹,ñ□B

ŽQÆ03579

—áŠO^—

Ā^,ìĀÝŠ·«

•î”,ìĀ^fLfffXfg

’l,ìĀ^fLfffXfg

☐☐☐"CE^03580

ŽQ☐AE ☐☐☐~CE^

Object Pascal ,l'è< ☐İ,Ÿ,☐☐☐"CE^,İŠî-{CE^,Æ"Ä—pCE^,İ 2 Ží—p,É•^a—p,³,ê,Ü,☐B
 'Ê☐í,İ"Ä—p☐☐☐"CE^,É,æ,è☐CCPU ,ÆfİfyfCE☐[fefBf"fOfVfXfef€É,Æ,Ä,Ä☐Ä"K,È☐^—☐CEø—
 !,^a"³/₄,ç,ê,é,¹/₂,β☐CfAfvfŠfP☐[fvf#f" ,Ä,İ,Ä,«,³/₄,~"Ä—p☐☐☐"CE^,ðŽg,α,æ,α,É,μ,Ü,☐BŠî-
 {☐☐☐"CE^,İ☐CŽÄ☐Ü,İ"İ'İ,âŠî"[CE`Ž®,^afAfvfŠfP☐[fvf#f" ,Ä☐d—v,È-â'è,Æ,É,é☐ê☐#,³/₄, Žg,ç
 ,Ü,☐B

Šî-{CE^

^È%^o,İŠî-{☐☐☐"CE^,â ,è,Ü,☐B

| CE^ | "İ'İ | CE`Ž® |
|----------|---------------------------|----------------------|
| Shortint | -128 .. 127 | •,☐+•t,« 8 frfbfg |
| SmallInt | -32768 .. 32767 | •,☐+•t,« 16 frfbfg |
| Longint | -2147483648 .. 2147483647 | •,☐+•t,« 32 frfbfg |
| Byte | 0 .. 255 | •,☐+•t,È,μ 8 frfbfg |
| Word | 0 .. 65535 | •,☐+•t,È,μ 16 frfbfg |

Šî-{CE^,İ"İ'İ,ÆCE`Ž®,İ CPU ,ÆfİfyfCE☐[fefBf"fOfVfXfef€É`È'¶,¹,☐CObject Pascal
 ,İŽÄ'•,^aèÜ,È,Ä,Ä,à•İ,İ,è,Ü,¹,ñ☐B

"Ä—pCE^

"Ä—p☐☐☐"CE^,É,İ Integer ,Æ Cardinal ,^a ,è,Ü,☐BInteger CE^,İ"Ä—p,İ•,☐+•t,«☐☐☐",ð•\
 ,μ☐CCardinal CE^,İ"Ä—p,İ•,☐+•t,È,μ☐☐☐",ð•\,μ,Ü,☐B"Ä—pCE^,İŽÄ☐Ü,İ"İ'İ,ÆŠî"[CE`Ž®,İ
 Object Pascal ,İ☐^—☐CEn,É,æ,Ä,Ä^Ü,È,è,Ü,☐B¹/₂,³/₄,μ☐C'Ê☐í,İ CPU
 ,ÆfİfyfCE☐[fefBf"fOfVfXfef€É,Æ,Ä,Ä☐☐☐"%^ožZ,^a,à,Ä,Æ,àCEø—|"İ,É,È,é,æ,α
 ,È"İ'İ,ÆŠî"[CE`Ž®,^a"K—p,³,ê,Ü,☐B

| CE^ | "İ'İ | CE`Ž® |
|----------|---------------------------|----------------------|
| Integer | -32768 .. 32767 | •,☐+•t,« 16 frfbfg |
| Integer | -2147483648 .. 2147483647 | •,☐+•t,« 32 frfbfg |
| Cardinal | 0 .. 65535 | •,☐+•t,È,μ 16 frfbfg |
| Cardinal | 0 .. 2147483647 | •,☐+•t,È,μ 32 frfbfg |

ŽZ☐p%^ožZ

☐☐☐"CE^fİfyf%^of"fh,É,æ,éŽZ☐p%^ožZ,Ä,İ☐C^È%^o,İ<K'¥,É☐],Ä,Ä 8 frfbfg☐C16 frfbfg☐C32
 frfbfg,İ,ç,, ,é,©,İ☐, "x,^aŽg,İ,é,Ü,☐B

- ☐☐☐"è☐",İ☐C,» ,İ☐☐☐"è☐",İ'İ,ðŠÜ,p☐☐☐"CE^,İ,α,ž☐Ä☐—,İ"İ'İ,İ☐☐☐"CE^,É,È,é
- "ñ☐€%^ožZ,İ—¹/₄•û,İfİfyf%^of"fh,İ☐C—¹/₄•û,İCE^,İ,Æ,è,α,é, ,x,Ä,İ'İ,ðŠÜ,p☐☐☐"CE^,İ,α
 ,ž☐Ä☐—,İ"İ'İ,İ☐☐☐"CE^,É•İŠ•,³,é,é☐BŽ®,İCE<%^oÊCE^,İ<α'É,İCE^,É,È,é
- 'ä"ü•¶,İ%^oE'α,İŽ®,İ☐¶'α,İ•İ☐",İfTfCfY,âCE^,ÉŠÖCEW,È,•] %^ož,³,é,é
- fofCfG,İ☐CŽ®,İ•] %^ož,İ'O,É Integer ,Æ Word ,İ—¹/₄•û,ÆCEŸS•☐«,^a ,é 1 f☐☐[fh,İ'tŠÔfİfyf
 %^of"fh,É•İŠ•,³,é,é

f☐f, CE^fLfffXfg,É,æ,è☐☐☐☐"CE^,İ'İ,ð•Ê,İ☐☐☐"CE^,É-³/₄Ž|"İ,É•İŠ•,Ä,«,,Ü,☐B

ŽQÆ03581

CE^,ìCEÝŠ·«

'l,ìCE^fLfffXfg

•ï",ìCE^fLfffXfg

Šî'bCE^,Æ"Ä—pCE^

~_—□CE^03582

ŽQ□AE □#□~CE^

'è<`ij,Ý,i~_—□CE^,í 4 Ží—p, ,è,Ü,·□B~_—□CE^,í False ,Ü,½,í True ,AE•]%%
; ,³,ê,é•ĭ□",đ□éCE¾,μ,Ü,·□B

| CE^ | f□f,fš |
|----------|---------------------|
| Boolean | 1 fofCfg |
| ByteBool | 1 fofCfg |
| WordBool | 2 fofCfg (1 f□□[fh) |
| LongBool | 4 fofCfg (2 f□□[fh) |

□Å,à^ê"Ê"l,Ê~_—□Ž®,ìŽg,ç•ù,íŠÖCEW%%ŽŽŽq,â□đCE□•¶,Æ,Æ,à,ÉŽg,π•û-@,Å,·□B~_—
□CE^,í—ñ<"CE^,Å, ,é,½,β□CŽŸ,ìŠÖCEW,ª□—š,μ,Ü,·□B

- False < True
- Ord(False) = 0
- Ord(True) = 1
- Succ(False) = True
- Pred(True) = False

Boolean ,íÊ□íŽg,í,ê,éCE^,ÅŽg,πf□f,fš—Ê,à□Å□,Å,·□BByteBool , WordBool , LongBool
,í¼,ìCE¾CEê,â Windows ŠÅ<<,Æ,ìCEÝŠ·□«,đ'ñ<Ÿ,μ,Ü,·□B

Boolean CE^,ì•ĭ□",ªl 0 (False) ,Æ 1 (True) ,μ,©^μ,†,È,ç,ì,É'í,μ□CByteBool , WordBool ,
LongBool ,í 0 ,ª False ,Å"ñf[f□,ì'l,ª,·, x,Ä True ,Æ,ç,π□#□~'l,đ^μ,†,Ü,·□BBoolean 'l,ª—\
Šú,³,ê,éfRf"fefLfXfg,Å ByteBool , WordBool , LongBool 'l,ªŽg,í,ê,½□ê#□CfRf"fpfCf%
,í"ñf[f□,ì,·, x,Ä,ì'l,đ True ,É•İŠ·,·,éfR□[fh,đŽ©"®"l,É□¶□—,μ,Ü,·□B

ŽQÆ03583

~ — Ž®

~ — %%%ŽŽŽq

ðÆ•¶

ŠÖÆW%%ŽŽŽq

Æ^, ìÆÝŠ•«

• **¶ŽšŒ^03584**

ŽQŒ ¶Œ^

Object Pascal ,ì•¶ŽšŒ^,Á,í 2 ,Á,ìŠî-Œ^,Œ 1 ,Á,ì"Ä—pŒ^,ª'è<` ,ª,ê,Ä,ç,Û,·ŒB
^È%º,ì 2 Ží—p,ìŠî-Œ^,ª, ,è,Û,·ŒB

AnsiChar Šg'£ ASCII •¶ŽšfZfbfg,ÉŒ],Á,Ä¶Œ~•t, ,ª,ê,½fofCfgyTfCfY,ì•¶ŽšŒEQ

WideChar fŒŒ[fhfTfCfY,ì•¶ŽšŒEQŒB

Char ,ª"Ä—p•¶ŽšŒ^,Á,·ŒB

Œ»ŒŸ,ì Object Pascal ,ìŒ^—ŒŒn,Á,í Char ,í Šî-Œ^,ì AnsiChar ,É'í%ž,µ,Û,·,ªŒCCPU
,âfjfyfŒŒ[fefBf"fOfVfXfef€ ,ª^Û,È,éŒ^—ŒŒn,Á,í Char ,ð WideChar ,Œ,µ,Ä'è<` ,Á,« ,Û,·ŒB—
¼•û,ìfTfCfY,ì•¶Žš,ð^µ,κK—v,ª, ,éfRŒ[fh,ðŒŒŒ,·,éŒêŒŒ,íŒC•¶ŽšfTfCfY,ð•\
,·fnŒ[fhfRŒ[fh,ì'èŒ",Á,í,È,•WŒ€ŠÖŒ",ì SizeOf ,ðŽg,ç,Û,·ŒB

Ch ,ª•¶ŽšŒ^'l,ì,Œ,«ŒCOrd(Ch) ,Œ,ç,κŠÖŒ"ŒÄ,ŒŒŒo,µ,í Ch ,ìŒŒ~'l,ð•Ô,µ,Û,·ŒB

' ,ª,ª 1 ,ì•¶Žš—ñ'èŒ",í'èŒ"•¶Žš'l,Á•\ ,¹,Û,·ŒBChr ŠÖŒ",íŒC'í
%ºž,·,éŒŒŒ~'l,ðŽŒ,Á•¶Žš,ÉŒŒŒ"Œ"Œ,ð•İŠ•,Á,« ,Û,·ŒB

ŽQÆ03585

Chr

Ord

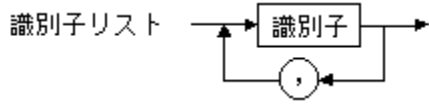
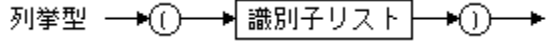
Ā, ÌĀÝŠ·Ā«

Šî'bĀ, Æ"Ä—pĀ

—ñ<“CE^03586

ŽQ□Æ —á □#□~CE^

—ñ<“CE^,íŽ~•ÊŽqfŠfXfg,ì—v’f,É~A±,μ,½’l,đŠ,,è”-,Ä,Ü,·□B□Å□%o,ì—v’f,ì’l,í 0 ,É,È,è□C2 ”Ô-
 Ú,ì—v’f,í 1 ,Æ,ç,æ<î□#,É’±,«,Ü,·□B



fRf“fpfCf%o,í—ñ<“CE^,ì-¼’O,đŽ~•ÊŽqfŠfXfg’S’ì,ìCE^,Æ,μ,Ä”FŽ~,μ,Ü,·□B

Ž~•ÊŽq,ì□#□~,í,» ,ìŽ~•ÊŽq,ª□éCE¾,³,ê,½Ž~•ÊŽqfŠfXfg“à,ì^É’u,É,æ,Ä,ÄCE^,Ü,è,Ü,·□B

Succ ŠÖ□”,Æ Pred ŠÖ□”,đŽg,æ,ÆŽ~•ÊŽqfŠfXfg,ì—v’fŠÔ,đ’O•û,Ü,½,ÍCEă•û,É□zŠÄ,Å,«,Ü,·□B

Ord ŠÖ□”,đ—ñ<“CE^,ì’l,É“K—p,·,é□ê□#□C,» ,ì’l,ª“~,¶—

ñ<“CE^,ì’¼,ì’l,Æ”äŠr,μ,Ä,Ç,ì^É’u,É’u,©,ê,é,©,đŽ!,·□®□”,ª•Ô,³,ê,Ü,·□B

ŽQÆ03587

~ — □ CE ^

CE ^, ì CE Ý Š · □ «

CE ^ □ é CE ³/₄

—ñ<“œ^,ì—á03588

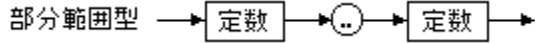
type

Suit = (Club, Diamond, Heart, Spade);

•"•a"í^íCE^03589

—á □#□~CE^

•"•a"í^íCE^,ízfXfgCE^,ÆCEÄ,í,ê,é□#□~CE^,ì^ê•",)!"í^í,Ä,·□B•"•a"í^íCE^,)è<,Ä,í•"•a"í^í"à,)□
Ä□-!l,Æ□Ä'á'l,ðŽw'è,μ,Ü,·□B



2 ,Ä,)è□",í"~,¶□#□~CE^,Ä,È,,Ä,í,È,è,Ü,¹,ñ□B

•"•a"í^íCE^,ì•ï□",ízfXfgCE^,ì,·,×,Ä,ífvf□pfefB,ðŽ□,ì,Ü,·,ª□CŽÄ□sŽŽ,ì'l,íŽw'è,³,ê,¹/₂"í^í"à,É,È,
,,Ä,í,È,è,Ü,¹,ñ□B

fRf"fpfCf%o,íjfbfR,ÄŽn,Ü,éCE^'è<,ð—ñ<"CE^,Æ,μ,Ä'è<,·,é,¹/₂,β□C'è□"Ž® ,ð<L□q,·,é,Æ,« ,É□
•¶□ã,ì,·,ç,Ü,ç,³,^a 1 ,Ä□¶,¶,Ü,·□B,±,ì-â'è,ð%oðCE^,·,é•ú-@,í 2 ,Ä,·,è,Ü,·□B

- □Ä□%o,ì•"•a"í^íŽ®,ªjfbfR,ÄŽn,Ü,ç,È,ç,æ,π•Ò□-,μ'¹/₄,·
- Ž®,ì'l,Æ"™,μ,ç'è□",ð□Y'è,μ□C,» ,ì'è□",ðCE^'è<,ÄŽg,π

\$R fRf"fpfCf%oŽw—β,í•"•a"í^íCE^,ì"í^í`fFfbfN,ð□\$CEä,μ,Ü,·□B

•"•a"ííĈ^,ì—á03590

•"•a"ííĈ^,ì—á,đŽŸ,ÉŽ!,μ,Û,·□B

0..99

-128..127

Club..Heart

ŽŸ,lfR□[fh,ífjfbfR,ÁŽn,Û,é'è"Ž®,ì-â'è,đ%ođĈ^,·,é,½,ß,ì 1 ,Â,ì•û-@,đŽ!,μ,Ä,ç,Û,·□B

type

Scale = 2 * (X - Y) .. (X + Y) * 2;

ŽÀ"CE^03591

ŽQAE CE^

ŽÀ"CE^,íŽÀ",ì"••W±,ÅCCEÀ'è,³,ê,½CE...",ì•,"@-""_•\<L,Å•\CE»,Å,«,Ü,·B
 ŽÀ"CE^,É,í 6 ,Å,ìŽí—P,ª, ,è,Ü,·B,±,ê,ç,íí'íC'l,ì, "xCfTfCfY,ª,»,ê,¼,ê^Ü,È,è,Ü,·B

| CE^ | "íí | —LCEø CE..." | fTfCfY (fofCfg") |
|----------|--|-----------------|---------------------|
| Real | 2.9e-39 .. 1.7e38 | 11-12 | 6 |
| Single | 1.5e-45 .. 3.4e38 | 7-8 | 4 |
| Double | 5.0e-324 .. 1.7e308 | 15-16 | 8 |
| Extended | 3.4e-4932 .. 1.1e4932 | 19-20 | 10 |
| Comp | (-2 ,ì 63 ±æ) + 1 .. (2 ,ì 63 ±æ) - 1 | 19-20 | 8 |

Comp (Computational) CE^,í (-2 ,ì 63 ±æ) + 1 ,©,ç (2 ,ì 63 ±æ) - 1
 ,Ü,Å,ì@""l,¾,¯,ð•ÚŽ,Å,«,Ü,·B-ñ -9.2e18 ,©,ç 9.2e18 ,É'í%ž,µ,Ü,·B

Currency CE^,í<àŠz,ìEVŽZ,É"K,µ,½CEÁ'è-""_ff[f^CE^,Å,·B,±,ê,íXfP[f<•t,«,ì 64
 frfbfg@"" ,Æ,µ,ÄŠi"[,³,êC%º 4 CE...,ª-""_É%º,ì 4 CE...,ð•\,·,à,ì,Æ,µ,Äµ,í,è,Ü,·B

f[f,: Real CE^,íC^È'O,ìfo[fWf#f",ì Delphi ,",æ,Ñ Borland Pascal ,Æ,ì%º^ÊCEÝŠ·«,ì,½,ß,É
 —p^Ó,³,ê,Ä,ç,Ü,·BReal CE^,ìŠi"[CE`Ž®,íCf"fej<,ì CPU ftj@f~fŠ[-{-^,ìCE`Ž®,Å,í,È,ç
 ,ì,ÅCReal CE^,ìl,ì%º%ŽZ,í¼,ì•,"@-""_CE^,æ,è,à'-"x,ª—Ž,ì,Ü,·B

f|fCf“f^CE^03592

ŽQ□Æ —á CE^

f|fCf“f^CE^,íŠi- {CE^,}i□”,đf|fCf“fg,·,é'l,Ä,·□Bf|
fCf“f^CE^,}i□”,É,}i□”,ìf□f,ſŠfAfhfCEfX,^a•ŰŽ□,³é,Ü,·□B

ポインタ型 → 基底型 →

基底型 → 型名 →

Ši- {CE^,^a-ç□éCE^{3/4},ìŽ⁻•ÉŽq,ì□é□#□Cf|
fCf“f^CE^,Æ“⁻,ſCE^□éCE^{3/4}•”,Ä,»,ìŽ⁻•ÉŽq,đ□éCE^{3/4},μ,È,,Ä,í,È,è,Ü,¹,ñ□B

f|fCf“f^•i□”,É,íŽÿ,ìŽè'±,«,Ü,^{1/2},íŠÖ□”,đŽg,Ä,Ä'l,đ'ă“ü,Ä,«,Ü,·□B

Žè'±,«/ŠÖ□” “@□ì

New fAfvfŠfP□[fVf#“fq□[fv,É“@“l•i□”,ì,^{1/2},β,ì□V,μ,çf□f,ſŠ—l^æ,đŠ,,è“-
,Ä□C,»,l—l^æ,ìfAfhfCEfX,đf|fCf“f^•i□”,ÉŠi”[·,é

@ %%%ŽŽŽq ,·,Ä,ÉŽ⁻•ÉŽq,đŽ□,Ä,Ä,ç,é•i□”,đŠÜ,β,Ä□CŠù'ſ,ì•i□”,©Žè'±
,«,©ŠÖ□”,ìfGf“fgfŠf|fCf“fg,đ•ŰŽ□,μ,Ä,ç,é□f,ſŠ—l^æ,đf|
fCf“f^•i□”,^aŽw,μŽì,·,æ,α,É,·,é

GetMem Žw'è,³é,^{1/2}fTfCfY,ì□V,μ,ç“@“l•i□”,đ□ì□¬,μ□C,»,ìfuf□fbfN,ìfAfhfCEfX,đf|
fCf“f^•i□”,É'u,

—\-ñCEê nil ,ìf|fCf“f^'l,đ•\,·'è□”,Ä□C%%^{1/2},àf|fCf“fg,μ,Ä,ç,È,ç,±,Æ,đ^Ó-i,μ,Ü,·□B

f|fCf“f^,}”äŠr

%%ŽŽŽq,ì = ,Æ <> ,íCEÝŠ·,ìf|fCf“f^CE^f|fyf%of“fh,É'í,μ,ÄŽg,ì,Ü,·□B2 ,Ä,ìf|
fCf“f^,}“⁻,ſìfufWfFfNfg,đf|fCf“fg,·,é□é□#,ì,Ý“™,μ,ç,Æ,Ý,È,³é,Ü,·□B

ŽQÆ03593

f|fCf“f^Āè”

f|fCf“f^,Æ”®“l•i”

Ā^,ìĀÝŠ·«

Pointer Ā^

PChar Ā^

‘l,ìĀ^fLffXfg

Pointer CE^03594

ŽQAE

'è`i,Ý,ìCE^ Pointer ,íCE^,È,µf|fCf"f^,Á,·B

Pointer CE^,ì•i",,í<tŽQAE,Á,«,Ü,¹,ñB,±,ì,æ,α,È•i",)CEã,É|fCf"f^fVf"f{f< ^ ,ð<Lq,·,é,ÆfGf
%o[,É,È,è,Ü,·B

"Ä—pf|fCf"f^,íCE^fLfffXfg,É,æ,Á,Ä<tŽQAE,Á,«,Ü,·B

Pointer CE^,ì',í¹/₄,ì,·,×,Ä,ì|f|fCf"f^CE^,ÆCEÝŠ·,Á,·B

ŽQÆ03595

f|fCf“f^Ā^

f|fCf“f^,Æ”®“l•i”

Ā^,ìĀÝŠ•«

PChar Ā^

•i”,ìĀ^fLfffXfg

• 1. Žšf|fCf“f^CE^03596

ŽQAE

Object Pascal ,l•1Žšf|fCf“f^CE^,Á,í 2 ,Á,šî- {CE^,Æ 1 ,Á,ì”Ä—pCE^,æ`è<` ,³,ê,Ä,ç,Ü,·B

• 1Žšf|fCf“f^CE^,í•1ŽšCE^,Ö,lf|fCf“f^,É,·,¬,Ü,¹,ñ,²CObject Pascal ,í•1Žšf|fCf“f^CE^,ðŽg,Á,Äf|kç,Ä,í,é•1Žš—ñ,ð^—,Ä,« ,é,æ,æ,É,·,é,½,ß,ÉC,ç,Ä,©,ìŠg’£\•1K’¥,ðfTf|f|fg,µ,Ä,ç,Ü,·B

^È%oo,ì 2 Ží—p,šî- {•1Žšf|fCf“f^CE^,æ, ,è,Ü,·B

PAnsiChar AnsiChar CE^,ì•1Žš,Ä\□¬,³,ê,éfkç,Ä,í,é•1Žš—ñ,Ö,lf|fCf“f^

PWideChar WideChar CE^,ì•1Žš,Ä\□¬,³,ê,éfkç,Ä,í,é•1Žš—ñ,Ö,lf|fCf“f^

^È%oo,ì”Ä—p•1Žšf|fCf“f^CE^,æ, ,è,Ü,·B

PChar Char CE^,ì•1Žš,Ä\□¬,³,ê,éfkç,Ä,í,é•1Žš—ñ,Ö,lf|fCf“f^

System ftfjfbfg,lf|fCf“f^•1ŽšCE^,ðŽÿ,ì,æ,æ,ÉéCE¾,µ,Ä,ç,Ü,·B

type

PAnsiChar = ^AnsiChar;

PWideChar = ^WideChar;

PChar = PAnsiChar;

šî- {•1Žšf|fCf“f^CE^,íšî- {•1ŽšCE^,Ö,ì (,Ü,½,í,» ,ì,æ,æ,É•1Žš,Ä\□¬,³,ê,éfkç,Ä,í,é•1Žš—ñ,Ö,ì) f|fCf“f^,Ä, ,èC”Ä—p•1Žšf|fCf“f^CE^,í”Ä—p•1ŽšCE^,Ö,lf|fCf“f^,Ä,·B

ŽQÆ03597

•ŀŽšf|fCf“f^%o%oŽŽŽq

fkf<,Å□l,í,é•ŀŽš—ñ

f|fCf“f^Ĉ^

ŠÖĈEW%o%oŽŽŽq

Ĉ^,ìĈÝŠ·□«

Pointer Ĉ^

f|fCf“f^E^,ì-á03598

{ f|fCf“f^E^[]éE¾ }

type

BytePtr = ^Byte;

WordPtr = ^Word;

IdentPtr = ^IdentRec;

IdentRec = **record**

 Ident: **string**[15];

 RefCount: Word;

 Next: IdentPtr;

end;

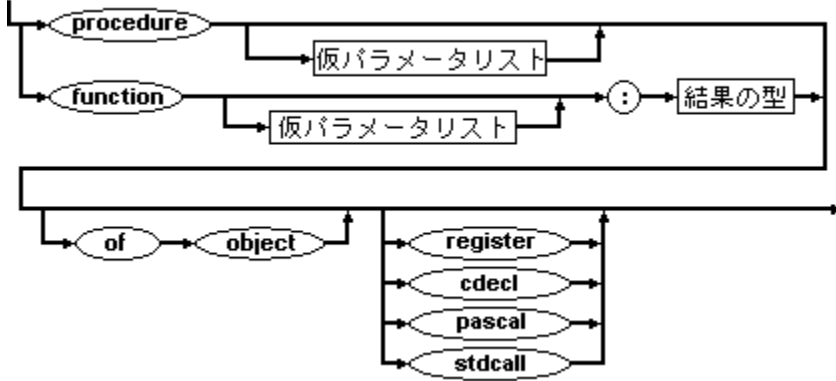
Žè'±,«Ĉ^03599

ŽQ□Æ —á Ĉ^

Žè'±,«Ĉ^,ðŽg,±,Æ□ĈŽè'±,«,âšÖ□",ð□C•i□",É'ã"ü,μ,½,è□Cfpf
%of□□[f^,Æ,μ,Ä'n,¹,éŽÄ'í,Æ,μ,Ä^μ,±,Æ,ª,Ä,«,Ü,·□B

Žè'±,«Ĉ^,i□éĈ³⁄₄,Ä,Ífpf%of□□[f^,ðŽw'è,μ□ĈšÖ□",i□é□#,íĈ<%oÉĈ^,àŽw'è,μ,Ü,·□B

手続き型



Žè'±,«Ĉ^,ð□éĈ³⁄₄,·,é□\•¶,í□CfL□[f□□[fh procedure ,Ü,½,í function
,íĈã,ÉŽ·ÉŽq,ðŽw'è,μ,È,ç,±,Æ^ÈšÖ,íŽè'±,«,Ü,½,íšÖ□",Ífwfbf_□[,Æ"- ,¶,Ä,·□BŽè'±
,«Ĉ^,i□éĈ³⁄₄,É,ÍfÍfvfVf#f",Æ,μ,ÄĈÄ,Ñ□o,μ<K-ñ,ðŽw'è,·,é,±
,Æ,à,Ä,«,Ü,·□BfftfHf<fg,íĈÄ,Ñ□o,μ<K-ñ,í□C□Ä"K%o»,ª—LĈø (ffftfHf<fg,í { \$O± } □ó'Ö)
,i□é□#,í register□□Ä"K%o»,ª-³Ĉø ({ \$O- } □ó'Ö) ,i□é□#,í pascal ,Ä,·□B

Žè'±,«Ĉ^,É,íŽŸ,ì 2 ,Ä,ÍjffefSfš,ª, ,è,Ü,·□B

- fOf□□[fof<Žè'±,«f|fCf"f^
- f□f□fbfhf|fCf"f^

Žè'±,«Ĉ^,í'í,ð•Ö,·šÖ□",í□éĈ³⁄₄,Ä,«,Ü,¹,ñ□B,½,¾,μ□CPointer Ĉ^,íšÖ□"Ĉ<%oÉ,ðŽg,Ä,ÄŽè'±
,«,Ü,½,íšÖ□",ÍfAfhfĈfX,ð•Ö,μ□C,»,íĈãŽè'±,«Ĉ^,ÉĈ^fLfffXfg,Ä,«,Ü,·□B
šÖ□"Ĉ<%oÉ,íŽŸ,í,ç,·,è,©,íĈ^,Ä,È,,Ä,í,È,è,Ü,¹,ñ□B

- •¶Žš-ñ
- žÄ□"
- □@□"
- char
- ~—□
- f|fCf"f^
- f†□[fU□['è< ,í=ñ<"

Žè'±,«Ĉ^,íĈÝš·□«

Žè'±,«Ĉ^,ªĈÝš·,Ä, ,é,½,B,É,íŽŸ,ìðĈĈ□,É□],í,È,,Ä,í,È,è,Ü,¹,ñ□B

- 2 ,Ä,íĈ^,í"- ,¶ĈÄ,Ñ□o,μ<K-ñ,ðŽg,±
- 2 ,Ä,íĈ^,í"- ,¶ĈÄ□",Ífpf%of□□[f^,ðŽ□,Ä
- 'í%ož,·,é^É'u,É, ,éfpf%of□□[f^,ª"- ,¶Ĉ^,Ä, ,é
- šÖ□",íĈ<%oÉĈ^,ª"- ,¶,Ä, ,é

'l nil ,í,·,x,Ä,ìŽè'±,«Ĉ^,ÆĈÝš·,Ä,·□B

f□f,: Žè'±,«Ĉ^,íĈÝš·□«,ð"»'è,·,é□é□#□Cfpf%of□□[f^-¼,í□d—v,Ä,í, ,è,Ü,¹,ñ□B

fOf□□[fof<Žè'±,«f|fCf"f^Ĉ^,Æf□f□fbfhf|fCf"f^Ĉ^,í'šĈÝ,É"ñĈÝš·,Ä,·□B

ŽQÆ03600

žè'±,«Ĉ^'è"

žè'±,«'!

Ĉ^f|fCf"f^

•i",ìĈ^fLfffXfg

Žè'±,«Ē^,ì-á03601

type

```
Proc = procedure;  
SwapProc = procedure(var X, Y: Integer);  
StrProc = procedure(S: string);  
MathFunc = function(X: Real): Real;  
DeviceFunc = function(var F: Text): Integer;  
MaxFunc = function(A, B: Real; F: MathFunc): Real;
```

var

```
P: SwapProc;  
F: MathFunc;
```

```
procedure Swap(var A, B: Integer); far;
```

var

```
Temp: Integer;
```

begin

```
Temp := A;  
A := B;  
B := Temp;
```

end;

```
function Tan(Angle: Real); far;
```

begin

```
Tan := Sin(Angle) / Cos(Angle);
```

end;

```
{ •ĭ□ P ,Æ F ,ÉŽŸ,ì'l,đ'ă"ü,μ,Ü,· }
```

```
P := Swap;
```

```
F := Tan;
```

```
{ P ,Æ F ,đŽg,Á,½ŽŸ,ìĒÄ,Ń□o,μ,í-LĒø,Ā,· }
```

```
P(I, J); { Swap(I, J) ,Æ"™%oož,Ā,· }
```

```
X := F(X); { X := Tan(X) ,Æ"™%oož,Ā,· }
```

fOf□□[fof<Žè'±,«f|fCf“f^ 03602

ŽQ□Æ =á

fOf□□[fof<Žè'±,«f|fCf“f^,í of object □β,È,μ,Å□éCE^{3/4,3},è,½Žè'±,«CE^,Å,·□BfOf□□[fof<Žè'±,«f|fCf“f^,íOf□□[fof<,ÈŽè'±,«,Ü,½,ÍŠÖ□”,đŽQ□Æ,Å,«□CfOf□□[fof<,ÈŽè'±,«,Ü,½,ÍŠÖ□”,íAfhfCEfX,đŠi”[.,é|fCf“f^,Æ,μ,ÄfR□[fh%o»,³,ê,Ü,·□B

ŽQÆ03603

f\fbfhfjfc“f^

Žè'±,«Ē^

—á03604

type

TProcedure = **procedure**;

TStrProc = **procedure**(const S: **string**);

TMathFunc = **function**(X: Double): Double;'

Žè'±,«'l03605

ŽQ□Æ —á

Žè'±,«Ĉ^•i□",É,íŽè'±,«'l,đ'ă"ü,Ā,«,Ü,·□B

Žè'±,«'l,íŽÿ,ì,ç,,é,©,Ā,·□B

- 'l nil
- Žè'±,«Ĉ^,ì•i□"ŽQ□Æ
- Žè'±,«,Ü,½,íŠÖ□",íŽ^-•ÉŽq
- f□\fbfhŽw'èŽq

Žè'±,«,Ü,½,íŠÖ□",đŽè'±,«'l,Æ,μ,Ä□éĈ¾,·,é,Æ□Ĉ'è□"□éĈ¾,Æ,Ý,È,³,è,Ü,·□B

'l,^a nil ,íŽè'±,«•i□",đŽè'±,«•¶,Ü,½,íŠÖ□"ĈÄ,Ñ□o,μ,ĀŽg,κ,ÆĈ<%oÊ,ÍfGf%o□[É,È,è,Ü,·□Bnil
,íŽè'±,«•i□",É'l,^a'ă"ü,³,é,Ā,ç,È,ç,±,Æ,đ^Ó-;μ,Ü,·□Bnil ,íŽè'±,«•i□",^aŠÖ—^,·,éŽè'±
,«•¶,Ü,½,íŠÖ□"ĈÄ,Ñ□o,μ,đŽg,κ□é□‡,í□CŽÿ,ÍfefXfg,^a•K—v,Ā,·□B@ %o%oŽŽŽq,Í P
,^aĈÄ,Ñ□o,³,é,é,ì,Ā,Í,È,fefXfg,³,é,é,±,Æ,đŽ,μ,Ü,·□B

if @P <> nil then P(I, J);

Žÿ,ìĈ^,íŽè'±,«,ÆŠÖ□",íŽè'±,«'l,Æ,μ,ĀŽg,ì,Ü,¹,ñ□B

- •W□€
- flfXfg
- f□\fbfh
- fCf"f%ofCf"

•W□€Žè'±,«,Æ•W□€ŠÖ□",í'¼□Ü,íŽg,ì,Ü,¹,ñ,^a□Ĉ'î□^•û-@,^a, ,è,Ü,·□B•W□€Žè'±

,«,Ü,½,íŠÖ□",đŽè'±,«'l,Æ,μ,ĀŽg,κ,É,í□C□V,μ,çŠÖ□",Ü,½,íŽè'±

,«,đ□éĈ¾,μ□C,»,Íf□fCf"f{fffB,Ā•W□€Žè'±,«,Ü,½,íŠÖ□",đĈÄ,Ñ□o,³,È,,Ā,Í,È,è,Ü,¹,ñ□B

ŽQÆ03606

Žè'±,«Ĉ^

Ĉ^,ìĈÝŠ·□«

Ž®,Ā,ìŽè'±,«Ĉ^,ìŽg,č•û

—á03608

```
{ •ŕŽš—ňĀ^,l'è<` }
```

const

```
LineLen = 79;
```

type

```
Name = string[25];
```

```
Line = string[LineLen];
```

ŽQÆ03609

string (-\-ñĀê)

•ŕŽš-ñ%%o%oŽŽžq

•ŕŽš-ñĀ^'è□"

Ā^,ìĀÝš·□«

'Z,č•ŕŽš—ňĀ^03610

žQŕĀ •ŕŽš—ňĀ^

'Z,č•ŕŽš—ňĀ^,ìĀéĀ¾,í 1`255 •ŕŽš,ìĀ'á',đŽw'è,μ,Û,·ŕB'Z,č•ŕŽš—
ňĀ^,ì•Īŕ",É,ìĀC"@"I,È',³,ª 0ŕ`ĀéĀ¾,³,è,½Ā'á',ì•ŕŽš—ň,đŠi"[Ā,«,Û,·ŕB

'è<ŕĪ,ŕ,ìĀ^ ShortString ,ìĀ'á',ª 255 •ŕŽš,ì'Z,č•ŕŽš—ňĀ^,đ•\,μ,Û,·ŕB
'Z,č•ŕŽš—ňĀ^•Īŕ",ªŕè—L,·,é<L%ŕ^æ,ìfŕCfŕŕ",ì'Z,č•ŕŽš—ňĀ^,ìĀ'á',É 1 ,đ
%ŕĀ,ì,½,à,ì,Ā,·ŕB

'Z,č•ŕŽš—ňĀ^•Īŕ",É•ŕŽš—ň'ì,đ'ã"ü,·,éĀĀŕŕC,»,"ì'Z,č•ŕŽš—
ňĀ^•Īŕ",ìĀéĀ¾,³,è,½Ā'á',æ,è•ŕŽš—ň'ì,ª',·,è,ìĀC,»,"ì•ŕŽš—ň'ì,ìĀŕ,èŽì,Ā,ç,è,Û,·ŕB
'Z,č•ŕŽš—ňĀ^•Īŕ",É,ì"YŽšŽ@,đ 1 ,Ā,¾,·,t,·,ç,è,Û,·ŕB"YŽšŽ@,ì'ì,ìĀCŕ`N (N ,ì'Z,č•ŕŽš—
ň,ìĀéĀ¾,³,è,½Ā'á',) ,ì"ì'ì,É,È,·,è,ì,È,è,Û,¹,ňŕB'Z,č•ŕŽš—

ň,É"YŽš,đ•t,·,ĀfĀfNfZfX,³,è,é•ŕŽš,ìĀ^,ì Char ,Ā,·ŕB•ŕŽš—ň,ìĀŕ%ŕ,ì•ŕŽš,ì"YŽš,ì 1
,Ā,·ŕB"YŽš 0 ,ì—v'f,ì,»,"ì•ŕŽš—ň,ì"@"I,È',³,đ•ŪŽŕ,μ,Û,·ŕB'Z,č•ŕŽš—ň,ìĀĀŕŕCLength(S) ,ì
Ord(S[0]) ,Ā"ŕ,ŕ,Ā,·ŕB'Z,č•ŕŽš—ň,ì 0 "Ō-Ū,ì—v'f,É'ì,đ'ã"ü,·,é,Ā•ŕŽš—
ň,ì"@"I,È',³,ª,ì,è,Û,·,ªŕCfRf"fpfCf%ŕ,ì,»,"ì'ì,ª•ŕŽš—ň,ìĀéĀ¾,³,è,½Ā'á',æ,èŕŕ,³,ç,©,ç,ŕ
,©,đ'²,x,Û,¹,ňŕB'Z,č•ŕŽš—ň,ÉĀ»ŕŕ,ì"@"I,È',³,đ',ì,Ā"YŽš,ª•t,·,ç,è,Ā,ç,é%ŕĀ"\ŕ«,à, ,è,Û,·ŕB,»
,ìĀĀŕŕ,É"ç,ŕŕŕ,³,è,é•ŕŽš,ì'ì,ì—ç'è<,Ā, ,èŕĀĀ»ŕŕ,ì',³,đ',ì,½•ŕŽš'É'u,Ō'ã"ü,μ,Ā,àŕC'Z,č•ŕŽš—
ňĀ^•Īŕ",ìŽĀŕŕ,ì'ì,É%ŕe<ç,ì, ,è,Û,¹,ňŕB

'Z,č•ŕŽš—ňĀ^•Īŕ",É,ì•Wŕ€ŠŌŕ",ì Low ,Ā High ,ªŽg,ì,Û,·ŕB,»,"ìĀĀŕŕCLOW
,ìfŕŕ,đ•Ō,μŕCHigh ,ì'Z,č•ŕŽš—ň,ìĀéĀ¾,³,è,½Ā'á',đ•Ō,μ,Û,·ŕB

ŽQÆ03611

•ŕŽš—ňĚ^

‘,č•ŕŽš—ňĚ^

string (—\—ňĚê)

ŽQÆ03613

•ŕŽš—ňĚ^

'Z,č•ŕŽš—ňĚ^

string (—\—ňĚê)

fkf<,Åŕl,í,é•ŕŽš—ň

ŽQÆ03615

'.,ç•¶Žš—ňĚ^

'Z,ç•¶Žš—ňĚ^

string (-\-ňĚê)

ŽQÆ03617

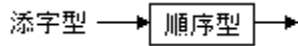
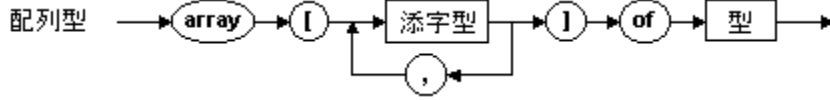
Ń\č%o»Ā^'èŃ"

Ā^,ĭĀÝŠ·Ń«

"z-ñĀ^03618

ŽQĀĒ —á □\ĉ%o»Ā^

"z-ñ,í^èŽŸĀ³,Ü,½,í'½ŽŸĀ³,íRf"feĭ,Ā□C"~,ĶĀĀ,í•i□",í•i□",đ•ŮŽ□,μ,Ů,·□B"z-ñ,íŠe•i□",í"z-ñ-¼,Āfĉf"ffbfNfX,đŽg,Ā,ĀŽQ□Ā,Ā,«,Ů,·□Bfĉf"ffbfNfX,í [] ,Ā^í,ñ,ĀŽw'è,μ,Ů,·□B



"z-ñĀ^,đŽw'è,·,é,É,íRf"fpfĉf%o,É 2 ,Ā,í□î•ñ,đ-^,í,È,,Ā,í,È,è,Ů,¹,ñ□B

- —v'f,í□",đŽw'è,·,é"z-ñ,í□î~fĉf"ffbfNfXĀ^
- Šî-{Ā^

"z-ñ"à,í—v'f,í□",íŠefĉf"ffbfNfXĀ^,í'l,í□",í□í,É,È,è,Ů,·□B

"z-ñ,í—v'f,ÉfĀfNfZfX,·,é,É,í□C"z-ñŽ~•ÉŽq,É [] ,Ā^í,ñ,¾fĉf"ffbfNfX'l,đ%oĀ,í,Ů,·□BŽŸ,í•Ķ,í"z-ñ,í 3 "Ō-Ů,í—v'f,ÉfĀfNfZfX,μ,Ů,·□B

array [3] ;

"z-ñ,ífĉf"ffbfNfXĀ^,í%o°Ā,Ā□āĀ,đ•Ō,·,É,í□C•W□€ŠŌ□" Low ,Ā High ,đŽg,ĉ□C"z-ñĀ^Ž~•ÉŽq,Ů,½,í"z-ñĀ^,í•i□"ŽQ□Ā,đŽw'è,μ,Ů,·□B

'½ŽŸĀ³"z-ñĀ^

"z-ñ,íRf"fi□[fi"fgĀ^,à,Ů,½"z-ñ,Ā,·,é□ê□□ĀĀ<%oĒ,đ"z-ñ,í"z-ñ,Ā,μ,Ā□C,Ů,½,í 1 ,Ā,í'½ŽŸĀ³"z-ñ,Ā,μ,Ā^μ,í,Ů,·□BŽŸ,É—á,đŽí,μ,Ů,·□B

array [Boolean] of array [1..10] of array [Size] of Real

fRf"fpfĉf%o,í,±,é,đŽŸ,Ā"~,Ķ,æ,ɤ,É%ođŽβ,μ,Ů,·□B

array [Boolean, 1..10, Size] of Real

'½ŽŸĀ³,í"z-ñ,đ□éĀ¾,·,é□ê□□C"z-ñ"à,í—v'f,í□îĀv□",íŠefĉf"ffbfNfXĀ^,í'l,í□",í□í,É,È,è,Ů,·□B

fĉf"ffbfNfX,¾f[fi□,©,ĉŽn,Ů,é"z-ñ

fĉf"ffbfNfX,¾f[fi□,©,ĉŽn,Ů,é"z-ñ,í"z-ñ□éĀ¾,Ā□Ā□%o,í—v'f,Éfĉf"ffbfNfX,Ā,μ,Āf[fi□,đŠ,,è"-,Ā,é,±,Ā,É,æ,Ā,Ā□éĀ¾,μ,Ů,·□BŽŸ,É—á,đŽí,μ,Ů,·□B

array [0..5] of Char

fĉf"ffbfNfX,¾f[fi□,©,ĉŽn,Ů,é•ĶŽš"z-ñ,ífkf<,Ā□í,í,é•ĶŽš-ñ,đŠi"[,·,é,½,β,ÉŽg,ĉ,Ů,·□Bfĉf"ffbfNfX,¾f[fi□,©,ĉŽn,Ů,é•ĶŽš"z-ñ,í PChar 'l,ĀĀĀŸŠ,É,È,è,Ů,·□B

"z-ñ,ì-á03619

"z-ñé¼,ì-á,đŽ!,μ,Û,·B

array[1..100] of Real { ŽÀ"CE^,ì 100 CEÀ,ì-v'f,đ•ÛŽ,À,«,é"z-ñ,đé¼,μ,Û,· }

ŽQÆ03620

array (—\ñĀê)

"z—ñĀ^'è"

fCf"ffbfNfX

fkf<,Å□,í,é•¶Žš—ñ

f□[fvf""z—ñfpf%of□□[f^

Ā^,ìĀÝš·□«

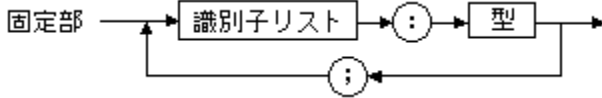
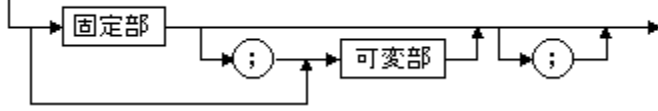
•ï"ŽQÆ

fCfR[fhCE^03621

ŽQAE —á □\¢%o>CE^

fCfR[fhCE^,łftfB[f<fh,łW,Ü,è,ÅCŠeftfB[f<fh,ł'Ù,È,éCE^,Å, ,A,Ä,à,©,Ü,¢,Ü,ł,ñB

フィールドリスト



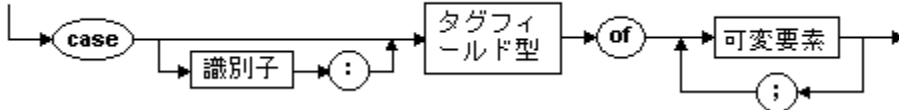
fCfR[fhCE^,łéCE¾,Å,łftfB[f<fh-¼,ÆftfB[f<fhCE^,đŠ,,è-„Ä,È,,Ä,ł,È,è,Ü,ł,ñB

fCfR[fhCE^,łCEÁ'è•",łCEÁ'èftfB[f<fh,łfŠfXfg,đŽw'è,μC,»,è,¼,è,łftfB[f<fh,É,łŽ•ÉŽq,ÆCE^,ªŽw'è,¾,è,Ü,łBŠeftfB[f<fh,ÉSÜ,Ü,è,éł•ñ,łł,É"~,ł•û-@,ÅŽæ,èło,¾,è,Ü,łB

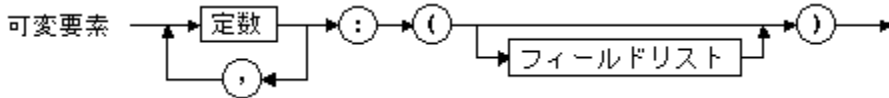
fCfR[fhCE^,ł%oÅ•ĩ•",ł•j□",łftfB[f<fhfŠfXfg,Éfłf,łŠ<óŠÔ,đ•ª"z,μC,±,è,É,æ,è•j□",ł•û-@,Åł•ñ,ÉfAfNfZfX,Å,«,Ü,łB

ŠeftfB[f<fhfŠfXfg,łfłf,łŠ"à,ł"~,ł<óŠÔ,Éfł□fo□fCfC,•,é%oÅ•ĩ—v'f,Å,łB,»,è,¼,è,ł%oÅ•ĩ—v'f,ł'è□",É,æ,Å,Ä<æ•É,¾,è□C,•,x,Ä,ł%oÅ•ĩ—v'f,ł,•,x,Ä,łftfB[f<fh,É,¢,Å,Å,àfAfNfZfX,Å,«,Ü,łB

可変部



タグフィールド型 → 順序型名 →



Še%oÅ•ĩ—v'f,łÅ'á 1 ,Å,ł'è□",É,æ,Å,ÄŽ•É,¾,è,Ü,łB,•,x,Ä,ł'è□",łftf□fN,Å,È,-,Ä,ł,È,¢,łC^foftfB[f<fhCE^,ÆCEÝŠ,ł□#□CE^,Å,È,,Ä,ł,È,è,Ü,ł,ñB

□È—ª%oÅ"\\,Éf^foftfB[f<fhŽ•ÉŽq,ł□CfCfR[fh,ł'Ç %oACEÁ'èftfB[f<fh□C,•,É,ł,łf^foftfB[f<fh,łŽ•ÉŽq,Å,łBfvf□Of%ofÉ ,łf^foftfB[f<fh,ł'ł,đŽg,Å,ÅfAfNfefBfu,È%oÅ•ĩ—v'f,đŽł,μ,Ü,łB

f^foftfB[f<fh,ª,È,¢łéł□Cfvf□Of%ofÉ,ł•É,łŠł□€,É,æ,Å,Ä%oÅ•ĩ•",đ'ł'đ,μ,Ü,łB

fłf,: fCfR[fh,ł%oÅ•ĩ•",łftfB[f<fh,É,ł□C'•,¢•łŽš—ñCE^,~,æ,NfofŠfAf"fgCE^,łŽg,ł,Ü,ł,ñB"—ł,ÉfCfR[fh,ł %oÅ•ĩ•",łftfB[f<fh,É,ł□C'•,¢•łŽš—ñCE^,Ü,¼,łfofŠfAf"fgCE^,đŠÜ,ł□\¢ %o>CE^,łŽg,ł,Ü,ł,ñB

fCfR[fh,Ö,lfAfNfZfX

fCfR[fh'S'ì,ÉfAfNfZfX,μ,½,èCŠeftfB[f<fhĈÂ•Ê,ÉfAfNfZfX,μ,½,è,Â,«,Ü,·BĈÂX,ìftfB[f<f
h,ÉfAfNfZfX,·,é,É,ÍCfCfR[fh-¼CfsfŠfIfhCftfB[f<fhŽ·ÊŽq,ð“ü—
Í,μ,Ü,·B,½,Æ,î,îŽŸ,ì,æ,α,É“ü—Í,μ,Ü,·B

TDateRec.Year

fCfR[fh'S'ì,ÉfAfNfZfX,·,é,É,ÍC**with** ·¶,ðŽg,ç,Ü,·B

ŽQÆ03622

fĈfR[fh.]fXfR[fv

Ĉ^,)ĈÝŠ·«

with •¶

fR[fh^,i-á03623

type

TDateRec = **record**

Year: Integer;

Month: 1..12;

Day: 1..31;

end;

type

TPerson = **record**

FirstName, LastName: **string**[40];

BirthDate: TDate;

case Citizen: Boolean **of**

True: (BirthPlace: **string**[40]);

False: (Country: **string**[20];

EntryPort: **string**[20];

EntryDate: TDate;

ExitDate: TDate);

end;

fNf%ofXCE^03624

ŽQ□Æ —á □\‘¢%o»CE^

fNf%ofXCE^,íCE^,β,ç,ê,½CEÁ□”,ìfRf“f□[fif“fg,©,ç,È,é□\‘¢,Á,·□B

fRf“f□[fif“fg,Æ,μ,Ä%oÁ“\,ÈfNf%ofX,íŽÿ,ì,à,ì,Á,·□B

- ftfB□[f<fh
- f□\fbfh
- fvf□fpfefB

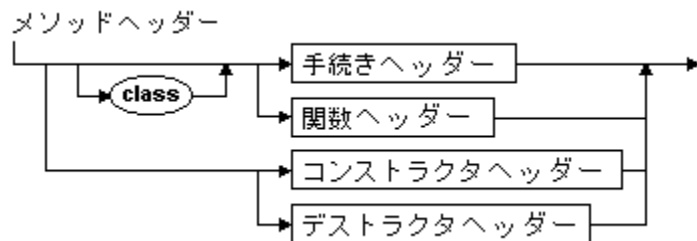
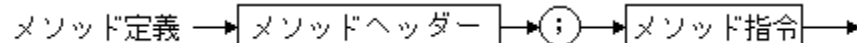
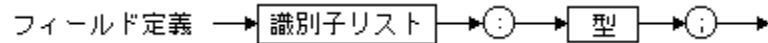
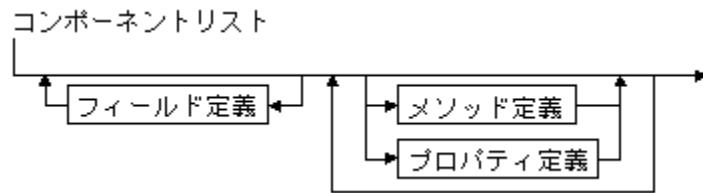
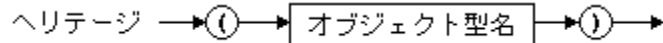
‘¼,ìCE^,Æ^Ù,È,è□CfNf%ofXCE^,ìfvf□fOf%of€,Ü,½,ìftfjfbfg,ì□Á,àŠO‘x

,ìfXfR□[fv,ìCE^□éCE¾•”,Ä,¾,~□éCE¾,Ä,«,Ü,·□B,μ,½,¾,Ä,Ä□CfNf%ofXCE^,ì•ì□□éCE¾•”,âŽè‘±

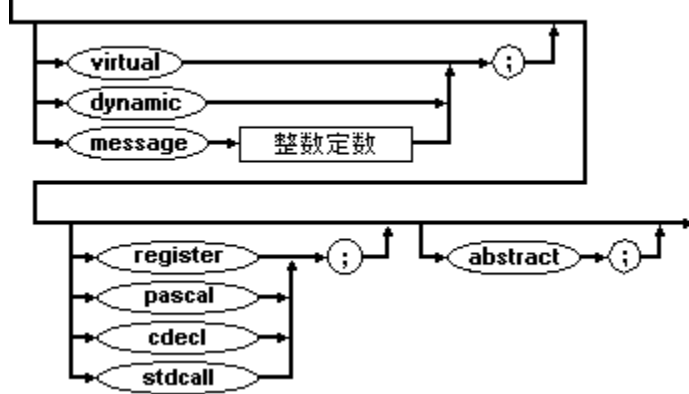
,«□CSÖ□□Cf□fbfhfuf□fbfN“à,Ä,ì□éCE¾,Ä,«,Ü,¹,ñ□B

fNf%ofXCE^,ì—\—ñCEê **class**, ðŽg,Á,Ä□éCE¾,¾,è□CfNf%ofX,ì“à—e,ð‘è<`,μ,Ü,·□BfNf

%ofX,ì□ufìfufWfFfNfgCE^□v,Æ,àCEÄ,ì,è,Ü,·□B2 ,Ä,ì—pCEê,ì‘ŠCEÝ,É‘u,«Š,ì%oÁ“\,Á,·□B



メソッド指令



メソッド指令の構造を示す図。仮想関数 (virtual)、動的バインディング (dynamic)、メッセージ (message) の各キーワードは、整数定数 (整数定数) とともに、セミコロン (;) で区切られる。また、register、pascal、cdecl、stdcall の各キーワードも、セミコロン (;) で区切られる。abstract キーワードは、別のセミコロン (;) で区切られる。

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セパレータ

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型

```

TFigure = class
:
end;
TRectangle = class(TFigure)
:
end;
TRoundRect = class(TRectangle)
:
end;
TEllipse = class(TFigure)
:

```


end;

TRectangle @^,l,l,TRectangle, TFigure, TObject @^,i•i",É'ã"ü,Å,«CfvfOf
%of€ŽÀs,İŠÔCTFigure @^,i•i",í nil ,É,É,é,©CTFigure, TRectangle, TRoundRect,
TEllipse ,İfCf"fXf^f"fX,Ü,½,Í TFigure ,i'¼,i%o^ÊfNf%ofX,İfCf"fXf^f"fX,Ö,İŽQÆ,É,È,è,Ü,·B

ŽQÆ03625

class (—\-ñĈĖĕ)

fNf%ofXf\fbfh

fRf“f|□[flf“fg,}fXfR□[fv

fRf“f|□[flf“fg,}‰oÂŽ<□«

ffftfHf<fg□ã^ÊflfufWfFfNfg

forward fNf%ofX□éĈĖ³/₄

flfufWfFfNfg,}fCf“fXf^f“fX‰o»

f\fbfh

TObject

flfufWfFfNfgĈ,ì—á03626

ŽŸ,ìR[]fh,ìfNf%ofX TField ,đ[]éĈ¾,μ,Û,·B

TField = **class**

private

X, Y, Len: Integer;

FName: **String**;

public

constructor Copy(F: TField);

constructor Create(FX, FY, FLen: Integer; FName: String);

destructor destroy; **override**;

procedure Display; **virtual**;

procedure Edit; **dynamic**;

protected

function GetStr: String; **virtual**;

function PutStr(S: String): Boolean; **virtual**;

private

procedure DisplayStr(X, Y: Integer; S: String);

public

property Name: **String** **read** GetStr **write** Buffer;

end;

TStrField = **class**(TField)

private

Value: PString;

public

constructor Create(FX, FY, FLen: Integer; FName: String);

destructor Destroy; **override**;

protected

function GetStr: String; **override**;

function PutStr(S: String): Boolean; **override**;

end;

TNumField = **class**(TField)

private

Value, Min, Max: Longint;

public

constructor Create(FX, FY, FLen: Integer; FName: String;
FMin, FMax: Longint);

function GetStr: String; **override**;

function PutStr(S: String): Boolean; **override**;

function Get: Longint;

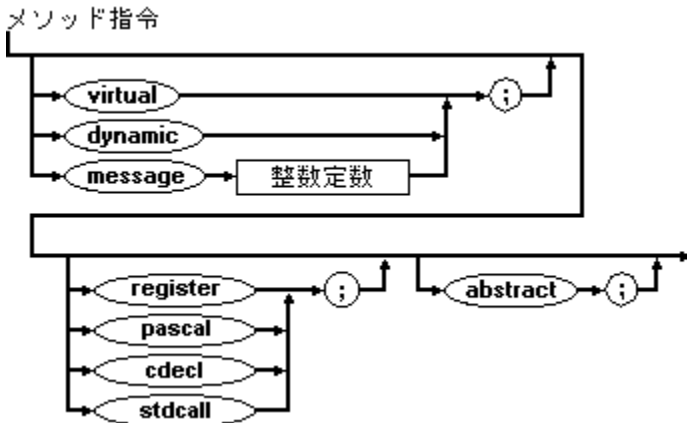
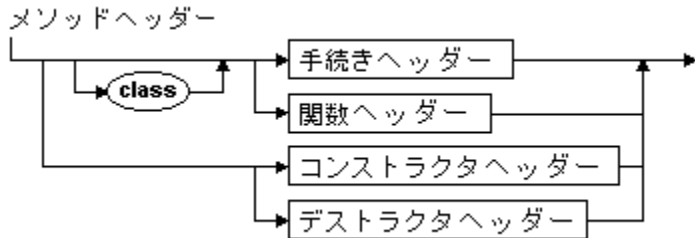
procedure Put(N: Longint);

end;

03627

Class types

Method definition structure: Method Header → ; → Method Statement



Method definition structure: Method Header → ; → Method Statement

Method definition structure: Method Header → ; → Method Statement

Method definition structure: Method Header → ; → Method Statement

Method definition structure: Method Header → ; → Method Statement

```

procedure ObjectType.Method(Param1, Param2: Integer);
begin
    ...
end; (* fbfh *)
    
```

Method definition structure: Method Header → ; → Method Statement

%o¼'zf\fbfh

"@“lf\fbfh

fNf%ofXf\fbfh

f\fo\lf%ofCfhŽw—ß

f\fbfZ\fw^—\fbfh

'ŠÛf\fbfh

fRf“fXfgf%ofNf^,ÆfffXfgf%ofNf^,ÍfufWfFfNfg,ì\¬,Æ”pŠü,ð§CEä,·,é“ÁŽè,Èf\fbfh,Å,·B

f\fbfh“à,Å,ÍCŠÖ“CEÄ,Ño,μ,Û,½,íŽè‘±,«•¶,ÅCEÀ'èf\fbfhŽw'èŽq,ðŽg,Á,Ä“Á'è,lf\fbfh,ð<N“®,Å,«,Û,·B,±,ìŽí,ìCEÄ,Ño,μ,íCEÄ'èf\fbfh,ì<N“®,ÆCEÄ,î,ê,Û,·B

ŽQÆ03628

fRf“fXfgf%oofNf^,ÆffXfgf%oofNf^

f□\fbfh,ì<N“®

f□\fbfh,ì□éÆ¾

f□\fbfh\|fCf“f^

f\ufWfFfNfgÆ^

ÆÀ`èf□\fbfh,ì<N“®

Self

—á03630

ŽŸ, ì, æ, ¼, È, f, f, u, f, W, f, F, f, N, f, g, C, E, ^, é, C, E, ¾, ð, 'z', è, µ, Ü, ·, □, B

```
type
  TFramedLabel = class(TLabel)
  protected
    procedure Paint; override;
  end;
Paint f, f, f, b, f, h, í, C, E, ä, ì, 'è, <` □, é, C, E, ¾, Å, Ž, À, C, E, », µ, È, ,, Ä, Í, È, è, Ü, ¹, ñ, □, B, ½, Æ, |, î, Ž, Ÿ, ì, æ, ¼, É, µ, Ü, ·, □, B
  procedure TFramedLabel.Paint;
begin
  inherited Paint;
  with Canvas do
  begin
    Brush.Color := clWindowText;
    Brush.Style := bsSolid;
    FrameRect(ClientRect);
  end;
end;
```


¼'zfbfh03631

ŽQÆ —á

¼'zfbfh,íŽÀsŽž,ÉfRf"fpfCf%,É,æ,Á,Ä%ðCE^,³,ê,Ü,·B,±
,lfvfZfX,ÍfCfCgfofCf"fffBf"fo,ÆCEÁ,í,ê,Ü,·BffftfHf<fg,Á,ÍCfRf"fxfgf%Nf^f
fbfh^ÉŠO,ì,·,x,Ä,Íffbfh,ªÄ"l,Ä,·,ªCffbfhéCE¾,É **virtual** Žw—ß,ðŠÜ,ß,é,±
,Æ,É,æ,Á,Äfbfh,ð%¼'z,ÉŽw'è,Ä,«,Ü,·B

¼'zfbfh,ªCEÄ,Ño,³,ê,é,ÆCffbfhCEÄ,Ño,µ,ÅŽg,í,ê,½Nf
%ofX,Ü,½,ÍfufWfFfNfg,ìŽÀÜ,ì (ŽÀsŽž,ì) CE^,É,æ,Á,ÄC,Ç,Íf
fbfhŽÀCE»,ð<N"®,·,é,©,ªCE^,Ü,è,Ü,·B

¼'zfbfh,ìf[f%ofCfh

fufWfFfNfgCE^,íã^ÉfufWfFfNfg,©,çEp³,·,éfbfh,í,Ç,é,Å,àf[f%ofCfh (Ä'è<`)
,Ä,«,Ü,·Bf[f%ofCfhfbfh,ÍfXfR[fv,í'è<`CE³fufWfFfNfg,ì,·,x,Ä,ì
%º^ÉfufWfFfNfg,É<y,Ó,©CfbfhŽ·ÉŽq,ðÄ'è<`,·,é,Ü,Ä,É,È,è,Ü,·B

¼'zfbfh,ìf[f%ofCfh,Ípf%of[f^,ì#~CCCE^C-
¼'O,ª³Sm,É^è'v,µCŠÖ"CE<%ºÉ,ìCE^,ª"Y,·,éé#í,»,ìCE^,àè'v,µ,È,-
,Ä,í,È,è,Ü,¹,ñBf[f%ofCfh,É,í **virtual** Žw—ß,ì,©,í,è,É **override**,ðŽw'è,µ,È,-
,Ä,í,È,è,Ü,¹,ñB

f: ¼'zfbfh,ðf[f%ofCfh,·,é—B^è,ì•û-@,í **override** Žw—ß,ðŽg,ª•û-@,Ä,·B
%º^ÉNf%ofX,ÍfbfhéCE¾,Ä"·,ÍfbfhŽ·ÉŽq,ðEp³f
fbfh,Æ,µ,ÄŽw'è,µC**Override** Žw—ß,ðŽw'è,µ,È,çé#Cµ,çf
fbfhéCE¾,É,æ,èEp³éCE¾,í%ºB,³,ê,Ü,·,ªCf[f%ofCfh,í,³,ê,Ü,¹,ñB

—á03632

ŽŸ, ì 2 , Â, ì%o^ÊfNf%ofX, í TFigure , ©, çCEp³, μ, ½ Draw f[]\fbfh, ðfi[]fo[]f%ofCfh, μ, Ü, ·□B

type

```
TRectangle = class(TFigure)
  procedure Draw; override;
  :
end;
TEllipse = class(TFigure)
  procedure Draw; override;
  :
end;
```

ŽŸ, ìfR[]fh, íŽÀ□sŽŽ, ÉŽÀ□Ù, ìCE^, ð•î%o», ·, éfNf%ofXCE^•î□", ðŽg, Á, Ä%o¼'zf[]\fbfh, ðCEÄ, Ñ□o, ·
—lŽq, ðŽ!, μ, Ä, ç, Ü, ·□B

var

```
Figure: TFigure;
```

begin

```
Figure := TRectangle.Create;
Figure.Draw;                               { TRectangle.Draw ,ðCEÄ,Ñ□o,μ,Ü,· }
Figure.Destroy;
Figure := TEllipse.Create;
Figure.Draw;                               { TEllipse.Draw ,ðCEÄ,Ñ□o,μ,Ü,· }
Figure.Destroy;
```

end;

ŽQÆ03633

“@“lf\fbfh

f\fbfh

fl[fo[f%ofCfhŽw—β

virtual (•W[€Žw—β)

flfufWfFfNfg,lfCf“fXf^f“fX%»03634

ŽQ□Æ

flfufWfFfNfgCE^,lfCf“fXf^f“fX,lfifufWfFfNfgCE^,É,æ,Á,Ä'è<^,³,ê,½fCEfCfAfEfg,đŽg,Á,Ä“®“l,É Š,,,è“-,Ä,ç,ê,½f□f,fŠfuf□fbfN,Ä,□B

flfufWfFfNfgCE^,lfCf“fXf^f“fX,í^ê”É,ÉflfufWfFfNfg,Æ,àCEÄ,î,ê,Ü,□BflfufWfFfNfgCE^,lŠeflfuf WfFfNfg,í,».,lfifufWfFfNfgCE^,Ä□éCE¾,³,ê,½ftfB□[f<fh,lfRfs□[,đ“ÆŽ©,ÉŽ□,¿,Ü,□,□Cf□f fbfh,ÉŠÖ,μ,Ä,í,□,×,Ä,ª“~ ,¶,à,ì,đ<α—L,μ,Ü,□B

flfufWfFfNfgCE^,l•i□”,É,í,».,lfifufWfFfNfgCE^,lfifufWfFfNfg,Ö,lŽQ□Æ,ªŠÜ,Ü,ê,Ü,□B•i□”,É,lfifu fWfFfNfg,».,l,à,ì,íŠÜ,Ü,ê,□CflfufWfFfNfg,Éí,μ,ÄŠ,,,è“-,Ä,ç,ê,½f□f,fŠfuf□fbfN,Ö,lf| fCf“f^,Æ,μ,Ä<@“\,μ,Ü,□BflfCf“f^•i□”,Æ“~ — l,É□C•i□”,lfifufWfFfNfgCE^•i□”,ª“~ ,¶lfifufWfFfNfg,đŽQ□Æ,Ä,«□C,Ü,½CE»□YflfufWfFfNfg,đŽQ□ Æ,μ,Ä,ç,È,ç,±,Æ,đŽ!,·l nil ,đŽ□,Ä,±,Æ,ª,Ä,«,Ü,□B

f□f: fl
fCf“f^•i□”,Æ,í^ù,È,è□CŽQ□Æ□æflfufWfFfNfg,ÖfAfNfZfX,·,é,½,β,ÉflfufWfFfNfgCE^•i □”,đ<tŽQ□Æ,·,é•K—v,í, ,è,Ü,¹,ñ□B,Ä,Ü,è□C“®“l,ÉŠ,,,è“- ,Ä,ç,ê,½fCEfR□[fh,iftfB□[f<fh,ÉfAfNfZfX,·,é,É,í□CPtr^ .Field ,Æ<L□q,μ,È,- ,Ä,í,È,è,Ü,¹,ñ,ª□CflfufWfFfNfg,lfRf“f|□[flf“fg,ÉfAfNfZfX,·,é,Æ,«,É,í ^ %%%ŽŽŽq,ª^Ä- Ù“l,ÉŠÜ,Ü,ê,é,½,β□C□\•¶,í’P,É Instance.Field ,É,È,è,Ü,□B

ŽQÆ03635

fRf“fXfgf%oofNf^,ÆffXfgf%oofNf^

“@“lf\fbfh

f\fbfh

%o¼'zf\fbfh

メソッド指定子

メソッド指定子

メソッド指定子の構文は、`メソッド名` または `変数参照` のいずれかである。



メソッド指定子は、`変数参照` または `メソッド名` のいずれかである。

メソッド指定子の構文は、`変数参照` または `メソッド名` のいずれかである。

with 子句は、`変数参照` または `メソッド名` のいずれかである。

メソッド指定子の構文は、`変数参照` または `メソッド名` のいずれかである。

ŽQÆ03637

ŠÖ"CEÄ,Ño,μ

f\fbfh,ìéCE¾

fp%of[f^

Žè'±,«•¶

CEÀ'èf\fbfh,ì<N"®

with •¶

ŽQÆ03639

ŠÖ"CEÄ,Ño,μ

f\Fbfh,ìéCE¾

f\ufWfFfNfgCE^

f\Fbfh,ìf\fo[f%ofCfh

Žè'±,«•¶

CEÀ'èf\fbfh,ì<N"®,ì—á03640

ŽŸ,ìfR[]fh,íCEÀ'èf\fbfh<N"®,đŽ!,μ,Ä,ç,Û,·□B,±,ìCEÀ'èf\fbfh<N"®,í\fbfh,đf[]fo[]f
%ofCfh,μ□Cf[]fo[]f%ofCfh,;éf\fbfh,ìfR[]fh,đÄ—~—p,μ,Û,·□B

constructor TShape.Create(AOwner: TComponent);

begin

inherited Create(AOwner);

 Width := 65;

 Height := 65;

 FPen := TPen.Create;

 FPen.OnChange := StyleChanged;

 FBrush := TBrush.Create;

 FBrush.OnChange := StyleChanged;

end;

fRf“f|□[f|f“fg,ì%oÂŽ<□«03641

ŽQ□Æ Class types

fRf“f|□[f|f“fgŽˆ•ÊŽq,ì%oÂŽ<□«,ÍŽˆ•ÊŽq,â□éCE¾,¾,ê,½fRf“f|□[f|f“fg•”,ì
%oÂŽ<’®□«,É,æ,Á,Ä□\$CEä,¾,ê,Û,·□B%oÂŽ<’®□«,É,í 5 ,Ä,ÌŽí—p,ª, ,è,Û,·□B

- f|fufŠfbVf...
- f|fufŠfbfN
- f|f|fefNfg
- f|f%ofCfx□[fg
- f|□[fgf□□[fvf#f“

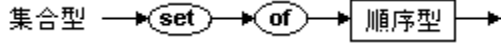
f|fufWfFfNfgCE^CE©□o,μ,ì’¼CEä,ìfRf“f|□[f|f“fgfŠfXfg,Á□éCE¾,¾,ê,½fRf“f|
□[f|f“fgŽˆ•ÊŽq,í□Cf|fufWfFfNfgCE^,ª { \$M+ } □ó’Ô,ÁfRf“fpfCf<,¾,ê,½□é□#□C,Û,½,í { \$M+ }
□ó’Ô,ÁfRf“fpfCf<,¾,ê,½fNf%ofX,©,ç”h□¶,·,é□é□#□CfpfufŠfbVf...,ì
%oÂŽ<’®□«,đŽ□,¿,Û,·□B,»ê^ÊŠO,ì□é□#□C,»ê,ç,ìfRf“f|□[f|f“fgŽˆ•ÊŽq,íf|fufŠfbfN,ì
%oÂŽ<’®□«,đŽ□,¿,Û,·□B

ŽQÆ03642

W+CE^03643

ŽQAE CE^

W+CE^,í“ ,¶+~CE^,lfufWfFfNfg,ìW+,Å,·B+W+CE^,ðéCE¾,·,é,É,Í—\—ñCê **set of**,É'±,¯,Šî—{CE^,ðŽw'è,μ,Ü,·B



W+CE^,ì'ì,ì'í,í“Á'è,ì+~CE^ (Šî—{CE^),ì,x,«W+,É,È,è,Ü,·B+W+CE^,ì%Å“\,È'ì,Šî—{CE^,ì%Å“\,È'ì,ì•”•a+W+,É,È,è,Ü,·B

W+CE^,ì•í“ ,í<ó,Ü,½,íW+,ì,·,×,Ä,ì'ì,ð•ÚŽ,Ä,«,Ü,·B,·,×,Ä,ìW+CE^,ì'ì [] ,ð•ÚŽ,Ä,«C,±,ì'ì,í<óW+,ÆCEÄ,î,ê,Ü,·B

Šî—{CE^,ì%Å“\,È'ì,ì“ ,í 256 CE^È%º,Ä,È,,Ä,í,É,ç,·CŠî—{CE^,ìÅ'â,ÆÅ¬,ì+~'ì,í 0 ,©,ç 255 ,ì'í“à,Ä,È,,Ä,í,É,è,Ü,¹,ñB

W+,ì”äŠr

A ,Æ B ,aW+flyf%of“fh,ìê+±C,±,ê,ç,ì”äŠr,É,æ,èŽŸ,ìCE<%ºÊ,a¶¬,³,ê,Ü,·B

- A = B ,í A ,Æ B ,a,Ü,Ä,½,““ ,¶f“fo[,ðŽ,Äê+¾,¯ True ,É,È,èC,» ,é^ÈŠO,ìê+ ,í A <> B ,Ä ,é
- A <= B ,í A ,ì,·,×,Ä,lf“fo[,a B ,lf“fo[,Ä,à ,éê+ ,É,¾,¯ True ,É,È,é
- A >= B ,í B ,ì,·,×,Ä,lf“fo[,a A ,lf“fo[,Ä,à ,éê+ ,É,¾,¯ True ,É,È,é

W+f“fo[lVfbfv,lfefXfg

ŠÖCEW%%ŽŽq,ì in ,ì+~CE^flyf%of“fh,ì'ì,aW+CE^flyf%of“fh,lf“fo[,Ä ,éê+ ,É True ,ð•Ô,μ,Ü,·B,» ,é^ÈŠO,ìê+ ,í False ,ð•Ô,μ,Ü,·B

ŽQÆ03644

‡~Ā^

ŠÖĀW%%ŽŽq

set (—\-ñĀê)

W‡%%ŽŽq

W‡Ā^'è"

Ā^,ìĀÝŠ·«

ftf@fCf<,iŽí—P03645

ŽQAE CE^

ftf@fCf<CE^,íüó,É•À,ñ,¼—v'f,lfV[fPf“fX,ÂCŠe—v'f,iŽŸ,ìCE^,ðœ,“C^Ó,ìCE^,Â\
□→,Â,«,Ü,·□B

- ftf@fCf<CE^
- ftf@fCf<CE^,ìRf“f[fj“fg,ðŽ,Â\‘ç%»CE^
- flufWfFfNfgCE^

ftf@fCf<CE^é¼,Â,í—v'f”,íY’è,μ,Ü,¹,ñ□B

ftf@fCf<é¼,©,ç of ,ìCEè,ÆCE^,ðÈ—ª,μ,½ê#Cftf@fCf<,íCE^,È,μftf@fCf<,É,È,è,Ü,·□B

•W€ftf@fCf<CE^,ì Text (,“,æ,Ñ TextFile) ,í’s^Ê,Â•Ò□→,³,ê,½•¶Žš,ðŠÜ,Pftf@fCf<,ð•\
,μ,Ü,·□B

ŽQÆ03646

file (-\-ñĚê)

Ě^,ìĚÝŠ·Ě«

CE^, ÌCEÝŠ·«03647

ŽQÆ

Ž®, âšÖCEW%%žž, Å, í 2 , Å, ÌCE^, ÌCEÝŠ·«, a—

v< , ³, ê, Û, ·BCE^, ÌCEÝŠ·«, í'ä"üCEÝŠ·«, í'O'ňðCE, Å, ·B

CE^, aCEÝŠ·, É, È, é, Ì, Í, Å'á, Å, àžŸ, Ì, ç, , ê, © 1 , Å, ÌðCE, a True , Ìê±, Å, ·B

- 2 , Å, ÌCE^, a" , ¶, Å, , é
- 2 , Å, ÌCE^, ažÅ"CE^, Å, , é
- 2 , Å, ÌCE^, a@"CE^, Å, , é
- ^ê·ù, ÌCE^, a¼·ù, Ì·"·a"íí, Å, , é
- 2 , Å, ÌCE^, a" , ¶fzfxfgCE^, Ì·"·a"íí, Å, , é
- 2 , Å, ÌCE^, aCEÝŠ·, Ìšî- {CE^, ðž, ÅW±CE^, Å, , é
- 2 , Å, ÌCE^, a" , ¶CEÅ" , ÌfRf"fl[f]fg, ðž, ÅfþbfN·¶žš—ňCE^, Å, , é
- ^ê·ù, ÌCE^, a·¶žš—ňCE^, Å¼·ù, a·¶žš—ňCE^CþbfN·¶žš—ňCE^CChar CE^, Ì, ç, , ê, ©, Å, , é
- ^ê·ù, ÌCE^, a Pointer , Å¼·ù, a"C^Ó, ÌfþCf"f^CE^, Å, , é
- 2 , Å, ÌCE^, aþNf%oFXCE^, Û, ½, ÌNf %oFXžQÆCE^, ÅC, ©, Å^ê·ù, ÌCE^, a¼·ù, ©, ç"h¶¶, µ, ½CE^, Å, , é
- ^ê·ù, ÌCE^, a PChar , Å¼·ù, a **array[0..X] of Char** , ÌCE`ž®, ÌfCf"fffþfNfX, ¶f[f], ©, çžn, Û, é·¶žš"z—ň, Å, , é
- 2 , Å, ÌCE^, a" , ¶CE^, ðžw, ·fþCf"f^, Å, , é ({\$T±} žw—ß, É, æ, èfþCf"f^, ÌCE^f`fþbfN, a—LCEø, Èê±, Ì, Ý)
- 2 , Å, ÌCE^, a" , ¶CE<%oÊCE^, a" , ¶CEÅ" , Ìþf%o f[f]^, ðž, ÌCþf%o f[f]^CE^šÖ, Å 1 'í 1 , Ì"^-ê« , ðž, Åžè±, «CE^, Å, , é
- ^ê·ù, ÌCE^, afofšfAf"fgCE^, ÅC¼·ù, a@"CE^CžÅ"CE^C·¶žš—ňCE^C, , é, ç, Ì~_—CE^, Ì, ç, , ê, ©, Å, , é

ŽQÆ03648
'ã"ü,ìŒÝŠ.ª«

'ä"ü,ìĀÉÝŠ·□«03649

ŽQ□Æ

'ä"ü•ŕ,â'lfpf%of□□[f^,ìŽó,~"n,μ,È,Ç,Å□C'l,ð%½,©,É'ä"ü,·,é,Æ,«,É,í'ä"ü,ìĀÉÝŠ·□«,ª—
v□,³,ê,Û,·□B

flfufWfFfNfgĀ^,í,·,x,Ä,ìĀ^ÊflfufWfFfNfgĀ^,Æ'ä"ü,ìĀÉÝŠ·□«,ðŽ□,ì,Û,·□B

ŽŸ,ì,ç,·,ê,©,ª True ,ìĀê#□CT2 Ā^,ì'l,í T1 Ā^,Æ'ä"ü,ìĀÉÝŠ·□«,ª ,è,Û,· (·,È,í,ì T1 := T2 ,ª-
%oÄ,³,ê,Û,·)□B

- T1 ,Æ T2 ,ª"~^è,ìĀ^,Å□C,Ç,ì,ç,àftf@fCf<Ā^,Å,í,È,□C□\`ç
%o»fĀfxf<"à,Éftf@fCf<Ā^fRf"f[lfif"fg,ðŽ□,Å□\`ç%o»Ā^,Å,à,È,ç
 - T1 ,Æ T2 ,ªĀÉÝŠ·,ìĀ#~Ā^,Å□CT2 Ā^,ì'l,ª T1 ,ì'l,ì"í"í"à,Å, ,é
 - T1 ,Æ T2 ,ªŽÀ□"Ā^,Å□CT2 ,ì'l,ª T1 ,ì'l,ì"í"í"à,Å, ,é
 - T1 ,ªŽÀ□"Ā^,Å□CT2 ,ª□@□"Ā^,Å, ,é
 - T1 ,Æ T2 ,ª•ŕŽš—ñĀ^,Å, ,é
 - T1 ,ª•ŕŽš—ñĀ^,Å□CT2 ,ª Char Ā^,Å, ,é
 - T1 ,ª•ŕŽš—ñĀ^,Å□CT2 ,ªfpfbfN•ŕŽš—ñĀ^,Å, ,é
 - T1 ,ª'·,ç•ŕŽš—ñĀ^,Å□CT2 ,ª PChar Ā^,Å, ,é
 - T1 ,Æ T2 ,ªĀÉÝŠ·□«,ì, ,éfpfbfN•ŕŽš—ñĀ^,Å, ,é
 - T1 ,Æ T2 ,ªĀÉÝŠ·□«,ì, ,é□W□#Ā^,Å□CT2 Ā^,ì'l,ì,·,x,Ä,ìf□f"fo□[,ª T1 ,ì'l,ì"í"í"à,Å, ,é
 - T1 ,Æ T2 ,ªĀÉÝŠ·□«,ì, ,éf|fCf"f^Ā^,Å, ,é
 - T1 ,ªfNf%ofXĀ^,Å□CT2 ,ª T1 ,©,ç"h□ŕ,μ,½fNf%ofXĀ^,Å, ,é
 - T1 ,ªfNf%ofXŽQ□ÆĀ^,Å□CT2 ,ª T1 ,©,ç"h□ŕ,μ,½fNf%ofXŽQ□ÆĀ^,Å, ,é
 - T1 ,ª PChar Ā^,Å T2 ,ª•ŕŽš—ñ'è□"Ā, ,é
 - T1 ,ª PChar ,Å T2 ,ª **array**[0..X] of Char ,ìĀ`Ž® ,ìfCf"fffbfNfX,ªf[f□,©,çŽn,Û,é•ŕŽš"z—
ñ,Å, ,é ({X±} ,É,æ,èŠg'f□\•ŕ,ª—LĀø,È□ê# ,ì,Y)
 - T1 ,Æ T2 ,ªĀÉÝŠ·□«,ì, ,éŽè'±,«Ā^,Å, ,é
 - T1 ,ªŽè'±,«Ā^,Å□CT2 ,ª T1 ,Æ"~ ,ŕĀ<%oĒĀ^,Æ"~ ,ŕ□" ,lfpf%of□□[f^,ðŽ□,ì□Cfpf
%of□□[f^Ā^ŠÔ,Å 1 'í 1 ,ì"~^è□«,ðŽ□,ÅŽè'±,«Û,½,íŠÔ□"Ā, ,é
 - T1 ,ªfofŠfAf"fgĀ^,Å□CT2 ,ª□@□"Ā^ĀČŽÀ□"Ā^Ā•ŕŽš—ñĀ^□C~_—□Ā^,ì,ç
,·,ê,©,Å, ,é
 - T1 ,ª□@□"Ā^□ČŽÀ□"Ā^Ā•ŕŽš—ñĀ^□C~_—□Ā^,ì,ç,·,ê,©,Å□CT2
,ªfofŠfAf"fgĀ^,Å, ,é
- 'ä"ü,ìĀÉÝŠ·□«,ª•K—v,È□ê-È,Å^ÈĀ,ìŠfXfg,ì,Ç,ìĀ€-Ú,à True ,Å,È,ç□ê#□CfRf"fpfCf<ŽžGf
%o□[,ª"ŕ,μ,Û,·□B

ŽQÆ03650
CE^,ICEÝŠ·«

fNf%oXZQAECE^03651

žQAE —á flfufWfFfNfgCE^

fNf%oXZQAECE^,Á,íCfNf%oX,É'í,μ,Ä'¼Ú,í'€□,áŽÀ□s,Ä,«,Ü,·□B,±,é,íNf
%oX,íCf"fxf^f"fx,É'í,μ,Ä,í'€□,áŽÀ□s%oÄ"\,ÉfNf%oXCE^,Æ,í'íAE"l,Ä,·□BfNf
%oXZQAECE^,íCf^fNf%oX,Ü,½,íCf^fNf%oXCE^,Æ,àCEÄ,í,é,Ü,·□B

fNf%oXZQAECE^,í'è%o°,íCé□±,É-ð—\$,¿,Ü,·□B

- ŽÀ□Ú,íCÉ^,áRf"fpfCf<Žž,ÉCE^,Ü,Ä,Ä,ç,È,çflfufWfFfNfg,ð□□-,·,é,½,β,É%o¼'zfRf"fxfgf
%oNf^,Æ^é□□,ÉŽg,π□é□±
- ŽÀ□Ú,íCÉ^,áRf"fpfCf<Žž,ÉCE^,Ü,Ä,Ä,ç,È,çfNf%oX,É'í,μ,Ä'€□,ðŽÀ□s,·,é,½,β,ÉfNf%oXf□\f
fbfh,Æ^é□□,ÉŽg,π□é□±
- is %o%oZZZq,í%oE'α,íflfyf%of"fh,Æ,μ,Ä□CfRf"fpfCf<Žž,ÉCE^,Ü,Ä,Ä,ç
É,çCE^,Ä"@"ICÉ^f`fffbfN,ðŽÀ□s,·,é□é□±
- as %o%oZZZq,í%oE'α,íflfyf%of"fh,Æ,μ,Ä□CfRf"fpfCf<Žž,ÉCE^,Ü,Ä,Ä,ç
É,çCE^,Éf`fffbfN•t,«CE^flfffXfg,ðŽÀ□s,·,é□é□±

fNf%oXZQAECE^,íCéCE¾,í—\-ñCEé **class of** ,ÉfNf%oXCE^Ž^-Éžq,ð'±,·,Ä□□-,μ,Ü,·□BŽÿ,É
—á,ðŽ!,μ,Ü,·□B

type

```

TComponent = class (TPersistent)
:
end;
TComponentClass = class of TComponent;
TControl = class (TComponent)
:
end;
TControlClass = class of TControl;

```

var

```

ComponentClass: TComponentClass;
ControlClass: TControlClass;

```

,±,íCéCE¾,Á,íCCTComponentClass,íTComponent fNf%oX,Ü,½,íTComponent
,©,ç"□□,·,é"C^Ó,íNf%oX,ðŽQAE,Ä,«,éCE^,Æ,μ,Ä'è<` ,³,é□CTControlClass,íTCotrol fNf
%oX,Ü,½,íTControl,©,ç"□□,·,é"C^Ó,íNf%oX,ðŽQAE,Ä,«,éCE^,Æ,μ,Ä'è<` ,³,é,Ü,·□B

fNf%oXCE^Ž^-Éžq,íí%ož,·,ÉfNf%oXZQAECE^,í'l,Æ,μ,Ä<@"\,μ,Ü,·□B,½,Æ,í,í□C,Ü,©,í—
p"r^ÈŠO,É□CTComponent Ž^-Éžq,íTComponentClass CE^,í'l,Æ,μ,Ä<@"\,μ□CTControl
Ž^-Éžq,íTControlClass CE^,í'l,Æ,μ,Ä<@"\,μ,Ü,·□B

fNf%oXZQAECE^,í'l,í"C^Ó,íCá^ÉfNf%oXZQAECE^,Æ'ä"ü,íCEÝŠ·□« ,á, ,è,Ü,·□B,μ,½,á,Ä,Ä□Cfv
f□fOj%oF€,íŽÀ□s't,ÉfNf%oXZQAECE^·í□,í□C,»,é,á'è<` ,³,é,½'í□Ú,íNf%oX,á□C,»,íNf
%oX,í"C^Ó,í%o°^ÉfNf%oX,ðŽQAE,Ä,«,Ü,·□B□á<L,íCéCE¾,É□,α,Æ□CŽÿ,í2 ,Ä,í'ä"ü·□,í□C

```

ComponentClass := TComponent;      { —LCEø }
ComponentClass := TControl;        { —LCEø }

```

—¼•ú,Æ,à—LCEø,Á,·,á□CŽÿ,í2 ,Ä,í'ä"ü·□,Á,í□C

```

ControlClass := TComponent;        { -³CEø }
ControlClass := TControl;          { —LCEø }

```

2 "Ô-Ú,í•□,¾,·,á—LCEø,Á,·□B□Á□%o,í•□,áGf%o□,É,È,é,í,í□CTComponent ,áTControl ,í
%o°^É,Ä,È,ç,½,β□CTControlClass CE^,í'l,É,È,ç,É,ç,©,ç,Ä,·□B

fNf%oXZQAECE^·í□,í'l **nil** ,ð,Æ,é,±,Æ,á,Ä,«,Ü,·□Bnil ,í□C·í□",áCE»□YfNf%oX,ðŽQAE,μ,Ä,ç

,È,ç,±,Æ,đŽ!,μ,Û,·□B

fNf%ofX,í•K, (TObject , ©,ç) f□\fbfhŠÖ□” ClassType (flfufWfFfNfg,lfNf
%ofX,Ö,ìŽQ□Æ,đ•Ô,ŠÖ□”) ,đÇep□³,μ,Û,·□BClassType ,Å•Ô,³,ê,é'l,ìÇ^,í TClass ,Å□C,»,ê,í
class of TObject ,Æ,μ,Ä□éÇ¾,³,ê,Û,·□B,Å,Û,è□CClassType
,Å•Ô,³,ê,é'l,í□CÇ^flffXfg,É,æ,Á,Ä,»,ìŽg—p,ì'O,É□C,æ,è<ì'l,È
%o^Ê,ìÇ^,É,μ,È,¯,ê,í,È,ç,È,ç□é□‡,ª, ,é,±,Æ,đ^Ó-i,μ,Û,·□BŽŸ,É—á,đŽ!,μ,Û,·□B

if Control <> **nil** **then**
 ControlClass := TControlClass(Control.ClassType) **else**
 ControlClass := **nil**;

ŽQÆ03652
class (—\-ñŒé)

—á03653

type

```
{TComponentRef Ą^,ì•ï",đŽÀsžž,ÉŸ'è,μ TComponentClass ,Ü,½,Í,»,ì%º^ÊfNf  
%ofX,đŽQĀ,Ā,«,Ü,·}
```

```
TComponentRef = class of TComponentClass;
```

var

```
TRef: TComponentRef;
```

```
NewComponent: TComponent;
```

...

```
TRef := TButton; {TRef ,Í TButton fNf%ofX,ì-¼'O,žg—p%ºĀ"\,ÈéŸ,Ā,Í,Ç,±  
,Ā,àžg,!,é,æ,ŕ,É,È,è,Ü,·}
```

```
NewComponent := TRef.Create; {TRef ,Í,±,±,Ā,ÍV,μ,ϕ TButton  
,đŸŸ-,·,é,½,ß,Éžg,í,ê,Ā,ϕ,Ü,·}
```

...

fkf<,Á□l,í,é•¶Žš—ñ03654

ŽQ□Æ

Delphi ,í□C□ufkf<,Á□l,í,é•¶Žš—ñ□v,ÆCEÄ,î,ê,é•¶Žš—ñ,ìfNf%ofX,ðfTf|□[fg,μ,Ä,ç,Ü,·□Bfkf<,Á□l,í,é•¶Žš—ñ,í□CC/C++ fvf□fOf%of~f“fOCE¾CEê,¨,æ,Ñ Windows Ž©‘í,Á,à□L,—p,ç,ç,ê,Ä,ç,Ü,·□B Delphi ,ìfkf<,Á□l,í,é•¶Žš—ñ,ìfTf|□[fg,Æ SysUtils ftfjfbfg,ì•¶Žš—ñ□^—□ŠÖ□”,ð—~—p,·,ê,í□C¾¼,ìCE¾¼CEê,â Windows API ,Æ—e^Ö,ÉfCf“f^□[ftfF□[fX,ð,Æ,é,±,Æ,ª,Á,«,Ü,·□B

fkf<,Á□l,í,é•¶Žš—ñ,Æ,í□H

fkf<,Á□l,í,é•¶Žš—ñ,í□C fkf<^ÈŠO,ì•¶Žš,ì•Ä,Ñ,ì□ÁCEã,É NULL (#0) ,ª•t,ç,½,à,ì,Á,·□B Object Pascal ,ì•¶Žš,Æ,í^Ü,È,è□Cfkf<,Á□l,í,é•¶Žš—ñ,É,í“Æ—š,μ,½‘,³fCf“fWfP□[f^,í, ,è,Ü,¹,ñ□Bfkf<,Á□l,í,é•¶Žš—ñ,Á,í□C□Á□%,ì NULL ,ª•¶Žš—ñ,ì□ÁCEã,ðŽ!,μ,Ü,·□B

fkf<,Á□l,í,é•¶Žš—ñ,ìŽg,ç•û

fkf<,Á□l,í,é•¶Žš—ñ,í□Cf[f□,©,çŽn,Ü,é□®□”,ðfCf“ffbfNfX,ìCE^,Æ,·,é•¶Žš”z—ñ,Æ,μ,ÄŽŸ,ìCE`Ž®,ÁŠi”[,³,ê,Ü,·□B

array [0..X] of Char

X ,í□³,ì□®□”l,Á,·□B

,±,ì”z—ñ,í□CfCf“ffbfNfX,ªf[f□,©,çŽn,Ü,é•¶Žš”z—ñ,Æ,μ,ÄŽQ□Æ,³,ê,Ü,·□B

fkf<,Á□l,í,é•¶Žš—ñ,ìŽŸ,ì 2 ,Á,Á•¶Žšf|fCf“f^,ðŽg,ç,Ü,·□B

- •¶Žš—ñfŠfef%of<
- •¶Žš”z—ñ

fkf<,Á□l,í,é•¶Žš—ñ,Æ•W□€Žè‘±,«

ŽŸ,ì•W□€Žè‘±,«,ðfCf“ffbfNfX,ªf[f□,©,çŽn,Ü,é•¶Žš”z—ñ,É“K—p,Á,«,Ü,·□B

- Read
- Readln
- Str
- Val

ŽŸ,ìŽè‘±,«,í•¶Žšf|fCf“f^,É,à“K—p,Á,«,Ü,·□B

- AssignFile
- Rename
- Val
- Write
- Writeln

ŽQÆ03655

•ŕŽš—ňĀ^

•ŕŽšf|fCf“f^,ì“YŽš•t,-

fƒƒ<,Åŕl,í,é•ŕŽš—ň,ìŠÖŕ”

‘,ç•ŕŽš—ň,Æfƒƒ<,Åŕl,í,é•ŕŽš—ň,ìŕ—ŕÝ

fƒƒ<,Åŕl,í,éfŕfCfh•ŕŽš—ň

ŽQÆ03657

•ŀŽšŀŀCf“f^,Æ•ŀŽš”z—ñ

•ŀŽšŀŀCf“f^,ŀCf“ffbfNfX•t,̄

fkf<,Åŀŀ,í,é•ŀŽš—ñ

—á03658

var

P: PChar;

begin

P := 'Hello world...';

end;

• Žš|fCf“f^,Æ•Žš”z—ň03659

ŽQÆ —á Null-terminated strings

fCf“ffbfNfX,f[f, ©,çŽn,Ü,é•Žš”z—ň,í PChar_CE^,ÆCEÝŠ·«,, ,è,Ü,·B,±,ì,±,Æ,íCCE^, PChar ,Æ, ,ç,©,,β,í,©,Á,Ä,,éè,íC,©,í,è,ÉfCf“ffbfNfX,f[f,©,çŽn,Ü,é•Žš”z— ñ,đŽg,!,é,±,Æ,đ^Ó-!,μ,Ü,·B

•Žš”z—ň,đ PChar ,ì,©,í,è,ÉŽg,,ÆCfRf“fpfCf%,,»!,Žš”z—ň,đf| fCf“f^‘è”,É•İŠ·,μ,Ü,·B•İŠ·,,è,/fCf“f^,ì‘è”!,íC,»!,Žš”z—ň,ì‘æ 1 — v‘f,lfAfhfCEfX,đŽw,μ,Ü,·B

fCf“ffbfNfX,f[f,©,çŽn,Ü,é•Žš”z—ň,ìCE^·t,«‘è”,đC”z—ň,ìéCE/fCfY,É-ž,/2,È,•Žš —ñfŠfef%f,%Š%»·,·,é,±,Æ,,,«.,Ü,·B%Š%»·,,è,È,©,Á,/2Žc,è,ì•Žš,É,í NULL (#0) ,‘è,,è,é,/2,βC”z—ň,lfkf,,í,é•Žš—ň,đCE%È“!,ÉŽ,,±,Æ,É,È,è,Ü,·B

ŽQÆ03660

•ŀŽšŀŀCf“f^,Æ•ŀŽš”z—ñ

•ŀŽšŀŀCf“f^,ŀCf“ffbfNfX•t,̄

fkf<,Åŀŀ,í,é•ŀŽš—ñ

—á03661

var

A: **array**[0..63] **of** Char;

P: PChar;

begin

P := A; {P ,í A ,ìÅ%o,ì—v'f,ðŽw,μ,Ü,·}

PrintStr(A);

PrintStr(P); {PrintStr ,í “-,¶'l,Å 2 “xĒÄ,Ño,³,ê,Ü,·}

end;

• Žšf|fCf“f^,lfCf“ffbfNfX•t, 03662

ŽQÆ —á Null-terminated strings

fCf“ffbfNfX,af[f,©,čŽn,Ü,é•Žš“z—ň,í•Žšf|fCf“f^,ÆŸŠ•«^a,é,½,βC•Žšf|
fCf“f^,lfCf“ffbfNfX,af[f,©,čŽn,Ü,é•Žš“z—ň,ì,æ,α,ÉfCf“ffbfNfX•t, ,Å,«,Ü,•B

•Žšf|fCf“f^,ÉfCf“ffbfNfX•t, ,;éê#C,»,lfCf“ffbfNfX,É,ÍC<tŽQÆ,;é’O,Éf|fCf“f^,É’Ç
%oÁ,•é•,•t,É,μ,lf|ftfZfbfg,ðŽw’è,μ,Ü,•B,μ,½,^aÁ,ÄCP[0],ÍP^,É“™,μ,Cf|fCf“f^P
,ðŽw,•Žš,ðŽw,μ,Ü,•BP[1],ÍP,ðŽw,•Žš,ì1•Žš%oE,ìŽš,ðŽw,μ,Ü,•BP[2]
,Í,»,ìŽÿ,ìŽš,ðŽw,•,Æ,ç,Á,½<i#É±,«,Ü,•B“ ,,æ,α,ÉP[-1],ÍP
,ðŽw,•Žš,ì¼’O,ìŽš,ðŽw,μC“—|,É±,«,Ü,•B

fRf“fpfCf%o,ÍC•Žšf|fCf“f^,lfCf“ffbfNfX•t, ,Å”í^f`fFbfN,ð,μ,Ü,¹ňB,±,é,ÍC•Žšf|
fCf“f^,ðŽw,•fkf<,Á,í,é•Žš—ň,ìÁ’á’,ðŸ^,β,éŸ^í•ň,^a—~—p,Å,«,É,ç
,½,β,Á,•B,μ,½,^aÁ,ÄCf+U[fv]fOf%of€,Å”í^f`fFbfN,ð,μ,È,,Ä,Í,È,è,Ü,¹ňB

—á03663

{ŽŸ, ĺfR [fh, Å, í, f k f <, Å [l, í, é • ĺ Ž š — ñ, ð ' á • ĺ Ž š, É • ĺ Š, ., é, ½, ß, É • ĺ Ž š f |
f C f " f ^, ĺ f C f " f f f b f N f X • t, ¯, ð Ž g, ç, Ü, · [B }

```
function StrUpper(Str: PChar): PChar;
var
  I: Word;
begin
  I := 0;
  while Str[I] <> #0 do
  begin
    Str[I] := UpCase(Str[I]);
    Inc(I);
  end;
  StrUpper := Str;
end;
```

ŽQÆ03664

PChar

ŽQÆ03666
SysUtils.ftjfbfg

ŽQÆ03668

‘,ç•¶Žš—ñĈ^

fkf<,Á,í,é,éfCfh•Źš—ñ03669

ŽQAE fkf<,Á,í,é•Źš—ñ

Windows flfyfCE[fefBf“foVfXfef€,í^È%º,ì 3 Ží—p,ì•ŹšfZfbfg,đfTf|[]fg,μ,Ä,ç,Ü,·□B

- 1 fofCfg•ŹšfZfbfg
- 2 fofCfg•ŹšfZfbfg
- Unicode •ŹšfZfbfg

1 fofCfg•Źš

1 fofCfg•ŹšfZfbfg (SBCS) ,Á,í•Źš—ñ,ífofCfg,ì•À,Ñ,Á, ,è□C1 fofCfg,Á 1 •Źš,đ•\,μ,Ü,·□B
 ,Ü,Æ,ñ,ç,ì%ºç•ÄEü,˘fo[]fWf†f“,ì Windows ,ÄŽg,× ANSI •ŹšfZfbfg,ª 1
 fofCfg•ŹšfZfbfg,Á,·□B

2 fofCfg•Źš

2 fofCfg•ŹšfZfbfg (DBCS) ,Á,à•Źš—ñ,ífofCfg,ì•À,Ñ,Á,·ª□C1
 fofCfg•ŹšfZfbfg,Æ^Ù,È,è□C1 fofCfg,Á•\,³,ê,é•Źš,Æ 2 fofCfg,Á•\,³,ê,é•Źš,ª, ,è,Ü,·□B
 2 fofCfg•Źš,ì 1 fofCfg-Ú,í□æ□sfofCfg,ÆEÄ,î,ê,Ü,·□B

^ê”Ê,É□C2 fofCfg•ŹšfZfbfg,ì%º^Ê 128 •Źš,í 7 frfbfg,ì ASCII
 •ŹšfZfbfg,Éf}fbfv,μ□C□æ□sfofCfg,í 128 ^È□ã,ì□†~’l,đŽ□,Á,ì,ª•□’Ê,Á,·□B

2 fofCfg•ŹšfZfbfg,íAfwfA,Á□L,Žg,í,ê,Ä,˘,è□C,»•,ç,ì’n^æ,ì•ŹšfZfbfg,É,í 256
 •Źš,đ,í,é,©,É’˘,ì,é•Źš,ªŠÜ,Ü,ê,Ä,ç,Ü,·□B

Unicode •Źš

Unicode •ŹšfZfbfg,í 1 fofCfg•ŹšfZfbfg,ª 2 fofCfg•ŹšfZfbfg,ÆŠì-{"l,É^Ù,È,è□C1 •Źš,ª 1
 f□□f[]h (2 fofCfg) ,Á•\,³,ê,Ü,·□BUnicode •ŹšfZfbfg,ì•Źš—ñ,í□CfofCfg,Á,È,f□□f[]h,ì•À,Ñ,Á,·□B

Unicode •Źš,ífofCfh•Źš,Æ,àEÄ,î,ê□Unicode •Źš—ñ,í’½,,ì□ê□†□CfofCfh•Źš—
 ñ,ÆEÄ,î,ê,Ü,·□B

1 •Źš,É 65536 ’Ê,è,ì’l,ª□l,ì,ç,ê,é Unicode ,í□C<Z□p•ª-
 ì,ì<L□†,â□o”Ä,ÉŽg,í,ê,é“ÄŽê•Źš,àŠÜ,ß□C«»’ã,ìfRf“fsf...□f^,ÄŽg,í,ê,Ä,ç,é□
 çŠE’t,ì,˘,×,Ä,ì•Źš,đ•\,¹,Ü,·□B

Unicode •ŹšfZfbfg,ì□Á□%º,ì 256 •Źš,í ANSI •ŹšfZfbfg,Éf}fbfv,μ,Ä,ç,Ü,·□B

Delphi •ŹšfZfbfg

Delphi ,í 1 fofCfg•Źš,Æ 2 fofCfg•Źš,đfTf|[]fg,μ□CansiChar□CPansiChar□CansiString ,ìŠì-
 {CE^,©,ç Char□CpChar□Cstring ,ì”Ä—pCE^,Ü,Á,ì•Źš—ñ,đfTf|[]fg,μ,Ä,ç,Ü,·□BfofCfh•Źš,í
 WideChar CE^,Æ PWideChar CE^,É,æ,Ä,ÄfTf|[]fg,³,ê,Ü,·□B

string CE^,É’š“-˘,éfofCfh•Źš,í, ,è,Ü,¹,ñ□B

f[]Cfh•Źš—ñ

Object Pascal ,ìfkf<,Á,í,é•Źš—ñ,ì□^—□<@”\,í PWideChar CE^,É,à“-
 ,Á,í,Ü,è,Ü,·□B,μ,½,ª,Á,Ä□C•Źš—ñfŠfef%of<,í PWideChar CE^,Æ’ã“ü,ìCEÝŠ•□«,ª, ,è,Ü,˘
 (,½,¾,μ□C•Źš—ñfŠfef%of<,É,í ANSI •Źš,ì”í”í”à,ì□†~’l,đŽ□,ÁfofCfh•Źš,¾,˘,đ“ü,ê,é,±
 ,Æ,ª,Á,«,Ü,˘)□B“—l,É□C

array[0..X] **of** WideChar

,Æ,ç,×CE`Ž@,ìf[]f[] ,©,çŽn,Ü,éfofCfh•Źš”z—ñ,í PWideChar
 CE^,Æ’ã“ü,ìCEÝŠ•□«,ª, ,è□CPWideChar CE^,ì’l,É,í□Cf[]f[] ,©,çŽn,Ü,éfofCfh•Źš”z—

ň,Æ,Ü,Á,½,“”,¶,æ,æ,É“YŽš,đ•t,¯,ç,ê,Ü,·□B,³,ç,É□C•¶Žšf|fCf“f^%%ŽŽŽq (+ ,Æ -)
,Íf□fCfh•¶Žšf|fCf“f^,É,à“K—p,Å,«,Ü,·□B

f□f, f□fCfh•¶Žšf|fCf“f^,Ö□@□”f|ftfZfbfg,đ%ÁŽŽ,·,é□ê□#□C,Ü,½,Íf□fCfh•¶Žšf|
fCf“f^,©,ç□@□”f|ftfZfbfg,đÇ,ŽŽ,·,é□ê□#□C,»,ê,ç,Íf|ftfZfbfg,Íf□fCfh•¶Žš’P^Ê,Å,ì<—
—f,đ•\,μ,Ü,·□B,μ,½,³,Á,Ä□Cf|fCf“f^,Ö%ÁŽŽ,³,ê,é,©f|
fCf“f^,©,çÇ,ŽŽ,³,ê,é’O,É□CŽ©“@“Í,É 2 ”{,É,³,ê,Ü,·□B“—Í,É□Cf□fCfh•¶Žšf|
fCf“f^,đ•Ê,Íf□fCfh•¶Žšf|fCf“f^,©,çÇ,ŽŽ,·,é□ê□#□CÇ<%Ê,ì□@□”,ÍŽ©“@“Í,É 2
,Å□œŽŽ,³,ê□Cf□fCfh•¶Žš’P^Ê,Å,ì<——f,³¶¶□→,³,ê,Ü,·□B

System ftfjfbfg,É,Í WideCharToString□CWideCharLenToString□CStringToWideChar ,Æ,ç,æ 3
,Á,ÌŠÖ□”,³, ,è□Cfkf<,Å□Í,Í,éf□fCfh•¶Žš—ň,đ 1 fojCfg,Ü,½,Í 2 fojCfg,ì’,ç•¶Žš—
ň,É•İŠ,Å,«,é,æ,æ,É,È,Á,Ä,ç,Ü,·□B

ŽQÆ03670

•ŕŽšĀ^

•ŕŽš—ňĀ^

fƒĀ,Āŕ,í,é•ŕŽš—ň,ìŠŐ”

fofŠfAf“fgCE^,ì—á03672

ŽŸ,lfR[]fh,lfofŠfAf“fgCE^,ìŽg,č•û,Æ[]CfofŠfAf“fgCE^,đ,Ù,©,ìCE^,Æ'g,Ý[]#,í,1,½,Æ,«,ÉŽÀ[]s,³,
ê,éŽ©“@CE^•iš,ìŽÀ—á,Å,[]B

var

V1, V2, V3, V4, V5: Variant;

I: Integer;

D: Double;

S: **string**;

begin

V1 := 1; { []@[]"l }

V2 := 1234.5678; { ŽÀ[]"l }

V3 := 'Hello world'; { •¶Žš—ň'l }

V4 := '1000'; { •¶Žš—ň'l }

V5 := V1 + V2 + V4; { ŽÀ[]"l 2235.5678 }

I := V1; { I = 1 }

D := V2; { D = 1234.5678 }

S := V3; { S = 'Hello world' }

I := V4; { I = 1000 }

S := V5; { S = '2235.5678' }

end;

ŽQÆ03673

fofŠfAf“fg”à,ì'!

fofŠfAf“fgĚ^,ì•İŠ.

fofŠfAf“fgŽ®

fofŠfAf“fg”z—ň

fofŠfAf“fg.Æ OLE fl□[fof□fVf#f“flfufWfFfNfg

fofŠfAf“fg“à,ì'103674

ŽQÆ fofŠfAf“fgÆ^

fofŠfAf“fgÆ^,ì'ì",í 16 fofCf,ìf,fŠ,ðè—L,μC“à••\
 Æ»,íÆ^fR[fh,Æ,»,ìÆ^fR[fh,É,æ,Á,Ä—^,!,ç,ê,½Æ^,ì'ìi,Ü,½,í'ì,Ö,ìŽQÆj,©,ç
 ñ,³,ê,Ü,·B•W€ŠÖ" VarType ,lfofŠfAf“fg,ìÆ^fR[fh,ð•Ö,μ,Ü,·BŽÝ,ì•\
 ,ÉfofŠfAf“fgÆ^'è",Æ'ìC,“,æ,ÑÆ^fR[fh,ì^Ó-ì,ðŽ!,μ,Ü,·B

| VarType | 'l | fofŠfAf“fg,ì“à—e |
|-------------|------------|---|
| varEmpty | \$000 0 | fofŠfAf“fg,í Unassigned ,Á, ,é |
| varNull | \$000 1 | fofŠfAf“fg,í Null ,Á, ,é |
| varSmallint | \$000 2 | 16 frfbfg•,„†•t,«@” (Smallint Æ^) |
| varInteger | \$000 3 | 32 frfbfg•,„†•t,«@” (Integer Æ^) |
| varSingle | \$000 4 | 'P,“x•,“@—”_’l (Single Æ^) |
| varDouble | \$000 5 | ”{,“x•,“@—”_’l (Double Æ^) |
| varCurrency | \$000 6 | 'Ê%ŸÆ^,ì' (Currency Æ^) |
| varDate | \$000 7 | “ú•t^Žž”l (TDateTime Æ^) |
| varOleStr | \$000 8 | OLE •Ÿžš—ñ,Ö,ìŽQÆ (“@“IŠ,,è“-„Ä Unicode •Ÿžš—ñ) |
| varDispatch | \$000 9 | OLE fl[f,fgf[fVfj“flfufWfFfNfg,Ö,ìŽQÆ (IDispatch fC“f^ [ftfF[fXf]fC“f^) |
| varError | \$000 A | flfyfÆ[fefBf“fOfVfXfefGf%[fR[fh |
| varBoolean | \$000 B | 16 frfbfg~_—’l (WordBool Æ^) |
| varVariant | \$000 C | fofŠfAf“fg (fofŠfAf“fg”z—ñ,Á,ì,ÝŽg,í,ê,é) |
| varUnknown | \$000 D | -ç'è<` OLE flfufWfFfNfg,Ö,ìŽQÆ (IUnknown fC“f^ [ftfF[fXf]fC“f^) |
| varByte | \$001 1 | 8 frfbfg•,„†,È,μ@” (Byte Æ^) |
| varString | \$010 0 | “@“I,ÉŠ,,è“-„Ä,ç,ê,é',ç•Ÿžš—ñ,Ö,ìŽQÆ (AnsiString Æ^) |
| varTypeMask | \$0FF F | Æ^fR[fh,ð'Šo,·,é,½,ß,ìfrfbfgf}fXfN |
| varArray | \$200 0 | fofŠfAf“fg”z—ñ,ðŽ!,·frfbfg |

•W€ŠÖ" varType ,ª•Ö,· varXXXX 'è",í System ftjfbfg“à,É'è<` ,³,ê,Ä,ç,Ü,·B«—
 ^,lfo[fWfj“,ì Delphi ,ÁÆ^fR[fh,ª'Ç%Á'è<` ,³,ê,é%Á“\«ª, ,é,ì,ÁC,±,ê,ç,ì-

β, è' l, ¾, -, É^É'¶, μ, ½fR[fh, ðìï¬, μ, È, ç, æ, π, É'ï^Ó, μ, Ä,, ¾, ¾, çB
varArray frfbfg^É'u, íC, , éC^, ì"z—ñ, ³fofŠfAf"fg, É"ü, Á, Ä, ç
, éêë, ÉY'è, ³, ê, Ü, ·BvarTypeMask frfbfgf}fXfN, í varType
ŠÖ", ²•Ö, ·l, ©, çŽÄÜ, ìC^fR[fh, ð'Šo, ·, é, ½, β, ÉŽg, í, ê, Ü, ·B, ½, Æ, l, îCŽÿ, ìŽ®, í V, É Double
C^, Ü, ½, í Double C^, ì"z—ñ, ²"ü, Á, Ä, ç, éêë, É^, É, È, è, Ü, ·B
if VarType(V) **and** varTypeMask = varDouble **then** ...

System ftjfbfg"à, É'è<`, ³, ê, Ä, ç, é TVarData
fCfR[fh, ðŽg, Á, ÄfofŠfAf"fgC^, ì•í", ðC^flfffXfg, ·, é, ÆC, », ì"à•"•\
C», ÖfAfNfZfX, Ä, «, Ü, ·BÜx, íwf%ofCfuf%ofŠfŠftf@fCf"fx, ì TVarData , ìà-
¾, ðŽQÆ, μ, Ä,, ¾, ¾, çB

ŽQÆ03675
VarType ŠÖ
TVarData Ć^

fofŠfAf“fgCE^,ì•İŠ•03676

ŽQ□Æ fofŠfAf“fgCE^

,,x,Ä,ì□@□“CE^□CŽÀ□“CE^□C•¶Žš—ñCE^□C•¶ŽšCE^□C~_—
 □CE^,ìfofŠfAf“fgCE^,Æ’ă“ü,ìCEÝŠ·□«,^a,è,Ü,·□BŽŸ,ì•\,
 ,ÉfofŠfAf“fg,Ö’ă“ü,Ä,«,éCE^,Æ□C’ă“üCEă,ìfofŠfAf“fgCE^fR□[fh,đŽ!,μ,Ü,·□B

| | |
|----------------|-----------------------|
| Ž®,ìCE^ | fofŠfAf“fgCE^f |
| | R□[fh |
| □@□“CE^ | varInteger |
| ’Ê%ŸCE^,đ□œ,- | varDouble |
| ŽÀ□“CE^ | |
| ’Ê%ŸCE^ | varCurrency |
| •¶Žš— | varString |
| ñCE^,Æ•¶ŽšCE^ | |
| ~_—□CE^ | varBoolean |

Ž®,í Variant(X),Æ,ç,æCE`Ž®,ìCE^fLfffXfg,đŽg,Ä,ÄfofŠfAf“fgCE^,Ö-
 ¾Ž!,ì,ÉfLfffXfg,Ä,«,Ü,·□BX,ì□ă,ì•\,ÉŽ!,μ,½,ç,,é,©,ìCE^,ìŽ®,Ä,·□B
 fofŠfAf“fgCE^,ì,·,x,Ä,ì□@□“CE^□CŽÀ□“CE^□C•¶Žš—ñCE^□C~_—□CE^,Æ’ă“ü,ìCEÝŠ·□«,^a,è,Ü,
 ,·□B^Ê%Ÿ,ì•\,ÉfofŠfAf“fgCE^,ì!,©,ç,Ê,ìCE^,Ö•İŠ·,·,é□ê□#,ìCE^•İŠ·K’¥,đŽ!,μ,Ü,·□B

fofŠfAf“fgCE^,©,ç□@□“CE^’ì,Ö,ì•İŠ·

| | |
|----------------------|---|
| fofŠfAf“fgCE^ | CE<%Ÿ |
| varEmpty | 0. |
| varNull | EVariantError —áŠO,đ¶¶□—,·,é |
| varByte | 1,Ä,ì□@□“CE`Ž®,đ•Ê,ìCE`Ž®,Ö•İŠ·,μ□C’ì, ^a - |
| varSmallint | Ú“ì,ìCE`Ž®,É“K□#,μ,È,ç□ê□#,í EVariantError —áŠO,đ¶¶□—,·,é |
| varInteger | |
| varError | |
| varSingle | ŽÀ□“’ì,đ,à,Á,Æ,à<ß,ç□@□“,ÖŠÚ,ß□CCE<%ŸÊ, ^a - |
| varDouble | Ú“ì,ìCE`Ž®,É“K□#,μ,È,ç□ê□#,í EVariantError —áŠO,đ¶¶□—,·,é |
| varCurrency | |
| varDate | “ú•t□^Žž□□’ì,đ Double CE^,Æ,μ,Ä %ŸđŽß,μ□C’ì,đ,à,Á,Æ,à<ß,ç□@□“,ÖŠÚ,ß□CCE<%ŸÊ, ^a - Ú“ì,ìCE`Ž®,É“K□#,μ,È,ç□ê□#,í EVariantError —áŠO,đ¶¶□—,·,é |
| varOleStr | •¶Žš—ñ,đ□@□“,É•İŠ·,μ□C•¶Žš—ñ, ^a —LCE∅,È□@□“’ì,Ä,È,ç |
| varString | ,©CE<%ŸÊ, ^a -Ú“ì,ìCE`Ž®,É“K□#,μ,È,ç□ê□#,í EVariantError — áŠO,đ¶¶□—,·,é |
| varBoolean | <U,ì□ê□#,É 0□C□^,ì□ê□#,É -1 (-Ú“ì,ìCE^, ^a Byte ,ì□ê□#,í 255) |

fofŠfAf“fgCE^,©,çŽÀ□“CE^’ì,Ö,ì•İŠ·

| | |
|----------------------|-----------------|
| fofŠfAf“fgCE^ | CE<%Ÿ |
| varEmpty | 0. |

varDouble ň•\CE»,É•İŠ·,·,é
varCurrency
varDate Windows
 ,İfRf“fgf□□lf<fpflf<,İ□m’n^æ□n,đŽg,Á,Ä“ú•t□^Žž□□’l,đ•ŋŽš—ň•\CE»,É•İŠ·,·,é
varOleStr -Ú“l,İCE^,ª varString ,İ□ê□#□Unicode ,©,ç ANSI ,É•İŠ·,·,é
varString -Ú“l,İCE^,ª varOleStr ,İ□ê□#□CANSI ,©,ç Unicode ,É•İŠ·,·,é
varBoolean □^,İ□ê□#,É 0□C<U,İ□ê□#,É -1

föfŠfAf“fgCE^,©,ç~_—□CE^’l,Ö,İ•İŠ•

**föfŠfAf“fgCE CE<%oÊ
^**

varEmpty <U
varNull —áŠO,đ□ŋ□—,·,é
varByte ’l,ªf[□,İ□ê□#,É<U□C’l,ªf[□^ÈŠO,İ□ê□#,É□^
varSmallint
varInteger
varError
varSingle ’l,ªf[□,İ□ê□#,É<U□C’l,ªf[□^ÈŠO,İ□ê□#,É□^
varDouble
varCurrency
varDate ’l,đ Double CE^,Æ,μ,Ä
 %ođŽB,μ□C’l,ªf[□,İ□ê□#,É,Í<U□C’l,ªf[□^ÈŠO,İ□ê□#,É,Í□^,đ•Ö,·
varOleStr •ŋŽš—ň,É□ufalse□v□i’á•ŋŽš,Æ□—•ŋŽš,đ<æ•É,μ,È,ç□j,©□C•]‰
varString ¿,ªf[□,É,È,é□”’l•ŋŽš—ň,ªŠÜ,Ü,é,Ä,ç,é□ê□#,Í<U□C•ŋŽš—
 ň,É□uttrue□v□i’á•ŋŽš,Æ□—•ŋŽš,đ<æ•É,μ,È,ç□j,©□C•]‰
 ¿,ªf[□^ÈŠO,É,È,é□”’l•ŋŽš—ň,ªŠÜ,Ü,é,Ä,ç
 ,é□ê□#,Í□^□C,»„ê^ÈŠO,İ□ê□#,Í EVariantError —áŠO,đ□ŋ□—,·,é
varBoolean •İŠ•,È,μ

föfŠfAf“fgCE^,İ’l,Í TypeName(V) ,Æ,ç
,æCE`Ž® ,İCE^fLfffXfg,đŽg,Á,Ä®□”CE^□CŽÀ□”CE^□C•ŋŽš—ňCE^□C~_—□CE^,Ö-
¾Ž“l,ÉfLfffXfg,Ä,« ,Ü,·□BTypeName ,Í®□”CE^□CŽÀ□”CE^□C•ŋŽš—ňCE^□C~_—□CE^,İ,ç
,·,é,©,İŽ`•ÉŽq,Ä□CV ,İföfŠfAf“fgCE^,İŽ®,Ä,·□B,ª,ç,É□C•W□€ŠÖ□”,İ VarAsType ,Æ•W□€Žè’±
,« ,İ VarCast ,đŽg,Á,ÄföfŠfAf“fg,İ“à”•\CE»,đ•İ□X,Ä,« ,Ü,·□B□ä,İ•\,Í,» ,İ,æ,æ
,È,·,x,Ä,İCE^•İŠ•,ÉŠÖ,·,é<K’¥,İ^ê—,Ä,·□B
föfŠfAf“fgCE^,É OLE f□□f□f□□f□f□f“f□fufWfFfNfg,Ö,İŽQ□Æ (varDispatch CE^fR□[fh)
,ªŠÜ,Ü,é,Ä,ç,é□ê□#□C,» ,İföfŠfAf“fgCE^,đ•É,İCE^,É•İŠ•,μ,æ,æ,Æ,·,é,Æ□C□Ä‰
,Éf□fufWfFfNfg,İfffHf<fgfvf□fpfefB,İ’l,ªŽæ“¾,ª,é,Ä,©,ç□C,» ,İ’l,ª—
v□,ª,é,½CE^,É•İŠ•,ª,é,Ü,·□B—^ ,l,ç,é,½ OLE
f□□f□f□□f□f□f“f□fufWfFfNfg,ÉfffHf<fgfvf□fpfefB,ª,É,ç□ê□#□CEVariantError —
áŠO,ª□ŋ□—,ª,é,Ü,·□B

ŽQÆ03677
foššAf“fg“à.ì'!
foššAf“fgŽ®

fofŠfAf“fgŽ®03678

ŽQ□Æ fofŠfAf“fgCE^

fofŠfAf“fgCE^,íŽ®,ì†,ÁŽg,±,±,Æ,ª,Á,«,Ü,·□BŽŸ,ì%%ŽŽŽq,Í Variant CE^,ìfìyf%of“fh,đTf] □[fg,μ,Ä,ç,Ü,·□B

+ -> * / **div mod shl shr and or xor not = <> <**
> <= >=

2 ,Á,ìfìyf%of“fh,đ,Æ,é%%ŽŽŽq,ìê□□C^ê•ù,ìfìyf %of“fh,ªfofŠfAf“fgCE^,É,ç,ì□C,à,±ê•ù,ìfìyf%of“fh,ìfofŠfAf“fgCE^,ì•İŠ,ÉŽì,μ,½<K’¥ ,ÁŽ©“@“ì,ÉfofŠfAf“fgCE^,É•İŠ,ª,è,Ü,·□BfofŠfAf“fgCE^,ì,É’ì,·,é”ñŠÖCEW%%ŽŽ (□ÄCEä,ì 6 ,Á,đ□æ,%%ŽŽŽq) ,ìCE<%É,ìCE^,ì□í,ÉfofŠfAf“fgCE^,Á,·□BfofŠfAf“fgCE^,ì,ì,É’ì,·,éŠÖCEW%% %%ŽŽ,ìCE<%É,ìCE^,ì□í,É~_□CE^,Á,·□B

”ñŠÖCEW%%ŽŽŽq,ìê□□C^ê•ù,Ü,½,ì—¼•ù,ìfìyf%of“fh,ª Unassigned ,É,ç,ì□CEVariantError —áŠO,ª□□□→,ª,è,Ü,·□BCE¾,çŠ,ì,è,ì□CUnassigned fofŠfAf“fg,É’ì,μ,Ä,ì”äŠr^ÈŠO,ì%%ŽŽ,ì,Á,«,Ü,¹,ñ□B

,ª,ç,É”ñŠÖCEW%%ŽŽŽq,ìê□□C^ê•ù,Ü,½,ì—¼•ù,ìfìyf%of“fh,ª Null ,É,ç,ì□C%% %%ŽŽ,ìCE<%É,ì Null ,Á,·□BNull ’ì,ì,»,è,¼,è,ìŽ®,Á“` ,ì,ç,è□CŽ®,ì†,É Null ’ì,ª ,é,ÆŽ®‘S’ì,ª Null ,É,È,è,Ü,·□B

“ñ□€%%ŽŽ,đŽÀ□s,·,é□ê□□C2 ,Á,ìfofŠfAf“fgCE^ìfìyf%of“fh,ì<±’É,ìCE^,ª%% %%ŽŽ,đ□\$CEä,μ,Ü,·□B<±’É,ìCE^,ìŽŸ,ì•\,ÉŽì,·f}fgfŠfbfNfX,Á”»•É,ª,è,Ü,·□BŽŸ,ì•\ ,đ“Ç,±□ê□□CVariant CE^fR□[fh varSmallint□CvarInteger□CvarByte ,ì Integer ,Öf}fbfv,ª,è□CvarSingle ,Æ varDouble ,ì Double ,Öf}fbfv,ª,è□CvarOleStr ,Æ varString ,ì String ,Öf}fbfv,ª,è,Ü,·□B

fofŠfAf“fg%%ŽŽ,ìCE^,ìf}fgfŠfbfNfX

| | Intege r | Double | Curren cy | String | Boolea n | Date |
|----------------------|---------------------|---------------|----------------------|---------------|---------------------|-------------|
| Intege r | Integer | Double | Currenc y | Double | Integer | Date |
| Double | Double | Double | Currenc y | Double | Double | Date |
| Curren cy | Currenc y | Currenc y | Currenc y | Currenc y | Currenc y | Date |
| String | Double | Double | Currenc y | String | Boolea n | Date |
| Boolea n | Integer | Double | Currenc y | Boolean | Boolea n | Date |
| Date | Date | Date | Date | Date | Date | Date |

,½,Æ,ì,ì□CV1 + V2 ,ì%%ŽŽ,Á,ì□CV1 ,ìCE^fR□[fh,ª varInteger ,Á V2 ,ìCE^fR□[fh,ª varString ,É,ç,ì□C%%ŽŽ,ìŽÀ□s,ÉŽg,ì,è,é<±’É,ìCE^,ì Double ,Á,·□B

”ñŠÖCEW%%ŽŽŽq,ìê□□C,ç,Á,½,ñ<±’É,ìCE^,ª□Ý’è,ª,è,é,Æ□C%%ŽŽ,ìŽŸ,ì•\,ÉŽì,·,æ,± ,É□i□s,μ,Ü,·□B

”ñŠÖCEW%%ŽŽŽq,ìfofŠfAf“fgCE^,É’ì,·,é“®□ì
 <±’É,ìCE^ %%ŽŽŽq,ìCE<%É

Integer / , ðœ, , , x, Ä, ì%ººŽŽŽq, ìê#Cfjfyf%of“fh, í Integer
 Ć^, É•İŠ·,³,êCCE<%ººÊ, ìĆ^, í Integer Ć^, É, Ê, é, ©CCE<%ººÊ,ª 32
 frfbfg•, ì+•t, «@” , É“K# , µ, È, ¯, ê, î Double Ć^, É, Ê, éB/ %ºº
 %ººŽŽŽq, ìê#C%ºººŽŽ, í Double Ć^%ºººŽŽ,Æ,µ,ÄŽÀs,³,ê,é

Double +C-C*C/C/ ,İSe%ºººŽŽŽq, ìê#Cfjfyf%of“fh, í Double
 Ć^, É•İŠ·,³,êCCE<%ººÊ, ìĆ^, í Double Ć^, É, Ê, éB,» ,ì¼, ì, , x, Ä, ì%ºº
 %ººŽŽŽq, ìê#C%ºººŽŽ, í Integer Ć^%ºººŽŽ,Æ,µ,ÄŽÀs,³,ê,é

Currency +C-C*C/C/ ,İSe%ºººŽŽŽq, ìê#Cfjfyf%of“fh, í Currency
 Ć^, É•İŠ·,³,êCCE<%ººÊ, ìĆ^, í Currency Ć^, É, Ê, é, ©C2 ,Ä, ì
 Currency 'l, ìœŽŽ, È, ç, î Double Ć^, É, Ê, éB,» ,ì¼, ì, , x, Ä, ì%ºº
 %ººŽŽŽq, ìê#C%ºººŽŽ, í Integer Ć^%ºººŽŽ,Æ,µ,ÄŽÀs,³,ê,é

String + %ºººŽŽŽq, ìê#C—¼•û, ìfjfyf%of“fh,ª•ŕŽš—ñ, È, ç, ìCCE<%ººÊ, í
 2 ,Ä, ì•ŕŽš—ñ, ìĆ<# , É, Ê, éB+ %ºººŽŽŽq, ìfjfyf%of“fh, ì, È, -
 ,Æ, à^ê•û,ª•ŕŽš—ñ, Ä, È, çê# ,ÆC,» ,ì¼, ì, , x, Ä, ì%ºº
 %ººŽŽŽq, ìê#C%ºººŽŽ, í Double Ć^%ºººŽŽ,Æ,µ,ÄŽÀs,³,ê,é

Boolean andCCorCXor %ºººŽŽŽq, ìê#Cfjfyf%of“fh, í Boolean
 Ć^, É•İŠ·,³,êCCE<%ººÊ, ìĆ^, í Boolean Ć^, É, Ê, éB,» ,ì¼, ì, , x, Ä, ì
 %ºººŽŽŽq, ìê#C%ºººŽŽ, í Double Ć^%ºººŽŽ,Æ,µ,ÄŽÀs,³,ê,é

Date + %ºººŽŽŽq,Æ - %ºººŽŽŽq, ìê#Cfjfyf%of“fh, í Date
 Ć^, É•İŠ·,³,êCCE<%ººÊ, ìĆ^, í Date ,É, Ê, é, ©C2 ,Ä, ì Date
 'l, ìĆ, ŽŽ, È, ç, î Double Ć^, É, Ê, éB,» ,ì¼, ì, , x, Ä, ì%ºº
 %ººŽŽŽq, ìê#C%ºººŽŽ, í Double Ć^%ºººŽŽ,Æ,µ,ÄŽÀs,³,ê,é

ŠÖĆEW%ºººŽŽŽq, ìê#C—¼•û, ìfofŠfAf“fg,ª<œ'Ê, ìĆ^, Ö•İŠ·,³,êCCE<%ººÊ, ì'l,ª”äŠr,³,ê,Ä
 Boolean Ć^, ìĆ<%ººÊ,ªŕŕ—,³,ê,Û,·BUnassigned
 'l, ì, Û, ©, ì, , x, Ä, ì'l, æ, è—,³, ç”äŠrĆ<%ººÊ, É, Ê, è, Û, ·BNull 'l, ì Unassigned ,æ, è'â, «, -
 C,» ,ì¼, ì, , x, Ä, ì'l, æ, è—,³, ç”äŠrĆ<%ººÊ, É, Ê, è, Û, ·B
 'P€%ºººŽŽŽq, ìf}fCfjX—i—j, ìê#C•ŕŽš—ñ, ì%ºººŽŽ, ì'O, É Double Ć^, É•İŠ·,³,êC~—'l, ì
 %ºººŽŽ, ì'O, É Integer Ć^, É•İŠ·,³,ê,Û,·B
not %ºººŽŽŽq, ìê#CfofŠfAf“fg, ìĆ^fR[fh,ª varBoolean ,È, ç, î~—'Û'è%ºº
 %ººŽŽ,ªŽÀs,³,ê,Û,·B,» ,ì¼, ì, , x, Ä, ìĆ^fR[fh, ìê#CfofŠfAf“fg, í Integer
 Ć^, É•İŠ·,³,êCfrfbfg'P^Ê, ì”Û'è%ºººŽŽ,ªŽÀs,³,ê,Û,·B

ŽQÆ03679
fofŠfAf“fgĈ^,ì•iŠ.
fofŠfAf“fg“à,ì!

fofŠfAf“fg”z—ñ03680

žQ□Æ —á fofŠfAf“fgCE^

fofŠfAf“fgCE^,É,í□C,č,„,è,©,lfofŠfAf“fgŠî—{CE^,ì—v’f,©,ç,È,é,³,Ü,´,Ü,ÈfTfCfY,ÆŽŸCE³,ì”z—ñ,ð“ü,è,é,±,Æ,ª,Ä,«,Ü,·□BfofŠfAf“fg”z—ñ,ì—v’f,í,·,x,Ä”~,¶CE^,Á,·,ª□C—v’f,ìCE^,ª Variant,È,ç,í□C—“RCEÁ□X,ì—v’f,É,³,Ü,´,Ü,ÈŽí—p,lf□[f^□i,Ü,©,lfofŠfAf“fg”z—ñ,ðŠÜ,þ□j,ð“ü,è,é,±,Æ,ª,Ä,«,Ü,·□B

fofŠfAf“fg”z—ñ,í□C’É□í□C•W□€Žè’±,«,ì VarArrayCreate ,ðŽg,Á,Ä□i□—,μ,Ü,·□B ŽŸ,ì•\,ÉfofŠfAf“fg”z—ñ,ì•W□€Žè’±,«,Æ•W□€ŠÖ□”,ðŽì,μ,Ü,·□B,±,è,ç,í,·,x,Ä System ftfjfbfg,ì’t,Ä’è<’,³,è,Ä,ç,Ü,·□B

fofŠfAf“fg”z—ñ,ì•W□€Žè’±,«,Æ•W□€ŠÖ□”

| | |
|-------------------|--|
| -¼’O | □à-¾ |
| VarArrayCreate | —^,ì,ç,è,½—v’fCE^,Æ—^,ì,ç,è,½ŠeŽŸCE³,ì %œCEÀ,Æ□ãCEÀ,ðŽg,Á,ÄfofŠfAf“fg”z—ñ,ð□i□—,·,é□B—v’fCE^,í varString ,ð□œ,“C^Ó,ì varXXXX CE^fR□[fh,Á, ,é□B•¶Žš—ñ,lfofŠfAf“fg”z—ñ,ð□i□—,·,é,É,í□CvarOleStr CE^fR□[fh,ðŽg,í,È,~,è,ì,È,ç,È,ç□B□V,μ,□i□—,μ,½”z—ñ,ì—v’f,í,·,x,Äf□[f,©<ó,É□Y’è,³,è,é |
| VarArrayOf | —^,ì,ç,è,½—v’ffŠfXfg,ðŽg,Á,Ä 1 ŽŸCE³,lfofŠfAf“fg”z—ñ,ð□i□—,·,é□B•Ö,³,è,éfofŠfAf“fg”z—ñ,ì—v’fCE^,lfofŠfAf“fg,Á, ,é □BVarArrayOf ŠÖ□”,íCE^%œ•ì”z—ñfþf %œ□□[f^,ð,»,ì□è,Ä□i,é□è□‡,É•Ö—~,Ä, ,é |
| VarArrayRedim | %œ’[,ìŽŸCE³,ì□ãCEÀ,ð—^,ì,ç,è,½’l,É•ì□X,μ,ÄfofŠfAf“fg”z—ñ,ðfTfCfY•ì□X,·,é□BŠù’¶,ì”z—ñ—v’f,í•ÜŽ□,³,è□C□V,μ,ç—v’f,íf□[f,©<ó,É□Y’è,³,è,é |
| VarArrayDimCount | fofŠfAf“fg”z—ñ,ìŽŸCE³□”,ð•Ö,·,©□C^ø□”,ªfofŠfAf“fg”z—ñ,Á,È,~,è,íf□[f,ð•Ö,· |
| VarArrayLowBound | fofŠfAf“fg”z—ñ,ì—^,ì,ç,è,½ŽŸCE³,ì%œCEÀ,ð•Ö,· |
| VarArrayHighBound | fofŠfAf“fg”z—ñ,ì—^,ì,ç,è,½ŽŸCE³,ì□ãCEÀ,ð•Ö,· |
| VarArrayLock | fofŠfAf“fg”z—ñ,ðf□fbfN,μ□CfofŠfAf“fg”z—ñ“à,íf□[f^,Ö,íf□fCf“f^,ð•Ö,·□B,±,ìŠÖ□”,ðŽg,ª,ÆfofŠfAf“fg”z—ñ“à,íf□[f^,Ö’¼□ÚfAfNfZfX,Á,«□C□^—□Cø—ì,ª%œü’P,³,è,é |
| VarArrayUnlock | ‘O,É VarArrayLock ,Äf□fbfN,μ,½fofŠfAf“fg”z—ñ,ðf□fbfN %œð□œ,·,é |
| VarlsArray | ^ø□”,ÉfofŠfAf“fg”z—ñ,ª“ü,Á,Ä,ç,é,©,Ç,ª,©,ðfefXfg,·,é |

f□f, fofŠfAf“fg”z—ñ,ì—v’fCE^,í varString ,É,Á,«,Ü,¹,ñ□B•¶Žš—ñ,lfofŠfAf“fg”z—ñ,ð□i□—,·,é,É,í varOleStr CE^fR□[fh,ðŽg,í,È,~,è,ì,È,è,Ü,¹,ñ□B

fofŠfAf“fg,É”z—ñ,ª“ü,Á,Ä,ç,é□è□‡□C”z—ñ—v’f,ÖfAfNfZfX,·,é,É,ífofŠfAf“fg,ìCEã,Éfjf“f} ,Á<æ□ø,Á,½ 1 ,Á,Ü,½,í•j□”,ì“YŽšŽ@,ð’áfjfbfR,Á^ì,ñ,ÁŽw’è,μ,Ü,·□B“YŽšŽ@,í□i,É Integer CE^,Á,·□BfofŠfAf“fg,É“YŽš,ð•t,~,é,Æ,«□C,»,lfofŠfAf“fg,ÉfofŠfAf“fg”z—ñ,ª“ü,Á,Ä,ç ,È,ç□è□‡,â□CŽw’è,μ,½“YŽšŽ@,ì□”,ª³,μ,È,ç□è□‡□C,³,ç,É 1 ,Á,Ü,½,í•j□”,ì“YŽšŽ@,ª¹ %œž,·,éŽŸCE³,ì’í’á,È,È,ç□è□‡,É,ì□CEVariantError —áŠO,ª¶□i□—,³,è,Ü,·□B

fofŠfAf“fg”z—ñ,ì—v’f,É,ìŽ@,ì’t,ÄfAfNfZfX,Á,«□C’ã“ü•¶,ðŽg,Á,Ä□V,μ,ç’l,ð’ã“ü,Á,«,Ü,·□B,½,¾,μ□CfofŠfAf“fg”z—

ñ, ì—v'f, í **var** fpf%of□□[f^, Æ, μ, Ä"n, 1, È, ç, ì, Å'□^Ó, μ, Ä,, ¾, ¾, ç□B
fofŠfAf"fg"z—ñ, ã"ü, Á, Ä, ç, éfofŠfAf"fg, ð•Ê, ìfofŠfAf"fg, Ö'ã"ü, ·, é, ©'lfpf
%of□□[f^, Æ, μ, Ä"n, ·□ê□#□C"z—ñ'S'ì, ìfRfs□[, ã□ì□¬, ¾, ê□C'å—Ê, ìf□f, fŠ, ð□Á"i, ·, é%oÄ"\□«, ã, , è, Ü, ·
□B, ±, ì—□—R, ©, ç□CfofŠfAf"fg"z—ñ, ð, Ù, ©, ìfofŠfAf"fg, Ö'ã"ü, ·, é, ±, Æ, í%oÄ"\, ÊCEÄ, è"ð, ¬□C, Ç, x
, μ, Ä, à'ã"ü, μ, È, ¬, ê, ì, È, ç, È, ç□ê□#, í□CfofŠfAf"fg"z—ñ, ð **var** fpf%of□□[f^, © **const** fpf
%of□□[f^, Æ, μ, Ä"n, μ, Ä,, ¾, ¾, ç□B

fofŠfAf“fg”z—ñ,ì—á03681

fofŠfAf“fg”z—ñ,ìC'ÊíCŽŸ,ì—á,ì,æ,α,É•W€Žè'±,«,ì VarArrayCreate ,đŽg,Á,Äìì¬,μ,Ü,·B

var

A, B: Variant;

I: Integer;

begin

A := VarArrayCreate([0, 9], varInteger);

for I := 0 **to** 9 **do** A[I] := I * I;

B := VarArrayCreate([1, 3, 0, 9], varVariant);

for I := 0 **to** 9 **do** B[1, I] := I;

for I := 0 **to** 9 **do** B[2, I] := Sqrt(I);

for I := 0 **to** 9 **do** B[3, I] := Format('Value=%d', [I]);

...

end;

ŽQÆ03682

fofŠfAf“fg”z—ñ,ì’â,«,³,ì•ïX

fofŠfAf“fg”z—ñ,ìÆÀ’è

fofŠfAf“fg”z—ñ,ì‘á,«,³,ì•ïX03683

ŽQÆ —á fofŠfAf“fg”z—ñ

fofŠfAf“fg”z—ñ,ì•W€Žè‘±,«,ì VarArrayRedim ,đŽg,Á,ÄTfCfY•ïX,Á,«,Ü,·BVarArrayRedim
,đŽg,«,ÆCfofŠfAf“fg”z—ñ,ì%oE’[(PÁĈä)

,ìŽŸĈ³,ìĀĈĈĈ,đ•ïX,Á,«,Ü,·B,»¹,ìŽŸĈ³,ì“í,ì•ïX,Á,«,Ü,¹ñBSù‘¶,ì”z—ñ—

v‘f,íTfCfY•ïX‘€ì,đ,μ,Á,à•ŮŽ³,é,Á,ĉ,Ü,·B

VarArrayDimCountCVarArrayLowBoundCVarArrayHighBound ,ìŠe•W€ŠÖ“ ,đŽg,«

,ÆCfofŠfAf“fg”z—ñ,ìŽŸĈ³ ,ÆĈĈX,ìŽŸĈ³,ì“í,đĈĈ,Á,«,Ü,·B,±,é,ìCŽŸ,ÉŽ,·

VarArraySum ŠÖ“ ,ì,æ,«,È”Ā—pfofŠfAf“fg”z—ñ‘€ìif`f“,đìì-,·,éêî‡,É—đ—š,ì,Ü,·B

fofŠfAf“fg”z—ñ,lfTfCfY•İ□X,İ—á03684

ŽŸ,lfR□[fh,Í VarArrayRedim ,İŽg,ç•û,đŽ|,μ,Ä,ç,Ü,·□B

var

A: Variant;

I: Integer;

begin

A := VarArrayCreate([0, 4], varOleStr);

for I := 0 **to** 4 **do** A[I] := 'Initial';

...

VarArrayRedim(A, 9);

for I := 5 **to** 9 **do** A[I] := 'Additional';

...

end;

function VarArraySum(**const** A: Variant): Double;

var

I: Integer;

begin

if VarArrayDimCount(A) <> 1 **then**

raise Exception.Create('One-dimensional variant array expected');

Result := 0;

for I := VarArrayLowBound(A, 1) **to** VarArrayHighBound(A, 1) **do**

Result := Result + Double(A[I]);

end;

ŽQÆ03685

fofŠfAf“fg”z—ň,ìĀ'è

fofŠfAf“fg”z—ñ,ìĈĀ'è03686

ŽQ Ā —á fofŠfAf“fg”z—ñ

•W□€ŠÖ□”,ì VarArrayLock ,Ā•W□€Žè'±,«,ì VarArrayUnlock ,đŽg,ᄡ,Ā□CfofŠfAf“fg”z—
ñ“à,ìff□[f^,É'¼□ÚfAfNfZfX,Ā,«,Ü,·□B

□ă<L,ìŠÖ□”,Ā□i□→,μ,½,æ,ᄡ,Ē—v'fĈ^,ª varByte ,ìfofŠfAf“fg”z—ñ,Í OLE
f□[fgf□□[fvf†f“,ìRf“fgf□□[f%o,Āft□[fo□[,ìŠÔ,ĀfofCfifŠff□[f^,đŽó,~“n,·,ì,É,æ,Žg,í,ê,é•û-
@,Ā,·□B,»),ì,æ,ᄡ,Ē”z—ñ,ìff□[f^,ì•İŠ,É,æ,Ā,Ā%oē<¿,đŽó,~, ,□CVarArrayLock f<□[f`f“,Ā
VarArrayUnlock f<□[f`f“,đŽg,Ā,ĀĈø—!“l,ÉfAfNfZfX,Ā,«,Ü,·□B

fofŠfAf“fg”z—ñ,ìĈĀ'è,ì—á03687

ŽŸ,ÉŽ|,· VarArrayLoadFile ŠÖ” ,íftf@fCf<,ì“à—e,đfofŠfAf“fg”z—ñ,ífofCfg,Ö“Ç,Ý□ž,Ý,Ü,·□B,±
,íŠÖ” ,í VarArrayLock ,Æ VarArrayUnlock ,đŽg,Á,Āftf@fCf<,đ”z—ñ,ì't,Ö'¼□Ú“Ç,Ý□o,μ,Ü,·□B

function VarArrayLoadFile(**const** FileName: **string**): Variant;

var

F: **file**;

Size: Integer;

Data: PChar;

begin

AssignFile(F, FileName);

Reset(F, 1);

try

Size := FileSize(F);

Result := VarArrayCreate([0, Size - 1], varByte);

Data := VarArrayLock(Result);

try

BlockRead(F, Data^, Size);

finally

VarArrayUnlock(Result);

end;

finally

CloseFile(F);

end;

end;

ŽQÆ03688

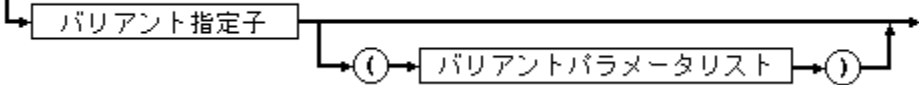
fofŠfAf“fg”z—ň,ì’â,«,³,ì•ïX

fofŠfAf“fg,Æ OLE fl□[fgf□□[fvf#f“flfufWfFfNfg03689

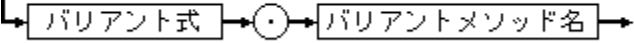
žQ□Æ —á fofŠfAf“fgÆ^

fofŠfAf“fg,É OLE fl□[fgf□□[fvf#f“flfufWfFfNfg,Ö,ìžQ□Æ,ª“ü,Á,Ä,ç,éê#□CDelphi ,Á,í□\fbfh,ðÆÄ,Ñ□o,μ,ÄflfufWfFfNfg,ìfvf□fpfefB,ìžæ“¾,Æ□Ý’è,ª,Á,«,Ü,·□B,±,ì<@“\,ðžg—p%o^Ä“\ ,É,·,é,É,í□COleAuto ftffjfbfg,ðžg,ç,Ü,·□B,Á,Ü,è□C,ç,·,è,©,ìftffjfbfg,ì **uses** □B,©□Cfvf□fOf%of€ ,Ü,½,ìf%ofCfvf%ofŠ,ì **uses** □B,ì†,É OleAuto ,Ö,ìžQ□Æ,ð“ü,è,Ü,·□B
 OLE fl□[fgf□□[fvf#f“flfufWfFfNfg,ìfvf□fbfhÆÄ,Ñ□o,μ,Ü,½,ìfvf□fpfefBfAfNfZfX,ì□
 •¶,ì□C’Éí,ìfvf□fbfhÆÄ,Ñ□o,μ,Ü,½,ìfvf□fpfefBfAfNfZfX,ì□•¶,É,æ,ž—,Á,ç,Ü,·□B

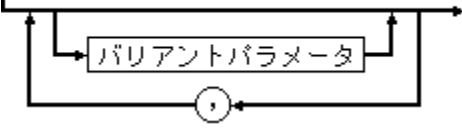
バリエーションメソッド呼び出し



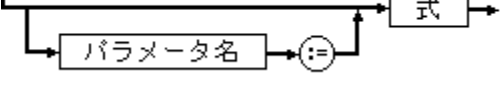
バリエーションメソッド指定子



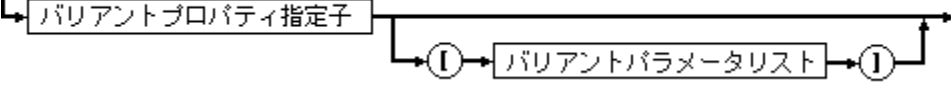
バリエーションパラメータリスト



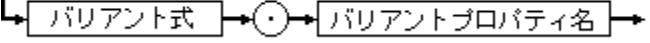
バリエーションパラメータ



バリエーションプロパティアクセス



バリエーションプロパティ指定子



OLE fl□[fgf□□[fvf#f“flfufWfFfNfg,ìfvf□fbfhÆÄ,Ñ□o,μ,ìfCfCfgoCf“fffBf“fO,³,è□Cf□\fbfh,Æfpf %of□□[f^,ð’O,à,Á,Ä,èé¾,μ,Ä,“,•K—v,ª, ,è,Ü,¹,ñ□B’Éí,ìfvf□fbfhÆÄ,Ñ□o,μ,Æ,í^Ü,È,è□COLE fl□[fgf□□[fvf#f“,ìfvf□fbfhÆÄ,Ñ□o,μ,Á,ìfRf“fpfCf%o,É”C^Ó,ìfvf□fbfhž~•Éžq,Æ”C^Ó,ì□”,Æží— p,ìfpf%of□□[f^,ðžw’è,Á,«,Ü,·□Bf□fbfhÆÄ,Ñ□o,μ,ªžÄ□Ü,É□—C÷,·,é,©,ç,¤ ,©,ì□CžÄ□Sžž,Éžw’è,³,è,½f□\fbfh,ª¶□Ý,·,é,©,ç,¤,©,É,æ,è,Ü,·□B

OLE fI[fgf[fVfj"fofŠfAf"fg,ì—á03690

OLE fI[fgf[fVfj",lf\bfbfhCEÄ,Ño,μ,δŽg,Á,½fR[fh,ì—á,δŽŸ,ÉŽ!,μ,Ü,·BCreateOleObject
ŠÖ"iOleAuto ftfjfbfg"à,É'è<`³,ê,Ä,ç,éj,δŽg,Á,Ä OLE
fI[fgf[fVfj"flufWfFfNfg,Ö,ìŽQAE,"ü,Á,Ä,ç,éofŠfAf"fg,δì—,μ,Ä,ç,é"_,É'^Ó,μ,Ä,-
,¾,³,çB

var

Word: Variant;

begin

```
Word := CreateOleObject('Word.Basic');  
Word.FileNew('Normal');  
Word.Insert('This is the first line'#13);  
Word.Insert('This is the second line'#13);  
Word.FileSaveAs('c:\temp\test.txt', 3);
```

end;

ŽQÆ03691

OLE f[fgf[fVf#f",ÅŽg,α%oÂ•ïpf%of[f^

OLE f[fgf[fVf#f",ïfvf[fpfefB

OLE fí[fgf][fVf]f“ ,ÁŽg, x%oÂ•İpf%of[f^03692

ŽQAE —á fofŠfAf“fg,Æ OLE fí[fgf][fVf]f“

OLE fí[fgf][fVf]f“ ,İf\fbfhCEÄ,Ño,μ,í 2 Ží—p,İpf%of[f^,đTf[f,g,μ,Ä,ç,Ü,·B

- 'è^É'ufpf%of[f^
 - -¼'O•t,«fpf%of[f^
- 'è^É'ufpf%of[f^,Í'P,È,éŽ®,Ä,·B-¼'O•t,«fpf%of[f^,İpf
%of[f^Ž^•ÉŽq,İCEä,ÉfRf“ ,Æ“™ □+□i:=□j,đ'±, □C,»,İCEä,ÉŽ®,đ'u,«,Ü,·B
- 'è^É'ufpf%of[f^,Í OLE fí[fgf][fVf]f“ ,İf\fbfhCEÄ,Ño,μ,İ't,Ä-¼'O•t,«fpf
%of[f^,İ'O,É'u,©,È, ,é,İ,È,è,Ü,¹,ñB'è^É'ufpf%of[f^,İCfpf%of[f^É'u,đ·ó,ÁŽc,μCf\fbfhCEÄ,Ño,μ,ÁŠú'Ò,³,è,é,æ,è,É,çfpf%of[f^Ž®,đ' ,±,Æ,É,æ,A,ÄÈ—ª,Ä,«,Ü,·B

fí, '½,,İê#COLE fí[fgf][fVf]f“fT[fó][,Í-¼'O•t,«fpf%of[f^,đTf[f,g,μ,Ü,¹,ñB“—
l,ÉC^è•”,İ OLE fí[fgf][fVf]f“fT[fó][,Ä,Í'è^É'ufpf%of[f^,đÈ—ª,Ä,«,Ü,¹,ñB

OLE fí[fgf][fVf]f“ ,İf\fbfhCEÄ,Ño,μfpf%of[f^,Í@□“CE^□CŽÀ□“CE^□C•¶Žš—ñCE^□C~
—□CE^□CfofŠfAf“fgCE^,İ,ç, ,é,©,İCE^,É,Ä,«,Ü,·Bfpf%of[f^,İpf
%of[f^Ž®,ª•İ“ŽQAE,¾, ,Ä\□- ,³,è,Ä,ç,éê#□C,»,İ•İ“ŽQAE,ª

Byte□Csmallint□CInteger□CSingle□Cdouble□CCurrency□CDateTime□CAnsiString (,Ü,½,Í
string)□CWordBool□CVariant ,İ,ç, ,é,©,İCE^,Ä, ,é,ÆŽQAE“n,μ,³,è,Ü,·Bfpf
%of[f^Ž®,ª'P,È,é•İ“ŽQAE,Ä,È,çê#□C,Ü,½,İŽ®,ªä<L,İCE^,İ,ç,è,Ä,à,È,çê#□Cfpf
%of[f^,Í'l“n,μ,³,è,Ü,·Bfpf%of[f^,ªŽQAE“n,μ,³,è,½ê#□C,»,é,É'İ
%ož, ,é•İ“,đCCÄ,Ño,μ,½f\fbfh,©,ç•İX,Ä,«,Ü,·B

fí, 'İpf%of[f^,đŠú'Ò, ,é\fbfh,Öpf%of[f^,đŽQAE“n,μ, ,é,Æ□COLE ,Í'P,ÉŽQAEfpf
%of[f^,©,ç'l,đžæ“¾,μ,Ü,·B,μ,©,μC<t,İó<μ,Ä,İfGf
%o[,É,È,è,Ü,·B,Ä,Ü,èCŽQAEfpf%of[f^,ªŠú'Ò,³,è,Ä,ç,éêŠ,Ö'l,İpf
%of[f^,đ“n, ,ÆfGf%o[,É,È,è,Ü,·B

OLE fI[fgf[fVfjf“ ,lf\fbfh,ÅŽg,xfpf%of[f^,ì—á03693

'è^Ê'ufpf%of[f^,Æ-¼'O•t,«fpf%of[f^,ì—á,ðŽŸ,ÉŽ!,μ,Û,·B

Word.FileSaveAs('test.doc');

Word.FileSaveAs('test.doc', 6);

Word.FileSaveAs('test.doc',,, 'secret');

Word.FileSaveAs('test.doc', Password := 'secret');

Word.FileSaveAs(Password := 'secret', Name := 'test.doc');

Å%o,ìĀÄ,Ño,μ,Å,í'è^Ê'ufpf%of[f^,ª 1 ,Å,·B2 "Ô-Ú,ìĀÄ,Ño,μ,Å,í 2 ,Å,í'è^Ê'ufpf
%of[f^,ª ,è,Û,·B3 "Ô-Ú,ìĀÄ,Ño,μ,Å,í 4 ,Å,í'è^Ê'ufpf%of[f^,ª ,èC,»,ì^,ñ†,ì 2 ,Å,ªÈ
—ª,³,è,Ä,ç,Û,·B4 "Ô-Ú,ìĀÄ,Ño,μ,É,í 1 ,Å,í'è^Ê'ufpf%of[f^,Æ 1 ,Å,ì-¼'O•t,«fpf
%of[f^,ª ,è,Û,·BÅĀĒã,ÉC5 "Ô-Ú,ìĀÄ,Ño,μ,É,í'è^Ê'ufpf%of[f^,ª,È,C2 ,Å,ì-
¼'O•t,«fpf%of[f^,ªŽw'è,³,è,Ä,ç,Û,·B-¼'O•t,«fpf%of[f^,ðŽg,xfêê#Cfpf
%of[f^,ðD,«,È#~ ,ÅŽw'è,Å,«,Û,·B

ŽQÆ03694

OLE f[[fgf[[fVf#".)fvf[[pfefB

OLE f[fgf][Vf]f" ,lfvf[fpfef]B03695

ŽQAE fofŠfAf"fg,AE OLE f[fgf][Vf]f"

OLE f[fgf][Vf]f"flufWfFfNfg,lfvf[fpfef]B,Ö,lfAfNfZfX,ÍCf[fbfh]CEÄ,Ño,μ,AE" ,¶K'¥,É

,Ü,·BŽ®,l't,Áfvf[fpfef]BfAfNfZfX,ðŽg,Á,½,AE,«,lfvf[fpfef]B,l'l,ª"Ç,Ýo,³,êC'ã"ü•¶,ì¶•Ó,Éfvf[fpfef]BfAfNfZfX,ðŽg,Á,½,AE,«,lfvf[fpfef]B,l'l,ª¶,«ž,Ü,ê,Ü,·B"z—ñfvf[fpfef]B,ìê¶,lfCf"ffbfNfXfpf%o[f^fŠfXfg,ð'åjfbfR,Å^í,Ü,È, ,ê,î,È,è,Ü,¹,ñB

Delphi fRf"fpfCf%o,Å,Í OLE f[fgf][Vf]f" ,lfvf[fbfh]CEÄ,Ño,μ,Ü,½,lfvf[fpfef]BfAfNfZfX,É"C^Ó,lfvf[fbfh]Ž^•ÉŽq,Ü,½,lfvf[fpfef]BŽ^•ÉŽq,AE[C^C^Ó,ì¶",AEŽí—p,lfvf[o][f^,ðŽw'è,Å,«,Ü,·BCEÄ,Ño,μ¶í•ñ,lfRf"fpfCf%o,É,æ,Á,Ä'P,ÉfpfbfP[fW%o»,³,êCŽÄsŽž,ÉCEÄ,Ño,μ,Ü,½,lfvf[fpfef]BfAfNfZfX,ªŽÄs,³,ê,é,Ü,ÅC,»,ê,ª—CE÷, ,é,©,Ç,¤,©,í,í,©,è,Ü,¹,ñB

OLE f[fgf][Vf]f" ,lfvf[fbfh]CEÄ,Ño,μ,Ü,½,lfvf[fpfef]BfAfNfZfX,ªŽ, "s,μ,½ê[CEOleError—áŠO,ª¶¶—,³,ê,Ü,·BCEÄ,Ño,μ,Ü,½,lfvf[fpfef]BfAfNfZfX,ªŽ, "s, ,é—R,AE,μ,Ä,íC^È%o²,ì,±,AE,ª¶,ì,ç,è,Ü,·B

- fofŠfAf"fgf[fbfh]Žw'èŽq,Ü,½,lfofŠfAf"fgfvf[fpfef]BŽw'èŽq,ì't,ÁŽw'è,μ,½fofŠfAf"fgŽ®,ªCCE»¶Y OLE f[fgf][Vf]f"flufWfFfNfg,ðŽQAE,μ,Ä,ç,È,ç
 - f[fbfh],Ü,½,lfvf[fpfef]B,ìŽ^•ÉŽq,ª OLE f[fgf][Vf]f"flufWfFfNfg,É,æ,Á,ÄfTf[fg,³,ê,Ä,ç,È,ç
 - Žw'è,μ,½fpf%o[f^,ì¶",ª³,μ,,È,ç,©C1 ,Ä,Ü,½,í;¶",lfvf%o[f^,ìC^,ª³,μ,-,È,©,Ä,½
 - 1 ,Ä,Ü,½,í;¶",ì•K—v,È'è^È'ufpf%o[f^,ªE—ª,³,ê,½
 - Žw'è,³,ê,½-¼'O•t,«fpf%o[f^,ª OLE f[fgf][Vf]f"flufWfFfNfg,É,æ,Á,ÄfTf[fg,³,ê,Ä,ç,È,ç
 - Ž®,l't,Áf[fbfh]CEÄ,Ño,μ,ªŽg,í,ê,½,ªC,»,lfvf[fbfh],ª'l,ð•Ó,³,È,©,Ä,½
 - f[fbfh],Ü,½,lfvf[fpfef]BfAfNfZfX,ª³í,ÉCEÄ,Ño,³,ê,½,ªC—áŠO,ð•Ó,μ,½
- OLE f[fgf][Vf]f" ,lfvf[fbfh]CEÄ,Ño,μ,Ü,½,lfvf[fpfef]BfAfNfZfX,ªŽ, "s,μ,½ê[CEOleError—áŠOflufWfFfNfg,ÉŽ, "s,ì—R,ðà-¾,μ,½Gf%o[f[fbfZ[fW,ª"ü,Ä,Ä,ç,Ü,·B

ŽQÆ03696

OLE f[fqf[fVf#f",ÅŽg,æ%oÂ•ïpf%of[f^

fRf“fpfCf%offbfZ[]fW03697

ŽÄsŽžGf%[]fbfZ[]fW

ŽŸ,ì^ê—,í Delphi fRf“fpfCf%o,ª[][]—,·,éfGf

%o[]CCEx[]Cf“fg,ì,·,×,Ä,ìfbfZ[]fW,ðfAf<ftf@fxfbfg[]±,ÉŽ!,µ,½,à,ì,Ä,·B“Á’è,ìfbfZ[]fW

,É,Ä,ç,ÄÜ×,ð·\Ž!,·,é,É,ìC^ê—,ì’t,Ä,».,ìfbfZ[]fW,ìefLfxfg,ðfNfŠfbfN,µ,Ä,,¾,¾,çB

‘½,,ìfbfZ[]fW,É,ì%oÄ·ìefLfxfg,ª“ü,Ä,Ä,ç,é,ì,ÄC^ê—,ì’t,Ä“Á’è,ìfbfZ[]fW,ðCE©,Ä,¯,É,-

,çê±,à, ,è,Ü,·B

f[]f, “[]±Šj”ŠÄ« (IDE), ÅŽó,~Žæ,Ä,½fbfZ[]fW,É,Ä,ç

,Äî·ñ,ð“¾,é,É,ìCfbfZ[]fWfEfBf“fhfE,ì’t,ÄfbfZ[]fW,ð<’²·\Ž!,µC[]kF1[]l,ð

%oÿ,·,ì,ª,à,Ä,Æ,à·Ö—~ ,È·û-@,Ä,·B

‘;’ not allowed before ‘ELSE’

‘<clause>’ clause not allowed in OLE automation section

<clause1> clause expected, but <clause2> found

<Filename>: <RLink32 error message>

‘<name>’ is not a type identifier

‘<name>’ not previously declared as a PROPERTY

<RLink32 error message>

<token1> expected but <token2> found

16-Bit fixup encountered in object file ‘<Filename>’

486/487 instructions not enabled

Abstract methods must be virtual or dynamic

Array type required

Assignment to FOR-Loop variable ‘<name>’

Bad argument type in variable type array constructor

Bad file format ‘<name>’

Bad file format: <Filename>

Bad global symbol definition: ‘<name>’ in object file ‘<Filename>’

Bad specification of M format

Bad unit format: <Filename>

BREAK or CONTINUE outside of loop

Cannot add or subtract relocatable symbols

Cannot assign to a read-only property

Cannot BREAK, CONTINUE or EXIT out of a FINALLY clause

Cannot initialize local variables

Cannot initialize multiple variables

Cannot initialize thread local variables

Cannot override a static method

Cannot read a write-only property

Case label outside of range of case expression

Circular unit reference to <Unitname>

Class already has a default property

Class does not have a default property

Class or object types only allowed in type section

Class type required
Close error on <Filename>
Compile terminated by user
Constant expected
Constant expression expected
Constant expression violates subrange bounds
Constant object cannot be passed as var parameter
Constant or type identifier expected
Constants cannot be used as open array arguments
Constructing instance of '<name>' containing abstract methods
Constructors and destructors not allowed in OLE automation section
Could not compile used unit '<Unitname>'
Could not create output file <Filename>
Could not load RLINK32.DLL
Data type too large: exceeds 2 GB
Declaration of <name> differs from previous declaration
Default property must be an array property
Default values must be of ordinal, pointer or small set type
Destination cannot be assigned to
Destination is inaccessible
Dispid '<number>' already used by '<name>'
Dispid clause only allowed in OLE automation section
Division by zero
Division by zero
Duplicate case label
Duplicate dynamic method index
Duplicate tag value
Dynamic method or message handler not allowed here
Dynamic methods and message handlers not allowed in OLE automation section
Element 0 inaccessible - use 'Length' or 'SetLength'
Error in numeric constant
EXCEPT or FINALLY expected
EXPORTS allowed only at global scope
Expression has no value
Expression is not a procedure
Expression too complicated
Field definition not allowed in OLE automation section
Field definition not allowed after methods or properties
Field or method identifier expected
File not found: <Filename>
File type not allowed here
Fn requires 2 <= n <= 18
For loop control variable must be simple local variable

For loop control variable must have ordinal type
FOR or WHILE loop executes zero times - deleted
FOR-Loop variable '<name>' cannot be passed as var parameter
FOR-Loop variable '<name>' may be undefined after loop
Format specifier must be C, S, D, H, X, Fn, P, R or nM
Function needs result type
'GOTO <label>' leads into or out of TRY statement
Identifier redeclared: '<name>'
Illegal character in input file: '<Char>' (<Hexadecimal value>)
Illegal message method index
Illegal reference to symbol '<name>' in object file '<Filename>'
Illegal type in OLE automation section: '<typename>'
Illegal type in Read/Readln statement
Illegal type in Write/Writeln statement
Inaccessible value
Incompatible format specification
Incompatible types: '<name>' and '<name>'
Incompatible types: <text>
Incompatible types
Inline assembler stack overflow
Inline assembler syntax error
Instance variable '<name>' inaccessible here
Integer constant or variable name expected
Integer constant too large
Internal error: <ErrorCode>
Invalid combination of opcode and operands
Invalid compiler directive: <Directive>
Invalid function result type
Invalid message parameter list
Invalid register combination
Invalid typecast
Label '<name>' is not declared in current procedure
Label already defined: '<Labelname>'
Label declaration not allowed in interface part
Label declared and referenced, but not set: '<label>'
Label expected
Left side cannot be assigned to
Line too long (more than 255 characters)
Local class or object types not allowed
Local procedure/function '<name>' assigned to procedure variable
LOOP/JCXZ distance out of range
Low bound exceeds high bound
Memory reference expected

Method '<name>' hides virtual method of base type '<name>'
Method '<name>' not found in base class
Method identifier expected
Missing ENDIF directive
Missing operator or semicolon
Missing or invalid conditional symbol in '\$<symbol>' directive
Missing parameter type
Necessary library helper function was eliminated by linker
No definition for abstract method '<name>' allowed
No source line for this procedure
Not enough actual parameters
Number of elements differs from declaration
Numeric overflow
Object or class type required
Object type required
Only register calling convention allowed in OLE automation section
Operand size mismatch
Operator not applicable to this operand type
Order of fields in record constant differs from declaration
Ordinal type required
Out of memory
Overflow in conversion or arithmetic operation
Overriding automated virtual method '<name>' cannot specify a dispid
PACKED not allowed here
Pointer type required
Procedure cannot have a result type
Procedure DISPOSE needs destructor
Procedure FAIL only allowed in constructor
Procedure NEW needs constructor
PROCEDURE or FUNCTION expected
Procedure or function name expected
Procedure runs out of local address space
Procedure too long: exceeds 32K
Program or unit recursively uses itself
Property '<name>' does not exist in base class
Published property '<name>' cannot be of type <type>
Published Real property '<name>' must be Single, Double or Extended
Re-raising an exception only allowed in exception handler
Read error on <Filename>
Record, object or class type required
Redeclaration of '<name>' hides a member in the base class
Redeclaration of property not allowed in OLE automation section
Return value of function '<Functionname>' might be undefined

Seek error on <Filename>

Segment/Offset pairs not supported in Borland 32-bit Pascal

Sets may have at most 256 elements

Size of published set '<name>' is >32 bits

Slice standard function only allowed as open array argument

Statement expected, but expression of type '<type>' found

Statements not allowed in interface part

String constant too long

String constant truncated to fit STRING[<number>]

Strings may have at most 255 elements

Structure field identifier expected

Syntax error in real number

System unit out of date or corrupted: missing '<name>'

Text after final 'END.' - ignored by compiler

This form of method call only allowed for class methods

This form of method call only allowed in methods of derived types

This type cannot be initialized

Thread local variables cannot be ABSOLUTE

Thread local variables cannot be local to a function

Too many actual parameters

Too many conditional symbols

Type '<name>' has no type info

Type '<name>' is not yet completely defined

Type '<name>' must be a class to have a PUBLISHED section

Type '<name>' must be a class to have OLE automation

Type '<name>' needs finalization - not allowed in file type

Type '<name>' needs finalization - not allowed in variant record

Type expected

Type not allowed in OLE Automation call

Type of expression must be BOOLEAN

Type of expression must be INTEGER

TYPEINFO standard function expects a type identifier

TYPEOF can only be applied to object types with a VMT

Types of actual and formal var parameters must be identical

Undeclared identifier: '<name>'

Unexpected end of file in comment started on line <Number>

Unit <Unit1> was compiled with a different version of <Unit2>

Unit name mismatch: '<Unitname>'

Unknown directive: '<Directive>'

Unnamed arguments must precede named arguments in OLE Automation call

Unsatisfied forward or external declaration: '<Procedurename>'

Unterminated string

Value assigned to '<name>' never used

Variable '<name>' inaccessible here due to optimization

Variable '<name>' is declared but never used in '<name>'

Variable '<name>' might not have been initialized

Variable required

Virtual constructors are not allowed

Write error on <Filename>

Wrong or corrupted version of RLINK32.DLL

Ordinal type required v03698

ŽQÆ —á fRf“fpfCf<fGf%□[fbfZ□[fW

à-¾

fRf“fpfCf%°,±,žž“_ ,Á□#~CE^,đ•K—v,Æ,μ,Ü,μ,½□B

□#~CE^,í'è<`□í,Ý,ì□@□”CE^□CChar CE^□Cf□fCfh•ŋŽšCE^□C~_—□CE^,Æ□C□éCE¾,μ,½—

ñ<“CE^,Á,·□B□#~CE^,í'È%°,ì,æ,α,È□ê□#,É•K—v,Á,·□B

”z—ñ,ì“YŽšCE^,í□#~CE^,Á,È,¯,ê,î,È,è,Ü,¹,ñ□B

- “•a”í'íCE^,ì%°CEÀ,Æ□ăCEÀ,í□#~CE^,ì'è”Ž®,Á,È,¯,ê,î,È,ç,È,ç
- □W□#,ì—v'fCE^,í□#~CE^,Á,È,¯,ê,î,È,ç,È,ç
- case •ŋ,ì'í'đŽ®,í□#~CE^,Á,È,¯,ê,î,È,ç,È,ç
- W□€Žè'±,« Inc ,Æ Dec ,ì'æ 1 ^ø□”,í□#~CE^,Ü,½,í|fCf“f^CE^,ì•ï□”,Á,È,¯,ê,î,È,ç,È,ç

—á03699

```
{ "z—ñ,ì"YŽšĈĒ^,í□#□~ĈĒ^,Å,È,¯,ê,Î,È,ç,È,ç□BTByteSet ĈĒ^,í□#□~ĈĒ^,Å,È,□W□#Å, ,é }
```

```
program Produce;
```

```
type
```

```
  TByteSet = set of 0..7;
```

```
var
```

```
  BitCount: array[TByteSet] of Integer;
```

```
begin
```

```
end.
```

```
{ □#□~ĈĒ^,ð"z—ñ,ì"YŽšĈĒ^,Æ,μ,ÄŽw'è,·,é }
```

```
program Solve;
```

```
type
```

```
  TByteSet = set of 0..7;
```

```
var
```

```
  BitCount: array[Byte] of Integer;
```

```
begin
```

```
end.
```

ŽQÆ03700

"z-ñĀ^

•"•ā"ííĀ^

-ñ<"Ā^

case •¶

Inc Žè'±,«

Dec Žè'±,«

File type not allowed here v03701

ŽQÆ —á fRf“fpfCf<fGf%o[f]fbfZ[f]fW

à-¾

ftf@fCf<CE^,í'lfpf%of[f^,Æ,μ,ÄŽg,Á,½,èftf@fCf<CE^Ž©g,ìŠì-

{CE^,Æ,μ,ÄŽg,Á,½,è,Ä,«,Ü,¹,ñBŠÖ”,ì-

ß,èCE^,Æ,μ,Ä,àŽg,!,.C’ă“ü,à,Ä,«,Ü,¹,ñ,^aC,»,è,ç,lfGf%o[.í•Ê,lfGf%o[f]fbfZ[f]fW,^a•\

Ž!,³,è,Ü,·B

—á03702

```
{ ŽŸ,lfR[]fh,Á,í[]CT ,ª Text (•W[]€ftf@fCf<) CE^,ì'lfpf%of[]f^,Á, ,é“_É-â'è,ª, ,é[]B'lfpf  
%of[]f^,Ö[]',«[]ž,ñ,Á,à[]CCEÄ,Ñ[]o,μ'α,ì•ì[]"fRfs[][,í  
%oe<¿,đŽó,~,È,¢[]B,μ,½,ª,Á,Ä[]Cftf@fCf<,đ'lfpf%of[]f^,Æ,μ,Ä[]éCE¾,μ,Ä,à^Ó-¿,ª,È,¢ }
```

program Produce;

```
procedure WriteInteger(T: Text; I: Integer);
```

```
begin
```

```
  Writeln(T, I);
```

```
end;
```

```
begin
```

```
end.
```

```
{ fpf%of[]f^,đ var fpf%of[]f^,Æ,μ,Ä[]éCE¾,·,è,Î-â'è,ª%öCE^,·,é }
```

program Solve;

```
procedure WriteInteger(var T: Text; I: Integer);
```

```
begin
```

```
  Writeln(T, I);
```

```
end;
```

```
begin
```

```
end.
```

ŽQÆ03703
ft@fCf<E^

Low bound exceeds high bound v03704

á fRf"fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfGf%o[f]fbfZ[fW,í•"•a"í^í(CE^,ì%o°CEÀ,ª[ãCEÀ,æ,è'å,«,ç[ê[#,©[Ccase_f%ofxf<,ì"íí,ì%o°CEÀ,ª[ãCEÀ,æ,è'å,«,ç[ê[#,É•\Z!,³,ê,Û,·B

—á03705

```
{ ŽŸ,İfR[]fh,Å,Í"Í'Í,ª<ó,Æ,μ,Ä^μ,í,ê,é,ì,Å,È,[]CfGf%o[][,É,È,é[]B }
```

```
program Produce;
```

```
type
```

```
  SubrangeType = 1..0;                                { []u%o°CEÀ'l,ª[]ăCEÀ'l,ð' ',!;Ä,ç,Ü,·[]vfGf  
  %o[][,É,È,é }
```

```
begin
```

```
  case True of
```

```
    True..False:                                       { []u%o°CEÀ'l,ª[]ăCEÀ'l,ð' ',!;Ä,ç,Ü,·[]vfGf  
    %o[][,É,È,é }
```

```
      Writeln('Expected result');
```

```
  else
```

```
    Writeln('Unexpected result');
```

```
  end;
```

```
end.
```

```
{ []ăCEÀ,Æ%o°CEÀ,Í•K, ,[]³,μ,ç[]#[]~,ÅŽw'è, ,é }
```

```
program Solve;
```

```
type
```

```
  SubrangeType = 0..1;
```

```
begin
```

```
  case True of
```

```
    False..True:                                       Writeln('Expected result');
```

```
  else
```

```
    Writeln('Unexpected result');
```

```
  end;
```

```
end.
```


□ uProgram or unit recursively uses itself □ v03706

—á [fRf“fpfCf<fGf%□\[ffbfZ□\[fW](#)

□ à-¾

, ±, ìfGf%□[ffbfZ□[fW, í **uses** □β, ^aCE<%oÊ“l, É“~ , ¶ffjfbfg, ©fvf□fOf%of€ , ðf□□[fh, ; , é□é□#, É•\ Ž, ³, è, Û, ·□B-P fRf“fpfCf%Žw—ß (8.3 CE`Ž@ , ìftf@fCf<, ð'T, ·) , ðŽw'è, μ, ½□é□#□C-¼'O, ì□Å□%o, ì 8 • ¶Žš, ^a“~ , ¶, ^¾, Æftf@fCf<-¼, ì□Ø, èŽì, Ä, É, æ, Á, Ä, ±, ìf□bfZ□[fW, ^a•\Ž, ³, è, é%oÅ“\□« , ^a, , è, Û, ·□B

—**á03707**

```
{ Produce_.pas ftf@fCf<,É“ü,Á,Ä,ç,éŽŸ,lfjffbfq,íC'Z,çftf@fCf<-  
¼,đŽg,xfjfvfVf#f“,đŽw'è,μ,ÄfRf“fpfCf<,.é,ÆfGf%o[][,É,È,é }
```

```
unit Produce_Unit_1;
```

```
interface
```

```
uses Produce_Unit_2;
```

```
implementation
```

```
end.
```

uProcedure runs out of local address space v03708

[fRf“fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

,±,lfGf%o[f]fbfZ[fW,Í Intel fA[fLfefNf`ff,Å,íŽg,í,ê,Ü,¹,ňB

Label '<name>' is not declared in current procedure v03709

—á [fRf“fpfCf<fGf%o\[\]f\[\]fbfZ\[\]fW](#)

•W€ Pascal ,Æ,Í^á,çCBorland Pascal ,Å,Í **goto** ,đŽg,Á,ÄŒ»Ÿ,ìŽè'±
,«,©,çŠO,ÖfWfff“fv,Å,«,Ü,¹,ňBfGf%o[],³“[]μ,½ê‡,ì^—,ì'âŽ~,É,Í—áŠO^—,đŽg—
p,μ,Ä,,³/₄,³,çB

—á03710

```
{ ŽŸ,lfR[fh,Á,Íf[fj<,Á,È,ç goto ,lŽÀ[s,É,æ,Á,Ä^—,đ'âŽ~,μ,æ,α,Æ,·,é }  
program Produce;  
  
label 99;  
  
procedure MyProc;  
begin  
  { ,±,±,Á%½,©'â,«,È-â'è,â<N,«,é }  
  goto 99;  
end;  
  
begin  
  MyProc;  
  99:  
  Writeln('Fatal error');  
end.  
  
{ Borland Pascal ,Á,Í—áŠO^—,đŽg,Á,Äfvf[fOf%of€,đ'âŽ~,·,é[B,±,ì•ù-@,É,ÍfGf  
%o[f[fbfZ[fW,à“n,1,é,Æ,ç,α—“_,a, ,é[B•É,ì•ù-@,Æ,μ,Ä•W[€Žè'±,«,ì Halt ,Ü,½,Í RunError  
,lŽg—p,a[,!,ç,é,é }  
program Solve;  
  
uses SysUtils;  
  
procedure MyProc;  
begin  
  { ,±,±,Á%½,©'â,«,È-â'è,â<N,«,é }  
  raise Exception.Create('Fatal error');  
end;  
  
begin  
  try  
    MyProc;  
  except  
    on E: Exception do Writeln(E.Message);  
  end;  
end.
```

Local procedure/function '<name>' assigned to procedure variable

á fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfGf%o[f]fbfZ[fW,lf[f]f<Žè'±,«,đŽè'±,«•i”,É'ã“ü,μ,æ,π,Æ,μ,½ê±,©Cf[f]f<Žè'±,«,đŽè'±,«,lfpf%of[f^,Æ,μ,Ä'n,»,π,Æ,μ,½ê±,É•\Ži,³ê,Ü,·B,»,ì,æ,π,É'€ì,íCŠO'π,ìŽè'±,«,AfNfefBfu,Å,È,Ä,à[f]f<Žè'±,«,đÆÄ,Ňo,¹é,±,Æ,É,È,é,ì,Å^á-@,Å,·B[f]f<Žè'±,«,ŠO'π,ìŽè'±,«,ì•i”,ÉfAfNfZfX,μ,æ,π,Æ,·,é,Æfvf[fO]f%of€,AfNf%ofbfVf...,μ,Ü,·B

—á03712

```
{ ŽŸ, ĺfR ĺfh, ĺf ĺf ĺf Žè' ±, «, ðŽè' ±, «ĈĖ^• ĺ" , Ö'ă"ü, μ, æ, x, Ą, Ę, , é ĺB, ±, ê, ĺŽÀ ĺsŽž, É^À'S, Ą, È, ĸ, ĺ, Ą^á-@, Ą, , é }
```

```
program Produce;
```

```
var
```

```
  P: Procedure;
```

```
procedure Outer;
```

```
  procedure Local;
```

```
  begin
```

```
    Writeln('Local is executing');
```

```
  end;
```

```
begin
```

```
  P := Local;          { <-- , ±, ±, ĄfGf%o ĺf ĺfbfZ ĺfW }
```

```
end;
```

```
begin
```

```
  Outer;
```

```
  P;
```

```
end.
```

```
{ f ĺf ĺf Žè' ±, «, ðŠO' x, ĺŽè' ±, «, ©, ĸŠO, Ö ĺo, ĺ, ĺ%oðĈĖ^, , é }
```

```
program Solve;
```

```
var
```

```
  P: Procedure;
```

```
procedure NonLocal;
```

```
begin
```

```
  Writeln('NonLocal is executing');
```

```
end;
```

```
procedure Outer;
```

```
begin
```

```
  P := NonLocal;
```

```
end;
```

```
begin
```

```
  Outer;
```

```
  P;
```

```
end.
```

Missing ENDIF directive v03713

ŽQÆ —á fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfGf%o[f]fbfZ[fW,í **\$IFDEF** C**\$IFNDEF** C**\$IFOPT** ,ì,ç,,.ê,©,ìŽw—β,ìĈă,É'í%ož,,é
\$ENDIF Žw—β,^a,Ě,çê±,É•\Ž!,³,ê,Û,·B

—á03714

```
(* ŽŸ,lfR[fh,Á,ÍC{$Endif} Žw—ß,ì†,É $ •¶Žš,đ“ü,ê-Y,ê,½,½,ß□CfRf“fpfCf%oo,Žw—  
ß,đfRf□“fg,ÆCEë%ođ,μ,½ *)
```

```
program Produce;
```

```
{ $AppType Console }
```

```
begin
```

```
{ $IfOpt O+ }
```

```
    Writeln('Compiled with optimizations');
```

```
{ $Else }
```

```
    Writeln('Compiled without optimizations');
```

```
{ $Endif }
```

```
end.      { <-- ,±,±,ÅfGf%o□[f□fbfZ□[fW } }
```

```
{ —LCEø,È $ENDIF Žw—ß,đ□đCE□Žw—ß,ìCEã,É•t,¯,é,¾,¯,Å%ođCE^,·,é }
```

```
program Solve;
```

```
{ $AppType Console }
```

```
begin
```

```
{ $IfOpt O+ }
```

```
    Writeln('Compiled with optimizations');
```

```
{ $Else }
```

```
    Writeln('Compiled without optimizations');
```

```
{ $Endif }
```

```
end.
```

ŽQÆ03715
ðŒŽw—ß

Method identifier expected v03716

—á [fRf“fpfCf<fGf%o\[f\fbfZ\[fW](#)

à-¾

,±,lfGf%o[f\fbfZ[fW,í^È%oº,ì,æ,æ,Èèèþ,É•\Ž!,³,ê,Ü,·B

- **automated** •““à,lfvf\fpfefB,ªfAfnfZfX—p,lf\fbfh,ðŽg,í,È,¯,ê,î,È,ç,„Cread B,Ü,½,í
- **write** B,ì†,lftfB[f<fh,ðŽg,ì,È,ç
- `uClassType.MethodName`v,ì\•¶,ðŽg,Á,Äfnf%ofXf\fbfh,ðCEÄ,Ño,»,æ,Æ,µ,½,ªCMethodNamev,ªf\fbfh-¼,Å,È,©,Á,½
- **inherited** `MethodName`v,ì\•¶,ðŽg,Á,Äep³f\fbfh,ðCEÄ,Ño,»,æ,Æ,µ,½,ªCMethodNamev,ªf\fbfh-¼,Å,È,©,Á,½

—á03717

{ ŽŸ, ĺfR[]fh, ĺftfB[]f<fh, É'¼[]ÚfAfNfZfX, ·, é automated fv[]fpfefB, δ[]éCE¾, μ, æ, x, Æ, μ, Ä, †, é[]B2 "Ô-Ú, ĺfGf%[][, Íŝî- {fNf%ofX, ĺftfB[]f<fh, δŽæ"¾, μ, æ, x, Æ, μ, ½, ì, æCE '^ö, Å, , é }

program Produce;

type

```
TMyBase = class
  Field: Integer;
end;
TMyDerived = class(TMyBase)
  Field: Integer;
  function Get: Integer;
automated
  property Prop: Integer read Field;      { <-- ,±,±,ÅfGf%[]f[]fbfZ[]fW }
end;
```

function TMyDerived.Get: Integer;

begin

```
  Result := TMyBase.Field;                { <-- ,±,±,ÅfGf%[]f[]fbfZ[]fW }
```

end;

begin

end.

{ []Å[]%, ì-â-è, ĺf[]fbfh, δ'É, μ, ÄftfB[]f<fh, ÉfAfNfZfX, ·, é, î%δCE^, Å, «, é[]B2 "Ô-Ú, ì-â-è, Í Self f[]fCf" f^, δŝî- {fNf%ofXCE^, ÖfLfffXfg, μ[]C, » , ±, ©, çftfB[]f<fh, ÉfAfNfZfX, ·, é, î%δCE^, ·, é }

program Solve;

type

```
TMyBase = class
  Field: Integer;
end;
TMyDerived = class(TMyBase)
  Field: Integer;
  function Get: Integer;
automated
  property Prop: Integer read Get;
end;
```

function TMyDerived.Get: Integer;

begin

```
  Result := TMyBase(Self).Field;
```

end;

begin

```
  Writeln( TMyDerived.Create.Prop );
```

end.

uFOR-Loop variable '<name>' cannot be passed as var parameter v03718

—á fRf“fpfCf<fGf%o[f]fbfZ[f]fW

à-¾

,±,ìCEx□□,í **for** f<□[fv,ì□\$CEä•ï□”,ð•ï□”fpf%of□□[f^,Æ,μ,Ä“n,μ,½,Æ,«,É•\
Ž!,³,ê,Ü,·□BCEÄ,Ñ□o,³,ê,½Žè’±,«,Ü,½,íSÖ□”,ª□\$CEä•ï□”,ð•ï□X,μ□C,»,ê,ªCE’^ö,Å for
f<□[fv,ª□³,μ,ŽÄ□s,³,ê,È,†%oÄ”\□«,ª, ,è,Ü,·□Bfpf%of□□[f^,í’fpf%of□□[f^,©’è□”fpf
%of□□[f^,ì,Ç,ì,ç,©,Å□éCE¾,μ,Ä,,¾,³,†□Bfpf%of□□[f^,ð□³,μ,□éCE¾,·,é,Æ□CEÄ,Ñ□o,³,ê,é’α
,ìŽè’±,«,Æ **for** f<□[fv,ì—¼•û,ìCEø—|,ªCEü□ă,μ,Ü,·□B

—á03719

```
{ ŽŸ, ĺfR[fh, ĺ$CEä•ĭ" ĺ, đ•ĭ"fpf%of[f^, Æ, μ, Ä MyProc Žè'±, «, É"n, μC, » ĺ, ½, β, ÉCEx, ä•\
Ž!, ³, ê, é }
```

```
program Produce;
{$WARNINGS ON}
```

```
procedure MyProc(var I: Integer);
begin
  Writeln(I);
end;
```

```
var
  I: Integer;
begin
  for I := 1 to 10 do
    MyProc(I);           { <-- ,±,±, ÅCEx[f]fbfZ[fW }
end.
```

```
{ ,±, ĺê±, É, ĺfpf%of[f^ ĺéCE¾, đ'è"fpf%of[f^, É•ĭX, ,ê, ĺ
%öðCE^, ,éB$CEä•ĭ", đ•É, ĺâ••ĭ", É'ä"ü, μC, » ĺ, ĭ", đ"n, •û-@, à, ,é }
```

```
program Solve;
{$WARNINGS ON}
```

```
procedure MyProc(const I: Integer);
begin
  Writeln(I);
end;
```

```
var
  I: Integer;
begin
  for I := 1 to 10 do
    MyProc(I);
end.
```

uBREAK or CONTINUE outside of loop v03722

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

while f<□[fv,Ü,½,Í **repeat** f<□[fv,É“ü,Á,Ä,ç,È,ç Break •¶,Ü,½,Í Continue
•¶,ª, ,è,Ü,µ,½□BBreak ,Æ Continue ,Íf<□[fv“à,É,È,,Á,Í,ç, ,Ü,¹,ñ□B

Division by zero

[fRf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

fvfOf%of€,'t,Éf[f,É,æ,é'è"œŽZ,è,Ü,µ,½B

'è"Ž®,'²,x,ÄCf[f,É,æ,éœŽZ,³<N,«,È,ç,æ,α,É,µ,Ä,¾,³,çB

uType of expression must be BOOLEAN v03725

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

,±,lfGf%o[]f[]fbfZ[]fW,ºo—í,³,ê,é,ì,í[]C, ,éŽ®,ºð[]Æ,µ,Ä<@”\
,µ,Ä,¨,è[]C,µ,½,º,Á,Ä,»,ìŽ®,º~—[]^,Ä,È,¨,é,í,È,ç,È,ç
,Æ,«,Ä,·[]B,½,Æ,!,î[]Cif[]Cwhile[]Crepeat •¶,ì[]\$ÆäŽ®,â[]Cð[]fuf[]fNf|
fCf“fg,ð[]\$Æä,·,éŽ®,ì[]é[]‡,È,Ç,Ä,·[]B

—á03726

{ ,±,±,Á,Í if •¶,ìðĀE□,Æ,μ,Äf|fCf“f^•i□”,ðŽg,Á,½ }

program Produce;

var

P: Pointer;

begin

if P **then**

Writeln('P <> nil');

end.

{ ,±,ì□ê□#□CPascal ,Á,Í,æ,è-¾Ž!“I,ÉŽw’è,·,é•K—v,ª, ,é }

program Solve;

var

P: Pointer;

begin

if P <> **nil then**

Writeln('P <> nil');

end.

uOverflow in conversion or arithmetic operationv03727

[fRf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

ŽŽpŽ®,ì†,Åfi[f]o[f]t[f]o[f],ªŒÿo,³,ê,Û,µ,½BŽ®,ìŒ<%oÊ,ª'â,«,·,¬,Ä 32 frfbfg,Å,Í\Œ»,Å,«,Û,¹,ñB

ŒvŽŽŽ®,ð'²,x,ÄCfRf"fsf...[f^,lfñ[f]hfEfFfA,ª•\Œ»,Å,«,é'l,ÉŽû,Û,é,æ,x,É,µ,Ä,,¾,¾,çB

uData type too large: exceeds 2 GB v03728

—á [fRf“fpfCf<fGf%oo\[\]f\[\]fbfZ\[\]fW](#)

à-¾

‘â,«,·,¬,ÄfRf“fpfCf%oo,³•\CE»,Å,«,È,çff[]f^CE^,đŽw’è,μ,Û,μ,½[]BCE^,ì<L[]q,ìTfCfY,ð[]¬,³,-
,μ,È,¬,ê,î,È,è,Û,¹,ñ[]B

—á03729

{ ,±,ê,ç,ìéÉ¾,âfGf%[]f[]fbfZ[]fW,ð"ñ³,¹,½—[]—R,íÉ©,ê,î,·,®,É,í,©,é }

program Produce;

type

EnormousArray = **array**[0..MaxLongint] **of** Longint;
BigRecord = **record**
 Points: **array**[1..10000] **of** Extended;
end;

var

Data: **array**[0..500000] **of** BigRecord;

begin

end.

{ ,±,ìfGf%[]f[]fbfZ[]fW,ð%ñ"ð,·,é,É,í[]Cff[]f^É^,ìftfCfY,ð•K, 2GB -ç-ž,É,Æ,Ç,ß,ê,îŠÈ'P,É
%ðÉ^,Á,«,é[]B,à,Á,Æ•;ŽG,È•û-@,Æ,μ,Ä,í[]CBigRecord []éÉ¾,Ä,μ,½,æ,α,Éff[]f^,ì[]'ç
,ð•ì[]X,·,é }

program Solve;

type

EnormousArray = **array**[0..MaxLongint **div** 8] **of** Longint;
DataPoints = ^DataPointDesc;
DataPointDesc = **array**[1..10000] **of** Extended;
BigRecord = **record**
 Points: DataPoints;
end;

var

Data: **array**[0..500000] **of** BigRecord;

begin

end.

Integer constant too large v03730

—á fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

•\Œ»,:é,ì,É 32 frfbfg^Èã•K—v,È®”è”,ďŽw’è,μ,Û,μ,½B

—á03731

```
{ ŽŸ,lfR[fh,Å,í¼•û,ì"è",a'å,«,·,-,Ä 32 frfbfg,Å•\Œ»,Å,«,È,ç,½,ß,ÉfRf"fpfCf<fGf%oo[,É,È,é  
}
```

program Produce;

const

VeryDecimal = 123456789;

VeryBigHex = \$123456789;

begin

end.

```
{ Žw'è,µ,½'è",ð²,x,Ä 32 frfbfg,Å•\Œ»,Å,«,é,æ,α,É,·,é }
```

program Solve;

const

VeryDecimal = 12345678;

VeryBigHex = \$12345678;

begin

end.

u16-Bit fixup encountered in object file '<Filename>'; v03732

fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

\$L fRf“fpfCf%oŽw—ß,Åfvf[]Of%of€,ÖfŠf“fN,μ,½fIfufWfFfNfgf,fWf...[f<,ì 1 ,Â,É 16
frfbfg,ìC³,ª%oA,!,ç,è,Ä,ç,Û,μ,½[]BfRf“fpfCf%o,ÍfŠf“fNfIfufWfFfNfgf,fWf...[f<,Ä,Í 32
frfbfg,ìC³,¾,¯,ðfTf|[]fg,μ,Ä,ç,Û,·[]B
fŠf“fNfIfufWfFfNfgf,fWf...[f<,í•K,¾ 32 frfbfg,ìfIfufWfFfNfgf,fWf...[f<,É,μ,Ä,,¾,¾,ç[]B

Inline assembler syntax error v03733

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

fCf“f%ofCf“fAfZf“fuf%o,ª—LCEø,ÈfAfZf“fufŠ-½—ß,Æ,μ,Ä%ođŽß,Å,«,È,čŽ® ,đ“ü—Í,μ,Ü,μ,½B
fGf%o[] ,đ<N,±,μ,½fCf“f%ofCf“fAfZf“fufŠ•¶,đ'²,×,ÄC³,μ,č\•¶,É,μ,Ä,¾,¾,čB

-á03734

```
program Produce;
```

```
    procedure Assembly;
```

```
    asm
```

```
        adx  eax, 151
```

```
    end;
```

```
begin
```

```
end.
```

```
program Solve;
```

```
    procedure Assembly;
```

```
    asm
```

```
        add  eax, 151
```

```
    end;
```

```
begin
```

```
end.
```

Inline assembler stack overflow v03735

[fRf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

fCf"f%ofCf"fAfZf"fufofR[fh,afCf"f%ofCf"fAfZf"fufo,ì—e—Ê,ð',!,Ü,µ,½B
,±,lfGf%o[,ª,N,«,½ê‡,ÍCf{[f%of"fh,É~A—,µ,Ä,,¾,³,çB

Operand size mismatch v03736

ŽQÆ —á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

-½—ß,lflyf%of“fh,ª•K—v,Æ,·,éTfCfY,ª[]Čw’è,³,ê,½TfCfY,É^ê’v,μ,Ü,¹,ň[]B

-á03737

{ ŽŸ,ĵfR[]fh,Å,Í offset %%%ŽŽŽq,í dword ,đŦŦŦŦ-,·,é,ªC,±,ĭ%%ŽŽŽq,ª byte ,đ•K—
v,Æ,·,é,ĭ,ÅfRf“fpfCf:fGf%[][,É,È,é }

program Produce;

var

V: Integer;

procedure Assembly;

asm

db offset V

end;

begin

end.

{ ,±,ĭ—á,ÉĈÈÀ,ê,ĭ[]C%%ŽŽŽq,ª dword ,đŽó,~Žæ,é,æ,ª,É•ĭ[]X,·,ê,ĭ
%%đĈÈ^,Å,«,é[]B^ê”Ê”ĭ,É,ĭ[]CfR[]fh,đ,æ,’²,x,Ä%%ŽŽŽq,ÆfĭfŸf
%of“fh,ĭfTfCfŸ,đ[]í,É^ê’v,³,¹,é•K—v,ª, ,é }

program Solve;

var

V: Integer;

procedure Assembly;

asm

dd offset v

end;

begin

end.

ŽQÆ03738

fCf“f%ofCf“fAfZf“fu f%oo

Memory reference expected v03739

fRf"fpfCf<fGf%o[f]fbfZ[fW

à-¾

fCf"f%ofCf"fAfZf"fuf%o,ª—Šú,µ,Ä,ç,½f[f,fŠŽQÆŽ® ,ªCE© ,Â,© ,è,Ü,¹,ñ,Å,µ,½B
fGf%o[l,đ<N,±,µ,½•¶,ªf[f,fŠŽQÆ,É,È,é,æ,æ,É,µ,Ä,,¾,¾,çB

□uConstant expected□v03740

—á fRf“fpfCf<fGf%□[fbfZ□[fW

□à-¾

fCf“f%□fCf“fAfZf“fuf%□,ª—Šú,µ,Ä,ç,½'è□”,ªŒ©,Â,©,è,Ü,¹ñ,Â,µ,½□B

fCf“f%□fCf“fAfZf“fuf%□,ì¹/₂,,ìŽ®,Å,Í□C□³,µ,fAfZf“fuf<,·,é,½,ß,É'è□”,ª•K—v,Å,·□BfGf

%□[,đ<N,±,µ,½•¶,ªfAfZf“fuf<Žž,É'è□”,đŽ□,Â,æ,æ,É•í□X,µ,Ä,^¾/₄,³/₃,ç□B

—á03741

{ fCf“f%ofCf“fAfZf“fuf%o,Í Pascal •ĭ” ,Éĭ,·,é MOD %%oŽZ,ª,Å,«,È,ç,ì,Å□CŽŸ,ĭfR□[fh,ĭfGf
%o□[,É,È,é }

```
program Produce;  
  
  procedure Assembly(X: Integer);  
  asm  
    mov  ax, X MOD 10  
  end;  
  
begin  
end.
```

uType expected v03742

[fRf“fpfCf<fGf%o\[fbfZ\[fW](#)

à-¾

,±,lfGf%o[,³<N,«,½ê¶,ÍCf{[f%of“fh,É~A—,μ,Ä,,¾,³,çB

␣uType of expression must be INTEGER␣v03743

—á fRf“fpfCf<fGf%o␣[f␣fbfZ␣[fW

␣à-¾

,±,ìfGf%o␣[,í'Z,ç•¶Žš—ñĈ^,ì•¶Žš␣” ,đŽw'è,μ,½'è␣”Ž®,¶␣®␣”Ĉ^,Å,È,ç,Æ,«,É,¾,~"-
␣¶,μ,Û,·␣B

—á03744

{ ŽŸ,lfR[fh,í•ŋŽš—ñ“à,ì—v‘f,ì”,đ Color Ą^,ìĀ‘â‘l—v‘f,É^Ě‘ŋ,.,é‘l,Æ,μ,ĂŽw‘è,μ,æ,ꝛ
,Æ,μ,Ă,č,é,âC—v‘f”,â^á-@,Ě Color Ą^,Ā, ,é }

program Produce;

type

Color = (red,green,blue);

var

S3: **string**[Succ(High(Color))];

begin

end.

program Solve;

type

Color = (red,green,blue);

var

S3: **string**[Ord(High(Color))+1];

begin

end.

Cannot add or subtract relocatable symbols v03745

—á [fRf“fpfCf<fGf%o\[\]f\[\]fbfZ\[\]fW](#)

à-¾

fCf“f%ofCf“fAfZf“fuf%o,ífŠf“fj,É,æ,Á,Ä•ïX,³,ê,é%oÂ“\□«,^a, ,éf[]f,fŠfAfhfCEfX,ì
%oÁŽZ,âCE,ŽZ,í,Â,«,Û,¹,ñ□B

fCf“f%ofCf“fAfZf“fuf%o•¶,ì‘†,©,ç□Ä“z’u%oÂ“\fAfhfCEfX,ì%oÁŽZ,âCE,ŽZ,ð,μ,È,ç,æ,π,É,μ,Ä,-
,¾,³,ç□B

—á03746

{ fOf□□[fof◀•i□",í□Ä"z'u%oÁ"vfAfhfCEfX,ð□¶□→,·,é□€-Ú,lfNf%ofX,É'®,μ□CfCf"f%ofCf"fAfZf"fuf
%o,í,»,ê,ç,ì%oÁŽZ,âCE,ŽZ,â,Á,«,È,ç }

program Produce;

var

A: **array**[1..10] **of** Integer;
EndOfA: Integer;

procedure Relocatable;

begin
end;

procedure Assembly;

asm
mov eax, A + EndOfA
end;

begin

end.

Invalid register combination v03747

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

fCf“f%ofCf“fAfZf“fuf%o•¶,ì’t,ÅfCEfWfXf^,ì^á-@,È’g,Ý□‡,í,¹,đŽw’è,μ,Ü,μ,½□Intel 80x86
ftf@f~fŠ,ĂŽg,!,éfAfhfCEfXŽw’èf,□[fh,É,Â,ç,Ä,ì□Ú□×,í□CfAfZf“fufŠCE¾CEé,ì
%ođ□à□’,đŽQ□Æ,μ,Ä,,¾,¾,ç□B

-á03748

{ ,±,ì mov -½—β,ÅŽw'è,μ,½‰E'α,ì|f|yf‰of“fh,í^á-@,Å, ,é }

program Produce;

procedure AssemblerExample;

asm

mov eax, [ecx + esp * 4]

end;

begin

end.

{ ,±,ì mov -½—β,ì‰E'α,ì|f|yf‰of“fh,ÅŽw'è,μ,½fAfhfCEfXŽw'èf,□[fh,í<-,³,è,é }

program Solve;

procedure AssemblerExample;

asm

mov eax, [ecx + ebx * 4]

end;

begin

end.

uNumeric overflowv03749

—á [fRf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

[fCf"f%ofCf"fAfZf"fu f%o, aŽ ®, ì 1 , Â, Â"'"lf\[fo\[ftf\[, ðŒÿ o, µ, Ü, µ, ½ B](#)

—á03750

{ 32 frfbfg^È%º,Å,í•\Œ»,Å,«,È,ç□''l,ðŽw'è,·,é,Æ,±,}fGf%º□[.ª<N,«,é }

program Produce;

procedure AssemblerExample;

asm

mov eax, \$0ffffffffffffffffffffffff

end;

begin

end.

{ Žw'è,·,é□''l,ª,·,×,Ä 32 frfbfg,ÉŽû,Û,é,æ,ª,É,·,é }

program Solve;

procedure AssemblerExample;

asm

mov al, \$0ff

end;

begin

end.

uString constant too long v03751

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

Žw’è,μ,½•¶Žš—ñ,ì□l,í,è,ðfCf“f%oofCf“fAfZf“fuf%o

,³CEÿ□o,Á,«,Ü,¹,ñ,Á,μ,½□B,à,Á,Æ,à□l,¡,ç,é,éCE´ö,í•Â,¶,é^ø—p•,,ìCEë,Á,½”z’u,Á,·□B

—á03752

{ fCf“f%ofCf“fAfZf“fuf%o,Í•ŕŽš—ñ,ìl,í,è,ðŒŸo,Å,«,È,ç,æ,¿,És,ªl—¹,·,é,½,ßC•ŕŽš—ñ,ª',·,¬,é,Æ,ç,æfGf%o[l,ð•ño,·,é }

program Produce;

procedure AssemblerExample;

asm

db 'Hello world. I am an inline assembler statement'

end;

begin

end.

{ •Â,ŕ,é^ø—p•,,,ð'ç%oÁ,·,ê,î,±,lfGf%o[l,í%oðŒ^,·,é }

program Solve;

procedure AssemblerExample;

asm

db 'Hello world. I am an inline assembler statement'

end;

begin

end.

uError in numeric constantv03753

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

“ü—í,µ,½”'l'è”,©,çfCf“f%ofCf“fAfZf“fuf%o,³fGf%o[],ðŒÿ[]o,µ,Ü,µ,½[]B

—á03754

```
{ ŽŸ, ĩfR[]fh, Å, í[]CfCf“f%ofCf“fAfZf“fuf%o, í 16 []i'è[]", ĩ%ođ[]í, đ—\Šú, μ, Ä, ç  
, ½, æĒë, Á, ½•¶Žš, đĒĚŸ[]o, μ, ½ }
```

```
program Produce;
```

```
    procedure AssemblerExample;  
    asm  
        mov al, $z0f0  
    end;
```

```
begin  
end.
```

```
{ "ü—í, μ, ½[]"i'è[]", æfCf“f%ofCf“fAfZf“fuf%o, æ%ođ[]í, đ—\Šú, μ, Ä, ç, éĒĒ^, đ•K, „K[]‡, ³, ¹, é }
```

```
program Solve;
```

```
    procedure AssemblerExample;  
    asm  
        mov al, $f0  
    end;
```

```
begin  
end.
```

Invalid combination of opcode and operands v03755

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

³,μ,,È,¢fCf“f%ofCf“fAfZf“fuf%o•¶,đŽw'è,μ,Û,μ,½ B

—á03756

{ fCf“f%ofCf“fAfZf“fuf%o,Í \$f0*16 ,ìCE<%oÊ,ð al fCEfWfXf^,ÉŠi“[,Å,«,È,ç□BCE^,ì•s^ê'v,ªCE
^'ö,Å, ,é }

program Produce;

```
procedure AssemblerExample;  
asm  
    mov al, $0f0 * 16  
end;
```

begin
end.

{ -¼•û,ìfif%of“fh,ìCE^,ð•K, ,^ê'v,³,¹,é }

program Solve;

```
procedure AssemblerExample;  
asm  
    mov al, $0f * 16  
end;
```

begin
end.

u486/487 instructions not enabled v03757

[fRf"fpfCf<fGf%o\[fbfZ\[fW](#)

à-¾

486 -½—β, í, ÉŽg—p%oÂ"\, É, È, Á, Ä, ç, é, ì, Å C, ±, ìCf"f%oCf"fAfZf"fu f%o, ìfGf%o[, í"¶, μ, È, ç, í, , Å, ·B

Division by zero v03758

—á [fRf"fpfCf<fGf%o\[fbfZ\[fW](#)

à-¾

[fCf"f%ofCf"fAfZf"fu f%o,ªE<%oÊ"l,Éf\[f,É,æ,éœžZ,É,È,éž®,đEÿ\[o,µ,Ü,µ,½B](#)

-á03759

```
{ 'è"ſŠfef%of<,Å,È,fvfſOf%of€'è",ðŽg,Á,Ä,ç,é,ÆC,±,İGf%o[ ,Í, ,Ü,è-Ú-s,½,È,çê†,ª, ,é  
}
```

program Produce;

```
procedure AssemblerExample;  
asm  
    dw 1000 / 0  
end;
```

begin
end.

```
{ ,<%CE¾CEê,Å,İvfſOf%of~f"fo,Æ"-l,ÉCCE^,μ,Äf[ſ,É,æ,éœŽZ,ª,È,ç,æ,ª,É,·,ê,î  
%øđCE^,·,é }
```

program Solve;

```
procedure AssemblerExample;  
asm  
    dw 1000 / 10  
end;
```

begin
end.

Structure field identifier expected v03760

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

fCf“f%ofCf“fAfZf“fuf%o, a□u.□v, ì%oE’x, ÉŽ- •ÊŽq, ð”FŽ-, μ, Ü, μ, ½, a□C, » , ê, Í□u.□v, ì□¶’x, É, , éfÆfR
□[fh, ìftfB□[f<fh, Å, í, , è, Ü, ¹, ñ, Å, μ, ½□B, ±, ìŽí, ì, æ, , , é□C, μ, ©, μÆ©, Å, -, é, ì, a“i, μ, çfGf%o□[, Í□Cch
, Æ, ç, xftfB□[f<fh, a, , éfÆfR□[fh, ðŽg, Å, ½fGf%o□[, Å, ·□BfCf“f%ofCf“fAfZf“fuf%o, í□í, É ch
, ðfÆfWfxf^-¼, Æ, μ, Å%oðŽß, μ, Ü, ·□B

—á03761

{ ŽŸ, ĺR ĺfh, Å, ĺCfCf“f%ofCf“fAfZf“fuf%o, ĺY ,đ—LCEø, ÈŽ•ÈŽq, Æ, μ, Ä“FŽ-, μ, ½, ĺCY ,đ D
CE^, ĺf“fo ĺ, Æ, μ, Ä, ĺ“FŽ-, μ, È, ©, Á, ½ }

program Produce;

type

Data = **record**

X: Integer;

end;

procedure AssemblerExample(D: Data; Y: Char);

asm

mov eax, D.Y

end;

begin

end.

{ ĺ³, μ, ç•ĺ“-¼, đŽw'è, , ê, ĺfGf%o ĺ, ĺ, È, , È, é }

program Solve;

type

Data = **record**

X: Integer;

end;

procedure AssemblerExample(D: Data; Y: Char);

asm

mov eax, D.X

end;

begin

end.

uLOOP/JCXZ distance out of range v03762

[fRf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

fCf"f%ofCf"fAfZf"fuf%ofR[fh,ì't,ÅŽw'è,μ,½ LOOP ,Ü,½,Í JCXZ ,ìsæ,ª"í^íŠO,Å,·B<—£,í -
128`127 ,ì"í^í,Å,È,¯,ê,î,È,è,Ü,¹,ñB

,±,ìfGf%o[,ª•\Ž!,³,ê,½ê±,íCLOOP ,Ü,½,Í JCXZ ,ð 2 ,Â,ì-½—β,©,ç,È,é"¯,¶^Ó-
i,ìfV[fPj"fx,É'uŠ·,μ,Ä,,¾,³,çB

Statement expected, but expression of type '<type>'
found

á fRf"fpfCf<fGf%o[fbfZfW

à-¾

fRf"fpfCf%o,í•¶,đ—Šú,μ,Ä,ϕ,Ü,μ,½,³CŽw'è,³,ê,½Ě^,ìŽ®,đ,©,í,è,ÉĚŸo,μ,Ü,μ,½B

—á03764

{ ŽŸ,ìfR[]fh,í IF[]CWHILE[]CREPEAT ,È,Ç,ì•¶,ª, ,é,x,«ê[]Š,É[]CŽ® (3+4) ,ª'¶[]Ý,µ,Ä,ç,é }

program Produce;

var

A: Integer;

begin

(3 + 4);

end.

{ ,±,±,Á,ÍŽ® (3+4) ,ìŒ<%oÊ,ð•ì" a ,É'ã"ü, ,ê,î%oðŒ^ , ,é[]BfGf%o[][,ð<N,±,µ,½Ž® ,ð\ [][fXfR[]fh,©,ç[]í[]œ, ,é•û-@,à, ,é[]B,Ç,¿,ç,É, ,é,©,í[]ó<µ,É,æ,é }

program Produce;

var

A: Integer;

begin

A := (3 + 4);

end.

Procedure or function name expected v03765

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

Žè’±,«,âŠÖ”,đ•\,³,È,çŽ⁻•ÊŽq,đ **exports** []β,ì’t,ÅŽw’è,μ,Û,μ,½[]B

—á03766

{ •ï",ªuprocedurevCE^,Å,àCDelphi f%ofCfuf%ofŠ,©,ç,í•ï",đfGfNfXf|[fg,Å,«,È,ç }

library Produce;

var

Y: procedure;

exports Y;

begin

end.

{ EXPORTS □β,ÉŽw'è,μ,½,·,x,Ä,ìŽ·ÉŽq,ª•K,Žè'±,«,Ü,½,íŠÖ",đ•\,·,æ,α,É,·,é }

program Solve;

procedure ExportMe;

begin

end;

exports ExportMe;

begin

end.

uPROCEDURE or FUNCTION expectedv03767

—á [fRf“fpfCf<fGf%o\[\]f\[\]fbfZ\[\]fW](#)

à-¾

,±,ìé¾,É,í **procedure** ,Ü,½,í **function** ,ð•t,¯,È,,Ä,í,ç,¯,Ü,¹,ñB

—á03768

```
{ ŽŸ, Ì, Ç, ÿ, ç, ì, ê, ð, à, Cclass ,Æ, ç, ð, fL, f, fh, Ì, Æ, É procedure ,Æ, ç, ð, Æ, é, ±, ©, È, -, ê, Ì, È, ç, È, ç }
```

program Produce;

type

```
Base = class
```

```
  class AProcedure; { fP[fX 1 ] }
```

```
end;
```

```
  class Base.AProcedure; { fP[fX 2 ] }
```

```
  begin
```

```
  end;
```

begin

end.

```
{ procedure fL[f, fh, ð, Ç, Á, , é, Æ, C, ±, Ì, v, f, Of, f, €, ©, ç, G, f, %, [ , a, È, , È, é }
```

program Solve;

type

```
Base = class
```

```
  class procedure AProcedure;
```

```
end;
```

```
  class procedure Base.AProcedure;
```

```
  begin
```

```
  end;
```

begin

end.

Instance variable '<name>' inaccessible here v03769

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

fNf%ofXf[]fbfh,`t,©,çfCf“fXf^f“fX•i”,đŽQÆ,μ,æ,α,Æ,μ,Ä,ç,Ü,·B

—á03770

```
{ fNf%oofXf[]\fbfh,ÍfCf“fXf^f“fXf|fCf“f^,ðŽ□,Á,Ä,ç,È,ç,ì,Å□CfNf%ofX,Íf[]\fbfh,âfCf“fXf^f“fXff□[f^,ÉfAfNfZfX,Å,«,È,ç }
```

program Produce;

type

Base = **class**

Title: **string**;

class procedure Init;

end;

class procedure Base.Init;

begin

Self.Title := 'Does not work';

Title := 'Does not work';

end;

begin

end.

```
{ ,±,ÍfGf%o□[,Á,ÍfNf%ofXf[]\fbfh,ì't,©,çf□f“fo□[,Íf□[f^,âf□\fbfh,ÉfAfNfZfX,μ,È,ç,ì,a,½,3/4 1,Ä,ì%oðCE^-@,Ä, ,é }
```

program Solve;

type

Base = **class**

Title: **string**;

class procedure Init;

end;

class procedure Base.Init;

begin

end;

begin

end.

uEXCEPT or FINALLY expected v03771

—á [fRf“fpfCf<fGf%o\[\]f\[\]bfZ\[\]fW](#)

à-¾

try [fuf\[\]bfN](#),É,í—áŠO^—•” (**except**) ,Ü,½,ífnfš[]f“fAfbfvfR[]fh•” (**finally**) ,ª•K,„ü,Á,Ä,ç
,È,¯,ê,î,Ë,è,Û,¹,ñ[]B

—á03772

{ ŽŸ, ĩfR□[fh, Å, í—áŠO□^—□fR□[fh, ĩ except □β, Ü, ½, í finally □β, ³CE‡—Ž, μ, Ä, †, é, ĩ, ÅfRf“f‡fCf<fGf%□[É, È, é }

program Produce;

begin

try

end;

end.

{ CE‡—Ž, μ, Ä, †, é□β, †'Ç%□Á, ·, ê, ĩfR□[fh, ĩfRf“f‡fCf<, †Š@—¹, Å, ‹, é□B, ±, ĩ—á, Å, í except □β, Åf‡f□fO‡f%□f€‡, †□|—¹, Å, ‹, é }

program Solve;

begin

try

except

end;

end.

Cannot BREAK, CONTINUE or EXIT out of a FINALLY clause v03773

[=á](#) [fRf"fpfCf<fGf%o\[f\]fbfZ\[f\]fW](#)

à-¾

finally `Ö,í Delphi ,í—áŠO^—fjffjYf€,â'Éí,lfvfOf%of€$Eä,ð'É,µ,Äo"ü,è,º%Á\
,É,ì,ÄCfvfOf%of€,ì-¾Ž!“l,È$Eäftf[É],í,¹,Ä,í,È,è,Ü,¹,ñB—áŠO^—fjffjYf€,ð'É,µ,Ä
finally ,É"ü,Á,½ê#CBreakCContinueCExit ,Å,íß,©,ço,ç,ê,Ü,¹,ñB—áŠO^—VfXfef€
,º finally ß,ðŽÀs,µ,Ä,ç,é,Æ,«,í—áŠO^—VfXfef€,Ö$Eä,ð•Ö,³,ê,È,¯,ê,î,È,è,Ü,¹,ñB`

—á03774

{ ŽŸ,lfvf[]fOf%of€,Í break •¶,Å finally []ß,©,ç[]o,æ,κ,Æ,μ,Ä,ç,é[]B,±,ì•û-@,Å FINALLY
[]ß,©,ç[]o,é,ì,í[]±-@,Å,í,É,ç }

program Produce;

```
procedure A0;
var
  i : integer;
begin
  for i:=1 to 10 do
    try
      (* ^Ù[]í[]|—¹,·,é%oÅ"[]«,ª, ,é%o½,©,ðŽŽ,Ý,é *)
    finally
      Break;
    end;
  end;
end;
```

begin
end.

{ FINALLY []ß,ÉfGf%o[][,ð<N,±,·•¶,ð"ü,ê,É,ç,æ,κ,É•í[]X,μ,É,¯,ê,î,È,ç,É,ç[]B,±,ì—á,ì[]ê[]±,Å,í
f<[][fv,ìŠO,Å—áŠO[]^—[],ð[]s,κ,æ,κ,É•í[]X,μ,½[]BBREAK ,ì"ã,í,è,É RAISE •¶,É,æ,é—
áŠO,ì[]Ä[]¶[]—,ðŽg,κ
,±,Æ,à,Å,«,é[]B}

program Produce;

```
procedure A0;
var
  i : integer;
begin
  try
    for i:=1 to 10 do
      begin
        (* ^Ù[]í[]|—¹,·,é%oÅ"[]«,ª, ,é%o½,©,ðŽŽ,Ý,é *)
      end;
    finally
      end;
  end;
end;
```

begin
end.

u'GOTO <label>' leads into or out of TRY statement v03775

—á [fRf“fpfCf<fGf%o□\[f□fbfZ□\[fW](#)

□à-¾

goto •¶, í—áŠO□^—□•¶, ì†, Ö□C, Ü, ½—áŠO□^—□•¶, ì†, ©, çŠO, ÖfWffff“fv, Å, «, Ü, †, ñ□B
goto •¶, đŽg, í, È, †, æ, x, É, ·, é, ì, ^a—□‘z“l, È%ođCE^—@, Å, ·, ^a□C, » , ê, ^a•s%oÂ“\, Èêê†, Ívf□fOf%of€
, đ□Ú, μ, •^a□í, μ, Ä□³, μ, †□^‘u, đ, ·, é•K—v, ^a, , è, Ü, ·□B

—á03776

{ ŽŸ, ðfR[]fh, ð GOTO •¶, í—¼•û, Æ, à³, µ,, È, ç[]B—áŠO[]^—
[]fuf[]fbfN, ð†, Ö[]C, Ü, ½ŠO, Ö, ðfWffff“fv, Å, «, È, ç }

program Produce;

label 1, 2;

begin

goto 1;

try

1:

except

goto 2;

end;

2:

end.

u<clause1> clause expected, but <clause2> foundv03777

á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

Pascal ,ì\•¶,Á,Ívf[]fOf%of€“à,Á <clause1> ,ª•K—v,È[]ê[]Š,É[]C<clause2> ,ª, ,è,Ü,µ,½[]B

-á03778

{ □Á□%□,lfvf□pfefB□éCE¾,Á,í read □ß,Æ write □ß,đŽw'è,μ,È,¯,ê,î,È,ç,□CCh fvf□pfefB,É—
¼•û,ªCE‡—Ž,μ,Á,ç,é,½,ß□CfRf"fpfCf<fGf%□[.É,È,é□Bfvf□pfefB,ìê□#□CŠî-{fNf
%ofX"à,Á'è<` ,μ,½fvf□pfefB,đ•È,ì%ÁŽ<□«fCEfxf<,Ö□C,½,Æ,¡,îpfufŠfbfN,©,çvf
%ofCf×□[fg,Ö^ø,«□ã,° ,é,ì,ª"-□%□,ì^Ó□},¾,Á,½%Á"□«,ª , ,é□B,» ,ìê□#□Cfvf□pfefB-¼,ªŠî-
{fNf%ofX"à,ÁCE©,Á,©,ç,È,©,Á,½,ì,ªfGf%□[,ìÉ´^ö,Æ,μ,Á,à,Á,Æ,à□,¡,ç,é,é□Bfvf□pfefB-
¼,đ□³,μ,çfXfyf<,ÁŽw'è,μ,½,©,Ç,α,©□C,» ,lfvf□pfefB-¼,ªŽA□Ú,É,ç, , ,é,©,ìefNf%ofX,ì't,É, ,é,
©,Ç,α,©,đŠm"F,·,é•K—v,ª , ,é }

program Produce;

type

```
CharDesc = class  
  vch: Char;  
  property Ch: Char;  
end;
```

end.

{ •K—v,È□ê□Š,É□³,μ,□ß,đŽw'è,·,é,ì,ª%□đCE^-@,Á, ,é }

program Produce;

type

```
CharDesc = class  
  vch: Char;  
  property Ch: Char read vch write vch;  
end;
```

end.

Cannot assign to a read-only property v03779

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

'l,đ'ã“ü,µ,æ,π,Æ,µ,Ä,ç,évf[]pfefB,í **write** []ß,Žw'è,³,ê,Ä,ç,È,ç,½,ß,É“Ç.Ý[]o,µ[]ê—
pfvf[]pfefB,É,È,Á,Ä,ç,Û,·[]B

—á03780

```
{ fvf[]pfefB,Í write []ß,ðŽw'è,μ,Ä,ç,È,¯,ê,Î“Ç,Ý[]o,μ[]ê—pfvf[]pfefB,É,É,é[]B“Ç,Ý[]o,μ[]ê—  
p,lfvf[]pfefB,É,Í'l,ð'ã“ü,Ä,«,È,ç,ì,Â[]CfRf“fpfCf%o,í[]uc.Title[]v,Ö,ì'ã“ü,ÄfGf%o[][,ð[]o—Í,·,é }
```

program Produce;

type

```
Base = class  
  S: string;  
  property Title: string read S;  
end;
```

var

```
C: Base;
```

procedure DiddleTitle;

begin

```
  if C.Title = '' then  
    C.Title := 'Super Galactic Invaders with Turbo Gunpla Sticks';  
    { C.Title ,É'í,μ,Ä,»,ì'¼,ì[]<Æ,ð,·,é }
```

end;

begin

end.

```
{ f[]fXfR[]fh,ª, ,é[]ê[]#,É,í[]C,±,ì“Ç,Ý[]o,μ[]ê—pfvf[]pfefB,É write []ß,ðŽw'è,·,é,ì,ª 1 ,Â,ì  
%oðCE^~@,É,È,é[]B,μ,©,μ,±,ì•û-@,Íŝî-{}fNf%ofX,ì^Ó-ì,ð'ã,«,•ì,ì,é<°,è,ª, ,é,ì,Â[]y[]X,μ,-  
ŽÁ[]s,·,x,«,Ä,ì,È,ç[]B•É,ì%oðCE^~@,Æ,μ,Ä,ì“Ç,Ý[]o,μ[]ê—pfvf[]pfefB,ì'l,ð“ü,é,é'±%oí—  
p,ì•í[]",ðŽg,ª•û-@,ª, ,é[]BŽÝ,ÉŽì,·,ì,ì 2 "Ö-Ü,ì•û-@,lfR[]fh,Ä, ,é }
```

program Solve;

type

```
Base = class  
  S: string;  
  property Title: string read S;  
end;
```

var

```
C: Base;
```

procedure DiddleTitle;

var

```
Title: string;
```

begin

```
  Title := C.Title;  
  if Title = '' then  
    Title := 'Super Galactic Invaders with Turbo Gunpla Sticks';  
    { Title ,É'í,μ,Ä,»,ì'¼,ì[]<Æ,ð,·,é }
```

end;

begin

end.

Cannot read a write-only property v03781

—á [fRf“fpfCf<fGf%o\[\]f\[\]fbfZ\[\]fW](#)

à-¾

'l,đ“Ç,Ýo,»„Æ,μ,Ä,ç,évf[]pfefB,í read []ß,Žw'è,³,ê,Ä,ç,È,ç,½,ß,É',«ž,Ýê—
pfvf[]pfefB,É,È,Á,Ä,ç,Û,·B

—á03782

```
{ C.Password ,Í read []ß,ðŽw'è,μ,Ä,ç,È,ç,ì,Å[]C,»,ì'l,ð"Ç,Ý[]o,¹,È,ç }
```

program Produce;

type

```
Base = class
  S: string;
  property Password: string write S;
end;
```

var

```
C: Base;
S: string;
```

begin

```
S := C.Password;
```

end.

```
{ f[]fXfR[]fh,ª, ,é[]ê[]±,É,í[]C,±,ì[]',«[]ž,Ý[]ê—pfvf[]pfefB,É read []ß,ð'Ç%oÁ,·,è,îŠÈ'P,É
%oðCE^,Ä,«,é[]B,μ,©,μ[]Cread []ß,ì'Ç%oÁ,í-],Ü,μ,,È,ç[]ê[]±,à, ,è[]CfzfLf...fŠfefBfVfXfef€
,ÉCEŠ,ª, ,<°,ê,à, ,é[]B,½,Æ,ì,î[]C,±,ì—á,ì Password ,Æ,ç,±[]',«[]ž,Ý[]ê—
pfvf[]pfefB,ð[]l,ì,Ä,Ý,é,Æ[]C,±,ìfNf%ofX,ðŽg,Á,½fvf[]fOf%of€
,ªŠi"[[]í,ÝfPfXf[]fh,ð<ð'R,É"Ç,Ý[]o,·,æ,±,ÈŽ-'Ô,í-¾,ç,©,É-],Ü,μ,,È,ç[]BfVf[]pfefB,ª[]',«[]ž,Ý[]ê
—p,Æ,μ,Ä[]í[]¬,³,ê,Ä,ç,é[]ê[]±,É,í,»,ì,æ,±,È—[]—R,ª[]\•ª,É[]l,ì,ç,é,é,ì,Å[]C,±
,ìfVf[]pfefB,ð"Ç,Ý[]o,³,È,¯,ê,î,È,ç,È,ç—[]—R,ð[]Ä"xCEÝ"ç,μ,È,¯,ê,î,È,ç,È,ç }
```

program Solve;

type

```
Base = class
  S: string;
  property Password: string read S write S;
end;
```

var

```
C: Base;
S: string;
```

begin

```
S := C.Password;
```

end.

Class already has a default property v03783

ŽQÆ —á fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

ffftfHf<fgfvf]fpfefB,đ,·,Å,É'è<`,μ,Ä, ,éfNf%ofX,É'í,μ,ÄffftfHf<fgfvf]fpfefB,đŠ,,è“- ,Ä,æ,α
,Æ,μ,Ü,μ,½]B

—á03784

```
{ ŽŸ, ĺfR ĺfh, Ā, ĺ Access fvf ĺpfefB, đ, ±, ĺfNf%ofX, ĺffftfHf<fgfvf ĺpfefB, É, μ, æ, α, Æ, μ, Ā, ĸ, é, ĀC, ·, Ā, É Data , ĺffftfHf<fg, Æ, μ, ĀŽw'è ĺ, Ÿ, Ā, , é ĺBffftfHf<fgfvf ĺpfefB, ĺ 1 , Ā, ĺfNf%ofX, É 1 , Ā, 3/4, -, Ā, , é }
```

program Produce;

type

Base = **class**

function GetV(I: Integer): Char;

procedure SetV(I: Integer; **const** X: Char);

property Data[I: Integer]: Char **read** GetV **write** SetV; **default**;

property Access[I: Integer]: Char **read** GetV **write** SetV; **default**;

end;

function Base.GetV(I: Integer): Char;

begin

GetV := 'A';

end;

procedure Base.SetV(I: Integer; **const** X: Char);

begin

end;

begin

end.

```
{ fvf ĺOf%of€e, ĺf ĺfX, ©, ĸ³, μ, , È, ĸffftfHf<fgfvf ĺpfefB, ĺŽw'è, đ ĺ ĺœ, ·, ê, ĺ%đœ^, ·, é }
```

program Solve;

type

Base = **class**

function GetV(I: Integer): Char;

procedure SetV(I: Integer; **const** X: Char);

property Data[I: Integer]: Char **read** GetV **write** SetV; **default**;

end;

function Base.GetV(I: Integer): Char;

begin

GetV := 'A';

end;

procedure Base.SetV(I: Integer; **const** X: Char);

begin

end;

begin

end.

ŽQÆ03785

fftfHf<fgvf[]pfefB

fvf[]pfefB

"z—ňfvf[]pfefB

Operator not applicable to this operand type v03786

—á fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfGf%o[f]fbfZ[fW,Ílfyf%of“fh,ÖŽw’è,μ,½%o%oŽŽŽq,^³,» ,lflyf%of“fh,É,Í“K—
p,Å,«,È,çé#C,½,Æ,¡,Íf|Cf“f^,Ö~_—%o%oŽŽŽq,đ“K—p,μ,½é#É,Ç,É•\Ž!,^³,ê,Ü,·B

—á03787

{ P ,Í~_—□Ž® ,Å,Í,È,□C”äŠr,ÍfjfbfR,Å^Í,Þ•K—v,ª, ,é }

program Produce;

var

P: ^Integer;

begin

if P **and** P^ > 0 **then**

 Writeln('P points to a number greater 0');

end.

{ P ,Æ nil ,ð-¾Ž!“I,É”äŠr,µ□CfjfbfR,Å^Í,β,Í,æ,ϕ }

program Solve;

var

P: ^Integer;

begin

if (P <> nil) **and** (P^ > 0) **then**

 Writeln('P points to a number greater 0');

end.

Default property must be an array property v03788

—á [fRf“fpfCf<fGf%o\[\]f\[\]bfZ\[\]fW](#)

à-¾

fNf%ofX,ÉŽw’è,μ,½ffftfHf<fgfvf[]pfefB,³”z—ñfvf[]pfefB,Å,í, ,è,Ü,¹,ñ[]BffftfHf<fgfvf[]pfefB,í”z
—ñfvf[]pfefB,Å,È, ,è,î,È,è,Ü,¹,ñ[]B

—á03789

```
{ ffftfHf<fgfvf[]pfefB,íC"z—ñĀ^,Å,È,¯,ê,î,È,ç,È,ç[]BŽŸ,ìfR[]fh,ì Data fvf[]pfefB,í"z—  
ñĀ^,Å,È, Char Ā^,ðŽw'è,μ,Ä,ç,é }
```

```
program Produce;
```

```
type
```

```
Base = class
```

```
function GetV: Char;
```

```
procedure SetV(X: Char);
```

```
property Data: Char read GetV write SetV; default;
```

```
end;
```

```
function Base.GetV: Char;
```

```
begin
```

```
GetV := 'A';
```

```
end;
```

```
procedure Base.SetV(X: Char);
```

```
begin
```

```
end;
```

```
begin
```

```
end.
```

```
{ fGf%oo[],ð<N,±,μ,½fvf[]pfefB,ìŽw'è,ð"z—ñĀ^,É•ï[]X,·,é,©[]Cdefault Žw—β,ð[]í[]œ,·,ê,î,±  
,ìfGf%oo[],í,È,,È,é }
```

```
program Solve;
```

```
type
```

```
Base = class
```

```
function GetV(I: Integer): Char;
```

```
procedure SetV(I: Integer; const X: Char);
```

```
property Data[I: Integer]: Char read GetV write SetV; default;
```

```
end;
```

```
function Base.GetV(I: Integer): Char;
```

```
begin
```

```
GetV := 'A';
```

```
end;
```

```
procedure Base.SetV(I: Integer; const X: Char);
```

```
begin
```

```
end;
```

```
begin
```

```
end.
```

uTYPEINFO standard function expects a type identifier v03790

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

CE^,ð•\,μ,Ä,ç,È,çŽ`•ÊŽq,É,Â,ç,ÄCE^[]•ñ,ð“üŽè,μ,æ,α,Æ,μ,Ü,μ,½[]B

—á03791

{ TypeInfo •W€Žè'±,«,É,Ífpf%of□□[f^,Æ,μ,ÄCE^Ž^-ÊŽq,a•K—v,Å, ,é□BŽŸ,ÌfR□[fh,Å,Í
NotType ,ÍCE^Ž^-ÊŽq,đ•\,μ,Ä,ç,È,ç }

program Produce;

var

P: Pointer;

procedure NotType;

begin

end;

begin

P := TypeInfo(NotType);

end.

{ TypeInfo ,ÉŽg,xfpf%of□□[f^,đCE^Ž^-ÊŽq,É,·,ê,î□C,±,ÌfGf%o□[,đ%oñ"đ,Å,«,é }

program Solve;

type

Base = **class**

end;

var

P: Pointer;

begin

P := TypeInfo(Base);

end.

uType '<name>' has no type info v03792

—á [fRf“fpfCf<fGf%o\[\]f\[\]fbfZ\[\]fW](#)

à-¾

ŠÖ~A,µ,½ŽÀ[]sŽžCE^[]î•ñ,ª,È,çCE^Ž~•ÊŽq,Éî,µ,Ä TypeInfo •W[]€Žè'±,«,đ“K—p,µ,æ,ª
,Æ,µ,Û,µ,½[]B

—á03793

{ fCEfR[]fhCE^,ÍCE^[]•ñ,ð[]¶[]¬,μ,È,ç,ì,Å[]C,±,ì TypeInfo ,íŽg—p,Å,«,È,ç }

program Produce;

type

Data = **record**
end;

var

V: Pointer;

begin

V := TypeInfo(Data);

end.

{ fNf%ofX,Í RTTI ,ð[]¶[]¬,·,é,ì,Å[]CTypeInfo ,ªŽg—p,Å,«,é }

program Solve;

type

Base = **class**
end;

var

V: Pointer;

begin

V := TypeInfo(Base);

end.

do FOR or WHILE loop executes zero times - deleted v03794

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

fRf“fpfCf%o,íŽw'è,³,ê,½f<□[fv□\‘ç,ª 1 %oñ,àŽÀ□s,³,ê,È,ç,Æ”»'f,μ□C□Å“K
%o»,ì,½,ß,É,»,lf<□[fv□\‘ç,đ□í□œ,μ,Ü,·□B

—á03795

```
{ fRf“fpfCf%o,ÍuFALSE AND (i<100)□v,ðí,É FALSE ,Æ•]‰o¿,μ□C,» ,ìf<□[fv,íŽÀ□s,³,ê,È,ç,Æ—  
e^Ö,É”»'f,·,é }
```

```
program Produce;  
{ $HINTS ON }
```

```
var  
  I: Integer;
```

```
begin  
  I := 0;  
  while False and (I < 100) do  
    Inc(I);  
end.
```

```
{ while •¶,ð□$CEä,·,é~_—□Ž® ,ð'², x, Ä□C□í,É FALSE ,É,È,é,æ,α,È□ó'Ô,ð‰oñ”ð,·,ê,Î□C,±  
,ìfqf“fg,Í‰oðCE^ ,·,é□Bfor f<□[fv,Å,Í•K, (□ãCEÀ-‰o°CEÀ) >=1 ,É,·,é }
```

```
program Solve;  
{ $HINTS ON }
```

```
var  
  I: Integer;
```

```
begin  
  I := 0;  
  while I < 100 do  
    Inc(I);  
end.
```

uNo definition for abstract method '<name>' allowedv03796

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

<name> ,đ abstract ,Æ,μ,Ä□éĈ¾,μ,Ü,μ,½,ª□CfRf“fpfCf%o,Í\□[fXftf@fCf<,ì†,Å,»,ìf□\fbfh,ì'è<` ,đĈ©,Â, ¯,Ü,μ,½□Babstract □éĈ¾,É'è<` ,đŽw'è,·,é,ì,í^á-@,Å,·□B

—á03797

```
{ 'ŠŮf\fbfh,í'è` ,Á,«,È,çB,±,lfvfOf%of€,đfRf“fpfCf< ,.é,ÆCBBase.Foundation ,ì,Æ,± ,ë,ÁfGf%o[ ,ª•\Ž!,³,ê,é }
```

program Produce;

type

```
Base = class  
    procedure Foundation; virtual; abstract;  
end;
```

procedure Base.Foundation;

```
begin  
end;
```

```
begin  
end.
```

```
{ ,±,lfGf%o[ ,đ%ođĈ^ ,.é,É,í 2 ,Á,ìŽè±,ª•K—v,Á ,éBÁ%o,ÉCŠî-{fNf %ofX,ÁéĈ¾,μ,½'ŠŮŽè'±,«,í'è` ,đíœ,μ,È, ,ê,í,È,ç,È,çBŽŸ,ÉCŠî-{fNf%ofX,đŠg'Ě ,μC,±,í'ŠŮŽè'±,«,đŠg'Ě<@“\,í†,Á override ,Æ,μ,ÁéĈ¾,μ,½ĈãC V,μ,éĈ¾,μ,½Žè'± ,«,í'è` ,đŽw'è ,.é }
```

program Solve;

type

```
Base = class  
    procedure Foundation; virtual; abstract;  
end;
```

```
Derived = class(Base)  
    procedure Foundation; override;  
end;
```

procedure Derived.Foundation;

```
begin  
end;
```

```
begin  
end.
```

Method '<name>' not found in base class

—á fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

f[]\fbfh,É override Žw—β,đ“K—p,μ,Ü,μ,½,∞[]C,»,ì-¼‘O,ìŽè‘±,«,∞Šî-{}fNf
%ofX,ì‘t,É,í, ,è,Ü,¹,ñ[]B

-á03799

```
{ ,±,lfGf%o[ ,l^ê"E"l,ÈCE'^ö,lf\[[fXfR[[fh,Å,l'P,É,éf^fCfvf~fX,Å, ,é[]Boverride Žè'±  
,«,Æ,μ,ÄŽg,Á,½-¼'O,Šî-{fNf%ofX"à,l-¼'O,Æ"- ,lfXfyf<,Å, ,é,©,Ç,κ,©,đŠm"F,·,é•K-v,ª, ,é[]  
B, ,é,ç,í[]C<[],β,éŽè'±,«,Šî-{fNf%ofX,É,È,ç[]ê[]#,à[],,ç,é,é[]B,» ,l,æ,κ,È[]ê[]#,É,í[]C-â'è,l  
%ođCE^-@,đ"»•É,·,é,½,β[]C,æ,è[],ç•ª[]í,ª•K-v,É,É,é }
```

program Produce;

type

```
Base = class  
  procedure Title; virtual;  
end;
```

```
Derived = class(Base)  
  procedure Titl; override;  
end;
```

```
procedure Base.Title;  
begin  
end;
```

```
procedure Derived.Titl;  
begin  
end;
```

```
begin  
end.
```

```
{ Žÿ,lfR[[fh,Å,l'P,É Derived "à,lžè'±,«-¼,lXfyf<,đ'ù[]³,μ,Ä%ođCE^,μ,½ }
```

program Solve;

type

```
Base = class  
  procedure Title; virtual;  
end;
```

```
Derived = class(Base)  
  procedure Title; override;  
end;
```

```
procedure Base.Title;  
begin  
end;
```

```
procedure Derived.Title;  
begin  
end;
```

```
begin  
end.
```

Invalid message parameter list v03800

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

f[]fbfZ[]fW^—[]f[]fbfh,í var fpf%of[]f^,ð 1 ,Â,¾,¯ ,Æ,ê,Û,·[]Bfpf
%of[]f^,ìÆ^,í^fFfbfN,¾,ê,Û,¹,ñ[]B

-á03801

```
{ ,Ç,¿,ç,ì,è,à,àf,fbfZ,lfWf,fbfh,ì,é,¼,Å var fpf%of[f^,ð 1 ,Å,¾,~Žw'è,μ,Ä  
%oðCE^,μ,½ }
```

program Produce;

type

Base = **class**

procedure Msg1(X: Integer); **message** 151;

procedure Msg2(**var** X, Y: Integer); **message** 152;

end;

procedure Base.Msg1(X: Integer);

begin

end;

procedure Base.Msg2(**var** X, Y: Integer);

begin

end;

begin

end.

```
{ ,Ç,¿,ç,ì,è,à,àf,fbfZ,lfWf,fbfh,ì,é,¼,Å var fpf%of[f^,ð 1 ,Å,¾,~Žw'è,μ,Ä  
%oðCE^,μ,½ }
```

program Solve;

type

Base = **class**

procedure Msg1(**var** X: Integer); **message** 151;

procedure Msg2(**var** Y: Integer); **message** 152;

end;

procedure Base.Msg1(**var** X: Integer);

begin

end;

procedure Base.Msg2(**var** Y: Integer);

begin

end;

begin

end.

Illegal message method index v03802

ŽQÆ —á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

fbfZ[fWfCf“ffbfNfX,É 0 ^È%o,ì'l,ďŽw'è,μ,Ü,μ,½B

-á03803

{ f[]bfz[]fWfCf“ffbfNfX,Æ,μ,Ä -151 ,ðŽw’è,μ,Ä,Í,ç, ,Ü,¹,ñ }

program Produce;

type

Base = **class**

procedure Dynamo(**var** X: Integer); **message** -151;

end;

procedure Base.Dynamo(**var** X: Integer);

begin

end;

begin

end.

{ f[]bfz[]fWfCf“ffbfNfX,Ì,Í•K, , 1 ^È[]ă,É,·,é }

program Solve;

type

Base = **class**

procedure Dynamo(**var** X: Integer); **message** 151;

end;

procedure Base.Dynamo(**var** X: Integer);

begin

end;

begin

end.

ŽQÆ03804

f[]fbfZ[]fWf[]f[]fbfh

%o¼'zf[]f[]fbfh

"@“lf[]f[]fbfh

uDuplicate dynamic method indexv03805

—á [fRf“fpfCf<fGf%o\[\]f\[\]bfZ\[\]fW](#)

à-¾

“®“lf[]\fbfh,ÉŽw'è,μ,½fCf“ffbfNfX,ªC,·,Á,É•Ê,ì“®“lf[]\fbfh,ÁŽg,í,ê,Ä,ç,Ü,·B

—á03806

```
{ Second ,ìéCE¾,í First ,ǎŽg,Á,Ä,ç,é,ì,Æ““,ñfñbfZñ[fWfCf“fffbfNfX,ðñÄ“xŽg,“,æ,Æ,μ,Ä,ç ,éñB }
```

program Produce;

type

Base = **class**

procedure First(**var** X: Integer); **message** 151;

procedure Second(**var** X: Integer); **message** 151;

end;

procedure Base.First(**var** X: Integer);

begin

end;

procedure Base.Second(**var** X: Integer);

begin

end;

begin

end.

```
{ ,±,ì-â'è,É,í¼ñÙ“l,È 2 ,Á,ì%øðCE^-@,ǎ ,éñB““,ñfñbfZñ[fW'l,ðŽg,æ•K—  
v,ǎ,È,“,é,íñC'P,ÉfñbfZñ[fW“Ôñt,ðftfjñ[fN,È“Ôñt,É•íñX,·,é,í,æ,çñB, ,é,ç,íñCŠì- {fNf  
%øfX,©,çñV,μ,çfNf%øfX,ð“hññ,³,¹ñCŠì- {fNf%øfX“à,ÁñéCE¾,μ,½fñbfZñ[fWfñf“fhf%ø  
,ì“@ñì,ð•íñX,μ,Ä,à,æ,çñB—¼•ù,ðŽÿ,ìfRñ[fh,ÉŽ!,· }
```

program Solve;

type

Base = **class**

procedure First(**var** X: Integer); **message** 151;

procedure Second(**var** X: Integer); **message** 152; {

ftfjñ[fN,ÉfCf“fffbfNfX,É•íñX,;é }

end;

Derived = **class**(Base)

procedure First(**var** X: Integer); **override;** { Šì- {fNf%øfX,ì“@ñì,ð•íñX,;é }

end;

procedure Base.First(**var** X: Integer);

begin

end;

procedure Base.Second(**var** X: Integer);

begin

end;

procedure Derived.First(**var** X: Integer);

begin

end;

begin
end.

Bad file format '<name>';v03807

fRf"fpfCf<fGf%o[fbfZ[fW

à-¾

fRf"fpfCf%o,ìó'Ôftf@fCf<,º%ó,ê,Ü,µ,½B'O,ìfRf"fpfCf%o,ìó'Ô,ðÄf[fh,Å,<,Ü,¹,ñB

uArray type required v03808

—á fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,í“z—ñ,Å,È,çf|fyf%of“fh,É‘î,μ,Ä“YŽš,ðŽw’è,μ,½[]ê[]‡,©[]Cf[]f[]v[]f[]“z—
ñfpf%of[]f^,É”z—ñ,Å,È,ç^ø[]”,ð“n,μ,½[]ê[]‡,É•\Ž|,³,ê,Û,·[]B

-á03809

{ Pascal, Delphi 2.0, Borland C++ }
{ Pascal, Delphi 2.0, Borland C++ }

program Produce;

var

P: ^Integer;

I: Integer;

begin

Writeln(P[I]);

end.

{ Pascal, Delphi 2.0, Borland C++ }
{ Pascal, Delphi 2.0, Borland C++ }

program Solve;

type

TIntArray = **array**[0..MaxInt **div** sizeof(Integer)-1] **of** Integer;

var

P: ^TIntArray;

I: Integer;

begin

Writeln(P[I]); { Delphi 2.0, Borland C++ }

end.

Unaccessible value v03810

[fRf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

“fffbfK,ì't,©,çfAfNfZfX,Å,«,È,ç'l,ð•\Ž!,μ,æ,π,Æ,μ,Ü,μ,½B',³,ç[f],ìfofŠfAf“fgCE^•ŕŽš
—ñ,È,ÇC“Á'è,ìCE^,ì'l,ìfffbfK,ì't,©,ç•\Ž!,Å,«,Ù,¹,ñB

uDestination cannot be assigned tov03811

fRf“fpfCf<fGf%□[f□fbfZ□[fW

□à-¾

“□□‡ffofbfK,ÍŽw’è,³,ê,½’ă“ü,³CE»□Ý,ìfRf“fefLjXfg,ì’t,Å,Í—LCEø,Å,È,ç,Æ”»’f,μ,Ü,μ,½□B

Expression has no value v03812

fRf"fpfCf<fGf%o[f]fbfZ[fW

à-¾

Ž®,ìĒ<%oÊ,ð•i",Ö'ã"ü,μ,æ,α,Æ,μ,Ü,μ,½,ªCŽ®,ª'l,ð¶¶¬,μ,Ü,¹,ň,Å,μ,½B

Destination is inaccessible v03813

[fRf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

'l,ð"ü,ê,æ,ɹ,Æ,μ,½fAfhfCefX,í"fffofbfK,ì't,©,çfAfnfZfX,Å,«,È,çfAfhfCefX,Å,·B

Expression is not a procedure v03814

[fRf“fpfCf<fGf%□\[f□fbfZ□\[fW](#)

à-¾

, ,éVf“f{f<,đfvf□fOf%of€ ,ĂŽè'±,«,Æ,μ,ĂŽg,“,ꝛ,Æ,μ,Ü,μ,½,ª□C,»,ìVf“f{f<,ÍŽè'±,«,Ă,í, ,è,Ü,¹,ň

□B

uNo source line for this procedurev03815

[fRf“fpcfCf<fGf%o□\[f□fbfZ□\[fW](#)

□à-¾

—v<□,μ,½Žè’±,«,\□[fX□s,đ“□□±fffofbfK,ª©©,Â,¯,ç,ê,Û,¹,ñ,Å,μ,½□Bf□□[fX,ª, ,é□é□‡,É,Í□C<□,ß
,éŽè’±,«,ª“ü,Á,Ä,ç,éftffjfbfg,đ□CfffofbfO□î•ñ,ðfjf“ ,É,μ,Ä□ÄfRf“fpcfCf<,μ,Ä,,¾,¾,ç□Bf\
□[fX,ª,É,ç□é□‡,É,Í,±,ìŽè’±,«,ð•Ž!,Á,«,Û,¹,ñ□B

Re-raising an exception only allowed in exception handler v03816

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

—áŠO,đ□Ä□¶□□□,·,é raise •¶,ì□\•¶,đŽg,ç,Ü,μ,½,ª□CfRf“fpfCf%o,í,»,ì□Ä□¶□□□,ª—áŠO□^—
□fuf□fbfN,ìŠO,Å<N,«,½,Æ”»’f,μ,Ü,μ,½□BCE»□Y,ì—áŠO□^—□f□fjffjYf€,ì□š-ñ,É,æ,è□CfIfXfg,μ,½
—áŠOfnf“fhf%o,©,ç,ì—áŠO,ì□Ä□¶□□□,í,Å,«,Ü,¹,ñ□B

-á03817

```
{ ,±,lfGf%oo[,É,í,ç,,Â,©,ìĈ´^ö,ª□l,|,ç,ê,é□B'æ 1 ,É-áŠOfnf"fhf%oo,ìŠO•",Å-áŠOfRf"fXfgf  
%ofNf^,ðŽ□,½,È,ç raise ,ðŽw'è,μ,½%oÅ"\□«,ª, ,é□B'æ 2 ,É-áŠOfnf"fhf%oo,ì try fuf□fbfN,Å-  
áŠO,ð□Ä□¶□-μ,æ,æ,Æ,μ,½%oÅ"\□«,ª, ,é□B'æ 3 ,É•É,ì-áŠOfnf"fhf%oo,ì't,ÉfXfg,μ,½-  
áŠOfnf"fhf%oo,ì't,Å-áŠO,ð□Ä□¶□-μ,æ,æ,Æ,μ,½%oÅ"\□«,ª, ,é }
```

program Produce;

procedure RaiseException;

```
begin  
  raise; { fP□[fX 1 }  
  try  
    raise; { fP□[fX 2 }  
  except  
    try  
      raise; { fP□[fX 3 }  
    except  
      end;  
      raise;  
    end;  
end;
```

begin
end.

```
{ ,±,lfGf%oo[,Å,í□V,μ,ç-áŠO,ð-¾Ž! "l,É□¶□-.,é,ì,ª 1 ,Å,ì%oðĈ^-@,Å, ,é□B□ucase  
1□v,Æ□ucase 2□v,ì,æ,æ,È□ê□#,í,» ,è,ð^Ó□},μ,½,ÆŽv,í,é,é□B□ucase  
3□v,ì□ê□#,É,í□CfR□[fh,ð'²,x,Å<□,β,éĈ<%oÉ,ª"¾,ç,è,é,æ,æ,É"K□Ø,È%oñ"ð•û-@,ð"»•É,.,é•K-  
v,ª, ,é }
```

program Solve;
uses SysUtils;

procedure RaiseException;

```
begin  
  raise Exception.Create('case 1');  
  try  
    raise Exception.Create('case 2');  
  except  
    try  
      raise Exception.Create('case 3');  
    except  
      end;  
      raise;  
    end;  
end;
```

begin
end.

Default values must be of ordinal, pointer or small set type

á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

default ß,ª“ü,Á,Ä,ç,éfv[]fpfefB,ðéCE¾,µ,æ,α
,Æ,μ,Û,μ,½,ª[]C,»ìfv[]fpfefB,ìCE^,ífftfHf<fg'l,ÆCEÝŠ·[]ª, ,è,Û,¹,ñ[]B

—á03819

```
{ ŽŸ,lfvf[]Of%of€ ,lfvf[]pfefB,ð[]¬,μ,Ä,» ,é,ÉfftfHf<fg'l,ðŠ,,è“- ,Ä,æ,κ,Æ,μ,Ä,ç ,é,[]Cfvf[]pfefB,ìCE^ ,[]fftfHf<fg'l,ðŽg,!,È,çCE^ ,É,!,ÅfGf%[] ,[]o—í,³,ê,é }
```

program Produce;

type

```
VisualGuage = class  
  Pos: Single;  
  property Position: Single read Pos write Pos default 0.0;  
end;
```

begin

end.

```
{ ,±,lfGf%[] ,[]μ,½[]ê[]É,ÍŠÈ'P,È 2 ,Â,ì%ðCE^-@,[] ,é[]B1  
,Ä,lffftfHf<fg'l,ì'è<` ,ð[]í[]œ, ,é•û-@,Å[]C,à,κ 1  
,Ä,lfvf[]pfefB,ìCE^ ,ðfftfHf<fg'l,[]Žg,!,éCE^ ,É•ï[]X, ,é•û-@,Ä ,é[]B,μ,©,μ[]CŽÀ[]Ù,lfvf[]Of%of€  
,Ä,ì[]C[]³ ,[] ,é,Ù,ÇŠÈ'P,Ä,È,ç,Æ,« ,à ,é[]B'â ,« ,: ,¬ ,é[]W[]#fvf[]pfefB,[] ,é[]ê[] ,ð[]!,Ä,Ý,é,Æ,æ,ç  
[]B,» ,ì[]ê[] ,É,lfvf[]Of%of€ ,ð'[]^Ó[] ,',² ,×[]C,±,ì-â'è,ì[]Ä'P,ì%ðCE^-@,ð'»•É, ,é•K—v,[] ,é }
```

program Solve;

type

```
VisualGuage = class  
  Pos: Integer;  
  property Position: Integer read Pos write Pos default 0;  
end;
```

begin

end.

Property '<name>' does not exist in base class

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

fRf“fpfCf%o,íŠ”ŽÒ,³fvf[]pfefB,ð”h[]fNf%ofX,ì•Ê,ì%oÂŽ<[]«fCfxf<,Ü,Å^ø,«[]ă,°,é^Ó[]},Å, ,é,Æ
”»'f,μ,Ü,μ,½,³[]CŽw'è,³,ê,½fvf[]pfefB,³Šî-{}fNf%ofX“à,É'[]Ý,μ,Ü,¹,ñ[]B

—á03821

```
{ ,±,lfGf%o[ ,É,í□-{"l,ÈCE´^ö,ª 2 ,Â, ,é□B1
,Â,íCE^,ðŽw'è,¹,,É□V,μ,¢fvf□fpfefB,ðŽw'è,μ,½□ê□‡,Â□C´Ê□í,±,ê,í□V,μ,¢
%oÂŽ<□fCEfxf<,Ö,ì`Ú"@ ,Æ,í□l,|,ç,ê,È,¢□B,à,α 1 ,Â,ÍŠî- {fNf
%ofX"à,É`¶□Ý,·,é,í,,lfvf□fpfefB,ðŽw'è,μ,ÄfRf"fpfCf%o
,ª,» ,ê,ðCE© ,Á, ¯,ç,ê,È,¢□ê□‡,Â□C,Ù,Æ,ñ,Ç,í f^fCfvf~fX,Â ,é□B2 "Ô-Ú,ìCE`´Ô,Â,àfRf"fpfCf%o,í
read □β,© write □β,ª•K—v,¾,Æ,¢,xfGf%o[ ,ð□o—í,·,é }
```

program Produce;

type

```
Base = class
private
  A: Integer;
  property BaseProp: Integer read A write A;
end;

Derived = class(Base)
  Ch: Char;
  property Alpha read Ch write Ch; { fp□[fX 1 ] }
  property BesaProp; { fp□[fX 2 ] }
end;
```

begin

end.

```
{ □Â□%o,ì—á,Â,lfvf□fpfefB,ìCE^,ðŽw'è,·,ê,í%oðCE^,·,é□B2 "Ô-Ú,ì—á,Â,lfvf□fpfefB-
¼,lfXfyf<,ðf`fFbfN,·,ê,í%oðCE^,·,é }
```

program Solve;

type

```
Base = class
private
  A: Integer;
  property BaseProp: Integer read A write A;
end;

Derived = class(Base)
  Ch: Char;
public
  property Alpha: Char read Ch write Ch; { fp□[fX 1 ] }
  property BaseProp; { fp□[fX 2 ] }
end;
```

begin

end.

Dynamic method or message handler not allowed here v03822

—á fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

“®“lf[]bfh,Æf[]bfZ[]fWf[]bfh,Ívf[]pfefB—p,İfAfNfZfXŠÖ[]”,Æ,μ,ÄŽg,!,Ü,¹,ñ[]B

—á03823

{ ŽŸ, Ì Velocity ,Æ Value ,Í,Ç, ÿ,ç, à^á-@, ÈfAfNfZfXŠÖ" ,Š,,è"-,Ä,ç,ê,Ä,ç,é, Ì, ÅfGf%o [,É,È,é }

program Produce;

type

```
Base = class
  V: Integer;
  procedure SetV(var X: Integer); message 1;
  function GetV: Integer; dynamic;
  property Velocity: Integer read GetV write V;
  property Value: Integer read V write SetV;
end;
```

procedure Base.SetV(var X: Integer);

begin

V := X;

end;

function Base.GetV: Integer;

begin

GetV := V;

end;

begin

end.

{ ŽŸ, ÌfR [fh, Å, ÌfGf%o [, Š<N, ±, μ, ½fRf"fpfCf%oŽw—β, ŠŽè'±, «ÉCE¾, ©, çíœ, μ, Å
%oŠCE^ , μ, ½, ðC, ±, ê, ð³, μ, ç%oŠCE^-@, Å, , é, Æ, ÍCEÀ, ç, È, çBfvf [fOf%of€ , Ì~ _ [, ðÚ, μ, -
'2, x, ÅCfvf [pfefB, ÈfAfNfZfXŠÖ" , ŠŽw'è, , éÅ'P, Ì•û-@, Š"»•È, μ, È, , ê, Ì, È, ç, È, çé [, à, , é }

program Solve;

type

```
Base = class
  V: Integer;
  procedure SetV(X: Integer);
  function GetV: Integer;
  property Velocity: Integer read GetV write V;
  property Value: Integer read V write SetV;
end;
```

procedure Base.SetV(X: Integer);

begin

V := X;

end;

function Base.GetV: Integer;

begin

GetV := v;

end;

begin
end.

uPointer type required v03824

—á [fRf“fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

,±,lfGf%o[f]fbfZ[fW,íf|fCf“f^,Å,È,çf|fyf%of“fh,É<tžQ[Æ%o%žžžq[u^v,ð“K—
p,μ,½,Æ,«,Æ[C”ňí,É“Ážê,Èê[†,Æ,μ,ÅuRaise <exception> at <address>v•¶,ì'æ 2 flfyf
%of“fh,af|fCf“f^,Å,È,ç,Æ,«,É•Ž!,³,ê,Û,·B

-á03825

```
{ fNf%oofXCE^,â"à•""l,É,ÍŽÀ□Ú,ì□î•ñ,Ö,ìf|fCf"f^,Æ,μ,ÄŽÀ'•,³,ê,Ä,ç,Ä,à□C<tŽQ□Æ%  
%oŽŽŽq,ďf□[fXfCfxf<,ÅfNf%oofXCE^,É"K—p,·,é,ì,í^á-@,Å, ,é□BfRf"fpfCf%o,í•K—v,Å, ,é,ÍŽ©"  
®"l,É<tŽQ□Æ,ď,·,é,ì,Å•s•K—v,Å,à, ,é }
```

program Produce;

var

C: TObject;

begin

C^.Destroy;

end.

```
{ 'P,É<tŽQ□Æ%o%oŽŽŽq,ď"ü,ê,È,ç,Å, ", ,ìfRf"fpfCf%o,ăŽ©"®"l,É□³,μ,□^—□,·,é }
```

program Solve;

var

C: TObject;

begin

C.Destroy;

end.

uClass does not have a default property v03826

—á [fRf“fpfCf<fGf%o\[\]f\[\]fbfZ\[\]fW](#)

à-¾

”z—ňŽ® ,ì†,ÅfNf%ofXfCf“fXf^f“fX•i” ,đŽg,ç,Ü,μ,½,¾C,» ,ìfNf%ofXCE^ ,ífftfHf<fg.ì”z—
[ňvf\[\]pfefB,đéCE¾,μ,Ä,ç,Ü,¹ňB](#)

—á03827

```
{ ŽŸ, ĺfR[]fh, Ā, í Base ,ª"z—ñfvf[]fpfefB, ð[]éĈ¾, µ, Ā, ", ç, , []CB Ž©'ì,ª"z—ñ, Ā, È, ç, ì, ĀfGf  
%o[][,ª<N, <, é }
```

```
program Produce;
```

```
type
```

```
Base = class  
end;
```

```
var
```

```
B: Base;
```

```
procedure P;
```

```
var
```

```
Ch: Char;
```

```
begin
```

```
Ch := B[1];
```

```
end;
```

```
begin
```

```
end.
```

```
{ fNf%oofX, ĺffftfHf<fgfvf[]fpfefB, ð[]éĈ¾, µ, ½[]ê[]‡, í[]C"z—ñŽ®, ì†, ĀfNf  
%oofXfCf"fxf^f"fx•í[]", ðŽÀ[]Ū, ì"z—ñ, ì, æ, x, ÉŽg, ì, é[]B, Ū, ½, í[]Cfvf[]fpfefB, ì-  
¼'O, ð'¼[]ŪŽw'è, Ā, <, é[]Bf[]f, : $HINTS , ð ON , É, µ, ½[]ê[]‡[]Cch , É'ã"ü, ³, è, ½'l, ĺŽg, í, è, Ā, ç, È, ç  
, Æ, ç, xfqf"fg,ª•\Žì,³, è, é }
```

```
program Solve;
```

```
type
```

```
Base = class  
function GetChar(I: Integer): Char;  
property data[I: Integer]: Char read GetChar; default;  
end;
```

```
var
```

```
B: Base;
```

```
function Base.GetChar(I: Integer): Char;
```

```
begin
```

```
GetChar := 'A';
```

```
end;
```

```
procedure P;
```

```
var
```

```
Ch: Char;
```

```
begin
```

```
Ch := B[1];
```

```
Ch := B.Data[1];
```

```
end;
```

begin
end.

Bad argument type in variable type array constructor v03828

—á [fRf“fpfCf<fGf%o\[\]f\[\]fbfZ\[\]fW](#)

à-¾

•i“”z—ñ,ì't,Å,íŽg,!,È,çCE^,ðŽg,Á,Ä”z—ñ,ð[]i[]¬,μ,æ,κ,Æ,μ,Ä,ç,Ü,·[]B

—á03829

```
{ "z—ñfRf“fXfgf%ofNf^,ì't,Å,í—ñ<“,ÆfCEfR□[fh,ÍfTf|□[fg,³,ê,È,ç,ì,Å□CExaminer ,ì 2  
,Å,ìCEÄ,Ñ□o,μ,í—¼•û,Æ,àŽ,“s,·,é }
```

program Produce;

type

```
Fruit = (apple, orange, pear);
```

```
Data = record
```

```
  X: Integer;
```

```
  Ch: Char;
```

```
end;
```

var

```
F: Fruit;
```

```
D: Data;
```

procedure Examiner(V: **array of** TVarRec);

begin

end;

begin

```
  Examiner([D]);
```

```
  Examiner([F]);
```

end.

```
{ Žÿ,ÍfR□[fh,ÉŽ!,μ,½,æ,α,É'½□",Ìff□[f^CE^,ª"z—ñfRf“fXfgf%ofNf^,ì't,ÅŽg,ì,é }
```

program Solve;

var

```
I: Integer;
```

```
R: Real;
```

```
V: Variant;
```

procedure Examiner(V: **array of** TVarRec);

begin

end;

begin

```
I := 0; R := 0; V := 0;
```

```
  Examiner([I, R, V]);
```

end.

Could not load RLINK32.DLL v03830

[fRf“fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

RLINK32.DLL ,³CE©,Â,©,è,Ü,¹,ñ,Â,µ,½B,±,ìtf@fCf<,³•K,,fpfXã,É, ,é,æ,α,É,µ,Ä,,¾,¾,çB

Wrong or corrupted version of RLINK32.DLL v03831

[fRf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

RLINK32.DLL ,É'î,·,é"à•",ì^êšÑ«f`fFfbfN,Á^Ùí,ªCE©,Â,©,è,Ü,µ,½B

ÆÃ,ç RLINK32 ,ðf[h,µ,æ,æ,Æ,µ,Ä,ç,é%oÂ"\<ª, ,é,ì,ÅCPATH ã,ÉÕ"Ë,ª,È,ç,©,Ç,æ

,©,ð'²,x,Ä,,¾,¾,çBRLINK32.DLL ,ÉŠm,©,É^Ùí,ª,È,ç,ì,É,±,ìf]fbfZ[fW,ª\

Ž!,¾,é,éêê‡,ÍCf{[f%of"fh,É~A—,µ,Ä,,¾,¾,çB

u;' not allowed before }ELSE}v03832

—á [fRf“fpfCf<fGf%o\[\]f\[\]fbfZ\[\]fW](#)

à-¾

if..else •¶, ì else ,ì'¼'O,É□u;□v,ª, ,è,Ü,·□B□u;□v,í•¶,ì□l,í,è,Å,È,-

•¶,ì<æ□∅,è,Æ,μ,Å^μ,í,ê,Ü,·□Bif..else ,í 1

,Å,ì•¶,Å, ,è□C•j□¶•¶,đŽg,Á,½□ê□¶^ÈŠO□CŠÔ,É□u;□v,í“ü,è,Ü,¹ñ□B

-á03833

{ Pascal ,Á,Í ELSE •¶,ì'¼'O,É□u;□v,ð•t,¯,ç,ê,È,ç□B,»ì,½,ß,ÉŽŸ,lfR□[fh,Á,ÍfGf%□[^a<N,«^é }

program Produce;

var
B: Integer;

begin
 if B = 10 **then**
 B := 0;
 else
 B := 10;
end.

{ ,±,ì-â'è,É,Í 2 ,Â,ìŠÈ'P,È%ðCE^-@^a, ,é□B1 ,Â,ÍfGf%□[^a<N,±,μ,½□u;□v,ð□í□œ,·,é•û-
@,Á, ,é□B,à,× 1 ,Á,Í IF.ELSE ,ìCEÂ□X,ì•"•^a,É•;□‡•¶,ð□\□-,·,é•û-@,Á, ,é□B\$HINTS ,^a ON
,ì□ê□‡,í□CB ,Ö'ã"ü,μ,½'l,^aCE^,μ,ÄŽg,í,ê,È,ç,Æ,ç,×fçf"fg,^a•\Ž|,³,ê,é }

program Solve;

var
B: Integer;

begin
 if B = 10 **then**
 B := 0
 else
 B := 10;

if B = 10 **then**
 begin
 B := 0;
 end
 else
 begin
 B := 10;
 end;

end.

uType '<name>' needs finalization - not allowed in variant record
v03834

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

Œ»□Ý□Š—L,μ,Ä,ç,éfŠf\□[fX,ð%oð•ú,μ,Ä□³,μ,ç□l—¹□^—□,ð,μ,È,¯,ê,î,È,ç,È,ç,Æ,ç,α“à•”“l,È—□
—R,©,ç□C,ç,,Â,©,ì“Á’è,ìŒ^,íRf“fpfCf%o,É,æ,Á,Ä“Á•É^μ,í,ê,Û,·□BfRf“fpfCf%o
,íŽÀ□sŽž,É,ç,ìŒ^,ªŽÀ□Û,ÉfŒfR□[fh,ìfofŠfAf“fg•”,ÉŠi”[,³,ê,Ä,ç,é,©,ð”»•É,Ä,«,È,ç
,½,ß□C,»ê,ç,ì“ÁŽê,Èff□[f^Œ^,ª³,μ,□l—¹□^—□,³,ê,é,©,ç,α,©,í•Û□∅,³,ê,Û,¹,ñ□B

-á03835

{ •¶Žš—ñ,íſſf\□[fX,đ□³,μ,%∞đ•ú,·,é,½,β,ÉfRf“fpfCf%∞,É,æ,é“ÁŽê,È□^—□,đ•K—v,Æ,·,é∕∧,ì 1
,Á,Á, ,é□B,μ,½,ª,Á,Ä□CfofſſfAſ“fg•”,É String ,đŽg,α,ì,í^á-@,Á, ,é }

program Produce;

type

Data = **record**
 case Kind:Char **of**
 'A': (Str: **string**);
 end;

begin

end.

{ fGf%∞□[,đ<N,±,μ,½,·,×,Ä,ì□é∕∧³⁄⁴,đfofſſfAſ“fg•”,©,ç□í□∞,·,é,ìª 1 ,Á,ì%∞đ∕∧-
@,Á, ,é□B,» ,ì,Ù,©□Cf|fCf“f^∕∧^ (,½,Æ,ì,í ^String) ,đŽg,Á,Äf□f,ſſ,đŽ©•ª,Áſſç—□,·,é%∞đ∕∧-
@,à, ,é }

program Solve;

type

Data = **record**
 Str: **string**;
 end;

begin

end.

uType '<name>' needs finalization - not allowed in file type v03836

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

Œ»□Ý□Š—L,μ,Ä,ç,éfŠf\□[fX,ð%oð•ú,μ,Ä□³,μ,ç□I—¹□^—□,ð,μ,È,¯,ê,î,È,ç,È,ç,Æ,ç,α“à•”“l,È—□
—R,©,ç□C,ç,,Ä,©,ì“Á’è,ìŒ^,íRf“fpfCf%o,É,æ,Á,Ä“Á•É^μ,í,ê,Û,·□B
fRf“fpfCf%o,íŽÀ□sŽž,É’:,ç•¶Žš—ñ,^aç,ê,,ç,ç’.,,È,é,©,ð”»•É,Á,«„È,ç
,½,ß□C,»,ê,ç,ì“ÁŽè,Èff□[f^Œ^,□³,μ,□I—¹□^—□,³,é,é,©,ç,α
,©,í•Û□Ø,³é,Û,¹ñ□BŒ^•t,«ftf@fCf<,l’t,É, ,é,:x,Ä,lfŒfR□[fh,í“¯,¶fTfçfY,Á,È,¯,ê,î,È,ç,È,ç
,ì,Á□C’:,ç•¶Žš—ñ,^aü,Á,Ä,ç,éŒ^,íŽg,l,Û,¹ñ□B

—á03837

{ •¶Žš—ñ,í□I—¹□^—□,đ•K—v,Æ,.,éff□[f^CE^,ì 1 ,Â,È,ì,Â□CFile CE^,É,ÍŠi"[,Â,«,È,ç }

program Produce;

type

Data = **record**
Name: **string**;
end;

var

InFile: **file of** Data;

begin

end.

{ String ,ì□ê□‡,É,íCE^,đ•¶Žš,ì"z—ñ,Æ,μ,Ä□Ä□éCE³/₄,.,é,ì,ŠÈ'P,È%đCE^-@,Â, ,é□B□I—¹□^—
□,đ•K—v,Æ,.,é,»,ê^ÈŠO,ìCE^,Â,í□Cfile of ,È,Ç,ì•W□€ Pascal <@"\,đŽg,Á,½fofCfifŠftf@fCf<□\`ç
,ì•ÚŽç,í^ê'w"i,μ,,È,é□B□ê—p,ìftf@fCf<"ü□o—Íf<□[f`f",đ□ì□¬,μ,½•û,ŠÈ'P,³/₄,ÆŽv,í,ê,é }

program Solve;

type

Data = **record**
Name: **array**[1..25] **of** Char;
end;

var

InFile: **file of** Data;

begin

end.

uExpression too complicatedv03838

[fRf“fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

f[fXfR[fh,ì't,É•;ŽG,;,¬,ÄfRf“fpfCf%o,ª^—,Å,«,È,çŽ®,ª, ,è,Ü,µ,½B
^êžž•i”,đŽg,ª,È,Ç,µ,ÄŽ®,đŠÈ'P,É,µ,Ä,,¾,¾,çB

Element 0 inaccessible - use 'Length' or 'SetLength' v03839

á Rf"fpfCf<fGf%o[f fbfZ[fW

à-¾

Delphi ,ì **string** Ć^,Á,Í—v'f 0 ,É•ŃŽš—ñ,ì',³,ÍŠi"[,³,ê,Ä,ç,Ü,¹,ñB':,ç•ŃŽš—ñ,Á,Í—v'f 0 ,ÉfAfNfZfX,μ,Ä•ŃŽš—ñ,ì',³,ðŽæ"¾,μ,½,è•íX,μ,½,è,·,éĆÄ,ç•û-@,ÍŽg,ì,Ü,¹,ñB

-á03840

{ ,±,lfvf□fOf%of€,Í•¶Žš—ñ,ì'æ 1 —v'f,É'¼□ÚfAfnfZfX,μ,Ä•¶Žš—ñ,ì'·,³,ðŽæ“¾,μ,æ,κ
,Æ,μ,Ä,ç,é□B }

program Produce;

var

Str: **string**;
Len: Integer;

begin

Str := 'Kojo no tsuki';
Len := Str[0];

end.

{ •W□€Žè'±,«,ì SetLength ,Æ Length ,ðŽg,í,Í•¶Žš—ñ,ì'æ 1 —
v'f,É'¼□ÚfAfnfZfX,·,é,ì,Æ““,¶<@“\,ª“¾,ç,é,é□B\$HINTS ,ª ON ,ì□ê□‡,Í□CŽg,í,ê,È,ç len
,ì'l,ÉŠÖ,·,éfqf“fg,ª•\Ž!,³,é,é }

program Solve;

var

Str: **string**;
Len: Integer;

begin

Str := 'Kojo no tsuki';
Len := Length(Str);

end.

System unit out of date or corrupted: missing '<name>' v03841

[fRf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

fRf"fpfCf%o,í System.dcu

,ì't,É, ,é"ÁŽéŠÖ" ,đ'T,μ,Ü,μ,½,¾CCE©,Á,©,è,Ü,¹,ñ,Á,μ,½BSystem.ftfjfbfg,í%ó,ê,Ä,ç
,é,©CEÄ,çftfjfbfg,Ä,·B

f%ofCfuf%ofŠCEÿðöpfX,ìÖ"È,É,æ,Á,Ä•Ê,ì System.dcu ,đŽw,·,±,Æ,²,È,ç,©,Ç,κ

,©,đŠm"F,μ,Ä,,¾,¾,çBSystem.dcu ,ðÄfCf"fXfg[f<,μ,Ä,Ý,Ä,,¾,¾,çB,» ,é,Ä,à

%óðCE^ ,μ,È,çéç,íCf{[f%of"fh,Ü,Ä~A—,μ,Ä,,¾,¾,çB

Record, object or class type required v03842

á fRf"fpfCf<fGf%o[f fbfZ[fW

à-¾

fRf"fpfCf%o,ífĒfR[fh[CfIfufWfFfNfg[CfNf%ofX,ì,ç,,ê,©,đŽw'è,μ,½Ē^-¼,đ—Šú,μ,Ä,ç,Û,μ,½,ª[CĒ©,Â,©,è,Û,¹,ň,Â,μ,½[B,±,IfGf%o[l,ìĒ'^ö,í 2 ,Â, ,è,Û,·[B1 ,Â,ífĒfR[fh,Â,È,çfIfufWfFfNfg,Ö,ì[u,·v,ì"K—p,Â,·[B,à,¸1 ,Â,ìĒ'^ö,í **with** •¶,ì't,ÉĒë,Â,½Ē^,ì•ï",đŽg,Â,Ä,ç,é,±,Æ,Â,·[B

—á03843

```
{ ,±,lfvf[]fOf%of€,É,Í“~,¶fGf%o[][,É 2 ,ÂCE´^ö,a, ,é[]B1  
,Â,lfCEfR[]fh,Â,È,çfIfufWfFfNfg,Ö,ì[]u.[]v,ì“K—p,Â, ,é[]B2 "Ô-Ú,ì—á,Í WITH  
•¶,ì'†,ÉCEè,Á,½CE^,ì•ì[]",ðŽg,Á,Ä,ç,é }
```

```
program Produce;
```

```
type
```

```
RecordDesc = class  
  Ch: Char;  
end;
```

```
var
```

```
pCh: PChar;  
r: RecordDesc;
```

```
procedure A;
```

```
begin
```

```
pCh.Ch := 'A'; (* fP[]fX 1 *)  
with pCh do  
begin (* fP[]fX 2 *)  
end;
```

```
end;
```

```
end.
```

```
{ ,±,lfGf%o[][,Í[]u.[]v,Æ WITH ,ð,Ç,¿,ç,à•K, ,fCEfR[]fh[]CfIfufWfFfNfg[]CfNf%ofX•ì[]",ì,ç  
,,è,©,É,¾,“K—p, ,é,æ,æ,É, ,ê,ìŠÈ'P,É%øðCE^, ,é }
```

```
program Solve;
```

```
type
```

```
RecordDesc = class  
  Ch: Char;  
end;
```

```
var
```

```
R: RecordDesc;
```

```
procedure A;
```

```
begin
```

```
R.Ch := 'A'; (* fP[]fX 1 *)  
with r do  
begin (* fP[]fX 2 *)  
end;
```

```
end;
```

```
end.
```

uType not allowed in OLE Automation call v03844

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

fRf“fpfCf%o,afofŠfAf“fgCE^,Ö•iš,Å,«,È,çff□[f^CE^,í OLE
f□[fgf□□[fvf#f“,ìCEÄ,Ň□o,μ,ÉŽg,!,Ü,¹,ň□B

—á03845

{ fofŠfAf“fgĈ^,Ö•İŠ·,Å,«,È,†fNf%ofX,È,İ,Å OLE ĈÄ,Ñ□o,μ,ÉŽg,ı,È,† }

program Produce;

type

Base = **class**
X: Integer;
end;

var

B: Base;
V: Variant;

begin

V.Dispatch(B);

end.

{ ,±

,è,ç,İff□[f^Ĉ^,đŽè“® ,ÅfofŠfAf“fg,Ö•İŠ·,·,é,©□CfofŠfAf“fg,ÖŽ©“®“ı,É•İŠ·,Å,«,éff□[f^Ĉ^,
¾,¯,đŽg,π,ı,â,±,ı-â‘è,ı,½,¾ 1 ,Å,ı%đĈ^ -@,Å, ,é }

program Solve;

type

Base = **class**
X: Integer;
end;

var

B: Base;
V: Variant;

begin

V.Dispatch(B.X);

end.

u<RLink32 error message>v03846

[fRf"fpfCf<fGf%o\[fbfZ\[fW](#)

à-¾

RLink32 ,ª•ñ,μ,Ä,ç,é,Æ,¨,è,lfGf%o[,ðCEÿo,μ,Ü,μ,½B

,±,lfGf%o[,É,Â,ç,Ä,ìÚ×,íCRLINK32 fŠftf@fÆf"fX,ðŽQÆ,μ,Ä,,¾,¾,çB

u<Filename>: <RLink32 error message>v03847

fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

RLink32 ,ª•ñ,μ,Ä,ç,é,Æ,¨,è,lfGf%o[,ðCEÿo,μ,Ü,μ,½B

,±,lfGf%o[,É,Â,ç,Ä,ìÚ×,íCRLINK32 fŠftf@fÆf“fX,ðŽQÆ,μ,Ä,,¾,¾,çB

Too many conditional symbols v03848

[Rf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

fRf}f"fhf%ofCf" (ŠÂ««Ÿ'èftf@fCf<,ðŠÜ,Þ) ,Á'è<` ,µ,½ðCEfVf"f{f<,ªCŠ,,,è"- ,Ä,ç,ê,Ä,ç ,éf[f,fŠ,ð' ,l,Ü,µ,½B, ,x,Ä,ìðCEfVf"f{f<,É'í,µ,Ä 256 fofCfgŠ,,,è"- ,Ä,ç,ê,Ü, ·BðCEfVf"f{f<,íðCEfVf"f{f<-ì^æ,ÉŠi"l, ,é,Æ,« ,É 1 ,Ä,ìðCEfVf"f{f<,É,Ä,« 1 fofCfg-]CEv,É•K-v,Æ,µ,Ü, ·B

fRf}f"fhf%ofCf" (,Ü,½,ÍŠÂ««Ÿ'èftf@fCf<) ,É"ü,Á,Ä,ç ,éðCEfRf"fpfCf<fVf"f{f<,ì",ðCE, ,ç, : ,l,ª,½,¾ 1 ,Ä,ì%ðCE^-@,Ä, ·B

Method '<name>' hides virtual method of base type '<name>'

ŽQ —á fRf“fpfCf<fGf%o[lfbfZ[lfW

à-¾

Šî- {fNf%ofX“à,É, ,é%¼'zf\fbfh,Æ“˘,ŋ-¼'O,ìf\fbfh,đéCE¾,μ,Û,μ,½B V,μ,çf\fbfh,í
%¼'zf\fbfh,Å,Í,È,C“˘,ŋ-¼'O,đŽ,ÂŠî- {fNf%ofX,ìf\fbfh,Ö,ìfNfZfX,đ%B,μ,Û,·B

—á03850

```
{ Derived ,ì'è<`“à,Â□éCE¾,μ,½ 2 ,Â,ìf□f□fbfh,í,Ç,ì,ç,àŠî- {fNf%ofX“à,Â□éCE¾,¾,ê,½“˘,¶-¼'0,ì  
%o¼'zŠÖ□“,ð%oB,· }
```

```
program Produce;  
{ $WARNINGS ON }
```

type

```
Base = class  
  procedure VirtuMethod; virtual;  
  procedure VirtuMethod2; virtual;  
end;
```

```
Derived = class(Base)  
  procedure VirtuMethod;  
  procedure VirtuMethod2;  
end;
```

```
procedure Base.VirtuMethod;  
begin  
end;
```

```
procedure Base.VirtuMethod2;  
begin  
end;
```

```
procedure Derived.VirtuMethod;  
begin  
end;
```

```
procedure Derived.VirtuMethod2;  
begin  
end;
```

```
begin  
end.
```

```
{ ,±,ìfGf%o□[,ð%oðCE^,·,é•û-@,í 2 ,Â, ,é□B1 ,Â,í override ,ðŽw'è,μ,Ä”h□¶fNf%ofX,ìŽè'±,«,à  
virtural ,É,·,é•û-@,Â□C,» ,ì□é□#□CCEp□¾,¾,ê,½CEÄ,Ñ□o,μ,í,»,ì,Ü,ÜCE¾,ìŽè'±  
,« ,ðŽQ□Æ,Ä,« ,é□B”h□¶fNf%ofX“à,Â□éCE¾,·,é,Æ,« ,ÉŽè'±,« ,ì-¼'0,ð•ï□X,·,é•û-@,à ,é□BŽŸ,ìf  
R□[fh,í-¼•û,ì•û-@,ðŽ!,·—á,Â, ,é }
```

```
program Solve;
```

type

```
Base = class  
  procedure VirtuMethod; virtual;  
  procedure VirtuMethod2; virtual;  
end;
```

```
Derived = class(Base)  
  procedure VirtuMethod; override;
```

```
    procedure Virtu2Method;
end;

procedure Base.VirtuMethod;
begin
end;

procedure Base.VirtuMethod2;
begin
end;

procedure Derived.VirtuMethod;
begin
end;

procedure Derived.Virtu2Method;
begin
end;

begin
end.
```

ŽQÆ03851

fifbfh,iffof%ofCh

-á03853

```
program Produce;  
{ $HINTS ON }
```

```
procedure Local;
```

```
var
```

```
  I: Integer;
```

```
begin
```

```
end;
```

```
begin
```

```
end.
```

```
{ Žg, í, È, ç • ĩ " , ð Ž è ' ± , « , © , ç ĩ ĩ œ , , é , ì , Š È ' P , È % ð œ ^ - @ , Å , , é B , μ , © , μ C Ž À œ » • " " à , Å Ž g —  
p , , x , « • ĩ " , ĩ % Å " \ ĩ « , à , , é }
```

```
program Solve;
```

```
{ $HINTS ON }
```

```
procedure Local;
```

```
begin
```

```
end;
```

```
begin
```

```
end.
```

uCompile terminated by user v03854

fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

fRf“fpfCf<’t,É[]mfRf“fpfCf<[]nf_fCfAf[]fOf{fbfNfX,Å[]mfLfff“fZf<[]nf{f^f“,ð%öÿ,µ,Û,µ,½[]B

uUnnamed arguments must precede named arguments in OLE Automation call **v03855**

—á fRf“fpfCf<fGf%o[f^fbfZ[fW

à-¾

-¼‘O•t,« OLE_fi[fgf[fVf+f“fpf%of[f^,ìĒă,É-¼‘O,ì,È,ç^ø” ,đ’u,±,α,Æ,μ,Û,μ,½B

—á03856

```
{ ,±,ì OLE fffBfXfjfbf` ,Å,ÍC-¼'O•t,«fjpf%of[]f^ FileName ,ð-¼'O,ì,È,çfjpf  
%of[]f^,ìEã,É'u,©,È,¯,ê,Í,È,ç,È,ç }
```

program Produce;

var

Ole: Variant;

begin

Ole.Dispatch(FileName:='FrogEggs', 'Tapioca');

end.

```
{ ,±,ì,æ,κ,Éfjpf%of[]f^,ð<t,É,·,é,ì,Í,à,Á,Æ,à'¼U“l,È%øðE^-  
@,¾,ªC“K∅,Å,È,ç[]ê[]‡,à, ,é[]B-¼'O,ì,È,çfjpf%of[]f^,É-¼'O,ðŽw'è,·,é%øðE^-@,à, ,é }
```

program Solve;

var

Ole: Variant;

begin

Ole.Dispatch('Tapioca', FileName:='FrogEggs');

end.

Abstract methods must be virtual or dynamic v03857

—á [fRf“fpfCf<fGf%o\[\]f\[\]fbfZ\[\]fW](#)

à-¾

Šî- {fNf%ofX“à,Á,ŠÛf[]fbfh,ðéÉ¾,.,éêê#[]C,» ,ìŠÛf[]fbfh,í’Êí,ì¼zÉ^, © “®“!¼zÉ^ ,Á,È, ,ê,î,È,è,Û,¹,ñB

—á03858

{ 'ŠŮfƒfbfh,í virtual ,© dynamic ,Å,È,¯,ê,Î,È,ç,È,†,ì,ÅŽŸ,ìéĚ¾,ÍGf%o[,É,È,é }

program Produce;

type

```
Base = class
  procedure DaliVision; abstract;
  procedure TellyVision; abstract;
end;
```

begin

end.

{ ,±,ÍGf%o[,ÍAfvfŠfP[fVf#f“,É%ž,ŕ,Ä virtual ,Æ dynamic
,ì,Ç,¿,ç,©Å“K,È•û,ðŽw'è,·,ê,Î,È,È,é }

program Solve;

type

```
Base = class
  procedure DaliVision; virtual; abstract;
  procedure TellyVision; dynamic; abstract;
end;
```

begin

end.

uCase label outside of range of case expression v03859

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

case •¶, ì[]\$€ä•ï[]”, º[]¶[]¬, Å, «, È, ¢f%ofxf<, ð case •¶, ì“à•”, ÉŽw’è, µ, Û, µ, ½[]B

—á03860

```
{ TatesCompass ,Í CompassPoints ,ì'l,ì^ê•",ð•ÛŽ□,Å,«,È,ç,ì,Å□C,ç,,Å,©,ì case f%oofxf<,âfGf
%o□[,É,È,é }
```

```
program Produce;
{$WARNINGS ON}
```

type

```
CompassPoints = (n, e, s, w, ne, se, sw, nw);
FourPoints = n..w;
```

var

```
TatesCompass: FourPoints;
```

begin

```
TatesCompass := e;
case TatesCompass of
  n:   Writeln('North');
  e:   Writeln('East');
  s:   Writeln('West');
  w:   Writeln('South');
  ne:  Writeln('Northeast');
  se:  Writeln('Southeast');
  sw:  Writeln('Southwest');
  nw:  Writeln('Northwest');
```

end;

end.

```
{ fR□[fh,ð'²,x,Ä%o½,ª-Ú"l,©,ð"»•É,μ,½CEä□C2 ,Å,ì%oðCE^-@,ª, ,é□B1 ,Å,í,·,×,Ä,ì case f
%oofxf<,ð□¶□- ,Å,« ,é,æ,x case •¶,ì□$CEä•ï□",ìCE^ ,ð•ï□X,·,é•û-@,Å, ,é□B2 "Ö-Ú,ì•û-
@,í□$CEä•ï□",ª□¶□- ,Å,« ,È,ç,·,×,Ä,ì case f%oofxf<,ð□í□œ,·,é•û-@,Å, ,é□BŽÿ,ìfR□[fh,í□Å□%o
,ì•û-@,ðŽ!,·-á,Å, ,é }
```

```
program Solve;
{$WARNINGS ON}
```

type

```
CompassPoints = (n, e, s, w, ne, se, sw, nw);
FourPoints = n..w;
```

var

```
TatesCompass: CompassPoints;
```

begin

```
TatesCompass := e;
case TatesCompass of
  n:   Writeln('North');
  e:   Writeln('East');
  s:   Writeln('West');
  w:   Writeln('South');
  ne:  Writeln('Northeast');
  se:  Writeln('Southeast');
```

```
sw: Writeln('Southwest');  
nw: Writeln('Northwest');  
end;  
end.
```

Object type required v03861

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

,±,lfGf%o[],lfRf“fpfCf%o,²flfufWfFfNfgCE^,ð•K—v,Æ,μ,Ä,ç,é,Æ,«,É•\Ž|,³,ê,Ü,·□B,½,Æ,¡,î□C, ,
éflfufWfFfNfg,ì□ă^ÊflfufWfFfNfg,ìCE^,àflfufWfFfNfgCE^,Å,È,¯,ê,î,È,è,Ü,¹,ñ□B

—á03862

```
{ System ftfjfbfg“à,ì TObject ,ífnf%ofXCE^,É,ì,Å□C,»,±  
,©,ç,íffufWfFfNfgCE^,đ”h□¶,Å,«,É,ç }
```

type

```
MyObject = object (TObject)
```

```
end;
```

begin

end.

```
{ CE^Ž~•ÉŽq,ífufWfFfNfgCE^,đ□³,μ,•\,•,æ,π,É,•,é□BfXfyf<,šŜÔ^á,Á,Ä,ç  
,é,©•É,íffjfbfg,©,ç,ìŽ~•ÉŽq,É,æ,Á,Ä%B,³,é,Ä,ç,é%oA”\□«,ª, ,é }
```

program Solve;

type

```
MyObject = class { ŽÀ□Û,É,í□C,±,é,í class (TObject) ,đ^Ó-j,•,é }
```

```
end;
```

begin

end.

Field or method identifier expected v03863

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

ftfB[]f<fh,Å,àf[]fbfh,Å,à,È,çfv[]pfefB,É'í,μ,Ä **read** []ß,Ü,½,í **write** []ß—
p,ìŽ⁻•ÉŽq,ðŽw'è,μ,Ü,μ,½[]B

-á03864

```
{ ŽŸ,lfR[fh,Á,í 2 ,Á,lfvf[fpfefB,ì-¼•û,afGf%o[ ,đ<N,±,·B[Á%o,lfvf[fpfefB,afGf%o[ ,É,È,é  
-R,lfvf[fpfefBŽ©'ì,đ"C,Ý[ ,«f[fbfh,Æ,μ,ĂŽw'è,Á,«,È,ç,©,ç,Á, ,éB2 "Ô-  
Ú,lfvf[fpfefB,afGf%o[ ,É,È,é-R,í R ,ª Base fNf%oX,lf[fo[ ,Á,È,ç,©,ç,Á, ,é }
```

program Produce;

var

R: **string**;

type

```
Base = class  
  T: string;  
  property Title: string read Title write Title;  
  property Caption: string read R write R;  
end;
```

begin

end.

```
{ ,±,lfGf%o[ ,đ%ođĈ^ , ,é,É,í[Cfvf[fpfefB-p,ì, ,x,Ă,ì read [B,Æ write  
[B,ĂC,» ,lfvf[fpfefB,đ[Š-L, ,éfNf%oX,lf[fo[ ,Á, ,é-LĈø,ÈftfB[f<fhŽ^-ÉŽq,©f[  
fbfhŽ^-ÉŽq,đŠmŽĂ,ÉŽw'è, ,é }
```

program Solve;

type

```
Base = class  
  T: string;  
  property Title: string read T write T;  
end;
```

begin

end.

Field definition not allowed after methods or properties v03867

á Rf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

Å%o,ì[]f[]bfh'è<` ,Ü,½,ívf[]fpfefB'è<` ,ªCEÿ[]o,³,ê,½CEã[]C,³,ç,ÉftfB[]f<fh,ðfNf%ofX,É'Ç
%oÁ,µ,æ,æ,Æ,µ,Ü,µ,½[]B,·,x,Á,ìftfB[]f<fh'è<` ,ðf[]\
fbfh,Æfvf[]fpfefB,ì'O,É'u,©,È,¯,ê,î,È,è,Ü,¹,ñ[]B

—á03868

{ FirstMethod ,ìĀă,É A ,đ□éĀ¾,·,é,ÆfGf%□[,É,Ē,é }

program Produce;

type

Base = **class**

procedure FirstMethod;

 A: Integer;

end;

procedure Base.FirstMethod;

begin

end;

begin

end.

{ ,±,ìfGf%□[,đ%đĀĒ^,·,é,É,í□C'É□í□C,·,×,Ä,ìftfB□[f<fh'è<` ,đ□Ā□%□□
,ìftfB□[f<fh□éĀ¾,Ū,½,ìfvf□pfefB□éĀ¾,ì'O,Ō^Ū"®,·,é,¾,¯,Ā□\•^a,Ā, ,é }

program Solve;

type

Base = **class**

 A: Integer;

procedure FirstMethod;

end;

procedure Base.FirstMethod;

begin

end;

begin

end.

Cannot override a static method v03869

—á [fRf“fpfCf<fGf%o\[\]f\[\]fbfZ\[\]fW](#)

à-¾

”h[]fNf%ofX,ì†,Å[]C%o¼’zE^,Æ,μ,Ä[]éE¾,¾,ê,Ä,ç,È,çŠî- {f[]fbfh,ðf[]fo[]f%ofCfh,μ,æ,æ
,Æ,μ,Û,μ,½[]B

—á03870

```
{ ŽŸ, ĩfR[fh, afGf%o[ , É, È, é—R, Í Base.StaticMethod , a%o¼'zf\
fbfh, Æ, μ, ÅéĈ¾, ¾, ê, Ä, ¨, ç, , C, μ, ½, a, Ä, » , ĩéĈ¾, đfI[f%ofCfh, Å, «, È, ç, ½, ß, Å, , é }
```

program Produce;

type

Base = **class**

procedure StaticMethod;

end;

Derived = **class**(Base)

procedure StaticMethod; **override;**

end;

procedure Base.StaticMethod;

begin

end;

procedure Derived.StaticMethod;

begin

end;

begin

end.

```
{ ŠŦ- {fNf%ofX, ĩf\ [fXfR[fh, đŽ, Á, Ä, ç, È, ç êĈ#C, ±, ĩfGf%o[ , đfvf\ fOf%ofĈ, ©, ç Žæ, èĈœ, -
, É, ĩ" hĈĭf\fbfh, ĩéĈ¾, ©, ç override , ĩŽw'è, đĭĈœ, , é, ĩ, a, ½, ¾ 1 , Å, ĩ•ú-@, Å, , éĈBŠŦ- {fNf
%ofX, ĩf\ [fX, a, , éĈêĈ# , É, ĩĈCĈTĈd, ÉĈĭ-ĭ, μ, ½ĈĈãĈĈŠŦ- {fNf%ofX, ĩf\fbfh, đ•ĭĈX, μ, Å%o¼'zĈĈ^ , ĩ
1 , Å, Æ, μ, ÅéĈ¾, , éĈB, ½, ¾, μĈC, » , ĩ, æ, x, È•ĭĈX, ĩfvf\ fOf%ofĈ, É'ã, «, È
%oē<ž, đ<y, Ú, , ĩ, Å'Ĉ^Ó, μ, È, Ĩ, ê, ĩ, È, ç, È, ç }
```

program Solve;

type

Base = **class**

procedure StaticMethod;

end;

Derived = **class**(Base)

procedure StaticMethod;

end;

procedure Base.StaticMethod;

begin

end;

procedure Derived.StaticMethod;

begin

end;

begin

end.

Variable '<name>' inaccessible here due to optimization v03871

—á fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

•]‰ž,Ü,½,íŠĂŽ<Ž® ,^{a-3}CEø,È•i” <name> ,ì'l,ðŽæ,èo,»,x,Æ,μ,Ü,μ,½,½B'½,,ìê#C,±
,lfGf%o[f,ífvf[fOf%of€
,ì\$CEäftf[f,ì†,Å“Á'è,ì“,©,çæ,íŽg,í,ê,È,ç'l,³f[f]fj<•i” ,É“ü,³,ê,½,ÆfRf“fpfCf%o
,^a”»'f,μ,½ê# ,É”¶,μ,Ü,·B

—á03872

1. □V,μ,ϕfAfvfŠfP□[fVfϕf“,δ□□□-,μ,Ü,·□B
2. ftfH□[f€□ä,Éf{f^f“,δ“ü,ê,Ü,·□B
3. f{f^f“,δf_fuf<fNfŠfbfN,μ,Ä click f□f\fbfh,δ□□□-,μ,Ü,·□B
4. □@□“CE^,ìfOf□□[fof<•ï□“ C ,δŽÀCE»•“,Ö’Ç%oÁ,μ,Ü,·□B

click f□f\fbfh,ÉŽÿ,ìfR□[fh,δ’Ç%oÁ,μ,Ü,·□B

```

procedure TForm1.Button1Click(Sender: TObject);
var
  A, B: Integer;
begin
  A := 10;
  B := 20;
  C := B;
  A := C;
end;

```

5. C ,Ö,ì’ã“ü,ÉfufCE□[fNf]fCf“fg,δ□Ý’è,μ,Ü,·□B
 6. fAfvfŠfP□[fVfϕf“,δfRf“fpfCf<,μ,ÄŽÀ□s,μ,Ü,·□B
 7. f{f^f“,δ%oÿ,μ,Ü,·□B
 8. fufCE□[fNf]fCf“fg,É“ž’B,μ,½CEã□C□m•]‰o¿□^•ï□X□nf_fCfAf□fOf{fbfNfX,δŠJ,«,Ü,·
(□mŽÀ□s□b•]‰o¿□^•ï□X(V)□n)□B
 9. A ,ð•]‰o¿,μ,Ü,·□B
- fRf“fpfCf‰o,í A ,Ö,ì□Á□‰o,ì’ã“ü,í□C,»„ì’l,ªCE^,μ,ÄŽg,í,ê,È,ϕ,½,β-
³CEø,^¾,Æ”FŽ˘,μ,Ü,·□B,»„ì,½,β□CfRf“fpfCf‰o,í 2 ”Ö-Ü,ì’ã“ü,ª”□¶,·,é,Ü,Á A ,ìŽg—p,δ‰o
 „Šú,μ,Ü,·□B•ï□“ A ,í C ,ª’ã“ü,³,ê,é“_Ü,Á-³CEø,Æ,Ý,È,³,ê,Ü,·□B
 —LCEø,È’l,ðŽ□,Á,Ä,ϕ,é•ï□“,ð•\Žì,·,é,ì,ª,½,^¾ 1 ,Â,ì‰oðCE^-@,Á,·□B

Unnecessary library helper function was eliminated by linker v03873

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

—v<□,³,ê,½•]‰‰ž,šÀ□s,·,é,½,ß,É□C“□□#fffofbfK,³fRf“fpfCf%o,lfwf<fp□[ŠÖ□”,šŽg,“,æ,Æ,μ,Ä,†
,Ü,·□B^ê•û□CfŠf“fj,lfwf<fp□[ŠÖ□”,šŽÀ□Ü,É,lfvf□fOf%o€
,ÉŽg,í,ê,È,©,Á,½,Æ”»'f,μ□Cfwf<fp□[ŠÖ□”,šfvf□fOf%o€f,ÖfŠf“fN,μ,Ü,¹,ñ,Å,μ,½□B

Missing or invalid conditional symbol in '\$<symbol>' directive

á fRf"fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

\$IFDEF \$IFNDEF \$DEFINE \$UNDEF, ìŠeŽw—β, ìŒă, ÉfVf"ff{f<, đ'u, •K—v, ª, , è, Ü, ·B

-á03876

```
{ ,±,±,Á,Í $IFDEF □đŒ□Žw—ß,ªŒë,Á,ÄŽw'è,³,ê,Ä,ç,é,ì,ÅfGf%□[ ,É,È,é }
```

program Produce;

```
{ $IFDEF }
```

```
{ $ENDIF }
```

begin

end.

```
{ fefXfg,·,éfVf“f{f,đŠY“-,ìŽw—ß,ìŒã,É•K,Žw'è,·,ê,î□C,±,ì-â'è,ì%đŒ^ ,·,é }
```

program Solve;

```
{ $IFDEF WIN32 }
```

```
{ $ENDIF }
```

begin

end.

Unicode incompatible format specification v03877

[fRf"fpfCf<fGf%o\[f\]fbfZ\[f\]fW](#)

à-¾

fCf"fxfyfNfg,µ,æ,π,Æ,µ,Ä,ç,élfufWfFfNfg,ìĈ^,Æ,ìĈÉŸ·«,ª,È,çĈ`Ž®Žw'èŽq,đ watch
•¶,Û,½,í evaluate •¶,ÉŽw'è,µ,Û,µ,½B,½,Æ,î~_—Ĉ^•í",đ•¶Žš—ň,Æ,µ,Ä•\Ž!,µ,æ,π
,Æ,·,é,ÆC,±,ìfGf%o[f],ª,N,«,Û,·B

Format specifier must be C, S, D, H, X, Fn, P, R or nMv03878

fRf"fpfCf<fGf%o[f]fbfZ[fW

à-¾

•]‰ı, ;éŽ®,É-³Eø,ÈE`Ž®Žw'èŽq,đŽw'è,μ,æ,π,Æ,μ,Û,μ,½B
—LEø,ÈE`Ž®,đŽw'è,μ,Ä,©,ç,Å,È,̄,ê,î•]‰ı,ªæ,Öi,Ý,Û,¹,ñB

uBad specification of M format v03879

[fRf"fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

Žg,!,È,ç M Ě`Ž®Žw'èŽq,đŽw'è,μ,Û,μ,½BM Žw'èŽq,ÉŽg,!,éfTftfBfNfX,í
C□CD□CH□CX□CS□CM ,¾, -,Å,·B

Object or class type required v03880

—á [fRf“fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

,±,lfGf%o[f]fbfZ[fW,ÍuTypename.Methodname[v,Æ,ç,æ[\•¶,đŽg,Á,½ê‡,ÉCtypename
,³fufWfFfNfgCE^,Ü,½,ÍNf%ofXCE^,đŽ!,μ,Ä,ç,È,ç,Æ•\Ž!,³,ê,Ü,:B

—á03881

{ Create f\fbfh,đŽ,Á,Ä,ç,é,ì,í TInteger ,Á, ,èC®"CE^,Á,í,È,ç }

program Produce;

type

TInteger = **class**
Value: Integer;
end;

var

V: TInteger;

begin

V := Integer.Create;

end.

{ Ž•Éžq,aflfufWfFfNfgCE^,Ü,½,íNf%ofXCE^,đŽ!,·,æ,π,É,·,éBŽ•Éžq,ìfXfyf<,ŠÔ^á,Á,Ä,ç
,é,©CŽ•Éžq,•É,ìftfjfbfg,©,ç,ìŽ•Éžq,É,æ,Á,Ä%B,³,ê,Ä,ç,é%Å"«, ,é }

program Solve;

type

TInteger = **class**
Value: Integer;
end;

var

V: TInteger;

begin

V := TInteger.Create;

end.

uFn requires 2 <= n <= 18 v03882

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

“[]fffofbfK,ìt,Å•,“@[]-[]”“ Ā`Ž®Žw'èŽq,ì"í^íŠO,ì'l,đŽw'è,μ,Ü,μ,½ B

Fn Ā`Ž®Žw'èŽq,ì"í^í,í 2` 18 ,Å,·B

u'<name>' not previously declared as a PROPERTY v03884

á fRf"fpfCf<fGf%o[f fbfZ[fW

à-¾

Äé¾,É,æ,Á,Ävf fpfefB,ð•Ê,ì%oÂŽ< fCFxf<,Ü,Å^ø,< ä,°,æ,α,Æ,μ,Û,μ,½,³CSî- {fNf
%oX"à,ì <name> ,³fvf fpfefB,Æ,μ,Äé¾,³,ê,Ä,ç,Û,¹,ñB

—á03885

```
{ Derived.Title ,ìÄéCE¾,í fvf[]pfefB Title ,ì“Ç,Ý[]‘,«,ÉŽg,æftfB[]f<fh,ì•ï[]X,ÆfpufŠfbfN,È  
%oÂŽ<[]«,Ö,ì^ø,«[]ă,°,đ^Ó[]],μ,Ä,ç,é[]B,μ,©,μfvf[]fOf%of},ª-{-,ÉŽg,“,æ,Æ,μ,½,ì,í Title ,Å,È,  
TitleProp ,Å, ,é }
```

```
program Produce;  
{ $WARNINGS ON }
```

type

```
Base = class  
protected  
Caption: string;  
Title: string;  
property TitleProp: string read Title write Title;  
end;
```

```
Derived = class(Base)  
public  
property Title read Caption write Caption;  
end;
```

```
begin  
end.
```

```
{ ,±,ìfGf%o[][,ì%ođCE^-@,í 2 ,Â, ,é[]B1 ,Â,íÄéCE¾,μ,½,ç-{-,ìfvf[]pfefB,đŽw'è,·,é•û-  
@,Å[]C,±,é,ª,à,Á,Æ,à^ê"É"ì,È•û-@,ÆŽv,í,é,é[]B,à,æ 1 ,Â,í Title ,ìÄéCE¾,ÉCE©,ç,é,é,æ,æ,  
,É[]CŠì-{-fNf%ofX"à,ìftfB[]f<fh,Æ"~,¶-¼'Ö,Å[]V,μ,çfvf[]pfefB,đ-¾Ž!ì,É[]ì[]-,·,é•û-@,Å, ,é[]B,  
±,ì[]V,μ,çfvf[]pfefB,íŠì-{-ftfB[]f<fh,đ%oB,·,ì,Å[]CŠì-  
{ftfB[]f<fh,ÖCE^flfffXfg,È,μ,ÉfAfNfZfX,Å,«,È,,È,é (f[]f, : CEx[][],đflf" ,É,μ,Ä, ,é[]ê[]#[]CTitle  
,đ[]ÄéCE¾,·,é,ÆŠì-{-fNf%ofX,ìf[]f"fo[][,ª[]ÄéCE¾,É,æ,Ä,Ä%oB,³,é,é,Æ,ç,æCEx[][],ª"[]s,³,é,é) }
```

```
program Solve;  
{ $WARNINGS ON }
```

type

```
Base = class  
protected  
Caption: string;  
Title: string;  
property TitleProp: string read Title write Title;  
end;
```

```
Derived = class(Base)  
public  
property TitleProp read Caption write Caption;  
property Title: string read Caption write Caption;  
end;
```

```
begin  
end.
```

Field definition not allowed in OLE automation section v03886

á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

fNf%ofXé¾, ò OLE fi[]fgf[]fVf+f“•”, ÉftfB[]f<fh’è` , ð“ü, ê, æ, x, Æ, µ, Û, µ, ½ B **automated**
•”, É, ívf[]fpfefB, Æf[]f\fbfh, ¾, ¯, ðé¾, Å, «, Û, · B

—á03887

{ ,±,ìfNf%ofX,Å,ì I ,ìéCE¾,ífRf“fpfCf:fGf%oo[.É,È,é }

program Produce;

type

```
Base = class
automated
  I: Integer;
end;
```

begin

end.

{ I ,ìéCE¾,đ automated •”,ìŠO,Öo,¹,îfGf%oo[.Í,È,,É,é }

program Solve;

type

```
Base = class
  I: Integer;
automated
end;
```

begin

end.

—á03889

{ •ŕŽšĀ^,Í automated •",Á,ÍŽg,!,È,ċĀ^,È,Ì,ÁĀCCh ,đĀéĀ¾,.,é,ÆfRf“fpcfj<fGf%o[][,É,È,é }

program Produce;

type

```
Base = class
  function GetC: Char;
  procedure SetC(C: Char);
automated
  property Ch: Char read GetC write SetC dispid 151;
end;
```

```
procedure Base.SetC(C: Char);
begin
end;
```

```
function Base.GetC: Char;
begin
  GetC := '!';
end;
```

```
begin
end.
```

{ ,±,Ì-â'è,Ì%ođĀ^-@,Í 2 ,Á, ,éĀB1 ,Á,ÍfGf%o[],đ<N,±,μ,½ĀéĀ¾,đ automated
•",ÌŠO,Öo,•û-@,Á, ,éĀB,à,x 1 ,Á,ÍfGf%o[],đ<N,±,μ,½Ā^,đ automated
•",ÁŽg,!,éĀ^,É•íĀX,;é•û-@,Á, ,é }

program Solve;

type

```
Base = class
  function GetC: string;
  procedure SetC(C: string);
automated
  property Ch: string read GetC write SetC dispid 151;
end;
```

```
procedure Base.SetC(C: string);
begin
end;
```

```
function Base.GetC: string;
begin
  GetC := '!';
end;
```

```
begin
end.
```

uString constant truncated to fit STRING[<number>] v03890

ŽQÆ —á fRf“fpfCf<fGf%o[f]fbfZ[f]fW

à-¾

•ŕŽš—ň'è",đ•i",É'ã"ü,μ,æ,π,Æ,μ,Ü,μ,½,ªC•i",ì'å,«,³,ª,»,ì•ŕŽš—ň'S'ì,đ"ü,ê,é,É,í\•ª,Å,í,
,è,Ü,¹,ňBfRf“fpfCf%o,í•i",ÉŽù,Ü,é,æ,π,ÉfŠfef%of<,ðØ,èŽì,Ä,½,±,Æ,ðEx,μ,Ä,ç,Ü,·B

—á03891

{ 2 ,Â, Ì•ŦŽš—ñ'è", ã•Ī", Ö'ã"ü, ³, ê, é, ãC, » , ê, ç, Ì•Ī", Í•ŦŽš—
ñ'S'Ì, ð"ü, ê, é, É, 'Z, , -, éBfRf"fpfCf%o, Í•ŦŽš—ñ, Ì--"ö, ðØ, èŽÌ, Ä, Ä'ã"ü, ðŽÀs, , é }

```
program Produce;  
{ $WARNINGS ON }
```

const

```
Title = 'Super Galactic Invaders with Turbo Gunpla Sticks';  
Subtitle = 'Copyright (c) 1968 by Frank Borland';
```

type

```
TitleString = string[25];  
SubtitleString = string[18];
```

var

```
ProgramTitle: TitleString;  
ProgramSubtitle: SubtitleString;
```

begin

```
ProgramTitle := Title;  
ProgramSubtitle := Subtitle;
```

end.

{ , ±, Ì-â'è, Ì%øðĈ^-@, Í 2 , Â, , èC, ±, Ì-á, Ä, Í-¼•û, ðŽÌ, , BÄ%o, Ì%øðĈ^-@, Ä, Í•ŦŽš—
ñ, ð•ÛŽ, , , é•Ī", ÌfTfCfY, ð'ã, <, , , éB2 "Ô-Û, Ì%øðĈ^-@, Ä, ÍéĈ¾, µ, ½•Ī"ftfCfY, É±, í, ¹, Ä•ŦŽš—
—ñ, ÌfTfCfY, ð-³, , , é }

```
program Solve;  
{ $WARNINGS ON }
```

const

```
Title = 'Super Galactic Invaders with Turbo Gunpla Sticks';  
Subtitle = 'Copyright (c) 1968';
```

type

```
TitleString = string[55];  
SubtitleString = string[18];
```

var

```
ProgramTitle: TitleString;  
ProgramSubtitle: SubtitleString;
```

begin

```
ProgramTitle := Title;  
ProgramSubtitle := Subtitle;
```

end.

ŽQÆ03892
'Z,č•¶Žš—ňĚ^

Constructors and destructors not allowed in OLE automation section v03893

á fRf“fpfCf<fGf%o[f fbfZ[fW

à-¾

fNf%ofXé¾, à automated •”, ì’t, ÖfRf“fXfgf%ofNf^, ©ffXfgf%ofNf^, ðÆë, Á, Ä“ü, ê, æ, x, Æ, µ, Û, µ, ½B

—á03894

```
{ OLE fI[fgf[fVf#f"•",]†,Å,ífNf%ofX,ífRf"fXfgf%ofNf^,âfffXfgf
%ofNf^,ðéCE¾,Å,«,È,çBŽŸ,ífR[fh,ífRf"fXfgf%ofNf^éCE¾,ÆfffXfgf
%ofNf^éCE¾,í,ç,ì,ç,à,±,ífGf%o[,ð¶¶¬,·,é }
```

program Produce;

type

Base = **class**

automated

constructor HardHatBob;

destructor DemolitionBob;

end;

constructor Base.HardHatBob;

begin

end;

destructor Base.DemolitionBob;

begin

end;

begin

end.

```
{ ŽŸ,ífR[fh,ÉŽ!,·,æ,¤,ÉCéCE¾,ð automated •",İŠO,Öo,·,ì,±,ífGf%o[,ì,½,¾ 1 ,Å,ì
%oðCE^-@,Å, ,é }
```

program Solve;

type

Base = **class**

constructor HardHatBob;

destructor DemolitionBob;

end;

constructor Base.HardHatBob;

begin

end;

destructor Base.DemolitionBob;

begin

end;

begin

end.

Dynamic methods and message handlers not allowed in OLE automation section v03895

á fRf“fpfCf<fGf%oo[]f[]fbfZ[]fW

à-¾

fNf%ofX[]éE¾, à automated •”, ì’t, Ö“@“[]f[]\fbfh, ©f[]fbfZ[]fWf[]\fbfh, ðEë, Á, Ä“ü, ê, æ, x, Æ, µ, Û, µ, ½[]B

—á03896

```
{ fNf%ofX,ì OLE f[fgf[fVf#f“•”,ì†,Å,í“@“lf[fVfbfh,âf[fbfZ[fWf[fA  
fbfh,ðééCE¾,Å,«,É,ç[B,μ,½,ª,Á,Ä[CŽŸ,ìfvf[fOf%of€É,É, ,é 2 ,Â,ìf[fVfbfhééCE¾,í,ç,ì,ç,àfGf  
%o[f,ð[f[f,.,é }
```

program Produce;

type

Base = **class**

automated

procedure DynaMethod; **dynamic**;

procedure MessageMethod(**var** Msg: Integer); **message** 151;

end;

procedure Base.DynaMethod;

begin

end;

procedure Base.MessageMethod;

begin

end;

begin

end.

```
{ fvf[fOf%of€,©,ç,±,ìfGf%o[f,ðŽæ,è[œ,•û-@,í,ç,,Â,©, ,é[B,Ü, ,[CŽŸ,ìR[fh,ÉŽ,.,æ,ª  
,É[C,±,ìfGf%o[f,ð[f[f,μ,½[éCE¾,ð automated •”,ìŠO,Ö[o,•û-@,ª, ,é[B, ,é,ç,í[Cf[fVfbfh,ì  
dynamic ‘@[«,Ú,½,í message ‘@[«,ð[f[œ,μ,Ä,à,æ,ç[B,±,é,ç,í‘@[«,ð[f[œ,.,é,Æ[CŠó-]  
,ì‘@[i,í“¾,ç,é,È,,É,é,ªfGf%o[f,à,È,,É,é }
```

program Solve;

type

Base = **class**

procedure DynaMethod; **dynamic**;

procedure MessageMethod(**var** Msg: Integer); **message** 151;

end;

procedure Base.DynaMethod;

begin

end;

procedure Base.MessageMethod;

begin

end;

begin

end.

Only register calling convention allowed in OLE automation section v3897

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

fNf%ofX[]é¾,ì **automated** •”,ì’t,É, ,éf[]f[]fbfh,É’í,μ,Ä[]C^á-@,ÈÄ,Ñ[]o,μ<K-
ñ,šw’è,μ,Ü,μ,½[]B

-á03898

{ Ą¼Ąĕ, Ĩđ—lăăCOLE fl[fġfġ[fVfġ“•”, Ā, Ā register ^ĚŠO, ĩĄĀ, Ĩġo, ġĀK-
ň, Ā, ·, x, ĀŽġ, ĩ, Ě, ģġBŽŸ, ĩfRġ[fh, Ā, Ā cdecl •ġ, ġfġfġ%ġ[ġ, ġĀN, ģ, ġ, Ā, ģ, ě }

program Produce;

type

Base = **class**
automated
 procedure Method; **cdecl**;
end;

procedure Base.Method; **cdecl**;

begin
end;

begin
end.

{ ġ, ģ, ĩfġfġ%ġ[ġ, ĩ%ġġĄĒ^-@, Ā 3, Ā, , ěġB1 , Ā, Ā **automated** •””à, ĀġěĄ¼, ġ, ½fġfġ
fbfh, ě’Ā, ġ, Ā, ĀĄĀ, Ĩġo, ġĀK-ň, ġŽw’è, ġ, Ě, ģ•ŭ-@, Ā, , ěġB2 ”Ō-Ū, Ā•ŭ-@, Ā register ĄĀ, Ĩġo, ġĀK-
ň, ¼, ġ, ġŽw’è, ·, ě•ŭ-@, Ā, , ěġB3 ”Ō-Ū, Ā•ŭ-@, ĩfġfġ%ġ[ġ, ġĀN, ģ
, ġ, ½ġěĄ¼, ġfġfġ[fġfġ“•”, ĩŠO, Ōġo, ·•ŭ-@, Ā, , ě }

program Solve;

type

Base = **class**
automated
 procedure Method; **register**;
 procedure Method2;
end;

procedure Base.Method; **register**;

begin
end;

procedure Base.Method2;

begin
end;

begin
end.

uDispid '<number>' already used by '<name>' v03899

ŽQÆ —á fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfNf%ofX,Å,·,Å,É•Ê,lf“fo[.Öš,,è“-,Ä,Ä, ,é **dispid** ,đŽg,“,x,Æ,μ,Ü,μ,½B

begin
end.

ŽQÆ03901

OLE f![]fgf[]fvf#"

fv[]pofefB

Redeclaration of property not allowed in OLE automation section v03902

á fRf"fpfCf<fGf%o[f fbfZ[fW

à-¾

automated •",)'+,Á,ívf fpfefB,ðÄÉ¾,Á,«,Ü,¹,ñB

—á03903

```
{ ŽŸ, ĩfR ĩfh, Ā, ĩC Ā ěĎĎ, Ę, æ, Ā, Ā Name ,đ Base ,Ā, ĩfvf%ŃfCfX ĩfg, Ę%ŃĀŽ<Ā«, ©, ċ Derived  
, Ā, ĩfpfufŠſbfN, Ę%ŃĀŽ<Ā«, Ő^Ú, μ, ½ ĀB" , ĩ'€ ĩ,đ Value ,ĘŽŽ, Ÿ, ½, ģGf%ŃĀ ĩ, Ę, Ę, Ā, ½ }
```

program Produce;

type

Base = **class**

V: Integer;

S: **string**;

protected

property Name: **string** **read** S **write** S;

property Value: Integer **read** V **write** V;

end;

Derived = **class**(Base)

public

property Name; (* ĀĀ ěĎĎ, Ę, æ, Ā, Ā Name ,đfpfufŠſbfN, Ę%ŃĀŽ<Ā«, Ő^Ú, · *)

automated

property Value;

end;

begin

end.

```
{ fvf ĩfpfefB, ĩ%ŃĀŽ<Ā«,đ automated ·", Ő'P ĩf, Ę, ĩ' ĩX, Ā, «, Ę, ċ ĀB, μ, ½, ģ, Ā, Ā ĀCŠî- {fNf  
%ŃfX, ĩfvf ĩfpfefB,đ automated ·", ĀĀ ěĎĎ, μ, Ę, ċ, ĩ, ģ, ±, ĩ-â'è, ĩ%ŃĀĎĎĎ^ -@, Ā, , Ę }
```

program Solve;

type

Base = **class**

V: Integer;

S: **string**;

protected

property Name: **string** **read** S **write** S;

property Value: Integer **read** V **write** V;

end;

Derived = **class**(Base)

public

property Name; (* ĀĀ ěĎĎ, Ę, æ, Ā, Ā Name ,đfpfufŠſbfN, Ę%ŃĀŽ<Ā«, Ő^Ú, · *)

property Value;

automated

end;

begin

end.

uUndeclared identifier: '<name>' v03904

—á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

Žw'è,³,ê,½Ž-•ÊŽq,³Œ©,Â,©,è,Ü,¹,ň,Â,μ,½B,à,Á,Æ,à[]!,ç,ê,éŒ'^ö,í[]éŒ¾,Ü,½,ÍŽg—
p,ìŽž“_.,Â,ìfXfyf<,ìŒè,è,Â,·B**uses** []ß,Âffjfbfg,ďŽw'è,μ,È,©,Á,½%oÂ“\[]«,à, ,è,Ü,·B

-á03905

{ ŽŸ, ĭfR□[fh, Å, Í Counter ,Æ, μ, Ä□éĈ¼, μ, ½• ĭ□", ð Count
,Æ, μ, ÄŽg, Á, ½□B□éĈ¼, ð• ĭ□X, ·, é, ©• ĭ□", ðŽg, Á, ½□ê□Š, É• ĭ□X, ð%oÁ, ĭ, ê, ĭ%oðĈ^, ·, é }

```
program Produce;  
var  
  Counter: Integer;  
begin  
  Count := 0;  
  Inc(Count);  
  Writeln(Count);  
end.
```

{ , ±, ĭ—á, Å, Í□éĈ¼, ð• ĭ□X, μ, ½□B, »., ĭ•û, ¢ŽèŠÔ, ¢, ©, ©, ç, È, ç }

```
program Solve;  
var  
  Count: Integer;  
begin  
  Count := 0;  
  Inc(Count);  
  Writeln(Count);  
end.
```

uClass type required v03906

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

fRf“fpfCf%o,í^È%oº,ìè¶,ÉfNf%ofXCE^,ð•K—v,Æ,µ,Ü,·B

- fNf%ofXCE^,ìã^ÊfifufWfFfNfg,Æ,µ,Ä
- **try..except** •¶,ì **on** ¶ß,ì†,Ä
- **raise** •¶,ì'æ 1 ^ø¶,Æ,µ,Ä
- forward ¶éCE¾fNf%ofXCE^,ìÅ¶I“l,ÈCE^,Æ,µ,Ä

-á03907

```
program Produce;
```

```
begin
```

```
    raise 'This would work in C++, but does not in Delphi';
```

```
end.
```

```
program Solve;
```

```
uses SysUtils;
```

```
begin
```

```
    raise Exception.Create('There is a simple workaround, however');
```

```
end.
```


u'<clause>' clause not allowed in OLE automation section v03908

á fRf"fpfCf&fGf%o[fbfZfW

à-¾

OLE_f[fqf[fVf+f"•",Å,Í indexCstoredCdefaultCnodefault ,ìŠeŽw—ß,ðŽg,ı,Ü,¹,ňB

—á03909

{ automated fvf[]pfefB,É,Í NODEFAULT []ß,ð'g,Ý[]ž,ß,È,ç }

program Produce;

type

Base = **class**

V: Integer;

procedure SetV(X: Integer);

function GetV: Integer;

automated

property Value: Integer **read** GetV **write** SetV **nodefault**;

end;

procedure Base.SetV(X: Integer);

begin

V := X;

end;

function Base.GetV: Integer;

begin

GetV := V;

end;

begin

end.

{ fGf%o[][,ð<N,±,μ,½[]ß,ð[]í[]œ,·,é,¾,~,ÅfGf%o[][,Í,È,,È,é[]B, ,é,ç,í[]C,»,)lfvf[]pfefB,ð
automated •",©,çŠO,É[]o,μ,Ã,àfGf%o[][,Í,È,,È,é }

program Solve;

type

Base = **class**

V: Integer;

procedure SetV(X: Integer);

function GetV: Integer;

automated

property Value: Integer **read** GetV **write** SetV;

end;

procedure Base.SetV(X: Integer);

begin

V := X;

end;

function Base.GetV: Integer;

begin

GetV := V;

end;

begin

end.

□uDispId clause only allowed in OLE automation section□v03910

—á

□à^{-3/4}

automated •”,É“ü,Á,Ä,ç,È,çfvf□fpfefB,É dispId ,đŽw’è,μ,Û,μ,½□B

—á03911

{ ,±,lfvf[]fO%fof€,Í OLE f![]fgf[][]fVf#f“fjfufWfFfNfg,Ì dispid ,ð[]Ý'è,μ,æ,κ,Æ,μ,Ä,ç
,é,ª[]C,»,)lfvf[]pfefB,Í automated •”,Å[]éÇ¾4,³,ê,Ä,ç,È,ç }

program Produce;

type

Base = **class**

V: Integer;

procedure SetV(X: Integer);

function GetV: Integer;

property Value: Integer **read** GetV **write** SetV **dispid** 151;

end;

procedure Base.SetV(X: Integer);

begin

V := X;

end;

function Base.GetV: Integer;

begin

GetV := V;

end;

begin

end.

{ fGf%oo[],ð%oðÇ^,.,é,É,Í[]Cfvf[]pfefB[]éÇ¾4,©,ç dispid []ß,ð[]í[]œ,.;é,©[]Cfvf[]pfefB[]éÇ¾4,ð
automated •”,)'+,Ö“ü,ê,é }

program Solve;

type

Base = **class**

V: Integer;

procedure SetV(X: Integer);

function GetV: Integer;

automated

property Value: Integer **read** GetV **write** SetV **dispid** 151;

end;

procedure Base.SetV(X: Integer);

begin

V := X;

end;

function Base.GetV: Integer;

begin

GetV := V;

end;

begin

end.

uType '<name>' must be a class to have OLE automation v03912

á fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

Ē,çfXf^fCf<,lfufWfFfNfg,É,Í automated •”,ðŽw’è,Å,«,Ü,¹,ñB

—á03913

```
{ ĆĀ,ĉfXf^fCf<,lfufjWfFfNfg,É,Í automated •”,đŽw’è,Ā,«,È,ĉ,ì,Ā□C,±,ì—á,ÍfGf%□[,É,È,é }
```

program Produce;

type

```
OldObject = object  
  automated  
end;
```

begin

end.

```
{ ĆĀ^,đ object ,©,ĉ class ,É•ĭ□X,·,é,© automated •”,đ□í□œ,·,ê,ÍfGf%□[,Í,È,,È,é }
```

program Solve;

type

```
NewClass = class  
  automated  
end;
```

begin

end.

uType '<name>' must be a class to have a PUBLISHED section v03914

á fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

Ē,çfXf^fCf<,lfufWfFfNfg,É,Í **published** •”,ðŽw’è,Å,«,Ü,¹,ñB

—á03915

```
{ ĄĀ,ĉfXf^fCf<,lfufjWfFfNfg,É,Í published •",đŽw'è,Ā,«,È,ĉ,ì,Ā□C,±,ì—á,ÍfGf%□[,É,È,é }
```

```
{ $TYPEINFO ON }
```

```
program Produce;
```

```
type
```

```
  OldObject = object
```

```
    published
```

```
  end;
```

```
begin
```

```
end.
```

```
{ ĄĒ^,đ object ,©,ĉ class ,É•ĭ□X,·,é,© published •",đ□í□œ,·,ê,ÍfGf%□[,Í,È,,È,é }
```

```
{ $TYPEINFO ON }
```

```
program Solve;
```

```
type
```

```
  NewClass = class
```

```
    published
```

```
  end;
```

```
begin
```

```
end.
```

uRedeclaration of '<name>' hides a member in the base class v03916

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

Šî- {fNf%ofX, ì 1 ,Â,ÉŠÜ,Ü,ê,Ä,ç,é•ï” ,Æ“˘ ,¶-¼‘O,ÅfNf%ofX“à,Éfvf[]fpfefB,ð[]ì[]¬,μ,Ü,μ,½[]B
,½,Æ,ì,î[]C[]V,μ,Šî- {fNf%ofXŠK‘w,ð“±“ü,μ[]C,» ,ê,ÉCE»[]YŽg,Á,Ä,ç,éfvf[]fpfefB-¼,Æ“˘ ,¶-
¼‘O,ìf[]f“fo[][•ï” ,â“ü,Á,Ä,ç,é[]ê[]‡,È,Ç,³CE´^ö,Æ[]l,ì,ç,ê,Ü,·[]B

—á03917

```
{ Derived.v ,Í Base.v ,ðf![]fo[]f%ofCfh,μ[]C,μ,½,ª,Á,Ä%oB,·[]BCE^fLfffXfg,ð,μ,È,¯,ê,î Derived  
CE^,ì•î[]",©,ç Base.v ,ÖfAfNfZfX,Å,«,È,ç }
```

```
{ $WARNINGS ON }
```

```
program Produce;
```

```
type
```

```
Base = class
```

```
  V: Integer;
```

```
end;
```

```
Derived = class(Base)
```

```
  Ch: Char;
```

```
  property V: Char read Ch write Ch;
```

```
end;
```

```
begin
```

```
end.
```

```
{ "h[]!fNf%ofX"à,ìfvf[]pfefB-¼,ð•î[]X,·,é,¾,¯,ÅfGf%o[][,í,È,,È,é }
```

```
{ $WARNINGS ON }
```

```
program Solve;
```

```
type
```

```
Base = class
```

```
  V: Integer;
```

```
end;
```

```
Derived = class(Base)
```

```
  Ch: Char;
```

```
  property ChV: Char read Ch write Ch;
```

```
end;
```

```
begin
```

```
end.
```

Overriding automated virtual method '<name>' cannot specify a dispid

[fRf"fpfCf<fGf%o\[fbfZ\[fW](#)

à-¾

"hNf%fX"à,ÅfI[f%ofCfh,·,é,·,×,Ä,ìŽè'±,«,ÍCÉ³,ì%¼'z **automated** Žè'±,«é¼—
p,Éé¼,³,è,½ **dispid** ,đŽg,í,È,·,è,î,È,è,Ü,¹,ñB

—á03919

{ Derived "à,É, ,é Base.Automatic ,lf[[fo[[f%ofCfh[éCE³/₄ (Derived.Automatic) ,aŽè'±—
p,É•Ê,Ì dispid ,ð'è<' ,μ,æ,α,Æ,μ,Ä,ϕ,é,ì,ªCEë,è,Å, ,é }

program Produce;

type

```
Base = class
automated
  procedure Automatic; virtual; dispid 151;
end;
```

```
Derived = class(Base)
automated
  procedure Automatic; override; dispid 152;
end;
```

```
procedure Base.Automatic;
begin
end;
```

```
procedure Derived.Automatic;
begin
end;
```

```
begin
end.
```

{ fGf%o[[,ð<N,±,μ,½ dispid [[β,ð[[í[[œ,·,ê,î[[C,±,lfvf[[fOf%of€ ,ðfRf"fpfCf<,Å,« ,é }

program Solve;

type

```
Base = class
automated
  procedure Automatic; virtual; dispid 151;
end;
```

```
Derived = class(Base)
automated
  procedure Automatic; override;
end;
```

```
procedure Base.Automatic;
begin
end;
```

```
procedure Derived.Automatic;
begin
end;
```

begin
end.

Unpublished Real property '<name>' must be Single, Double or Extended

á Rf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

Real CE^,ìfvf[]pfefB,ÍpfufŠbfVf...,ÉÝ'è,Å,«,Ü,¹,ñ[]BpfufŠbfVf...

,ÉÝ'è,Å,«,é•,“@[]-[]”“_fvf[]pfefB,Í Single[]CDouble[]CExtended ,ì,ç,.,ê,©,Å,·B

-á03921

{ ŽŸ,lfvf[]fOf%of€,Á,í[]CfpfufŠfbjVf...,É[]Ý'è,μ,½ Real fvf[]pfefB,ð[]í[]œ,·,é,©[]CfpfufŠfbjVf...
,É[]Ý'è,μ,È,ç" ,Ö^Ú" @ ,·,é,©[]C,Ü,½,ÍŽó,"ü,ê%oÂ"\,ÈCE^,É•í[]X,μ,È,¯,ê,Î,È,ç,È,ç }

```
program Produce;  
type  
  Base = class  
    R: Real;  
  published  
    property RVal: Real read R write R;  
  end;  
end.
```

{ ,±,ì%oðCE^-@,Á,lfvf[]pfefB,ðŽÀ[]"CE^,É•í[]X,μ,½[]B,±
,ê,É,æ,Á,ÄŽÀ[]sŽž,ÌCE^[]î•ň,ªŽÀ[]Ú,É[]¶[]-,³,ê,é }

```
program Produce;  
type  
  Base = class  
    R: Single;  
  published  
    property RVal: Single read R write R;  
  end;  
end.
```

Size of published set '<name>' is >32 bits v03922

á fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

published •”,É,Í 32 frfbfg,đ’,,é[W±CE^,đ“ü,ê,ç,ê,Ü,¹,ñ[B[W±CE^,}TfCfY (fofCfg’P^Ê) ,Í
High(setname) div 8 - Low(setname) div 8 + 1 ,ÅCEvŽZ,Å,«,Ü,·B

—á03923

```
{$TYPEINFO ON}
```

```
program Produce;
```

```
type
```

```
  CharSet = set of Char;
```

```
  NamePlate = class
```

```
    Characters: CharSet;
```

```
  published
```

```
    property TooBig: CharSet read Characters write Characters ;
```

```
  end;
```

```
begin
```

```
end.
```

```
{$TYPEINFO ON}
```

```
program Solve;
```

```
type
```

```
  CharSet = set of 'A'..'Z';
```

```
  NamePlate = class
```

```
    Characters: CharSet;
```

```
  published
```

```
    property TooBig: CharSet read Characters write Characters ;
```

```
  end;
```

```
begin
```

```
end.
```

Unpublished property '<name>' cannot be of type <type> v03924

—á fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

fpfufŠfbfVf...fvf]fpfefB,Í±~CE^CSingleCDoubleCExtendedCCompC•¶Žš—ñCE^C32
frfbfg,ÉŽù,Ü,éW±CE^Cf]fbfhf]fCf“f^CE^,ì,ç
,,è,©,Á,È,~,é,í,È,è,Ü,¹,ñB,»,é^ÈŠO,ìfvf]fpfefBCE^,ª published •”,É, ,Á,½ê±CfRf“fpfCf
%o,í published ‘®«,ðíœ,μ,Ü,·B

—á03925

```
{ "z—ñ,ÍfpjfufŠfbjVf...,ÉŸ'è,Å,«,È,čff[f^Ĉ^,È,Ì,ÅfGf%o[.,ā<N,«,é }
```

```
{ $TYPEINFO ON }
```

```
program Produce;
```

```
type
```

```
  TitleArr = array[0..24] of Char;
```

```
  NamePlate = class
```

```
    TitleStr: TitleArr;
```

```
  published
```

```
    property Title: TitleArr read TitleStr write TitleStr;
```

```
  end;
```

```
begin
```

```
end.
```

```
{ fvf[fpfefB[éĈ¾,đ published •",ÌŠO,Öo,¹,ÍfGf%o[.,đ%oñ"đ,Å,«,éB, ,é,č  
,Í[Cfv[fpfefB,ìĈ^,đŽŸ,ÍR[fh,ì,æ,ı,ÉCŽÀŮ,ÉfpjfufŠfbjVf...
```

```
,ÉŸ'è,Å,«,éĈ^,É•í[X,μ,Ä,à,æ,č }
```

```
{ $TYPEINFO ON }
```

```
program Solve;
```

```
type
```

```
  TitleArr = Integer;
```

```
  NamePlate = class
```

```
    TitleStr: TitleArr;
```

```
  published
```

```
    property Title: TitleArr read TitleStr write TitleStr;
```

```
  end;
```

```
begin
```

```
end.
```

Thread local variables cannot be local to a function v03926

á Rf“fpfCf<fGf%o[fbfZ[fW

à-¾

fXfÆfbfhf[fjf<•ï”,ÍfOf[fof<fXfR[fv,ÅéÆ¾,µ,È,¯,ê,Î,È,è,Ü,¹,ñB

—á03927

{ fXfCEfbfh•ï□",íŽè'±,«,É'í,μ,Äf□□[ffj<,É,Í□éCE¾,Å,«,È,ç }

program Produce;

procedure NoTLS;

threadvar

X: Integer;

begin

end;

begin

end.

{ ,±,lfGf%□□[É,ÍŠÈ'P,È%ñ"ð•û-@,ª 2 ,Â, ,é□B1 ,Â,í threadvar

fZfNfVf†f",ðf□□[ffj<fXfR□[fv,Ö^Ú" @,·,é•û-@,Å, ,é□B,à,ª 1 ,Â,Í□CŽè'±,«"à,ì threadvar ,ð'É□í,ì

var fZfNfVf†f",É•í□X,·,é•û-@,Å, ,é□BfRf"fpfCf%□

,lfqf"fg,ªflf",ì□ê□†,É,Í□C□éCE¾,μ,Ä,àŽg,í,ê,È,ç localX ,É,Â,ç,Ä,lfqf"fg,ª•\Ž!,ª,é,é }

program Solve;

threadvar

X: Integer;

procedure YesTLS;

var

LocalX: Integer;

begin

end;

begin

end.

—á03929

{ ŠÖ" Sum ,ì-β,è'ICE^,Žw'è,³,ê,Ä,ç,È,ç }

program Produce;

function Sum(A: **array of** Integer);

var

I: Integer;

begin

Result := 0;

for I := 0 **to** High(A) **do**

Result := Result + A[I];

end;

begin

end.

{ CE<%oÊ,ICE^,δ•K,Žw'è,·,é,³/₄,-,Ä,æ,ç }

program Solve;

function Sum(A: **array of** Integer): Integer;

var

I: Integer;

begin

Result := 0;

for I := 0 **to** High(A) **do**

Result := Result + A[I];

end;

begin

end.

uThread local variables cannot be ABSOLUTE v03930

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

fXfÆfbfhf[fjf<•i”,í•Ê,ì•i”,ǒŽQÆ,Å,«,.,Câ’íf,fŠfAfhfÆfX,àŽQÆ,Å,«,Ü,¹,ňB

-á03931

{ absolute Žw—β,í threadvar □éCE¾fZfNfVf#f“ ,Å,ÍŽg,ı,È,ç }

program Produce;

threadvar

SecretNum: Integer **absolute** \$151;

begin

end.

{ ,±,)Ží,ı-â'è,É,ÍŠÈ'P,È%øðCE^-@,ª 2 ,Å, ,é□B1 ,Å,Í threadvar fZfNfVf#f“ ,©,ç absolute Žw—
β,đ'P,É□í□œ, ,é•û-@,Å, ,é□B,à,æ 1 ,Å,í□â'í•İ□”,đ'È□í,ı var □éCE¾fZfNfVf#f“ ,Ö^Ú“®, ,é•û-
@,Å, ,é }

program Solve;

threadvar

SecretNum: Integer;

var

sNum: Integer **absolute** \$151;

begin

end.

EXPORTS allowed only at global scope v03932

á Rf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

f[]fXfvf[]fOf%of€,ì't,ÉfXfR[]fv,ªfOf[][]fof<,Å,È,ç exports []ß,ª, ,è,Ü,µ,½[]B

—á03933

```
{ EXPORTS ß,ÍfOf[fof<fXfR[fv,Á,¾,~Žg,!,é }
```

```
program Produce;
```

```
procedure ExportedProcedure;
```

```
exports ExportedProcedure;
```

```
begin
```

```
end;
```

```
begin
```

```
end.
```

```
{ EXPORTS ß,đ•K,„fOf[fof<fXfR[fv,É,μCß,ì't,ÉŽw'è,μ,½,;,x,Ä,ìŽè'±,«,ìCEă,É'u,~,î  
%ođCE^,.,éB^ê"Ê"l,Ë<K'¥,Æ,μ,ÄCEEXPORTS ß,Íf[fXftf@fCf<,ì%Šú%»fR[fh,ì¼'O,É'u,-  
,ì,âP,ì•û-@,Á, ,é }
```

```
program Solve;
```

```
procedure ExportedProcedure;
```

```
begin
```

```
end;
```

```
exports ExportedProcedure;
```

```
begin
```

```
end.
```

Constants cannot be used as open array arguments v03934

á fRf"fpfCf<fGf%o[f]fbfZ[fW

à-¾

f[fv"z=ñfpf%o[f^,ÍŽÀÛ,ì"z-ñ•ï",Ü,½,Í)¬-ï,Ý"z-ñ,Æ^è,ÉŽw'è,·,é,©Cfpf
%of[f^,ì-v'fCE^,ì'P^è•ï",Æ^è,ÉŽw'è,μ,È,¯,ê,Î,È,è,Û,¹,ñB

-á03935

```
{ ŽŸ,lfR[fh,ÅfGf%o[ ,á<N,«,éCE´^ö,íC"z-ñ,á"n,³,ê,é,x,«Žè´±,«,É•¶Žš-ñfŠfef  
%of<,á'ñ<Ÿ,³,ê,é,©,ç,Å, ,éB'è",©,ç,í"z-ñ,ð^Å-Ù,Éì[-,Å,«,É,ç }
```

program Produce;

```
procedure TakesArray(S: array of string);  
begin  
end;
```

```
begin  
    TakesArray('Hello Error');  
end.
```

```
{ ,±,ì%øCE^-@,Å,í"z-ñ,á-¾Ž! "l,Éì[-,³,ê,é,ì,ÅfGf%o[ ,ð%ñ"ð,Å,«,é }
```

program Solve;

```
procedure TakesArray(S: array of string);  
begin  
end;
```

```
begin  
    TakesArray(['Hello Error']);  
end.
```

uSlice standard function only allowed as open array argument

á fRf"fpfCf<fGf%o[fbfZ[fW

à-¾

Å'èTfCfY,ì"z-ñ,Ö"z-ñfXf%ofCfX,ð"n,»,α,Æ,μ,Ü,μ,½B"z-ñfXf%ofCfX,Í[fvf""z-ñfpf%of[f^,É,¾,^-',ê,Ü,·B

—á03937

{ ŽŸ, ĺfR□[fh, Å, Í TakesArray , æĈĀ' èfTfCfY, ì"z—ñ, ðŠú'Ò, μ, Ä, ç, é, ½, ß, ÉfGf%□[, æ□¶□—, ³, ê, é }

program Produce;

type

IntegerArray = **array**[1..10] **of** Integer;

var

SliceMe: **array**[1..200] **of** Integer;

procedure TakesArray(X: IntegerArray);

begin

end;

begin

TakesArray(Slice(SliceMe, 5));

end.

{ ŽŸ, ĺfR□[fh, Å, Í TakesArray , æfpf%□f□□[f^ ,Æ, μ, Äf□[fvf""z—ñ, ð, Æ, é, ì, ÅfGf %□[, Í□¶□—, ³, ê, É, ç }

program Solve;

type

IntegerArray = **array**[1..10] **of** Integer;

var

SliceMe: **array**[1..200] **of** Integer;

procedure TakesArray(X: **array of** Integer);

begin

end;

begin

TakesArray(Slice(SliceMe, 5));

end.

Cannot initialize thread local variables v03938

á Rf“fpfCf<fGf%o[fbfZ[fW

à-¾

XfÆfbfhf[fjf<•i”,í%Šú%»„Å,«,Ü,¹,ñB

-á03939

{ ŽŸ, ì tls , ì é Ą ¼, Ą Ą % Š ú % » , í, Ą, «, Ę, ċ }

program Produce;

threadvar

tls: Integer = 151;

begin

end.

{ fXfĄfbfhfĄĄ[fjĄ<<L% ^ æ, ð'Ęí, ĺ<L% ^ æ, Ą, μ, Ą Ą Ą ¼, μ, Ą, ", Ą, Ą Ą Ą [fXftĄ@fĄĄ<, Ą % Š ú % » • ", Ą Ą % Š ú % » , Ą, «, é }

program Solve;

threadvar

tls: Integer;

begin

tls := 151;

end.

Cannot initialize local variables v03940

á fR“fpfCf<fGf%o[fbfZ[fW

à-¾

f<f,ÁŠú»İ,Ý•İ”,ÍŽg,ı,Ü,¹,ñB

-á03941

{ Show Žè'±,«"à,ì i ,ìéÉ¾,Æ□%Šú%»,"í^á-@,Å, ,é }

program Produce;

var

J: Integer;

procedure Show;

var

I: Integer = 151;

begin

end;

begin

end.

{ fvf□fOj%œ,lfXf^fCf<,đŽg,Á,Ä,·,×,Ä,ì•ï□",É'l,đ□Y'è,Å,«,é }

program Solve;

var

J: Integer;

procedure Show;

var

I: Integer;

begin

I := 151;

end;

begin

J := 0;

end.

Cannot initialize multiple variables v03942

á fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

•i”i%Šú%»„í•i”„đĈÂ•Ê„ÉéĈ¾„μ„½„Æ„«„É„¾„žÀs„Å„«„Ü„·B

-á03943

{ ^ê"x,É•i□",)•i□",)□éĈ¼,Æ□%Šú%»},Á,Á,«},È,ç }

program Produce;

var

I, J: Integer = 151, 152;

begin

end.

{ 'P,ÉĈĀX,)•i□",đ'P"Æ,Á□éĈ¼,·,ê,î□%Šú%»},Á,«},é }

program Solve;

var

I: Integer = 151;

J: Integer = 152;

begin

end.

Constant object cannot be passed as var parameter v03944

á fRf“fpfCf<fGf%o[f fbfZ[fW

à-¾

•í“fpf%of[f^,ÍCEÄ,Ño,³,ê,½Žè’±,«,Ü,½,ÍŠÖ”,É,æ,Á,Ä•ïX,³,ê,é,ì,ð’O’ñ,Æ,μ,Ä,ç
,é,ì,ÅC’è”fIfufWfFfNfg,í“n,¹,Ü,¹,ñBCEÄ,Ño,³,ê,½ŠÖ”,É,»,ìff[f^‘ç,ð•ïX,³,¹,½,-
,È,~,ê,îC,©,í,è,É’è”fpf%of[f^,Žg,!,Ü,·B

—á03945

```
{ ŽŸ,lfR[fh,Å,ÍŠÖ",É•İ"fpf%of[f^,a, ,é,a[C,»ê,É'è",ð"n,μ,Ä,ç,é }
```

```
program Produce;
```

```
{ $AppType Console }
```

```
function Max(var A: array of Integer): Integer;
```

```
var
```

```
  I: Integer;
```

```
begin
```

```
  Result := Low(Integer);
```

```
  for I := 0 to High(A) do
```

```
    if Result < A[I] then
```

```
      Result := A[I];
```

```
end;
```

```
begin
```

```
  Writeln( Max([1,2,3]) ); { <-- ,±,±,ÅfGf%of[f]fbfZ[fW }
```

```
end.
```

```
{ fpf%of[f^,ð'è"fpf%of[f^,Æ,μ,Ä,ÉÉ¾,·,ê,Î (fpf%of[f^,É•İX,ð%Á,!,é^Ó),Í,È,ç,ì,Å)  
%øðÉ^,·,éB'è",ð"n,³,È,ç,æ,α,ÉÉÄ,Ño,μ,ð•İX,·,é•û-@,à, ,é }
```

```
program Solve;
```

```
{ $AppType Console }
```

```
function Max(const A: array of Integer): Integer;
```

```
var
```

```
  I: Integer;
```

```
begin
```

```
  Result := Low(Integer);
```

```
  for I := 0 to High(A) do
```

```
    if Result < A[I] then
```

```
      Result := A[I];
```

```
end;
```

```
begin
```

```
  Writeln( Max([1,2,3]) );
```

```
end.
```

Invalid function result type v03946

á fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

ftf@fCf<E^,íŠÖ”,ìE<%oÊ,ìE^,Æ,μ,Ä,íŽg,|,Ü,¹,ñB

—á03947

{ ŠÖ", ©, ç, ìftf@fCf<Æ^, ð•Ô, 1, È, ç }

program Produce;

function OpenFile (Name: string) : file;

begin

end;

begin

end.

{ ftf@fCf<Æ^, í•ï"fpf%of[]f^, Æ, μ, Ä•Ô, 1, éBftf@fCf<, ð"®"l, ÉŠ,, è"-, ÄC, »), ìftf@fCf<, Ö, ìf|
fCf"f^, ð•Ô, •û-@, à, , é }

program Solve;

procedure OpenFile (Name: string; var F: file);

begin

end;

begin

end.

Procedure cannot have a result type

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

Žè'±,«,đé¾,μ,Û,μ,½,ªC,» ,ê,É<%Ê,ìÉ^,đŽw'è,μ,Û,μ,½B-{"-,ÍŠÖ",đé¾, ,é^Ó}
,¾,Á,½,©C, ,é,ç,í<%Ê,ìÉ^,đíœ,μ,È, ,ê,î,È,è,Û,¹,ñB

—á03949

{ ,±,±,Á-{"-,Í DotProcut ,đŠÖ",É,·,é^Ó},¾,Á,½,ªCCEë,Á,½fL[f][fh,đŽg,Á,½ }

program Produce;

procedure DotProduct(const A,B: array of Double): Double;

var

I: Integer;

begin

Result := 0.0;

for I := 0 to High(A) do

Result := Result + A[I]*B[I];

end;

const

C: array[1..3] of Double = (1,2,3);

begin

Writeln(DotProduct(C,C));

end.

{ ŠÖ",đé¾,·,é,Æ,«,Í•K,CE<%oÉ,ìCE^,đé¾,μCŽè'±
,«,đé¾,·,é,Æ,«,ÍCE<%oÉ,ìCE^,đé¾,μ,É,¢ }

program Solve;

function DotProduct(const A,B: array of Double): Double;

var

I: Integer;

begin

Result := 0.0;

for I := 0 to High(A) do

Result := Result + A[I]*B[I];

end;

const

C: array[1..3] of Double = (1,2,3);

begin

Writeln(DotProduct(C,C));

end.

uText after final 'END.' - ignored by compiler v03950

á Rf“fpfCf<fGf%o[fbfZ[fW

à-¾

, ±, ìĀx, ívf fOf%of€, ì~_— ä, ìl, í, è, ð\ -., ., é ÅĀĒã, ì **end**, ÆfsfŠfjfh, ìĀě, ÉĀC, Ü, ¾f\ [fXfefLfXfg,^a, , éĀĒ# , É•\Ž!,³, ê, Ü, ·Ābegin..end , ìfXfg,^a-μ, , μ, Ā, ç, é (, Ç, ±, ©, É—]•^a, Ē end ,^a, , é) , ÆŽv, í, è, Ü, ·ĀB, » , ì\ [fXfefLfXfg, ðfRf“fpfCf%o, É-³Ž<,³,¹, é^Ó}, Ā, , Ā, ½, ©, Ç, x , ©, ð², x , Ā, , ¾, ³, çĀBŽĀÜ, É, í, » , ìfefLfXfg,^a ñí, ÉĀd—v, ©, à, μ, ê, Ü,¹, ñĀB

-á03951

```
program Produce;  
{ $WARNINGS ON }
```

```
begin  
end.
```

```
, ±, ±, ÉfēlfXfg,ª, ,é,Æ 16 frfbfg,ì Delphi ,Å,í-³Ž<,³,ê□C32 frfbfg,ì Delphi ,Å,íCEx□□,ª•\  
Ž|,³,ê,é
```

```
//-----
```

```
program Solve;
```

```
begin  
end.
```

```
{ end. ,ìCã,Å,àfRf□□“fgfAfefg,μ,Ä, ,ê,îCEx□□,í•\Ž|,³,ê,È,¢ }
```

Constant expression expected v03952

á fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à^{-3/4}

fRf“fpfCf%o,í,±,±,Á'è"Ž@,đŠú'Ò,μ,Ü,μ,½,ªCÆ©,Â,©,Á,½Ž@,í'è"Ž@,Á,Í, ,è,Ü,¹,ň,Á,μ,½
B

—á03953

```
{ Pos ,ìĀÄ,Ñ□o,μ,í,»,"ì^ø□",á'è□",Å, ,Á,Ä,àfRf"fpfCf%o,É'î,·,é'è□"Ž® ,Á,í,È,□ĀĒ  
'¥"l,É,íRf"fpfCf<Žž,É•]‰i,³,ê,é }
```

```
program Produce;
```

```
const
```

```
    Message = 'Hello World!';
```

```
    WPosition = Pos('W', Message);
```

```
begin
```

```
end.
```

```
{ ,μ,½,á,Á,Ä,±,ì—á,Á,í□CWPosition ,ì³,μ,ϕ'l,đŠJ"ŽÒŽ©□g,áĀEvŽZ,μ,È,¯,ê,î,È,ç,È,ϕ }
```

```
program Solve;
```

```
const
```

```
    Message = 'Hello World!';
```

```
    WPosition = 7;
```

```
begin
```

```
end.
```

uConstant expression violates subrange boundsv03954

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

,±,lfGf%o[fbfZ[fW,íC'è“,”í^íŠO,Å, ,é,ÆfRf“fpfCf%o,»'f,Å,«,½ê‡,É•\
Ž,³,ê,Ü,·B,½,Æ,¡,îC•”•”í^íCE^,ì•ï“,Ö”í^íŠO,ì'è“,ð'ã“ü,µ,½ê‡,È,Ç,Å,·B

—á03955

program Produce;

var

Digit: 1..9;

begin

Digit := 0; { []u"í^íŠO,)è"Ž®,Á,·[]v,̀f[]fbfZ[][fW,ª•\Ž|,³,ê,é }

end.

program Solve;

var

Digit: 0..9;

begin

Digit := 0;

end.

uDuplicate tag valuev03956

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

,±,lfGf%o[fbfZ[fW,ÍfofŠfAf“fgfCfR[fh,ìéE¾,ìt,Å'è”,ð 2 ,Â^ÈãŽg,Á,½,Æ,«,É•\
Ž,¾,è,Ü,·B

-á03957

program Produce;

type

VariantRecord = **record**

case Integer **of**

0: (IntField: Integer);

0: (RealField: Real); { <-- ,±,±,ÅfGf%o[f[]bfZ[]fW }

end;

begin

end.

program Solve;

type

VariantRecord = **record**

case Integer **of**

0: (IntField: Integer);

1: (RealField: Real);

end;

begin

end.

Unicode Sets may have at most 256 elements v03958

á Rf“fpfCf<fGf%o[f fbfZ[fW

à-¾

,±,lfGf%o[f fbfZ[fW,Í—v’f,ì”,^a 256 Ą,đ’’,i,éW±ĉ,đéĉ¼,μ,æ,ϣ,Æ,μ,½,Æ,«,É•\
Ž,³,ê,Û,·B³Šm,Éĉ¼,i,îCŠî- {ĉ^,ìăĉÀ,Æ%°ĉÀ,ì#~’i,í 0` 255
,i”í^í,Ă,È,̄,ê,î,È,è,Û,¹,ňB

—á03959

{ ŽŸ,lfR[fh,Á,Í BigSet ,ÉŽÀÛ,É,Í 256 ĄĀ,ì—v'f,μ,©,È,ç,ªC,» ,ê,Ā,à^á-@,Ā, ,é }

program Produce;

type

BigSet = **set of** 1..256; { <-- ,±,±,ĀfGf%o[f]fbfZ[fW,ª\Ž|,³,ê,é }

begin

end.

{ ĄĀĀ,Ā%ªĀ,ª 0`255 ,ì"í'í,É,È,é,æ,ª,É,·,é•K—v,ª, ,é }

program Solve;

type

BigSet = **set of** 0..255;

begin

end.

u<Token1> expected but <token2> foundv03960

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

,±,lfGf%o[fbfZ[fW,í\•¶fGf%o[,Å•\Ž;³,ê,Ü,·Bf\ [fX“à,ÉfXfyf<,l)Eë,è,ª, ,é,©C
%o½,©,ªE‡, ¯,Ä,ç,Ü,·B[s“ª,ÅfGf%o[,ª<N,«,Ä,ç,é,Æ,«,íC’O,ì[s,ÉŽÀÛ,lfGf%o[,ª, ,éê‡,ª
[,È,, ,è,Ü,¹,ñB

-á03961

```
{ fRf"fpfCf%o, í@ "CE ^, ìCEă, É•ï" "éCE¾, ð|—1, ·, éfZf~fRf" f", ð'T, ·B, µ, ©, µC, ±, ìs, É, ífZf~fRf" f", a, È, ç, ì, ÅCŽŸ, ìs"a, Ü, Å"Ç, Ýi, ñ, Å begin fL[f][fh, ðCE ©, Å, ¯, éB, ±, ìŽž" _ , ÅfRf"fpfCf%o, ífGf%o[ , Å, , é, Æ" »'f, ·, é }
```

program Produce;

var

I: Integer

```
begin { <-- , ±, ±, ÅfGf%o[f][fbfZ[fW[u' ; ' , ì'ă, í, è, É 'BEGIN'  
 , a, , è, Ü, ·v, a·\Ž|, 3, é, é }
```

end.

```
{ ^ê"É, É%½, ©, ìCE‡—Ž, âfXfyf<, ìCEè, è, ðCE ©, Å, ¯, é, É, íCfGf%o[f][fbfZ[fW, a·\  
Ž|, 3, é, ½s, Æ, » , ìă, ìs, ðÚ, µ, '², x, é•K—v, a, , é }
```

program Solve;

var

I: Integer; { fZf~fRf" f", ^aCE‡, ¯, Å, ç, ½ }

begin

end.

Identifier redeclared: '<name>'v03962

á Rf“fpfCf<fGf%o[fbfZ[fW

à-¾

fbfZ[fW,É•\Ž|,³,ê,½Ž•ÊŽq,Í,±,ìXfR[fv“à,Å,·,Å,ÉéÆ¾Í,Ý,Å,·B,»,ìŽ•ÊŽq,ì-¼‘O,ð•Ê,ì
%½,©,ÉÄŽg—p,μ,æ,π,Æ,μ,Û,μ,½B

—á03963

{ ,±,±,Á,Í,vj□fOf%of€-¼,ª•Ï" -¼,Æ" ,¶,Á, ,é□B,Ç,¿,ç,©,ð•ÏX,·,é•K—v,ª, ,é }

```
program Tests;
```

```
var
```

```
    Tests: Integer;
```

```
begin
```

```
end.
```

```
program Tests;
```

```
var
```

```
    TestCnt: Integer;
```

```
begin
```

```
end.
```

uDuplicate case labelv03964

á fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,Í[]Ccase •¶,ì't,É 1 ,Â,ì'l,É'î,µ,Ä•i[]",ì case f%ofxf<,ª, ,é,Æ,«,É•\
Ž,³,ê,Ü,·[]B

—á03965

{ ,±,±,Á,Í•s'□^Ó,©,ç case f%ofxf< 0 ,đ 2 %oñŽw'è,μ,½ }

program Produce;

function DigitCount(I: Integer): Integer;

begin

 case Abs(I) of

 0: DigitCount := 1;

 0 ..9: DigitCount := 1; { <-- ,±,±,ÁfGf%o□[f□fbfZ□[fW }

 10 ..99: DigitCount := 2;

 100 ..999: DigitCount := 3;

 1000 ..9999: DigitCount := 4;

 10000 ..99999: DigitCount := 5;

 100000 ..999999: DigitCount := 6;

 1000000 ..9999999: DigitCount := 7;

 10000000 ..99999999: DigitCount := 8;

 100000000..999999999: DigitCount := 9;

 else DigitCount := 10;

 end;

end;

begin

 Writeln(DigitCount(12345));

end.

{ ^ê"Ê,É□Ccase f%ofxf<,l'è□",Æ"Í^Í,ÉfVf"f{f<,đŽg,Á,Ä,ç,é,Æ□C-â'è,l%oÓ□Š,đ,Á,«,Æ,β,é,l,Í,±,è,Ù,ÇŠÉ'P,Á,Í,È,ç□BfGf%o□[,đCE©,Á,~,é,É,l'è□",lŽA'l,đf□f,,μ,Ä'²,x,È,~,è,Í,È,ç,È,ç□è□‡,à, ,é }

program Solve;

function DigitCount(I: Integer): Integer;

begin

 case Abs(I) of

 0 ..9: DigitCount := 1;

 10 ..99: DigitCount := 2;

 100 ..999: DigitCount := 3;

 1000 ..9999: DigitCount := 4;

 10000 ..99999: DigitCount := 5;

 100000 ..999999: DigitCount := 6;

 1000000 ..9999999: DigitCount := 7;

 10000000 ..99999999: DigitCount := 8;

 100000000..999999999: DigitCount := 9;

 else DigitCount := 10;

 end;

end;

begin

 Writeln(DigitCount(12345));

end.

uLabel expectedv03966

á fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,Í[]Cgoto •¶,ì't,ÅŽw'è,µ,½Ž⁻•ÊŽq,Ü,½,ÍfCf“f%ofCf“fAfZf“fufŠ,ì't,Åf
%oofxf<,Æ,µ,ÄŽg,Á,½Ž⁻•ÊŽq,af%ofxf<,Æ,µ,ÄéCE¾,¾,è,Ä,ç,È,ç[]ê[]‡,É•\Ž,¾,è,Ü,·[]B

—á03967

program Produce;

begin

if 2*2 <> 4 **then**

goto Exit; { <-- ,±,±,ÁfGf%o[f]fbfZ[fW]B[uf%ofxf<,ª•K—v,Á,·v,ª•\Ž|,³,ê,é }
 { ... }

Exit: { ,±,±,Á,à,³,ç,ÉfGf%o[f]fbfZ[fW] }
end.

program Solve;

label

 Exit; { Pascal ,Áf%ofxf<,ðéCE¾,µ,È,¯,ê,î,È,ç,È,ç }
 { ... }

begin

if 2*2 <> 4 **then**

goto Exit;

 { ... }

Exit:

end.

For loop control variable must be simple local variable v03968

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

, ±, ìfGf%o[fbfZ[fW, íCfor •¶, ì\$Eä•ï”, a’Ppf•ï”, Å, È, ç (, ½, Æ, Ì, ÎCfÆfR[fh, ìRf“f|
[fif“fg, É, È, Á, Ä, ç, é) , ©Cfor •¶, a“ü, Á, Ä, ç, éŽè’±, «, ìf[fjf<•ï”, Å, È, çêê‡, É•Ž|, ³, è, Ü, ·B
%o^ÊEÝŠ·«, ì, ½, ß, ÉCfOf[fof<•ï”, ð\$Eä•ï”, Æ, µ, ÅŽg, x, ±, Æ, à, Á, «, Ü, ·, aRf“fpfCf%o
, íEx[f, ð•Ž|, µ, Ü, ·Bf[fjf<•ï”, ðŽg, Á, ½•û, aEø—|“l, ÈfR[fh, ð¶[f, Á, «, é”_, É’^Ó, µ, Ä, -
, ¾, ¾, çB

—á03969

```
program Produce;  
{ $WARNINGS ON }
```

```
var
```

```
  I: Integer;  
  A: array[0..9] of Integer;
```

```
procedure Init;
```

```
begin
```

```
  for I := Low(A) to High(a) do { <-- ,±,±,ÅÇx□□,ª•\Ž|,³,ê,é }  
    A[I] := 0;
```

```
end;
```

```
begin
```

```
  Init;
```

```
end.
```

```
program Solve;
```

```
var
```

```
  A: array[0..9] of Integer;
```

```
procedure Init;
```

```
var
```

```
  I: Integer;
```

```
begin
```

```
  for I := Low(A) to High(a) do  
    A[I] := 0;
```

```
end;
```

```
begin
```

```
  Init;
```

```
end.
```

uFor loop control variable must have ordinal type v03970

—á fRf“fpfCf<fGf%oo[f fbfZ[fW

à-¾

for f<[fv,ì\$Eä•ï”,í~_—CE^CChar CE^CfCfh•¶ŽšCE^C@”CE^C—
ñ<“CE^C•”•a”í^íCE^,ì,ç,,ê,©,Å,È,~,ê,î,È,è,Ü,¹,ñB

—á03971

{ ŽŸ,İfR□[fh,İf<□[fv,İ□\$CEä•İ□",É Real CE^,İ•İ□",ðŽg," ,æ,Æ,μ,ÄfGf%□[É,È,é }

program Produce;

var

X: Real;

begin { □³CE."g,ð•`, }

for X := 0 to 2*Pi/0.2 do

%□[f□fbfZ□[fW }

Writeln('*' : Round((Sin(X*0.2) + 1)*20) + 1);

end.

{ <-- ,±,±,ÅfGf

{ ,±,±,Å,Í Integer CE^,ðŽw'è,·,é,ÆfGf%□[Í,È,,È,é }

program Solve;

var

X: Integer;

begin { □³CE."g,ð•`, }

for X := 0 to Round(2*Pi/0.2) do

Writeln('*' : Round((Sin(X*0.2) + 1)*20) + 1);

end.

Types of actual and formal var parameters must be identical v03972

á fRf“fpfCf&fGf%o[fbfZ[fW

à-¾

•i“fpf%o[f^,ìŽÀÛ,ì^ø”,í%¼4fpf%o[f^,Æ³Šm,É“¯,ŒCE^,Å,È,¯,ê,î,È,è,Û,¹,ñB

-á03973

{ ^ø C1 ,Æ C2 ,Í f f, fŠ ä, ì • \CE», Æ " í ^ í, a Byte ,Æ " -, ¶, ¾, a SwapBytes ,É, Í Žg, í, È, ç }

program Produce;

procedure SwapBytes(**var** B1, B2: Byte);

var

Temp: Byte;

begin

Temp := B1; B1 := B2; B2 := Temp;

end;

var

C1, C2: 0..255; { Byte CE ^, Å, í, È, ç }

begin

SwapBytes(C1,C2); { <-- , ±, ±, Å fGf % o [f f b f Z [f W }

end.

{ , ±, ì) fR [f h, ð f R f " f p f C f < , , é, É, Í C1 ,Æ C2 , ð Ž À [Ò Ù, É Byte ,Æ, μ, Ä [é CE ¾, μ, È, -, ê, Í, È, ç, È, ç }

program Solve;

procedure SwapBytes(**var** B1, B2: Byte);

var

Temp: Byte;

begin

Temp := B1; B1 := B2; B2 := Temp;

end;

var

C1, C2: Byte;

begin

SwapBytes(C1,C2);

end.

Too many actual parameters v03974

á fRf"fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfGf%o[f]fbfZ[fW,íCŽè'±,«,Ü,½,ÍŠÖ",lCEÄ,Ño,μ,ÅŽè'±
,«éCE¾,Ü,½,ÍŠÖ"éCE¾,ÉŽw'è,μ,½,æ,è'½,çfpf%o[f]f^,ðŽw'è,μ,½,Æ,«,É•\Ž!,³,è,Ü,·B
OLE f[f]gf[f]Vf±f"CEÄ,Ño,μ,Åfpf%o[f]f^,¾½,·,¬,é (255 ,ð'´,|,é) ê±,â-¼'O•t,«fpf
%o[f]f^,¾½,·,¬,éê±,É,àC,±,lfGf%o[f]fbfZ[fW,¾\Ž!,³,è,Ü,·B

—á03975

{ Max ,^a 3 ,Ä, ðpf%of[]f^, ðŽó, "ü,ê,é,æ,æ,É,μ,Ä, ", ,Î,æ, ©, Á, ½,^a... }

program Produce;

function Max(A,B: Integer): Integer;

begin

if A > B **then** Max := A **else** Max := B

end;

begin

 Writeln(Max(1,2,3)); { <-- ,±,±,ÄfGf%o[]f[]fbfZ[]fW }

end.

{ 'Éí, í³, μ, ç", ðpf%of[]f^, ^aÿ<<, ³,ê,é,æ,æ,ÉÄÄ, Ño, μ,É•í[]X, ,é[]B, μ, ©, μ[]C, ±, ±, Ä, í Max
,É-³[]\$ÄÄ, ð", ðŽÄ'•, .,é•û-@, ðŽ|, ,[]BMax ,ð,â,â^Û,É,é•û-
@,ÄÄÄ, Ño, ³,É, ,ê,Î,É,ç,É,ç"_,É'[]^Ó, ,é•K-v,^a, ,é }

program Solve;

function Max(const A: array of Integer): Integer;

var

 I: Integer;

begin

 Result := Low(Integer);

for I := 0 **to** High(A) **do**

if Result < A[I] **then**

 Result := A[I];

end;

begin

 Writeln(Max([1,2,3]));

end.

uNot enough actual parametersv03976

á fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,íCŽè‘±,«,Ü,½,ÍŠÖ“,ìĀ,Ño,μ,ÅŽè‘±
,«éĒ¾,Ü,½,ÍŠÖ““éĒ¾,ÉŽw’è,μ,½,æ,è,È,ƒfpf%of[]f^,đŽw’è,μ,½,Æ,«,É•\Ž|,³,è,Ü,·B,±
,lfGf%o[í•W€Žè‘±,«,â•W€ŠÖ“,ìĀ,Ño,μ,Å<N,«,éê‡,à, ,è,Ü,·B

—á03977

{ •W□€Žè'±,«,ì Val ,ífGf%□□[fR□[fh,ð•Ô,·,½,β,Éfpf%□f□□[f^,ð 1 ,Â
—]•ª,É,Æ,é□BŽŸ,ìfR□[fh,Â,í,»,)fpf%□f□□[f^,ðŽw'è,μ,Ä,ç,È,ç }

program Produce;

var

X: Real;

begin

Val('3.141592', X); { <-- ,±,±,ÂfGf%□□[f□fbfZ□[fW }

end.

{ 'É□í□CÆÄ,Ñ□o,·Žè'±,«,ì□éCE¾,©fwf<fv,ÆCEÄ,Ñ□o,μ,ð□Æ□‡,μ,Äf`fFfbfN,·,é,Æ□C•K—v,Èfpf
%□f□□[f^,ðŽw'è,μ-Y,ê,½,±,Æ,ª,í,©,é }

program Solve;

var

X: Real;

Code: Integer;

begin

Val('3.141592', X, Code);

end.

Variable required v03978

á fRf“fpfCf<fGf%o[f[]bfZ[]fW

à-¾

,±,lfGf%o[f[]bfZ[]fW,íCŽ@,Ü,½,í“è”,lfAfhfÆfX,ðŽg,“,α,Æ,μ,½,Æ,«,É•\Ž!,³,ê,Ü,·B

—á03979

```
{ 1 ,ì,æ,α,È'è",É,ìf,ſ,ſfAfhfĈfX,ª,È,ċ,ì,ÅĈC@ %%%%ŽŽŽq,â Addr •WĈ€ŠÖ",đ"K—p,Å,«,È,ċ }
```

```
program Produce;
```

```
var
```

```
  I: Integer;
```

```
  PI: ^Integer;
```

```
begin
```

```
  PI := Addr(1);
```

```
end.
```

```
{ •ĭ",ìfAfhfĈfX,đŽg,α•K—v,ª, ,é }
```

```
program Solve;
```

```
var
```

```
  I: Integer;
```

```
  PI: ^Integer;
```

```
begin
```

```
  PI := Addr(I);
```

```
end.
```

Declaration of <name> differs from previous declaration

á fRf“fpfCf<fGf%□[f□fbfZ□[fW

à-¾

, ±, ìfGf%□[f□fbfZ□[fW, íCŽè‘±, «CŠÖ□“□Cf□fbfh□CfRf“fXfgf%□fNf^□CfffXfgf%□fNf^, ì, ç, , è, ©, ìéĒ¾, ð’O, ì (forward) □éĒ¾, Æ^Ù, È, Á, Ä, ç, é, Æ, «, É•Ž!, ð, è, Ü, ·□B
%¼’z□fbfh, ðf□[fo□[f%□fCfh, μ, æ, x, Æ, μ, ½, Æ, «, É□Cf□[fo□[f%□fCfh, ·, é□fbfh, ìfpf
%□□[f^fŠfXfg, âĒÄ, Ń□o, μ<K-ñ, È, Ç, ð^Ù, È, Á, Ä, ç, éê±, É, à□C, ±, ìfGf%□[f□fbfZ□[fW, ð•\ Ž!, ð, è, Ü, ·□B

—á03981

```
{ ŽŸ,ÉŽ|,·,æ,ɱ,É□C,±,ĭfGf%□□[f□fbfZ□[fW,ª"□s,³,ê,éCE´^ö,í,ç,,Â,à, ,é }
```

program Produce;

type

```
MyClass = class  
  procedure Proc(Inx: Integer);  
  function Func: Integer;  
  procedure Load(const Name: string);  
  procedure Perform(Flag: Boolean);  
  constructor Create;  
  destructor Destroy(Msg: string); override; { <-- ,±,±,ĀfGf%□□[f□fbfZ□[fW }  
  class function NewInstance: MyClass; override; { <-- ,±,±,ĀfGf  
%□□[f□fbfZ□[fW }  
end;
```

```
procedure MyClass.Proc(Index: Integer); { <-- ,±,±,ĀfGf%□□[f□fbfZ□[fW }  
begin  
end;
```

```
function MyClass.Func: Longint; { <-- ,±,±,ĀfGf%□□[f□fbfZ□[fW }  
begin  
end;
```

```
procedure MyClass.Load(Name: string); { <-- ,±,±,ĀfGf%□□[f□fbfZ□[fW }  
begin  
end;
```

```
procedure MyClass.Perform(Flag: Boolean); cdecl; { <-- ,±,±,ĀfGf  
%□□[f□fbfZ□[fW }  
begin  
end;
```

```
procedure MyClass.Create; { <-- ,±,±,ĀfGf%□□[f□fbfZ□[fW }  
begin  
end;
```

```
function MyClass.NewInstance: MyClass; { <-- ,±,±,ĀfGf%□□[f□fbfZ□[fW }  
begin  
end;
```

```
begin  
end.
```

```
{ □u'O,ĭ□éCE¾□v,ĀfGf%□□[,đ<N,±,μ,½□éCE¾,đ'□^Ó□□[,"ăŠr,μ,Ā 2 ,Ā,ĭ'S^á"_,đ">•É,·,é•K—  
v,ª, ,é }
```

program Solve;

type

```
MyClass = class
```

```

procedure Proc(Inx: Integer);
function Func: Integer;
procedure Load(const Name: string);
procedure Perform(Flag: Boolean);
constructor Create;
destructor Destroy; override; { fpf%oof[]f^,ª,È,¢ }
class function NewInstance: TObject; override; { CE<%oÈ,|CE^ }
end;

procedure MyClass.Proc(Inx: Integer); { fpf%oof[]f^-¼ }
begin
end;

function MyClass.Func: Integer; { CE<%oÈ,|CE^ }
begin
end;

procedure MyClass.Load(const Name: string); { fpf%oof[]f^,|Ží—p }
begin
end;

procedure MyClass.Perform(Flag: Boolean); { CEÄ,Ñ[]o,µ<K-ñ }
begin
end;

constructor MyClass.Create; { fRf“fXfgf%ofNf^ }
begin
end;

destructor MyClass.Destroy;
begin
end;

class function MyClass.NewInstance: TObject; { fNf%ofXŠÖ[]” }
begin
end;

begin
end.

```

Illegal character in input file: '<Char>' (<Hexadecimal value>)

á fRf“fpfCfGf%o[fbfZ[fW

à-¾

fRf“fpfCf%o,ª Pascal fvjOf%of€“à,Å,Í^á-@,Æ,È,é•ŕŽš,ðŒ©,Â,¯,Ü,µ,½B,±,}fGf %o[fbfZ[fW,ª•\Ž!,³,è,éŒ^ö,ì,Ù,Æ,ñ,Ç,Í•ŕŽš—ñ’è”,Ü,½,}fRf“fg,Å,}fGf%o[,Å,·B

-á03983

{ ,±,±,Á,Ívfj[]fOf%of},ª C++ ,ìKŠμ,Á•¶Žš—ñ,ð“ñ[]d^ø—p•,,Á^í,ñ,¾ }

program Produce;

begin

 Writeln("Hello world!"); { <-- ,±,±,ÁfGf%[]f[]fbfZ[]fW }
end.

{ 'P^ø—p•,,ðŽg,|,î%ðCE^,.,é[]B^ê”Ê,É[]C^á-@,È•¶Žš,ðí[]œ,.,é•K—v,ª, ,é }

program Solve;

begin

 Writeln('Hello world!'); { Pascal ,Á,Í'P^ø—p•,,ª•K—v }
end.

u'<name>' is not a type identifier v03984

á Rf“fpfCf<fGf%o[f[]bfZ[]fW

à-¾

,±,lfGf%o[f[]bfZ[]fW,í[]CCE^,ì-¼'O,đŽw'è,·,é,x,«[]ê[]Š,ÅCE^,đ•\,μ,Ä,ç,È,ç-¼'O,đCEÿ[]o,μ,½,Æ,«,É•\Ž!,³,ê,Ü,·[]B

—á03985

{ ŽŸ, ĺfR[]fh, íĈE^-¼, Å, È, • ĺ"^-¼, ð^ø[]", ĺĈE^, Æ, μ, ÄĈEë, Á, ÄŽg, Á, Ä, ç, é }

program Produce;

type

 TMyClass = **class**
 Field: Integer;
 end;

var

 MyClass: TMyClass;

procedure Proc(C: MyClass); { <-- ,±,±,ÁfGf%[]f[]fbfZ[]fW }

begin

end;

begin

end.

{ fGf%[][, ð<N, ±, μ, ½Ž^-ÊŽq, ¢-{"-, ÉĈE^, Å, , é, ©, Ç, x, ©Šm"F, , , é[]BfXfyf<, ¢ŠÔ^á, Á, Ä, ç, ½, ©[]CŽQ[]Æ, μ, ½, çŽ^-ÊŽq, ¢"^-¼, ĺŽ^-ÊŽq, É, æ, Á, Ä%B, ¢, è, Á, ç, é%Å"[]«, ¢, , é }

program Solve;

type

 TMyClass = **class**
 Field: Integer;
 end;

var

 MyClass: TMyClass;

procedure Proc(C: TMyClass);

begin

end;

begin

end.

File not found: <Filename>v03986

á fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,ÍRf“fpfCf%o,“ü—Íftf@fCf<,ðŒ©,Â,¯,ç,ê,È,ç,Æ,«,É•\Ž!,¾,ê,Ü,·B,»,"ü
—Íftf@fCf<,Í\[]fXftf@fCf<[]CfRf“fpfCf<[]í,Ý,Íftfjfbfgftf@fCf< (.dcu
ftf@fCf<)[]CfCf“fNf<[]fhftf@fCf<[]CfIfufWfFfNfgftf@fCf<[]CfŠ\[]fXftf@fCf<,ì,ç,,.ê,©,Å,·B-
¼'O,ÆŠÖ~A,ìŒÿ[]öfpfX,lfXfyf<,ðf`fFfbfN,µ,Å,,¾,¾,ç[]B

-á03987

```
program Produce;  
uses SysUtils; { <-- ,±,±,ÅfGf%o□[f□fbfZ□[fW }  
begin  
end.
```

```
program Solve;  
uses SysUtils; { fXfyf<,ð□C□3,μ,½ }  
begin  
end.
```

Could not create output file <Filename> v03988

[fRf"fpfCf<fGf%o\[ffbfZ\[fW](#)

à-¾

fRf"fpfCf%o,ºo—Ítf@fCf<,ð`ì¬,Á,«,Û,¹,ñ,Á,µ,½B,»,ìo—
Ítf@fCf<,ÍRf"fpfCf<ì,Ý,Ítfjfbfgftf@fCf< (.dcu ftf@fCf<)CŽÀs%oÂ"\
ftf@fCf<Cf}fbfvftf@fCf<CflufWfFfNfgftf@fCf<,ì,ç,,ê,©,Á,·B,à,Á,Æ,àl,!,ç,ê,éE
^ö,ÍffBfÆfNfgfŠ,º'¶Y,µ,È,ç,©ftf@fCf<,Û,½,ÍffBfXfN,º',«ž,Ý<ÖŽ~,Á,·B

uSeek error on <Filename> v03989

fRf“fpfCf<fGf%o[ffbfZ[fW

à-¾

fRf“fpfCf%o,“ü—íftf@fCf<,Ü,½,Ío—íftf@fCf<,ÅV[fNfGf%o[,ðEÿo,μ,Ü,μ,½B,±,ìfGf
%o[,<N,«,é,Æ,í[,!,ç,ê,Ü,¹,ñ,ªC-œ^ê<N,«,½ê#C,à,Á,Æ,à[,!,ç,ê,éE´^ö,íff[f^,ì”j¹,Å,·B

uRead error on <Filename>v03990

fRf“fpfCf<fGf%o[ffbfZ[fW

à-¾

fRf“fpfCf%o,“ü—íftf@fCf<,Å“Ç,Ýo,µfGf%o[,ðŒŸo,µ,Û,µ,½B,±,lfGf
%o[,æ<N,«,é,Æ,í[,!,ç,ê,Û,¹,ñ,ªC-œ^ê<N,«,½ê#C,à,Á,Æ,à[,!,ç,ê,éŒ´^ö,íff[f^,ì”j¹,Å,·B

Write error on <Filename>v03991

fRf"fpfCf<fGf%o[fbfZ[fW

à-¾

fRf"fpfCf%o,ºo—Íftf@fCf<,Ö',«ž,Ý't,É',«ž,ÝfGf
%o[,đĎo,µ,Û,µ,½B,Ù,Æ,ñ,Ç,ìê#C—Íæ,ìffBfXfN,É<ó,«,º,È,ç,ì,ºE'^ö,Å,·B

Close error on <Filename>v03992

fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

fRf“fpfCf%o,“ü—íftf@fCf<,Ü,½,Ío—íftf@fCf<,ð•Â,¶,éÜ,ÉfGf%o[],ðŒÿo,µ,Ü,µ,½B,±,ìfGf%o[],í,ß,Á,½,É<N,«,Ü,¹,ñ,ªC<N,«,½é#C,à,Á,Æ,àl,ç,ê,éŒ´^ö,íffBfXfN,É<ó,«,ª,È,ç,©ffBfXfN,ì•s—Ç,Å,·B

uBad file format: <Filename>v03993

fRf"fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

,±,lfGf%o[],í \$L Žw—ß,Ü,½,í \$LINK Žw—

ß,Åf[]f[]fh,µ,½flfufWfFfNfgftf@fCf<,º³,µ,¢CE`Ž® ,Á,È,¢[]ê[]#,É"[]¶,µ,Ü,·[]B

^È%ºº,ì[]\$CEÄŽ-[]€ ,ð-ž,½,³,È, -,ê,î,È,è,Ü,¹,ñ[]B

- fwf<fvftf@fCf<"à,lfZfOf[]f"fg-¼,É,Á,¢,Ä-¼'O,ì[]\$CEÄ,ðŠm"F,·,é
- fZfOf[]f"fg,ð 10 CEÄ^È%ºº,É,·,é
- ŠO•"fvf"f{f<,ð 255 CEÄ^È%ºº,É,·,é
- LNames fCEfR[]f[]fh"à,lf[][]f[]f<-¼,ð 50 CEÄ^È%ºº,É,·,é
- LEDATA fCEfR[]f[]fh,Æ LIDATA fCEfR[]f[]fh,ðflftfZfbfg[]#,É,µ,È, -,ê,î,È,¢,È,¢
- THREAD ftfufCEfR[]f[]fh,í FIXU32 fCEfR[]f[]fh"à,Á,lfTf[]f[]fg,³,è,È,¢
- 32 frfbfg,lfiftfZfbfg,¾, -,ð[]C[]³,Á,«,é
- fZfOf[]f"fg[]C[]³,ÆŽ©CEÈ'S'í[]C[]³,¾, -,º%ºÄ"\
- []C[]³,lf^[]f[]Qfbfg,lfZfOf[]f"fg[]CfOf<[]f[]v[]CEXTDEF ,ì,¢, ,ê,©,Á,È, -,ê,î,È,¢,È,¢
- flfufWfFfNfg,í 32 frfbfg,lfifufWfFfNfgftf@fCf<,Á,È, -,ê,î,È,¢,È,¢
- ŠeZí,ì"à•" ^êŠN[]«[]ðCE[],lfifufWfFfNfgftf@fCf<,º%ºó,è,½[]ê[]#,É,µ,©[]áŠQ,ð[]¶,¶,È,¢

Out of memory v03994

[fRf“fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

fRf“fpfCf%o,af[f],fŠ•s'«É,È,è,Ü,μ,½B,±,lfGf

%o[,Í,Ù,Æ,ñ,Ç<N,«,Ü,¹,ñB<N,«,½ê‡,ÍCfXf[]fbfvftf@fCf<,ª\•ª,È'â,«,³,Å, ,é,©,Ç,κ

,©[]CfffBfXfN[]ã,É<ó,«,ª, ,é,©,Ç,κ,©,đŠm”F,μ,Ä,,¾,¾,çB

uCircular unit reference to <Unitname>v03995

á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

à-¾

1 ,Â,Ü,½,Í•i□”,)ftfjfbfg,afCf“f^□[ftfF□[fX•”,ÅŸÝ,ç,ÉŽg,ç□‡,Á,Ä,ç,Ü,·□BfRf“fpfCf%o
,ftfjfbfg,lfCf“f^□[ftfF□[fX•”,đ•İŠ·,μ,½Œă,Å,È,¯,ê,î□C,»,)ftfjfbfg,đ•Ê,ftfjfbfg,©,çŽg,!,È,ç
,ì,Å□CfRf“fpfCf%o
,íŠftfjfbfg,lfCf“f^□[ftfF□[fX•”,)fRf“fpfCf<□‡□~ ,đŸŸo,Å,«,È,¯,ê,î,È,è,Ü,¹,ñ□Buses
□B,ì†,É, ,é,·,×,Ä,ftfjfbfg,^a-{“-É•K—v,©,Ç,α,©,Æ□CŽÀŒ»•”,Ö^Ú“® ,Å,«,éftfjfbfg,^a,È,ç
,©,Ç,α,©,đ²,×,Ä,,^¾,^¾,ç□B

—á03996

```
{ A ,Æ B ,²fCf“f^□[ftfF□[fX•” ,Å,» ,ê,¼,ê,ðŽg,Á,Ä,ç,é,ì,Å-â‘è,²<N,« ,é }
```

```
unit A;
```

```
interface
```

```
uses B; { A ,Í B ,ðŽg,ç□CB ,Í A ,ðŽg,² }
```

```
implementation
```

```
end.
```

```
unit B;
```

```
interface
```

```
uses A;
```

```
implementation
```

```
end.
```

```
{ ,±,ì□zŠÅ,Íê•û,Û,½,Í—¼•û,ðŽÀÆ»•” ,Ö^Ú“® ,. ,ê,Î□Ø,ê,é }
```

```
unit A;
```

```
interface
```

```
uses B; { fRf“fpfCf<□#□~ ,Í B.interface□CA□CB.implementation }
```

```
implementation
```

```
end.
```

```
unit B;
```

```
interface
```

```
implementation
```

```
uses A; { ŽÀÆ»•” ,Ö^Ú“® ,µ,½ }
```

```
end.
```

uBad unit format: <Filename>v03997

fRf"fpfCf<fGf%o[ffbfZ[fW

à-¾

,±,lfGf%o[,lfRf"fpfCf<ï,Ý,lf+fjfbfgftf@fCf< (.dcu ftf@fCf<) ,lE`Ž®,³,μ,,È,¢êê#,É•\
Žl,³,ê,Ü,·B,Ù,Æ,ñ,Ç,ìêê#C.dcu ftf@fCf<,³%ó,ê,Ä,¢,é,ì,³E
^ö,Å,·Bftf@fCf<,ðÄfRf"fpfCf<,:é,© Delphi ,đfCf"fxfg[f<,μ¼,μ,Ä,,¾,³,¢B

uPACKED not allowed here v03998

á fRf“fpfCf<fGf%o[f fbfZ[fW

à-¾

packed fL[f[f[fh,í[W[±CE^C”z—ñCE^CfCEfR[fhCE^CfIfufWfFfNfgCE^CfNf %ofXCE^Cftf@fCf<CE^¾,¯,É—LCEø,Å,·B16 frfbfgfo[fWf#f“,ì Delphi ,Æ,Í^Ù,È,èCpacked ,IfCEfR[fhCE^CfIfufWfFfNfgCE^CfNf%ofXCE^,IfCEfCfAfEfg,É%oe<¿,ð<y,Ú,µ,Û,·B

—á03999

{ packed ,íŽÀ"CE^,É,í"K—p,Å,«,È,ç□B<L%oo^-^æ,ð□ß-
ñ,μ,½,ç□ê□‡,í□C,à,Á,Æ,à□¬,³,çŽÀ"CE^,ì Single CE^,ðŽg,α•K—v,ª, ,é }

program Produce;

type

SmallReal = **packed** Real;

begin

end.

program Solve;

type

SmallReal = Single;

begin

end.

Label declaration not allowed in interface part v04000

á Rf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

,±,lfGf%o[],íftjfbfg,lfCf“f^[]ftfF[]fX•”,Åf%ofxf<,ðéE¾,µ,½,Æ,«,É<N,«,Ü,·B

—á04001

{ ftfjfbfg,lfCf“f^□[ftfF□[fX•”,Åf%ofxf<,ð□éCE¾,·,é,ì,í^á-@,Å, ,é }

unit Produce;

interface

label 99;

implementation

begin

99:

end.

{ f%ofxf<,ðŽÀE»•”,Ö^Ú“®,μ,È,¯,ê,î,È,ç,È,ç }

unit Solve;

interface

implementation

label 99;

begin

99:

end.

-á04003

{ ,α,Á,©,è,μ,Ä MyProc ,ì-{'ì,ðfCf"f^□[ftfF□[fX•",É'u,ç,½ }

unit Produce;

interface

procedure MyProc;

begin { <-- ,±,±,ÅfGf%□[f□fbfZ□[fW }

end;

implementation

begin

end.

{ -{'ì,ðŽÀÆ»•",Ö^Ú"®,.é,Î,α,Ü,□s, }

unit Solve;

interface

procedure MyProc;

implementation

procedure MyProc;

begin

end;

begin

end.

Unit <Unit1> was compiled with a different version of <Unit2> v04004

fRf“fpcfCf<fGf%o□[f□fbfZ□[fW

□à-¾

,±,lfGf%o□[.íftjfbfg,lfCf“f^□[ftfF□[fX•”,É, ,éfVf“f{f<□éCE¾,đ•ï□X,μ,½□ê□#,É□C,»,ì□éCE¾,É^È
‘¶, ,éftjfbfg,lf□[fX,ª,»,ì□éCE¾,đŽg,!,È,,È,Á,Ä□ÄfRf“fpcfCf<,Á,«,ç,Æ,«,É<N,«,Ü,,□B
•;□”,ì%ođCE^-@,ª□[,!,ç,ê,Ü,,□BUnit1 ,đ□ÄfRf“fpcfCf<,,é (f□[fXfR□[fh,ª, ,é,Æ‘z’è,μ,½□ê□#)
,©□CUnit2 ,ìCEÁ,çfo□[fWf#f“,đŽg,ª,©□CUnit2 ,đ•ï□X,,é,©□CUnit1 ,lf□[fXfR□[fh,đŽ□,Á,Ä,ç
,é□[,©,ç□V,μ,çfo□[fWf#f“,ì Unit1 ,đ“üŽè,μ,Ä,,¾,¾,ç□B

uUnterminated stringv04005

—á fRf“fpfCf<fGf%o[f fbfZ[fW

à-¾

•Ÿš—ñ,ì--"ö,É•Â,Ÿ,é'P^ø—p•,,ª, ,è,Û,¹,ñ,Å,µ,½B

•Ÿš—ñ,ÍŽŸ,ìs,ÖŒp'±,Å,«,Û,¹,ñ,ªC□u+□v%o%ŽŽŽq,ðŽg,ꝛ,Æ•ÊX,ìs,É, ,é 2 ,Â,ì•Ÿš—ñ,ð~ACE<,Å,«,Û,·B

—á04006

{ •ŋŽš—ñ,É•Â,ŋ,é^ø—p•,,đ•t,¯-Y,ê,½□B,æ,, ,éfGf%□[.Å, ,é }

program Produce;

begin

 Writeln('Hello world!'); { <-- ,±,±,ÅfGf%□[f□fbfZ□[fW }

end.

{ •Â,ŋ,é^ø—p•,,đŽw'è,μ,Ä%đCE^,μ,½ }

program Solve;

begin

 Writeln('Hello world!');

end.

uSyntax error in real numberv04007

á fRf“fpfCf<fGf%o[f fbfZ[fW

à-¾

,±,lfGf%o[f fbfZ[fW,í“l,ì’t,É^ÊŽæ,è^ö“,lŽn,ß (E ,© e ,ì•¶Žš)
,ª, ,Á,ÄC,» ,ìĚă,É“Žš,ª,È,çê¶,É•\Ž!,³,è,Ü,·B

—á04008

{ ŽŸ, ĭfR [fh, Å, í 3.0E , ìCEã, ÉfXfy [fX • ħŽš, ð • t, ¯, ½, ½, ß [CfRf “f pfCf%o, É, Æ, Á, Ä, í [” l, a, » , ±, Å [l—
¹, μ [C • sŠ @ ‘S, È [” l, É, È, é }

program Produce;

const

SpeedOfLight = 3.0E 8; { <-- , ±, ±, ÅfGf%o [f [fbfZ [fW }

begin

end.

{ <ó” , ð [í [œ, μ, Ä, ¨ , ¾, ¯, Å, à, æ, ©, Á, ½, a [C+ • , [t, ð’ “ü, μ, Ä [œ ©, â, ·, μ, ½ }

program Solve;

const

SpeedOfLight = 3.0E+8;

begin

end.

Procedure too long: exceeds 32Kv04009

[fRf“fpfCf<fGf%o\[f\]fbfZ\[fW](#)

à-¾

,±,lfGf%o[f]fbfZ[fW,ÍCf“fef<,lfvf[fZfbfT,Å,ÍŽg,í,ê,Ä,ç,Ü,¹,ñB

Illegal type in Write/Writeln statement v04010

á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

,±,lfGf%o[],í[]†-@,Å,È,çCE^,ð Write •¶,Ü,½,Í Writeln •¶,É[]³,µ,-
,È,çCE^,ì^ø[],³“n,³,ê,½,Æ,«,É<N,«,Ü,·[]B

—á04011

```
{ Color ,đ'¼Ú writeln •¶,ì^ø",É,íŽw'è,Å,«,È,ç }
```

```
program Produce;
```

```
type
```

```
    TColor = (red,green,blue);
```

```
var
```

```
    Color: TColor;
```

```
begin
```

```
    Writeln(Color);
```

```
end.
```

```
{ Color ,đo—í,·,é,É,íC•â"z—ñ,đŽg,í,È,¯,ê,Î,È,ç,È,ç }
```

```
program Solve;
```

```
type
```

```
    TColor = (red,green,blue);
```

```
var
```

```
    Color: TColor;
```

```
const
```

```
    ColorString: array[TColor] of string = ('red', 'green', 'blue');
```

```
begin
```

```
    Writeln(ColorString[Color]);
```

```
end.
```

Illegal type in Read/Readln statement v04012

á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

,±,lfGf%o[],íCE^,ª³,μ,,È,ç•ï“,ð Read •¶,Û,½,í Readln •¶,Å“Ç,Ý[]o,»,æ
,Æ,μ,½,Æ,«,É<N,«,Ü,·[]B•ï“,ìCE^,ðf`fFfbfN,μ[]C<tŽQ[]Æ[]CfCf“fffbfNfX•t,~[]CftfB[]f<fh‘l’ð,ì,ç
,,è,©,ì%o%oŽŽŽq,ðCE‡,©,³,È,ç,æ,æ,É,μ,Ä,,¾,¾,ç[]B

—á04013

```
{ —ñ<“ĈĖ^, ì•ĭ□, í¼¼□Ú“Ç, Ý□o, ¹, È, ç }
```

```
program Produce;
```

```
type
```

```
  TColor = (red, green, blue);
```

```
var
```

```
  Color: TColor;
```

```
begin
```

```
  Readln(Color); { <-- , ±, ±, ÅfGf%□[f□fbfZ□[fW }
```

```
end.
```

```
{ •ŋŽš—ñ, ð“Ç, Ý□o, μ□C, »; ì•ŋŽš—ñ, ð•â□•fe□[fuf<“à, ÅŽQ□Æ, ·, ê, ì  
%øðĈĖ^, ·, é□BŽŸ, ĭfR□[fh, Å, ĭfGf%□[f`fFfbfN, ìŽèŠŌ, ð□É, ç, ½, ì, Å□C, ·, x, Ä, ì•ŋŽš—ñ, í blue  
, Æ, μ, Ä^μ, í, ê, é□BŽÀ□Ú, É, ĭfGf%□[f□fbfZ□[fW, ð□o—  
í, μ, Äft□[fU□[É, â, è¼¼, μ, ð<□, ß, é□ê□‡, æ¼¼, ç }
```

```
program Solve;
```

```
type
```

```
  TColor = (red, green, blue);
```

```
var
```

```
  Color: TColor;
```

```
  InputString: string;
```

```
const
```

```
  ColorString: array[TColor] of string = ('red', 'green', 'blue');
```

```
begin
```

```
  Readln(InputString);
```

```
  Color := red;
```

```
  while (color < blue) and (ColorString[color] <> InputString) do
```

```
    Inc(color);
```

```
end.
```

Unicode strings may have at most 255 elements v04014

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

,±,lfGf%o□[f□fbfZ□[fW,Í□C—v’f□”,^a 255 ,đ’’,|,é’Z,ç•¶Žš—ñĀ^,đ□éĀ^¾,μ,½,Æ,«□C, ,é,ç,Í 1
,Ā,ì•¶Žš—ñ,É 255 ĀĀ,đ’’,|,é•¶Žš,^a“ü,Ā,Ā,ç,é,Æ,«,É•\Ž!,^¾,ê,Ü,·□B

□u+□v%o%ŽŽŽq,đŽg,Ā,Ā•j□”,ì•¶Žš—ñfŠfef%of<,đ~ĀĀ<,·,ê,Ā□C•j□”,ì□s,É,Ü,½,^a,é’·,ç•¶Žš—
ñfŠfef%of<,đ□ì□-,Ā,«,é,±,Æ,É’□^Ó,μ,Ā,,¾,^¾,ç□B

-á04015

```
{ ŽŸ, ĺfR[]fh, Å, í[]C • ĺŽš—ñ, ì'·, ³, íCEÀ"x, ð 1 • ĺŽš'´, ĺ, ½, ¾, ¯, Å, , é }
```

```
program Produce;
```

```
var
```

```
  LongString: string[256]; { <-- , ±, ±, ÅfGf%[]f[]fbfZ[]fW }
```

```
begin
```

```
end.
```

```
{ ´, ç • ĺŽš—ñCE^, ðŽg, x, ĺ, à, Á, Æ, à • Ö—~ , È%øðCE^-@, Å, , é[]B, » , x, ·, é, ĺ[]±—  
[]“l, È[]Å'â'·, ð[]l, ĺ, ÄŽžŠÔ, ð"i, â, ·K—v, à, È, ç }
```

```
program Solve;
```

```
var
```

```
  LongString: AnsiString;
```

```
begin
```

```
end.
```


**Unexpected end of file in comment started on line
<Number>v04016**

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

,±,lfGf%o[f,ífRf“fg,đŠJ,č,Ä•Â,¶,È,©,Á,½ê¶,É•\
Ž!,³,é,Ü,·B□u{□v,ÁŠJŽn,μ,½fRf“fg,Íu}□v,Á□C□u(*□v,ÁŠJŽn,μ,½fRf“fg,Íu*)□v,Á•K,·Á,
¶,È,¯,é,í,È,è,Ü,¹,ñ□B

—á04017

{ ,±,ì—á,íRf□f“fg,ð•Â,¶,È,©,Á,½ }

program Produce;

{ ,±,±,ÅfRf□f“fg,ðŠŽn,μ,½,²□C•Â,¶,é,ì,ð-Y,ê,½

begin

end.

{ fRf□f“fg,ð•Â,¶,ê,ì-â'è,í%oðCE^,³,ê,é }

program Solve;

{ ,±,±,ÅfRf□f“fg,ðŠŽn,μ,½,²□C-Y,ê,,É•Â,¶,½ }

begin

end.

Constant or type identifier expected

á fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,íĒ^,đŠú’Ò,μ,Ä,†,½fRf“fpfCf%o
,‘è”,Á,àĒ^Ž·ÊŽq,Á,à,È,†fVf“f{f<,đĒÿ[]o,μ,½,Æ,«,É·\Ž!,³,è,Ü,
(‘è”,í·”·ª”ííĒ^,ìŽn,ß,É’u,©,é,é[]é[]‡,ª, ,è,Ü,.) []B

—á04019

```
{ ,±,±,Á,Í ExceptionClass ,ÍĈ^,Á,È,•ĭ□",Á, ,é }
```

```
program Produce;
```

```
var
```

```
  C: ExceptionClass; { ExceptionClass ,Í System "à,ĭ•ĭ□",Á, ,é }
```

```
begin
```

```
end.
```

```
{ •K, ,Ĉ^,đŽw'è,•,é•K—v,ª, ,é□BŽ~•ÊŽq,ĭfXfyf<,ªŠÔ^á,Á,Ä,ç  
,é,©□C,½,Æ,ĭ,ĭ•Ê,ĭftfjfbfg,ĭŽ~•ÊŽq,È,Ç,É,æ,Á,Ä%B,ª,è,Ä,ç,é%oÂ"\□«,ª, ,é }
```

```
program Solve;
```

```
uses SysUtils;
```

```
var
```

```
  C: Exception; { Exception ,Í SysUtils "à,ĭĈ^,Á, ,é }
```

```
begin
```

```
end.
```

Invalid compiler directive: '<Directive>'v04020

—á fRf“fpfCf<fGf%□[f□fbfZ□[fW

□à-¾

,±,lfGf%□[f□fbfZ□[fW,lfRf“fpfCf%Žw—ß,©fRf}f“fhf%ofCf“flfvfVf#f“,ÉfGf%□[.ª, ,é,±,Æ,ð^Ó-¡,µ,Ä,ç,Ü,·□B

^È%□,ì,æ,π,ÉfGf%□[.ª□l,¡,ç,ê,Ü,·□B

- ŠO•“□éĀ¾,ì□\•¶,ª□³,µ,,È,©,Á,½
 - fRf}f“fhf%ofCf“flfvfVf#f“,Ü,½,Í DCC32.CFG ftj@fCf<“à,lfifvfVf#f“,ªfRf“fpfCf% ,É,æ,Á,Ä“FZ¯,³,ê,È,©,Á,½,©-³Āø,¾,Á,½□B,½,Æ,¡,lfXf^fbfN,ì□Ā□-fTfCfY,Í 1024
 - fRf“fpfCf%ª \$XXXXX Žw—
- ß,ðĀÿ□o,µ,½,ª□C,»ê,ð“FŽ¯,Ā,«È,©,Á,½□BfXfyf<,ìĀë,è,¾,Á,½,ÆŽv,í,ê,é
- fRf“fpfCf%ª \$ELSE Žw—ß,Ü,½,Í \$ENDIF Žw—ß,ðĀÿ□o,µ,½,ª□C‘O,É
- \$IFDEF□C\$IFNDEF□C\$IFOPT ,ì,ç,,é,ìŽw—ß,à,È,ç
- {\$IFOPT} ,ìĀë,É switch flfvfVf#f“,Æ□u+□v,Ü,½,Í□u-□v,ª,È,©,Á,½
 - ‘,çĀ`Ž®,lfXfCfbf` Žw—ß,ìĀë,É ON ,Ü,½,Í OFF ,ª,È,©,Á,½
 - □““lfpf%of□□[f^,ð,Æ,éŽw—ß,ìĀë,É—LĀø,È□“‘l,ª,È,©,Á,½
 - \$DESCRIPTION Žw—ß,ìĀë,É•¶Žš—ñ,ª,È,©,Á,½
 - \$APPTYPE Žw—ß,ìĀë,É CONSOLE ,Ü,½,Í GUI ,ª,È,©,Á,½
 - \$ENUMSIZE Žw—ß ('Z,çĀ`Ž®,ì \$Z) ,ìĀë,É 1□C2□C4 ,ì,ç,,é,à,È,©,Á,½

-á04021

```
{ ŽŸ,lfR[fh,í 3 ,Â,ì“TCE^“l,ÈfGf%o[ ,đŽì,μ,Ä,“,èCACEã,ì 2 ,Â,lfGf%o[.lfRf“fpfCf%o,ª $lf ,đ“FŽ~,Â,«,È,©,Á,½,½,ß,É<N,«,½ }
```

```
{ $Description Copyright Borland International 1996 } { <-- ,±,±,ÄfGf%o[ ] }  
program Produce;  
{ $AppType Console } { <-- ,±,±,ÄfGf%o[ ] }
```

```
begin  
{ $If O+ } { <-- ,±,±,ÄfGf%o[ ] }  
  Writeln('Optimizations are ON');  
{ $Else } { <-- ,±,±,ÄfGf%o[ ] }  
  Writeln('Optimizations are OFF');  
{ $Endif } { <-- ,±,±,ÄfGf%o[ ] }  
  Writeln('Hello world!');  
end.
```

```
{ $Description ,É,í^ø—p•,,Á^í,ñ,¾•¶Žš—ñ,ª•K—v,Â, ,èC$AppType ,lfXfyf<,đ³,μ,“ü—  
í,·,é•K—v,ª, ,èCf`fFbfNf!fVfVfj“ ,É,í $IfOpt ,đŽw’è,·,éB,±,ê,ç,ì•íX,ð%Á,ì,ê,lfR[fh,í³,μ,-  
fRf“fpfCf<,Â,«,é }
```

```
{ $Description 'Copyright Borland International 1996' } { •¶Žš—ñ,ª•K—v }  
program Solve;  
{ $AppType Console } { AppType }
```

```
begin  
{ $IfOpt O+ } { IfOpt }  
  Writeln('Optimizations are ON');  
{ $Else } { ,±,ê,Â,æ,ç }  
  Writeln('Optimizations are OFF');  
{ $Endif } { ,±,ê,Â,æ,ç }  
  Writeln('Hello world!');  
end.
```

Bad global symbol definition: '<name>' in object file
'<Filename>'v04022

fRf"fpfCf<fGf%o[fbfZ[fW

à-¾

,±,ìEx,í \$L Žw—ß,Ü,½,í \$LINK Žw—ß,ÅfŠf"fn,μ,½flfufWfFfNfgftf@fCf<,É Pascal ,ì
external Žè'±,«,Æ,μ,ÄéCE¾,¾,è,Ä,ç,È,ç (,½,Æ,í,îC•ï",È,Ç,Æ,μ,ÄéCE¾,¾,è,Ä,ç,é)
fVf"ff{f<,ì'è<',ü,Ä,Ä,ç,é,Æ,«,É•Ží,¾,è,Ü,·B,±,ìè#CflfufWfFfNfg"à,ì'è<,í-¾Ž<,¾,è,Ü,·B

Invalid relocation information v04023

fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

,±,lfGf%o[]f[]bfZ[]fW,íE»ÝŽg,í,ê,Ä,ç,Ü,¹,ñB

uClass or object types only allowed in type section v04024

á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

fNf%oXCE^,Ü,½,ÍfufWfFfNfgCE^,íí,É type fZfNfVf#f“,Å-¾Ž!“I,ÉCE^éCE¾,µ,È,¯,ê,Î,È,è,Ü,¹,ñBfCEfR[]fhCE^,Æ^Ù,È,èC,»ê,ç,ìCE^,É,Í-¼‘O,ª•K—v,Å,·B-¾Ž!“I,ÈCE^éCE¾,ª•K—v,ÈŽâ,È—R,íCCE^-¾,ª,È,ç,½,ß,É,»ìCE^,íf[]\fbfh,ðéCE¾,Å,«,,È,,È,é,©,ç,Å,·B

-á04025

{ ŽŸ, ĺfR[]fh, í•ï[]"éCE¾, ì't, ÅfNf%ofXCE^, ð[]éCE¾, µ, æ, x, Æ, µ, Ä, ", è[]C^á-@, Å, , é }

program Produce;

var

MyClass: **class**
Field: Integer;
end;

begin

end.

{ 'P, É, » , ĺfNf%ofXCE^, ìCE^[]éCE¾, ð"±"ü, ·, ê, î%øðCE^, ·, é[]B, , é, ç, í[]CfNf
%ofXCE^, ðfCEfR[]fhCE^, Ö•ï[]X, µ, Ä, à, æ, ç }

program Solve;

type

TMyClass = **class**
Field: Integer;
end;

var

MyClass: TMyClass;

begin

end.

Local class or object types not allowed v04026

á Rf“fpfCf<fGf%o[fbfZ[fW

à-¾

Nf%fX,ÆfifufWfFfNfg,Í[fj<,É,ÍéE¾,Å,«,Ü,¹,ñB

—á04027

```
{ MyProc ,ÍfNf%ofXCE^,ðf□□[fjfk<,É□éCE¾,μ,æ,π,Æ,μ,Ä,¨,è□C^á-@,Å, ,é }
```

```
program Produce;
```

```
procedure MyProc;
```

```
type
```

```
  TMyClass = class
```

```
    Field: Integer;
```

```
  end;
```

```
begin
```

```
{ ... }
```

```
end;
```

```
begin
```

```
end.
```

```
{ 'P,É,»,)ÍfNf%ofXCE^,Ü,½,ÍfÍfufWfFfNfgCE^,ì□éCE¾,ðfOf□□[fof<fXfR□[fv,Ö^Ú“®,.,ê,Î  
%oðCE^,.,é }
```

```
program Solve;
```

```
type
```

```
  TMyClass = class
```

```
    Field: Integer;
```

```
  end;
```

```
procedure MyProc;
```

```
begin
```

```
{ ... }
```

```
end;
```

```
begin
```

```
end.
```

Virtual constructors are not allowed v04028

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

fNf%oXCE^,Æ^Ù,È,è[CflufWfFfNfgCE^,Í“IfRf“fXfgf%ofNf^,¾, ¯,øŽ,Ä,Ü,·B

Left side cannot be assigned to v04031

á fRf"fpfCf<fGf%o[fbfZ[fW

à-¾

,±,lfGf%o[fbfZ[fW,í'è" C'è"fpf%of[f^CŠÖ",ì-ß,è'l,ì,æ,α,È"Ç,Ýo,μê—
pflfufWfFfNfg,ð•ïX,μ,æ,α,Æ,μ,½,Æ,«,É•Ž!,³,ê,Ü,·B

-á04032

```
{ ŽŸ, ĺfR[fh, ĺ'è"fpf  
%of[f^C'è"CSÖ"CEÄ, Ńo, μ, ĺCE<%E, Ö'ă"ü, đŽÀ[s, , éB, » , ê, ç, ĺ'€i, ĺ, ·, x, Ä^á-@, Å, , é }
```

program Produce;

const

C = 1;

procedure P(const S: string);

begin

S := 'changed'; { <-- , ±, ±, ĺfGf%o[f]fbfZ[fW } }

end;

function F: PChar;

begin

F := 'Hello'; { , ±, ê, ĺ, æ, çB-ß, è'l, đŸ'è, μ, Ä, ç, é }

end;

begin

C := 2; { <-- , ±, ±, ĺfGf%o[f]fbfZ[fW } }

F := 'h'; { <-- , ±, ±, ĺfGf%o[f]fbfZ[fW } }

end.

```
{ , ±, ĺŽi, ĺ-â'è, ĺ%đCE^-@, ĺ 2 , Å, , éB'ă"üœ, ĺ'è< , đ'ă"ü%Ä"\, É•iX, , é•û-  
@, Æ'ă"ü, đŸíœ, , é•û-@, Å, , é }
```

program Solve;

var

C: Integer = 1; { []%Šú%»i, Ÿ•i" , đŽg, x }

procedure P(var S: string);

begin

S := 'changed'; { •i"fpf%of[f^, đŽg, x }

end;

function F: PChar;

begin

F := 'Hello'; { , ±, ê, ĺ, æ, çB-ß, è'l, đŸ'è, μ, Ä, ç, é }

end;

begin

C := 2;

F^ := 'h'; { , ±, ê, ĺfRf"fpfCf<, Å, «, é, đŽÀ[sŽž, ÉfNf%ofbfVf..., , é }

end.

**Unsatisfied forward or external declaration:
'<Procedurename>'v04033**

á fRf"fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfGf%o[f]fbfZ[fW,lfNf%ofXCE^,âlfufWfFfNfgCE^,l't,ÉŽè'±,«,âŠÖ",l forward
éCE¾,Ü,½,í external éCE¾,a, ,é,©Cf[f]fbfh,l éCE¾,a, ,é,É,à,©,©,í,ç, C,»,lŽè'±
,«CŠÖ" C[f]fbfh,a,ç,±,É,à'è'³,ê,Ä,ç,È,ç,Æ,«,É•Žl,³,ê,Ü,·BŽÀÜ,É'è'³,CE‡—Ž,μ,Ä,ç
,é,©C'è'¼,lfXfyf<,ŠÖ^á,Ä,Ä,ç,é%oÄ"\«,a, ,è,Ü,·B

ffjfbfg,lfCf" f^ [ftfF[fX•",Å,lŽè'±,«éCE¾,Ü,½,ÍŠÖ" éCE¾,Í forward
éCE¾,Æ"~,¶,Å,·BŽÀCE»•",ÉŽÀCE» (Žè'±,«,Ü,½,ÍŠÖ",l-{ 'i) ,ð—^,!,È,~,é,î,È,è,Ü,¹,ñB"~—
l,ÉCfNf%ofXCE^,Ü,½,lfufWfFfNfgCE^,l't,Å,lf[f]fbfh éCE¾,à forward éCE¾,Æ"~,¶,Å,·B

—á04034

```
{ ŽŸ, Ì Sum, Ì'è<` , Å, ÍŠÈ'P, Éf^fCfyf~fX, áĒ©, Â, ©, é, áC□"□ç□s, É<y, ÔŽÀ□Ů, ÌfR□[fh, Å, Í forward  
□éĒ¾, ÆŽè'±, «'è<` , Ìæ•É, á, ±, Ì, æ, α, É-¾Šm, Å, É, ç□ê□†, á, , é }
```

program Produce;

type

```
  TMyClass = class  
    constructor Create;  
  end;
```

function Sum(**const** A: **array of** Double): Double; **forward;**

function Summ(**const** A: **array of** Double): Double;

var

```
  I: Integer;
```

begin

```
  Result := 0.0;
```

```
  for I:= 0 to High(A) do
```

```
    Result := Result + A[I];
```

end;

begin

end.

```
{ ,μ, ½, á, Á, Ä□C, ·, x, Ä, ÌŽè'±, «□CŠÖ□"□Cf□f□fbfh, Ì'è<` , á'¶□Ÿ, ·, é, ±, Æ, ðŠm" F, μ□CfXfyf<, ð□³, μ, "ü  
—Í, ·, é•K—v, á, , é }
```

program Solve;

type

```
  TMyClass = class  
    constructor Create;  
  end;
```

constructor TMyClass.Create;

begin

end;

function Sum(**const** A: **array of** Double): Double; **forward;**

function Sum(**const** A: **array of** Double): Double;

var

```
  I: Integer;
```

begin

```
  Result := 0.0;
```

```
  for I:= 0 to High(A) do
```

```
    Result := Result + A[I];
```

end;

begin

end.

Missing operator or semicolon

ŽQ Ā —á fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfGf%o[f]fbfZ[fW,Í 2 ,Â,ì•”•āŽ®,ìŠÔ,É%o%oŽŽŽq,ª,È,çê±,©C2
,Â,ì•¶,ìŠÔ,ÉfZf~fRf[f“ ,ª,È,çê±,É•\Ž,³,ê,Ü,·B'½,,ìê±C'O,ìs,ÅfZf~fRf[f“ ,ªE±—Ž,µ,Ä,ç
,Ü,·B

-á04036

{ ŽŸ, ðR[fh, Å, íÅ%o, ð•¶, Éu+ v%o%oŽŽŽq, ÆfZf~fRf[f“, ðE‡-Ž, Æ, ç, x 2, Â, ðGf %o[.ª, , éBÅ%o, ðGf%o[.Í, »), ð•¶, É, Â, ç, Ä•ñ%o, ³, êC2 "Ô-Ú, ðGf%o[.ÍŽŸ, ðs, É, Â, ç , Ä•ñ%o, ³, ê, é }

program Produce;

var

I: Integer;

begin

I := 1 2 { <-- , ±, ±, ÅfGf%o[f[fbfZ[fW }

if I = 3 **then** { <-- , ±, ±, ÅfGf%o[f[fbfZ[fW }

Writeln('Fine')

end.

{ •K-v, È%o%oŽŽŽq, ÆfZf~fRf[f“, ð•K, .•t, -, ê, î%oðCE^, ., é }

program Solve;

var

I: Integer;

begin

I := 1 + 2; { u+ v%o%oŽŽŽq, ÆfZf~fRf[f“,ª, È, ©, Á, ½ }

if I = 3 **then**

Writeln('Fine')

end.

ŽQÆ04037
•i••••

Unicode incompatible types v04038

á Rf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfGf%o[f]fbfZ[fW,lfRf“fpfCf%o,²,Â,ìCE^,É—v<³,ê,½CEÝŠ·«,Ž,Ä,È,©,Á,½,Æ,«,É·\
Ž,³,ê,Ü,·B,±,lfGf%o[í,³,Ü,´,Ü,Èê‡,É”¶,μ,Ü,·B,½,Æ,í,îCfvf]pfefB“à,ì **read** ¶,©
write ¶,ÁŽw’è,μ,½f]fbfh,lfpf
%o[f]f^fŠfXfg,³,»],fvf]pfefB,É“K‡,μ,È,çê‡,âC•W€Žè’±,«,Ü,½,í•W€ŠÖ”,Ö,lfpf
%o[f]f^,ìCE^,²CEè,Á,Ä,ç,éê‡,È,Ç,Ä,·B

—á04039

{ •W□€ŠÖ□" Hi ,É,Í□@□"CE^,Ü,½,Íf□□[fhCE^,í^ø□",ª•K—v,¾,ª□C,±,±,Å,í"z—
ñCE^,í^ø□",ðŽw'è,µ,½ }

program Produce;

var

A: **array**[0..9] **of** Char;

I: Integer;

begin

I:= Hi(A);

end.

{ -{"-,Í Hi ,Å,È,•W□€ŠÖ□" High ,ðŽg,ª,Å,à,è,¾,Á,½ }

program Solve;

var

A: **array**[0..9] **of** Char;

I: Integer;

begin

I:= High(A);

end.

Missing parameter type v04040

á fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,lfpf%of[]f^fšfXfg,Å'lfpf%of[]f^,ÉCE^,đŽw'è,μ,È,©,Á,½,Æ,«,É•\
Ž,³,ê,Ü,·BCE^,đ[]È—ª,Å,«,é,ì,í'è“fpf%of[]f^,Æ•ï“fpf%of[]f^,Å,·B

—á04041

```
{ Žè'±,« P ,É 2 ,Â,ì@''fpf%of[]f^,đŽ[],½,¹,æ,ɣ,Æ,μ,½,³C'æ 1 fpf%of[]f^,ìEä,Éfj''f}
,Â,Í,È,fZf~fRf[]f'',đ•t,~,½[]BŠÖ[]" ComputeHash ,ÍE^,ì,È,ç'æ 1 fpf
%of[]f^,đŽ[],Â,Æ,Ý,È,³,è,½,³CCE^,È,μfpf%of[]f^,í•ï''fpf%of[]f^,©'è''fpf
%of[]f^,Â,È,~,è,Í,È,ç,[]C'lfpf%of[]f^,Â, ,Á,Ä,Í,È,ç,È,ç }
```

program Produce;

```
procedure P(I;J: Integer); { <-- ,±,±,ÄfGf%o[]f[]fbfZ[]fW }
begin
end;
```

```
function ComputeHash(Buffer; Size: Integer): Integer; { <-- ,±,±,ÄfGf
%o[]f[]fbfZ[]fW }
begin
end;
```

```
begin
end.
```

```
{ ,±,ì—á,Â,Í P ,ìfpf%of[]f^fŠfXfg,ÄE^,đ[]C[]³,μ[]CComputeHash ,Ö,ì Buffer fpf
%of[]f^,đ'è''fpf%of[]f^,Æ,μ,Ä[]éCE¾,μ,Ä%ðCE^,μ,½[]BBuffer fpf
%of[]f^,đ[]C[]³,·,é,Ä,à,è,Í,È,ç,½,ß,Ä, ,é }
```

program Solve;

```
procedure P(I, J: Integer);
begin
end;
```

```
function ComputeHash(const Buffer; Size: Integer): Integer;
begin
end;
```

```
begin
end.
```

**Illegal reference to symbol '<name>' in object file
'<Filename>' v04042**

fRf"fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfGf%o[f]fbfZ[fW,í **\$L** Žw—β,Ü,½,í **\$LINK** Žw—
β,Åf[fh,μ,½fIfufWfFfNfgftf@fCf<,ÉCŽè'±
,«CŠÖ" C•i" CCE^•t,«'è" CfXfCfEfbfhf[f]f<•i",ì,ç,,.ê,À,à,È,ç Pascal
fVf"ff{f<,Ö,İŽQÆ,ª"ü,Á,Ä,ç,éê£,É•\Ž!,³,ê,Ü,·B

Line too long (more than 255 characters) v04043

fRf“fpfCf<fGf%o[f fbfZ[fW

à-¾

,±,lfGf%o[f fbfZ[fW,Í\ [fXftf@fCf<“à,Å 1 s,ì‘,¾ 255 •ŕŽš,đ‘,|,Ä,ç,é,Æ,«,É•\

Ž,¾,ê,Û,·B’ÉíC’,çs,Í 2 ,Â,ì’Z,çs,É•š,,Å,«,Û,·B

‘,ç•ŕŽš—ñ’è”,¾-{-,É•K—v,Éêš,É,íC,»,ì’è”,đ~A’±,µ,½•j”,ìs,É•¾, C u+ v%

%oŽŽŽq,Å~ACE<,Å,«,Û,·B

Unknown directive: '<Directive>'v04044

á fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,Ížè‘±,«,Ü,½,ÍŠÖ”,l[]éÉ¾,ì†,ÅfRf“fpfCf%o,ª-ç’è<`,lžw=
š,ðÉÿ[]o,µ,½,Æ,«,É•ž|,³,ê,Ü,·Bžw—β,lfXfyf<,ªŠô^á,Á,Ä,ç,é,©[]CfZf~fRf[]f“,ªÉ‡—ž,µ,Ä,ç
,é,Æžv,í,ê,Ü,·B

-á04045

{ P, ìéÉ¾, ì†, ÅÉÄ, Ñ□o, µ<K-ñ, ìfXfyf<, ãŠÔ^á, Á, Ä, ç, é□BQ, /Æ GetLastError
, ìéÉ¾, ì†, ÈfZf~fRf□f“, ã, È, ç }

program Produce;

procedure P; stcall;
begin
end;

procedure Q **forward;**

function GetLastError: Integer **external** 'kernel32.dll';

begin
end.

{ Žw—ß, ìfXfyf<, ð□³, µ, “ü—Í, µ□C•K—v, ÈfZf~fRf□f“, ð•K, , •t, ¯, ê, Î%oðÉ^, ;, é }

program Solve;

procedure P; stdcall;
begin
end;

procedure Q; **forward;**

function GetLastError: Integer; **external** 'kernel32.dll';

procedure Q;
begin
end.

begin
end.

uThis type cannot be initializedv04046

—á fRf“fpfCf<fGf%o[f fbfZ[fW

à-¾

ftf@fCf<CE^,ÆfofŠfAf“fgCE^,Í%Šú%»„Å,«,Ü,¹,ňB,Â,Ü,èC,»,ê,ç,ìCE^,ìCE^•t,«'è“,â%Šú%»i,Ý•i“,íéCE¾,Å,«,Ü,¹,ňB

f f, <CEfo[fWf+f“,ì Delphi ,â Borland Pascal ,Æ,ìCEÝŠ•«,ì,½,ßCObject Pascal
,ìCE^•t,«'è“,Ö,ì'ã“ü,ª,Å,«,éfRf“fpfCf%Žw—ß,ðfTf| [fg,µ,Ä,ç,Ü,·B',«ž,Ý%Â\
,ÈCE^•t,«'è“,ðŽg—p%Â“\,É,·,é,É,íC\$] Žw—ß,ð { \$J+ } ,Ü,½,í
{ \$WRITEABLECONSTS ON } ,ÉÝ'è,µ,Ü,·B

—á04047

{ ŽŸ,lfR□[fh,lfofŠfAf“fgCE^,ì□%Šú%»□İ,Ÿ•İ□”,đ□éCE^{3/4},μ,æ,κ,Æ,μ,Ä,“,è□C^á-@,Å, ,é }

program Produce;

var

V: Variant = 0;

begin

end.

{ 'P,É'Ê□í,ì•İ□”,đ'ã“ü•¶,Å□%Šú%»:,ê,İ%đCE^:,é }

program Solve;

var

V: Variant;

begin

V := 0;

end.

Number of elements differs from declaration

á Rf“fpfCf<fGf%o[fbfZ[fW

à-¾

,±,lfGf%o[fbfZ[fW,Í”z—ñCE^,ìCE^•t,«’è”,Ü,½,í%Šú
%o»[.Ý•i”,ðéCE¾,µ,Ä“KØ,È”,ì—v’f,ðŽw’è,µ,È,©,Á,½,Æ,«,É•\Ž|,³,ê,Ü,·B

Label already defined: '<Labelname>'v04050

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

,±,lfGf%o[fbfZ[fW,í•i“,ì•¶,É““,¶f%ofxf<,ðY’è,µ,½,Æ,«,É•Ž|,³,ê,Ü,·B

-á04051

{ ŽŸ, ĺfR, ĺfh, ĺf%ofxf< 1 ,đ 2 %oñ, ĺŸ'è, μ, æ, α, Æ, μ, Ä, ç, é }

program Produce;

label 1;

begin

1:

goto 1;

1: { <-- , ±, ±, ÅfGf%o[f[fbfZ[fW }

end.

{ , , x, Ä, ĺf%ofxf<, đ³Šm, É 1 %oñ, ¾, ĺŸ'è, , é }

program Solve;

label 1;

begin

1:

goto 1;

end.

Label declared and referenced, but not set: '<label>' v04052

á Rf“fpfCf<fGf%o[fbfZ[fW

à-¾

fvfOf%of€,ì†,Á%oofxf<,ðéÉ¾,μ,ĂŽg,ç,Ü,μ,½,ªCf\ [fXfR [fh“à,Áf
%oofxf<'è<`,ªCEŸo,³,ê,Ü,¹,ñ,Á,μ,½B

-á04053

{ f%ofxf< 10 ,đŽè'±,« Labeled ,ì†,Á□éĈ³/₄,μ,ÄŽg,Á,½,^a□CfRf“fpfCf%o,^a,»,ìf
%ofxf<,ì'è<` ,đĈËŸ□o,Á,«,È,ç }

program Produce;

procedure Labeled;

label 10;

begin

goto 10;

end;

begin

end.

{ □éĈ³/₄,μ,ÄŽg,Á,Ä,ç,éf%ofxf<,ì'è<` ,đ•K,„fvf□fOf%of€,ì“` ,¶fXfR□[fv“à,É'u,¯,î-â'è,ÍŠÈ'P,É
%ođĈĖ^,·,é }

program Produce;

procedure Labeled;

label 10;

begin

goto 10;

 10:

end;

begin

end.

uThis form of method call only allowed in methods of derived typesv04054

á fRf“fpfCf&fGf%o[fbfZ[fW

à-¾

,±,lfGf%o[fbfZ[fW,Í[ã^Ê,ìCE^,lfvfbfh,ðCEÄ,Ñ[o,»,x,Æ,μ,½,Æ,«,ÉCŽÀÛ,É,Íf\Fbfh,ì†,É,ç,È,çê‡,É•\Ž!,³,é,Ü,·B

—á04055

```
{ ŽŸ,lfR[fh,ÍŽè'±,« Create ,l't,ÁĈep³fRf“fXfgf%ofNf^ ,ðĈEÄ,Ño,»,x,Æ,μ,Ä,ç,é,ªĈCCreate  
,lf\fbfh,Á,Í,È,ç }
```

```
program Produce;
```

```
type
```

```
  TMyClass = class  
    constructor Create;  
  end;
```

```
procedure Create;
```

```
begin
```

```
  inherited Create; { <-- ,±,±,ÁfGf%o[f\fbfZ[fW }
```

```
end;
```

```
begin
```

```
end.
```

```
{ ,±,|ĈE`Ž@,|ĈEÄ,Ño,μ,ðŽg,x,Æ,«,Í•K,ŽÄŮ,Éf\fbfh,l't,É,ç,é,æ,x,É,·,é }
```

```
program Solve;
```

```
type
```

```
  TMyClass = class  
    constructor Create;  
  end;
```

```
constructor TMyclass.Create;
```

```
begin
```

```
  inherited Create;
```

```
end;
```

```
begin
```

```
end.
```

uThis form of method call only allowed for class methodsv04056

á fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

fCf“fXf^f“fX,Å,È,fNf%oofXCE^,ðŽw’è,·,é,¾,¯,Å’Êí,ìf[f]fbfh,ðCEÄ,Ño,»,x
,Æ,µ,Û,µ,½B,»,è,ª,Å,«,é,ì,ìfNf%oofXf[f]fbfh,ÆfRf“fXfgf%oofNf^,ìèf,¾,¯,ÅC’Êí,ìf[f]
fbfh,ÆfffXfgf%ofNf^,ìèf,í,Å,«,Û,¹,ñB

—á04057

```
{ ŽŸ,İfR[]fh,Í TMyClass Ą^,»,)à,ì,đ”pŠü,μ,æ,π,Æ,μ,Ä,č,é }
```

```
program Produce;
```

```
type
```

```
  TMyClass = class  
    { ... }  
  end;
```

```
var
```

```
  MyClass: TMyClass;
```

```
begin
```

```
  MyClass := TMyClass.Create; { ,±,ê,Å,æ,č[]BfRf“fXfgf%ofNf^ }  
  Writeln(TMyClass.ClassName); { ,±,ê,Å,æ,č[]BfNf%ofXf[]\fbfh }  
  MyClass.Destroy; { <-- ,±,±,ÅfGf%o[]f[]bfZ[]fW }
```

```
end.
```

```
{ ŽÀ[]Ů,É,ÍĄ^,»,)à,ì,Å,È,Ą^,İfCf“fXf^f“fX,đ”pŠü,μ,È,,Ä,Í,È,č,È,č }
```

```
program Solve;
```

```
type
```

```
  TMyClass = class  
    { ... }  
  end;
```

```
var
```

```
  MyClass: TMyClass;
```

```
begin
```

```
  MyClass := TMyClass.Create; { ,±,ê,Å,æ,č[]BfRf“fXfgf%ofNf^ }  
  Writeln(TMyClass.ClassName); { ,±,ê,Å,æ,č[]BfNf%ofXf[]\fbfh }  
  MyClass.Destroy; { ,±,ê,Å,æ,č[]BfCf“fXf^f“fX,É’í,μ,ÄĄÄ,Ň[]o,³,ê,é }
```

```
end.
```

Uncompatible types: <text>v04058

ŽQÆ —á fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

Žè'±,«,ìéĚ¾,ÆŽg,ç•û,ĪŒ,É^á,ç,ª, ,è,Û,μ,½B

—á04059

```
{ ProcedureParm0 Ć^,ª stdcall Žè'±,«,đŠú'Ò,μ,Ä,ϕ,é,É,à,©,©,í,ç,, Ćregister ĆÄ,Ñ□o,μ<K-  
ñ,đŽg,Á,Ä WrongConvention ,đ□éĆ¾4,μ,½,½,β□CTakesParm0 ,đĆÄ,Ñ□o,·,ÆfGf  
%o□[,É,É,é□B"~—l,É□CTakesParm1 ,lĆÄ,Ñ□o,μ,lfpj%of□□[f^fŠfXfg,l•s^è'v,É,æ,Á,ÄŽ,"s,·,é }
```

```
program Produce;
```

```
type
```

```
ProcedureParm0 = procedure; stdcall;  
ProcedureParm1 = procedure(var X: Integer);
```

```
procedure WrongConvention; register;
```

```
begin  
end;
```

```
procedure WrongParams(x, y, z: Integer);
```

```
begin  
end;
```

```
procedure TakesParm0(p: ProcedureParm0);
```

```
begin  
end;
```

```
procedure TakesParm1(p: ProcedureParm1);
```

```
begin  
end;
```

```
begin
```

```
TakesParm0(WrongConvention);  
TakesParm1(WrongParams);
```

```
end.
```

```
{ ,±,ì 2 ,Â,ì-â'è,í'P,ÉĆÄ,Ñ□o,μ<K-ñ,Ü,½,lfpj%of□□[f^fŠfXfg,đ□éĆ¾4,É^è'v,³,¹,é,î,ç,ì,ç,à  
%ođĆ^,·,é }
```

```
program Solve;
```

```
type
```

```
ProcedureParm0 = procedure; stdcall;  
ProcedureParm1 = procedure(var X: Integer);
```

```
procedure RightConvention; stdcall;
```

```
begin  
end;
```

```
procedure RightParams(var X: Integer);
```

```
begin  
end;
```

```
procedure TakesParm0(p: ProcedureParm0);
```

```
begin  
end;
```

```
procedure TakesParm1 (p: ProcedureParm1);  
begin  
end;  
  
begin  
  TakesParm0 (RightConvention);  
  TakesParm1 (RightParms);  
end.
```

ŽQÆ04060

Žè'±,«Æ^

ÆÄ.Ñ□o,μ<K-ñ

Variable '<name>' might not have been initialized

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

,±,ìĈx,Í,l,ª’ã“ü,³,ê,Ä,ç,È,ç•ï”,ðŽg,“,x,Æ,μ,½,ê‡,É•\Ž|,³,ê,Ü,·B

—á04062

```
{ if •¶,Á,Í—¼•û,ì•šò,Á•ï" ,É'í,á"ü,³,ê,é,æ,æ,É,µ,È,¯,ê,Î,È,ç,È,çBcase
•¶,Á,Í|,|,ç,ê,é,·,×,Ä,ìê¶,É•K,·•ï",Ö'í,á"ü,³,ê,é,æ,æCelse •",ð'Ç%oÁ,·,é•K—
v,ª, ,éBtry-except ¶'ç,ìê¶Ctry •",Á,í"ü,íC,»,"í"ü,ª try •",ì-`"ª,É, ,Á,Ä—
áŠO,ð¶¶—,·,é,ÆŽv,í,ê,È,ç,Ù,Ç'P¶f,Á, ,Á,Ä,àCŽÄÜ,É,í"ü,ªŽÀs,³,ê,È,ç%oÁ"¶«,ª, ,é,Æ,Ý,
È,³,ê,é }
```

```
program Produce;
```

```
{ $WARNINGS ON }
```

```
var
```

```
  B: Boolean;
```

```
  C: (Red, Green, Blue);
```

```
procedure Simple;
```

```
var
```

```
  I: Integer;
```

```
begin
```

```
  Writeln(I); { <-- ,±,±,ÄÇx¶¶ }
```

```
end;
```

```
procedure IfStatement;
```

```
var
```

```
  I: Integer;
```

```
begin
```

```
  if B then
```

```
    I := 42;
```

```
  Writeln(I); { <-- ,±,±,ÄÇx¶¶ }
```

```
end;
```

```
procedure CaseStatement;
```

```
var
```

```
  I: Integer;
```

```
begin
```

```
  case C of
```

```
    Red..Blue: I := 42;
```

```
  end;
```

```
  Writeln(I); { <-- ,±,±,ÄÇx¶¶ }
```

```
end;
```

```
procedure TryStatement;
```

```
var
```

```
  I: Integer;
```

```
begin
```

```
  try
```

```
    I := 42;
```

```
  except
```

```
    Writeln('Should not get here!');
```

```
  end;
```

```
  Writeln(I); { <-- ,±,±,ÄÇx¶¶ }
```

```
end;
```

```

begin
  B := False;
end.

{ 'ä"ü,ä☒—Ž,μ,Ä,ϕ,½fR[]fhfjX,Ö'ä"ü,ð'Ç%oÁ,·,é,©[]C[]ð☒[]•¶,â try-except []\ϕ
,l'O,É'ä"ü,ð'Ç%oÁ,·,é,l%oð☒^,·,é }

program Solve;
{$WARNINGS ON}
var
  B: Boolean;
  C: (Red,Green,Blue);

procedure Simple;
var
  I: Integer;
begin
  I := 42;
  Writeln(I);
end;

procedure IfStatement;
var
  I: Integer;
begin
  if B then
    I := 42
  else
    I := 0;
  Writeln(I); { else •",Å I ,Ö,l'ä"ü,ä•K—v }
end;

procedure CaseStatement;
var
  I: Integer;
begin
  case C of
    Red..Blue: I := 42;
  else
    I := 0;
  end;
  Writeln(I); { else •",Å I ,Ö,l'ä"ü,ä•K—v }
end;

procedure TryStatement;
var
  I: Integer;
begin
  I := 0;
  try
    I := 42;
  except

```

```
    Writeln('Should not get here!');  
  end;  
  Writeln(I); { try ,l'O,Å I ,Ö,l'ä"ü,a•K—v }  
end;  
  
begin  
  B := False;  
end.
```

Value assigned to '<name>' never used

á fRf“fpfCf<fGf%“[f]fbfZ[fW

à-¾

fRf“fpfCf%“í•ï“,Ö“ã“ü,μ,½,l,žg,í,ê,Ä,ç,È,çêê±,É,±,lfqf“fgf]fbfZ[fW,ð•\Ž!,μ,Ü,·BÄ“K
%“»„žg—p%“Ä“\,ÉY“è,³,ê,Ä,ç,éêê±C,»„l“ã“ü,ííœ,³,ê,Ü,·B,»„l“ï“,ð,Ç,±,É,àžg,Á,Ä,ç
,È,©,Á,½,èžg,π‘O,ÉÄ“ã“ü,μ,Ä,ç,é,ÆC,±,lf]fbfZ[fW,ð•\Ž!,³,ê,éêê±,³,è,Ü,·B
,±,lfqf“fgf]fbfZ[fW,lfvf]fOf%“f€,ìœë,è,ðŽ!,μ,Ä,ç,é,ì,Ä,í,È,]C‘P,É•s•K—v,È“ã“ü,³,é,Æ,ç
,xfRf“fpfCf%“,l”»‘f,ð^Ó-i,μ,Ä,ç,Ü,·B‘Êí,í,»„l“ã“ü,ð‘P,Éíœ,Ä,«Cíœ,μ,È,Ä,àÄ“K
%“»„ðf]f“,É,μ,ÄfRf“fpfCf<·,é,ÆfRf“fpfCf<Eã,lfR[fh,É,í‘g,Ýž,Ü,ê,Ü,¹,ñB,½,¾,μCœë,Á,½•í
“,Ö“ã“ü,μ,½êê±C,½,Æ,í,Í,Ö“ã“ü,·,é,Ä,à,è,Ä l ,Ö“ã“ü,μ,½êê±,È,Ç,É,í-â“è,³<N,«„é,±
,Æ,³,è,Ü,·B,μ,½,³,Á,ÄC-â“è,ì,è,»„π,È“ã“ü,í‘^Ó[,’²,x,é%“l,³,è,Ü,·B

—á04064

```

{ Žè'±,« Propagate ,ì't,ÅfRf"fpfCf%o,í•í" I ,ª while f<[fv,ìCEã,ÅŽg,í,ê,Ä,ç,È,ç,ì,Å□CI ,ð
while "à,ÅfCf"fnfŠf"fg,·,é•K—v,í,È,ç,Æ"FŽ~,μ□C,μ,½,ª,Á,Ä,»),ìfCf"fnfŠf"fg,Æ while
f<[fv,ì'O,ì'ã"ü,à•s•K—v,Å, ,é,Æ"FŽ~,·,é□BŽè'±,« TryFinally ,Å,í try-finally □\ç,ì'O,É, ,é I
,Ö,ì'ã"ü,í•K—v,È,ç□B—áŠO,ª"□¶,μ,½□ê□#□C□ÅCEã,ì Writeln •¶,íŽÀ□s,³,ê,È,ç,ì,Å I ,ì'l,í^Ó-
j,ª,È,ç□B—áŠO,ª"□¶,μ,È,©,Á,½□ê□#□CWriteln •¶,Á•\Ž!,³,ê,é I ,ì'l,íí,É 42
,Å, ,é□B,μ,½,ª,Á,Ä□Å□%o,ì'ã"ü,í,±,ìŽè'±,«,ì" @□ì,ð•í□X,μ,È,ç,ì,Å□í□œ,Å,«,é }

```

```

program Produce;
{$HINTS ON}

```

```

procedure Simple;

```

```

var

```

```

  I: Integer;

```

```

begin

```

```

  I := 42; { <-- ,±,±,Åfqf"fgf□fbfZ□[fW }

```

```

end;

```

```

procedure Propagate;

```

```

var

```

```

  I: Integer;

```

```

  K: Integer;

```

```

begin

```

```

  I := 0; { <-- ,±,±,Åfqf"fgf□fbfZ□[fW }

```

```

  Inc(I); { <-- ,±,±,Åfqf"fgf□fbfZ□[fW }

```

```

  K := 42;

```

```

  while K > 0 do

```

```

    begin

```

```

      if Odd(K) then

```

```

        Inc(I); { <-- ,±,±,Åfqf"fgf□fbfZ□[fW }

```

```

        Dec(K);

```

```

      end;

```

```

end;

```

```

procedure TryFinally;

```

```

var

```

```

  I: Integer;

```

```

begin

```

```

  I := 0; { <-- ,±,±,Åfqf"fgf□fbfZ□[fW }

```

```

  try

```

```

    I := 42;

```

```

  finally

```

```

    Writeln('Reached finally');

```

```

  end;

```

```

  Writeln(I); { □í,É 42 ,ð□o—í,·,é□B—áŠO,ª"□¶,μ,½□ê□#,í,±,±,Ö"Ž'B,μ,È,ç }

```

```

end;

```

```

begin

```

```

end.

```

Return value of function '<Functionname>' might be undefined

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

,±,ìĒx,í^ê•”,ìfR[fhfjpfX,ÅŠÖ”,ì-β,è'l,Ö'l,ǎ“ü,³,ê,È,©,Á,½ê‡,É•\
Ž!,³,ê,Ü,·BĒ¾,çŠ,!,ê,îĈŠÖ”,đŽÀs,μ,Ä,à-β,è'l,Ö%½,à'l,đ’ă“ü,³,ê,È,ç%oÂ“\«,è,Ü,·B

—á04066

```
{ Žè'±,« IfStatement ,Æ CaseStatement ,ì-  
â'è" _,"í^ê•",ìfR□[fhfjpfX,ÅÆ<%oÊ,Ö'l,â'ã"ü,³,ê,È,ç" _,"Å, ,é□BTryStatement ,Å,í□CfRf"fpfCf%o,í  
Result ,Ö'l,â'ã"ü,³,ê,é'O,É—áŠO,â"□¶,·,é%oÅ"^\□<,â, ,é,Æ,Ý,È,· }
```

```
program Produce;
```

```
{ $WARNINGS ON }
```

```
var
```

```
  B: Boolean;
```

```
  C: (Red, Green, Blue);
```

```
function Simple: Integer;
```

```
begin
```

```
end; { <-- ,±,±,ÅÆx□□ }
```

```
function IfStatement: Integer;
```

```
begin
```

```
  if B then
```

```
    Result := 42;
```

```
end; { <-- ,±,±,ÅÆx□□ }
```

```
function CaseStatement: Integer;
```

```
begin
```

```
  case C of
```

```
    Red..Blue: Result := 42;
```

```
  end;
```

```
end; { <-- ,±,±,ÅÆx□□ }
```

```
function TryStatement: Integer;
```

```
begin
```

```
  try
```

```
    Result := 42;
```

```
  except
```

```
    Writeln('Should not get here!');
```

```
  end;
```

```
end; { <-- ,±,±,ÅÆx□□ }
```

```
begin
```

```
  B := False;
```

```
end.
```

```
{ □,!,ç,ê,é,·,×,Ä,ìfR□[fhfjpfX,ÅÆ<%oÊ,ì"ï□",Ö'l,â'ã"ü,³,ê,é,æ,π,É,·,ê,î%oðÆ^,·,é }
```

```
program Solve;
```

```
{ $WARNINGS ON }
```

```
var
```

```
  B: Boolean;
```

```
  C: (Red, Green, Blue);
```

```
function Simple: Integer;
```

```
begin
```

```
  Result := 42;
```

```
end;

function IfStatement: Integer;
begin
  if B then
    Result := 42
  else
    Result := 0;
  end;
end;

function CaseStatement: Integer;
begin
  case C of
    Red..Blue: Result := 42;
  else Result := 0;
  end;
end;

function TryStatement: Integer;
begin
  Result := 0;
  try
    Result := 42;
  except
    Writeln('Should not get here!');
  end;
end;

begin
  B := False;
end.
```


Procedure FAIL only allowed in constructor v04067

fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

•W€Žè'±,« Fail ,ÍRf“fXfgf%ofNf^,ì†,©,ç,¾,“CEÄ,Ño,¹,Ü,·B,»,ê^ÈŠO,ìCEÄ,Ño,µ,í^á-
©,Å,·B

Procedure NEW needs constructor v04068

á fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,í New ,Ö,lfpf%of[]f^fŠfXfg,ì†,ÅŽw'è,μ,½Ž⁻•ÊŽq,^afRf“fXfgf
%ofNf^,Å,È,ç,Æ,«,É•\Ž,³,ê,Ü,·B

—á04069

{ •s'□^Ó, ©, çfRf“fXfgf%oofNf^, Å, È, fffXfgf%oofNf^, ðŽw'è, μ, Ä New , ðĒÄ, Ñ□o, μ, ½ }

program Produce;

type

```
PMYObject = ^TMYObject;
TMYObject = object
  F: Integer;
  constructor Init;
  destructor Done;
end;
```

constructor TMYObject.Init;

begin

```
F := 42;
```

end;

destructor TMYObject.Done;

begin

end;

var

```
P: PMYObject;
```

begin

```
New(P, Done); { <-- , ±, ±, ÅfGf%o□[f□fbfZ□[fW }
```

end.

{ New •W□€ŠÖ□”, É, Í•K, ,fRf“fXfgf%oofNf^, ðŽw'è, , é, ©□C'Ç%oÄ^ø□”, ð, Ü, Á, ½, Žw'è, μ, È, ç, æ, π, É, , é }

program Solve;

type

```
PMYObject = ^TMYObject;
TMYObject = object
  F: Integer;
  constructor Init;
  destructor Done;
end;
```

constructor TMYObject.Init;

begin

```
F := 42;
```

end;

destructor TMYObject.Done;

begin

end;

var

```
P: PMyObject;
```

```
begin
```

```
  New(P, Init);
```

```
end.
```

Procedure DISPOSE needs destructor v04070

á fR“fpfCf<fGf%□[fbfZ□[fW

à-¾

,±,lfGf%□[fbfZ□[fW,í Dispose ,Ö,lfpf%□□[f^fŠfXfg,ì†,ÅŽw'è,μ,½Ž⁻•ÊŽq,^afffXfgf
%□fNf^,Å,È,ç,Æ,«,É•\Ž,³,ê,Ü,·□B

—á04071

{ ŽŸ,ĭfR□[fh,Å,Í•s'□^Ó,©,ç Dispose ,ÖfRf“fXfgf%ofNf^,đ“n,μ,½ }

program Produce;

type

```
PMYObject = ^TMYObject;
TMYObject = object
  F: Integer;
  constructor Init;
  destructor Done;
end;
```

constructor TMYObject.Init;

begin

```
F := 42;
```

end;

destructor TMYObject.Done;

begin

end;

var

```
P: PMYObject;
```

begin

```
New(P, Init);
```

```
{ ... }
```

```
Dispose(P, Init); { <-- ,±,±,ÅfGf%□[f□fbfZ□[fW }
```

end.

{ Dispose ,ÖfffXfgf%ofNf^,đ“n,.,©□C'æ 2 ^ø□”,đ□í□œ,.,ê,Î%ođCE^,.,é }

program Solve;

type

```
PMYObject = ^TMYObject;
TMYObject = object
  F: Integer;
  constructor Init;
  destructor Done;
end;
```

constructor TMYObject.Init;

begin

```
F := 42;
```

end;

destructor TMYObject.Done;

begin

end;

var

P: PMyObject;

begin

New(P, Init);

Dispose(P, Done);

end.

Assignment to FOR-Loop variable '<name>' v04072

—á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

□à-¾

for f<□[fv,ì“à•”,Å for f<□[fv,ì□§CEä•ï□”,Ö'l,ð'ã“ü,·,é,ì,í^á-@,Å,·□B—\`è,æ,è'□, f<□[fv,ð□o,é,ì,â-
Ú“l,È,ç,î□CBreak , © **goto** •¶,ðŽg,Á,Ä,,¾4,¾,ç□B

—á04073

{ ,±,ì—á,Å,ífvf□fOf%of},í | ,Ö 99 ,ð'ã"ü,·,ê,ífvf□fOf%of€ ,âf<□[fv, © ,ç□o,é,Æ□l,|,½ }

program Produce;

var

I: Integer;

A: **array**[0..99] **of** Integer;

begin

for I := 0 **to** 99 **do**

begin

if A[I] = 42 **then**

I := 99;

end;

end.

{ for f<□[fv,ð□o,é,É,í break •¶,ðŽg,Á,½•û,ª-â'è,ª□,È,ç }

program Solve;

var

I: Integer;

A: **array**[0..99] **of** Integer;

begin

for I := 0 **to** 99 **do**

begin

if A[I] = 42 **then**

Break;

end;

end.

FOR-Loop variable '<name>' may be undefined after loop

á fRf“fpfCfGf%o[fbfZ[fW

à-¾

, ±, ÌEx, Í **for** f<[fv, Ì\$CEä•ï”, Ìl, ðf<[fv, ÌCEä, ÉŽg, Á, ½ê, É•\Ž!, ³, è, Ü, ·**for**
f<[fv, Ì\$CEä•ï”, ÌÄl, ð“-, Ä, É, µ, Ä, à, æ, ç, Ì, Í **goto** •¶, © Exit
•¶, Äf<[fv, ðo, ½ê, ¾, -, Ä, ·B, ±, è, ÍfRf“fpfCf%o, ³ **for** f<[fv, ÉCEø—
!l, ÉfR[fh, ð¶l, -, Ä, «, é, æ, x, É, ·, é, ½, ß, Ì\$-ñŽ-¶€, Ä, ·B

—á04075

```
{ ŽŸ,ìfR□[fh,Å,ìf<□[fv,ìCEä,Å Result •ï□",ª^Ã-Ù,ÉŽg,í,ê,Ä,ç,é,ª□Cf<□[fv,ðŠ®—  
¹,µ,½□ê□#□CResult ,í-ç'è` ,Æ,È,é□B,» ,ì,½,ß,ÉCEx□□,ª•\Ž!,³,ê,é }
```

```
program Produce;  
{ $WARNINGS ON }
```

```
function Search(const A: array of Integer; Value: Integer): Integer;  
begin  
  for Result := 0 to High(A) do  
    if A[Result] = Value then  
      Exit;  
end;
```

```
const  
  A: array[0..9] of Integer = (1,2,3,4,5,6,7,8,9,10);
```

```
begin  
  Writeln( Search(A,11) );  
end.
```

```
{ f<□[fv,ðŠ®—¹,µ,½□ê□# ,É"ð,ì,Ä□C^Ó□},·,é'ì,ð'P,É□$CEä•ï□",Ö'ã"ü,·,ê,î%øðCE^ ,·,é }
```

```
program Solve;  
{ $WARNINGS ON }
```

```
function Search(const A: array of Integer; Value: Integer): Integer;  
begin  
  for Result := 0 to High(A) do  
    if A[Result] = Value then  
      Exit;  
  Result := High(A)+1;  
end;
```

```
const  
  A: array[0..9] of Integer = (1,2,3,4,5,6,7,8,9,10);
```

```
begin  
  Writeln( Search(A,11) );  
end.
```

uTYPEOF can only be applied to object types with a VMTv04076

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

,±,lfGf%o[fbfZ[fW,í%¼’zf\fbfhfe[fuf< (VMT) ,ª,È,çflfufWfFfNfgCE^,Ö•W€ŠÖ”
TypeOf ,ð”K—p,µ,æ,π,Æ,µ,½ê‡,É•\Ž,³,ê,Ü,·B’P[f,È%ñ”ð•û-@,Æ,µ,Ä,ÍCf_f~[.ì
%¼’zf\fbfh,ðéCE¾,µ,Ä<§“l,ÉfRf“fpfCf%o,É VMT ,ð¶¬,³,¹,Ü,·B

—á04077

```
{ ŽŸ, ìfR [fh, ì%¼'zf \fbfhfe [fuf< (VMT) , ðŽ [½, È, ç TMyObject CE^, Ö TypeOf  
•W [€ŠÖ" , ð"K—p, μ, æ, x, Æ, μ, Ä, ç, é }
```

```
program Produce;
```

```
type
```

```
  TMyObject = object  
    procedure MyProc;  
  end;
```

```
procedure TMyObject.MyProc;
```

```
begin
```

```
  { ... }
```

```
end;
```

```
var
```

```
  P: Pointer;
```

```
begin
```

```
  P := TypeOf(TMyObject); { <-- , ±, ±, ÅfGf% [f [fbfZ [fW }
```

```
end.
```

```
{ 'P, Éf_f~ [ [ ì%¼'zf \fbfh, ð" ±"ü, ·, é, © TypeOf , ìCEÄ, Ñ [o, μ, ð [í [œ, ·, ê, ì%øðCE^, ·, é }
```

```
program Solve;
```

```
type
```

```
  TMyObject = object  
    procedure MyProc;  
    procedure Dummy; virtual;  
  end;
```

```
procedure TMyObject.MyProc;
```

```
begin
```

```
  { ... }
```

```
end;
```

```
procedure TMyObject.Dummy;
```

```
begin
```

```
end;
```

```
var
```

```
  P: Pointer;
```

```
begin
```

```
  P := TypeOf(TMyObject);
```

```
end.
```

Order of fields in record constant differs from declaration v04078

á fRf"fpfCf<fGf%o[fbfZ[fW

à-¾

,±,lfGf%o[fbfZ[fW,ÍCE^•t,«'è",Ü,½,Í%Šú
%o»İ.Ý•i",lfCEfR[fhftfB[f<fh,ªéCE¾,i#~ ,Å%Šú%o»,³,ê,Ä,ç,È,çê# ,É•\Ž!,³,ê,Ü,·B

-á04079

{ ŽŸ,lfR[fh,íéĚ¼,Æ,ít,ìYCX ,ì‡,Á%Šú%»„μ,æ,α,Æ,μ,Ä,ç,é }

program Produce;

type

TPoint = **record**
X, Y: Integer;
end;

var

Point: TPoint = (Y: 123; X: 456);

begin

end.

{ 'P,É%Šú%»„ì‡~„đéĚ¼,ì‡~„É'‰ž,³,¹,ê,î%đĚ^,.,é }

program Solve;

type

TPoint = **record**
X, Y: Integer;
end;

var

Point: TPoint = (X: 456; Y: 123);

begin

end.

Unicode incompatible types: '<name>' and '<name>' v04080

á Rf“fpfCf<fGf%□[□fbfZ□[fW

à-¾

, ±, ìfGf%□[□fbfZ□[fW, íRf“fpfCf%□, ², Â, ìCE^, ðCEÝŠ: (, Â, Ü, è—pŽ—, μ, Ä, ç, é)
, Æ, μ, ÅŠú‘Ò, μ, Ä, ç, ½, É, à, ©, ©, í, ç, □C, » , ê, ç, ìCE^, à^Ü, È, Á, Ä, ç, ½, Æ, «, É•\Ž!, ³, ê, Ü, ·□B

-á04081

{ Pascal ,Á,Í,œŽŽ%%ŽŽŽq, ðu/ðv,Á,®" , ð<%%Ê,ª¼,ç,ê,È,ç }

program Produce;

procedure Proc(I: Integer);

begin

end;

begin

Proc(22 / 7); { ðu/ðv%%ŽŽŽq, ð<%%Ê, ÍŽÀ" ð^,É,È,é }

end.

{ ,±, ð-á,Á,Í,®" ,œŽŽ%%ŽŽŽq, ð div ,ðŽg, ð, ð%ð^ , ,é ðB^ê"É"Í,É,ÍfjffOf%of€,ð'Ó[,-
'2,x,Á^, ð"ñŸŠ·«,ð%ð^ , ,é•û-@,ð^, ð,é•K-v,ª, ,é }

program Solve;

procedure Proc(I: Integer);

begin

end;

begin

Proc(22 **div** 7); { div %%ŽŽŽq,Á,®" ð^, ð<%%Ê,ª¼,ç,ê,é }

end.

Internal error: <ErrorCode>v04082

fRf“fpfCf<fGf%o[]f[]fbfZ[]fW

à-¾

,±,lfGf%o[]f[]fbfZ[]fW,lfRf“fpfCf%o“à,lfvf[]fOf%of~f“fOfGf%o[],đ^Ó-i,μ,Ä,¨,è[]C•\
Ž!,³,è,éŽ-’Ô,Í[]l,!,ç,è,Ü,¹,ñ[]B-œ^è•\Ž!,³,è,½[]ê[]#,lf{[]f%of“fh,lfefNfjff<fTf|[]f[]g,É~A—[],ì,x
,![]CfGf%o[]f[]fbfZ[]fW,É•\Ž!,³,è,½fGf%o[]fR[]fh (,½,Æ,!,![]uC1196[]v,È,Ç) ,đ’m,ç,¹,Ä,-
,¾,¾,ç[]B,±,lfGf%o[]fR[]fh,ÄfGf%o[],ìCE´^ö,¾,¾,ç,½,ç,í,©,è,Ü,·[]B,±
,lf[]fbfZ[]fW,¾[]¶[]¬,³,è,½fvf[]fOf%of€,lfTf“fvf<,đ,²’ñ<Ÿ,ç,½,¾,¾,¯,è,ÍCE´^ö<+¾,É,³,ç,É-đ—
š,ž,Ü,·[]B

Unit name mismatch: '<Unitname>'v04083

á fRf“fpfCf<fGf%o[fbfZ[fW

à-¾

ffjfbfgŽ•ÊŽq,³ftfjfbfgftf@fCf<-¼,É^è'v,μ,Ü,¹,ñB,±,lfGf%o[l,Í',çftf@fCf<-¼,Æ'Z,çftfjfbfgŽ•ÊŽq,³¬Y,μ,Ä,ç,é,Æ,«,É<N,«,é%oÂ"\«,³, ,è,Ü,·B

-á04084

{ ,±,ì-á,Å,íftf@fCf<-¼,ª 8 •¶Žš,Å∅,èŽì,Ä,ç,ê,Ä,ç,½,½,ß,ÉfRf“fpfCf%o
,ªŒË,Á,½ftfjfbfg,ðŒÿ∅o,µ,½,ì,ª-â'è,Å, ,é }

----- MY_UNIT_.PAS ,ì“à—e -----

```
unit My_Unit_With_A_Long_Name;  
interface  
implementation  
end.
```

----- MY_UNIT_.PAS ,ì∅I,í,è -----

```
program Produce;  
uses My_Unit_With_Another_Long_Name; { -P fRf}f“fhf  
  %ofCf“fXfCfbf`,ªfAfNfefBfu,ì∅é∅¶,É MY_UNIT_.PAS  
  ,ðŒÿ∅o,; ,é,ª∅C,» ,é,íŒË,Á,½ftfjfbfg,Å, ,é }  
begin  
end.
```

{ ',çftf@fCf<-¼,ðŽg,α,©∅Å∅%o,ì 8 •¶Žš,ª•K, ,^Ù,È,éftf@fCf<-¼,ðŽg,í,Î
%oðŒË^,; ,é∅Bftfjfbfg,íftf@fCf<-¼,Æftfjfbfg-¼,à•K, ,í%ož,³,¹,é•K—v,ª, ,é }

uNo identifiers referenced from unit <unit> v04085

fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

,±,lfGf%o[]f[]bfZ[]fW,íE»ÝŽg,í,ê,Ä,ç,Ü,¹,ñB

uType '<name>' is not yet completely defined v04086

á fRf“fpfCf<fGf%o[f fbfZ[fW

à-¾

,±,lfGf%o[,íE»Ý'è<`t,ìE^,đŽQAE,μ,½ê‡,©Cforward é¾,μ,½fNf%ofXCE^,ª type
fZfNfVf‡f“,É“ü,Á,Ä,ç,Ä,»,ìE^,ìl—¹é¾,ª,È,çê‡,É”¶,μ,Ü,·B

-á04087

```
{ ŽŸ, ĭfR [fh, í'è< , ãŠ@-1, μ, Ä, ç, È, çfCEfR [fhCE ^, ðŽQ [Æ, μ, æ, π, Æ, μ, Ä, ç  
, é [Bf ^fCfvf ~fX, ã, , é, ì, Å [CfRf "f pfCf %o, í TMyClass , ĩŠ@ 'S, È [éCE3/4, àCEŸ [o, Å, «, È, ç }
```

program Produce;

type

```
TListEntry = record  
  Next: ^TListEntry; { <-- , ±, ±, ÅfGf%o [f [fbfZ [fW }  
  Data: Integer;  
end;  
TMyClass = class; { <-- , ±, ±, ÅfGf%o [f [fbfZ [fW }  
TMyClassRef = class of TMyClass;  
TMyClasss = class { <-- f ^fCfvf ~fX }  
  { ... }  
end;
```

begin

end.

```
{ [Å [ %o, ì-â'è, í•â [ •"l, Èf|fCf "f ^CE ^, ìCE ^ [éCE3/4, ðŽg, ì, ĭ%oðCE ^, ;, é [B2 "Ô-Ú, ì-â'è, í TMyClass  
, ĭfXfyf<, ð [ 3, μ, "ü-Í, ·, ê, ĭ [C [ 3, 3, ê, é }
```

program Solve;

type

```
PListEntry = ^TListEntry;  
TListEntry = record  
  Next: PListEntry;  
  Data: Integer;  
end;  
TMyClass = class;  
TMyClassRef = class of TMyClass;  
TMyClass = class  
  { ... }  
end;
```

begin

end.

uThis Demo Version has been patchedv04088

fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,íE»ÝŽg,í,ê,Ä,ç,Ü,¹,ñB

Integer constant or variable name expected v04089

—á fRf“fpfCf<fGf%o[f[]fbfZ[]fW

à-¾

,±,lfGf%o[f[]fbfZ[]fW,Í **absolute** Žw—β,ìĈã,É[]@[]"è[]",â•ï[]"-¼,đ'u,ç,Ä,Í,È,ç,È,ç,ì,É
absolute •ï[]",ð[]éĈ¾,μ,æ,α,Æ,μ,½[]ê[]‡,É•\Ž!,³,ê,Ü,·[]B

-á04090

program Produce;

var

I: Integer;

J: Integer **absolute** Addr(I); { <-- ,±,±,ÅfGf%o[f]fbfZ[fW] }

begin

end.

program Solve;

const

Addr = 0;

var

I: Integer;

J: Integer **absolute** I;

begin

end.

Invalid typecast v04091

ŽQÆ —á fRf“fpfCf<fGf%o[f]fbfZ[fW

à-¾

,±,lfGf%o[f]fbfZ[fW,Í<K'¥,Å”F,ß,ç,ê,Ä,ç,È,çCE^fLfffXfg,É,Â,ç,Ä•\Ž|,³,è,Ü,·B

^È%oº,iŽí—p,iCE^fLfffXfg,Í”F,ß,ç,ê,Ä,ç,Ü,·B

- ð#~CE^,Ü,½,Íf|fCf“f^CE^ “ •É,ið#~CE^,Ü,½,Íf|fCf“f^CE^
- •ŕŽšCE^C•ŕŽš—ñCE^C•ŕŽš,Ü,½,Í PChar ,ì”z—ñCE^ “ •ŕŽš—ñCE^
- ð#~CE^CŽÀ”CE^C•ŕŽš—ñCE^CfofŠfAf“fgCE^ “ fofŠfAf“fgCE^
- fofŠfAf“fgCE^ “ ð#~CE^CŽÀ”CE^C•ŕŽš—ñCE^CfofŠfAf“fgCE^
- •í”ŽQÆ “ “,ŕfTfCfY,ì”C^Ó,iCE^

ŽÀ”CE^,©,ç@”CE^,Ö,lfLfffXfg,Í•W€ŠÖ”,ì Trunc ,Æ Round

,ÅŽÀs,Å,«,Ü,·B,»,ì,Ü,©,É,à Ord ,â Chr ,ì,æ,ɣ,È•İŠ·ŠÖ”,ª, ,è,Ü,·B

—á04092

{ C ,\,æ,æ,É•,“@□-□”“_’è□”,í□@□”,ÉfLfffXfg,Å,«,È,ç }

program Produce;

begin

 Writeln(Integer(Pi));

end.

{ Pascal ,Å,í•,“@□-□”“_’l,ð□@□”,É•İŠ•,;éŠÖ□”,ðŽg—p,·,é }

program Solve;

begin

 Writeln(Trunc(Pi));

end.

ŽQÆ04093

CE^fLfffXfg

•İŠ·f<[]f`f“

Trunc ŠÖ”

Round ŠÖ”

Chr ŠÖ”

Ord ŠÖ”

uUser break - compilation abortedv04094

fRf“fpfCf<fGf%o[]f[]bfZ[]fW

à-¾

,±,lf[]bfZ[]fW,íE»[]ÝŽg,í,ê,Ä,ç,Ü,¹,ñ[]B

Assignment to typed constant '<name>' v04095

[fRf“fpfCf<fGf%o\[\]f\[\]bfZ\[\]fW](#)

à-¾

,±,ìEx[]f[]bfZ[]fW,íE»[]ÝŽg,í,ê,Ä,ç,Ü,¹,ñ[]B

uSegment/Offset pairs not supported in Borland 32-bit Pascal v04096

á fRf“fpfCf<fGf%o□[f□fbfZ□[fW

à-¾

32 frfbfgfR□[fh,Á,Í 16 frfbfgfR□[fh,ÅŽg,Á,Ä,ç,½fZfOf□f“fg□^flftfZfbfg,lfAfhfCEfXŽw'è,ðŽg,ç,Ü,¹,ñ□B16 frfbfgfo□[fWf#f“,ì Borland Pascal,Á,lfZfOf□f“fg,ÆflftfZfbfg,ìí,ªâ'í•i□”,ìéCE¾,ÉŽg,í,ê□CPtr •W□€ŠÖ□”,Ö,ì^ø□”,Æ,μ,Ä,àŽg,í,ê,Ä,ç,Ü,μ,½□B

32 frfbfg,lfvf□fefNfgf,□[fhfvf□fOf%of€,Á,Íâ'íAfhfCEfX,ðŽg,Á,Ä,Í,ç,̄,Ü,¹,ñ□B,»,ì,©,í,è,É“K□Ø,È Win32 API ŠÖ□”,ðCEÄ,Ñ□o,μ,Ä,,¾,¾,ç□B

-á04097

program Produce;

var

VideoMode: Integer **absolute** \$0040:\$0049;

begin

Writeln(Byte(Ptr(\$0040,\$0049)^));

end.

program Solve;

{ fRf"fpfCf<,Á,«,é,ŽÀs,Á,«,È,¢Bâ'ÍfAfhfCEfX,ÍŽg,!,È,¢ }

var

VideoMode: Integer **absolute** \$0040*16+\$0049;

begin

Writeln(Byte(Ptr(\$0040*16+\$0049)^));

end.

Delphi ,lfufWfFfNfgf,fff<04098

Delphi ,Á,lfufWfFfNfgCE^,l'è<,É,ç,,Á,©,l•lX,º%Á,l,ç,ê,Ä,ç,Ü,·B,±,ê,ç,l't,É,l
%º^ÊCEÝŠ·<,ðŽ,žCŠù'¶,lfufWfFfNfg,É'g,Ýž,ß,é•lX,à, ,è,Ü,·,ºC,Ü,Æ,ñ,ç,lV,μ,çXf^f
Cf<,lfufWfFfNfg,Á,lŽg,l,Ü,¹,ñB

CEÄ,çXf^fCf<,lfufWfFfNfg,ÆV,μ,çXf^fCf<,lfufWfFfNfg,ð•ÉX,lftjfbfg,ÁéCE¾,μ,ÄC“^,¶
fvfOf%of€,Á—¼•û,lfufWfFfNfg,ðŽg,±,±,Æ,à,Á,«,Ü,·B,μ,©,μC,±,ê,ç,lfufWfFfNfg,É,Í-
¾Šm,È^á,ç,ª, ,é,±,Æ,ð“FŽ^,μCft[fU[,lÓ“C,Á^á,ç,É'í%ž,μ,Ä,,¾,¾,çB

CEÄ,çXf^fCf<,lfufWfFfNfg,Á—\-ñCEê **object** ,ðŽg,ç
,È,ª,çC[V,μ,çXf^fCf<,lfufWfFfNfg,léCE¾,Á,l **class** ,ðŽg,±,±,Æ,É'^Ó,μ,Ä,,¾,¾,çB

ŽŸ,l•lX,lfo[fWfj“ 7.0 ^È'O,lfufWfFfNfgf,fff<,ðŽg,±lfufWfFfNfg,É“K—p,³,è,Ü,·B

- public •
- private •
- protected •
- published •
- lfufWfFfNfg,léCE¾,l•lX
- lfufWfFfNfg,lŽg,ç•û,l•lX
- fvf\pfefB
- f\fbfhfffBfXfpbf^,l•lX

ŽQÆ04100

fvfpfefB

f\fbhfffBfXfpbf`_i•iX

ffftfHf<fg□ã^ÊflfufWfFfNfg04101

ŽQ□Æ —á

System ftfjfbfg,Í TObject ,Æ,ç,α'Š□ÚflfufWfFfNfgCE^,ð'è<` ,μ,Ü,·□B,±
,lflfufWfFfNfgCE^,í□V,μ,-

□éCE^{3/4,3},ê,½,·,×,Ä,lflfufWfFfNfg,lffftfHf<fg□ã^ÊCE^,Å,·□B,·,×,Ä,lflfufWfFfNfg,É,í<α'Ê,ì□ã^Êflfu
fWfFfNfg,^a, ,é,ì,Å□C"ñí,ÉŠî-{"I,ÈfCfxf<,ÅflfufWfFfNfg,ð'½—I,É^μ,¡,Ü,·□B

f□f, TObject ,ð□ã^ÊflfufWfFfNfg,Æ,μ,Ä-¾Ž!{"I,É□éCE^{3/4},·,é•K—v,Í, ,è,Ü,¹,ñ□B

TObject ,Í Create ,Æ,ç,αŠî-{"I,ÈfRf"fXfgf%ofNf^,Æ□CDestroy ,Æ,ç,αŠî-{"I,Èfffxfgf
%ofNf^,ðŠÜ,ñ,Å,ç,Ü,·□B

- TObject.Create ,lflfufWfFfNfg,ì"®"lfCf"fXf^f"fX,ðfq□lfv,ÉŠ,,è"-
,Ä□C,·,×,Ä,íftfB□lf<fh,ðf[f□,É□%oŠú%o»,·,é
- TObject.Destroy ,Í Create ,αŠ,,è"-,Ä,½f□f,fŠ,ð□•^a,μ□CflfufWfFfNfgfCf"fXf^f"fX,ð"j
%oó,·,é

—á04102

ŽŸ,ì 2 ,Â,ìĀ^[]éĀ¾,í“™%o¿,Â,·[]B

type

 TMyObject = **class**

 ...

end;

type

 TMyObject = **class**(TObject)

 ...

end;

ŽQÆ04103

protected •”

published •”

fNf%ofXf\fbfh

forward fNf%ofXéĈ³/₄

fvf%ofCfx[]fg•"04104

ŽQÆ

private •",í[]CfIfufWfFfNfgCE^[]éCE¾,ðŠÜ,bf,fWf...[]f<,É'í,·,éfRf"f|[]f|f"fgŽ^-•ÉŽq,ì
%oÂŽ<[]«,ð[]§CEÀ,μ,Û,·[]B,Â,Û,è[]CfIfufWfFfNfgCE^[]éCE¾,ðŠÜ,bf,fWf...[]f<,ì"à•",Å,í[]CfRf"f|
[]f|f"fgŽ^-•ÉŽq **private** ,í'É[]í,ìfRf"f|[]f|f"fgŽ^-•ÉŽq **publilc** ,Æ"-—l,É@"\,μ,Û,·,ª[]Cf,fWf...
[]f<,ìŠO•",Å,ìfRf"f|[]f|f"fgŽ^-•ÉŽq **private** ,í"FŽ^,³,è,·[]CfAfNfZfX,Å,«,Û,¹,ñ[]B
ŠÖ~A,·,éf,fWf...[]f<CE^,ð"-,¶f,fWf...[]f<"à,É"z'u,·,é,±,Æ,É,æ,è[]C,±
,è,ç,ìfIfufWfFfNfgCE^,í[]Cfvf%ofCfx[]fgfRf"f|[]f|f"fg,ð'¼,ìf,fWf...[]f<,É'É'm,·,é,±,Æ,È,-
[]C'ŠCEÝ,ìfvf%ofCfx[]fgfRf"f|[]f|f"fg,Ö,ìfAfNfZfX,ðŽæ"¾,Å,«,Û,·[]B

ŽQÆ04105

protected •”

public •”

published •”

ŽQÆ04107

fNf%ofXf[]fbfh

fftfHf<fg[]ă^ÊlfufWfFfNfg

forward fNf%ofX[]éĈ¾

private •”

public •”

published •”

fpufšfbvf...•”04108

ŽQÆ

published Žw—ß,íNf%ofX,ìCE^□éCE¾,Å,¾,¯—\—ñ,³,è,é“_ ,Å□C,» ,í’%ž•” ,Å , ,é **private** ,
protected , **public** ,Æ“¯—l,É<@”\,μ,Û,·□B

fpufšfbvf...fRf“f□□fif“fg,ì%oÅŽ<□□<<K’¥,ípfufšfbfNfRf“f|
□□fif“fg,ì□é□#,Æ“¯ ,¶,Å,·□Bfpufšfbvf...fRf“f□□fif“fg,ÆfpufšfbfNfRf“f|□□fif“fg,ì—B^è,ì^á,ç
,í□CŽÀ□sŽžCE^□î•ñ,ª□**published** •” ,Å□éCE¾,¾,è,½ftfB□□f<fh□□Cf□f<fbh□□Cf<vf□□pfefB,É,Å,ç
,Å□¶□—,³,è,é“_ ,Å,·□B,±,ìŽÀ□sŽžCE^□î•ñ,ðŽg,α,Æ□C’¼,ì•û—
@,Å,í”FŽ¯ ,Å,« ,È,çfifufWfFfNfg,ìftfB□□f<fh□□Cf□f<fbh□□Cf<vf□□pfefB,É□CfAvfšfP□□fVf#f“ , © ,ç“ @“l,É—â,ç□#,¹,ª,Å,« ,Û,·□B

fif: Delphi ,lfrfWf...fAf<fNf%ofXf%ofCfuf
%ofš,ìftfH□□fçftf@fCf<,ð•û’¶,μ,½,èf□□f<fh,·,é,Æ,« ,É□CŽÀ□sŽžCE^□î•ñ,ðŽg,Á,ÄfRf“f|
□□fif“fgf<vf□□pfefB,ìl,ÉfAfNfZfX,μ,Û,·□BDelphi IDE
,ìŽÀ□sŽžCE^□î•ñ,ðŽg,Á,Å□CfifufWfFfNfgfCf“fXfyfNf^ ,É•\
Žl,·,éfvf□□pfefB,ìfšfXfg,ðCE^ ,ß,Û,·□B

{**\$M+**} □ó’Ô,ÅfRf“fpfCf<,μ,½□é□#,â {**\$M+**}
□ó’Ô,ÅfRf“fpfCf<,μ,½fifufWfFfNfg,© ,ç“h□¶,³,¹,½□é□#,ð□œ,ç,Å□CfifufWfFfNfgCE^ ,É
published •” ,ðŽw’è,Å,« ,Û,¹,ñ□B**\$M** fRf“fpfCf%žw—ß,íNf
%ofX,ìŽÀ□sŽžCE^□î•ñ,ì□¶□—,ðŽwŽl,μ,Û,·□B

published •” ,Å’è< ,³,è,éftfB□□f<fh,ìfifufWfFfNfgCE^ ,Å,È,-
,Ä,í,È,è,Û,¹,ñ□B,» ,è^ÈŠO,ìCE^ ,ìftfB□□f<fh,í **public** •”□**protected** •”□**private**
•” ,É□\$CEÅ,³,è,Û,·□B

published •” ,Å’è< ,³,è,éfvf□□pfefB,í”z—ñfvf□□pfefB,Å , ,Ä,Ä,í,È,è,Û,¹,ñ□B**published**
•” ,Å’è< ,³,è,éfvf□□pfefB,ìCE^ ,í□#□~CE^□CŽÀ□”CE^ (Single, Double, Extended, Comp ,ì,ç
, , ,è, © ,Å Real ^ÈŠO)□C•¶Žš—ñCE^□C□—□W□#CE^□CfifufWfFfNfgCE^□Cf□f<fbhfhf|
fCf“f^CE^ ,ì,ç, , ,è, © ,Å,È, ,Ä,í,È,è,Û,¹,ñ□B□—□W□#CE^ ,í%°CEÅ,Æ□ăCEÅ,ª 0 ,Æ 15
,ìŠÔ,ì□#□~l,Å , ,éší-
{CE^ ,ð”ð,ì,éW□#CE^ ,Å,·□B,Å,Û,è□C□—□W□#CE^ ,ífofCf<g,Û,½,í□□□f<fh,ÉŽû,Û,éW□# ,Å,·□B

ŽQÆ04109

fNf%ofXf[]fbfh

fftfHf<fg[]ă^ÊlfufWfFfNfg

forward fNf%ofX[]éÆ¾

flfufWfFfNfgÆ^

private •”

protected •”

public •”

fNf%oXf\fbfh04110

ŽQÆ —á

fNf%oXf\fbfh,íCfNf%oX,lfCf“fXf^f“fX,ì,©,í,è,ÉfNf%oX,ð^—,·,éžè'±,«,ÆŠÖ”,Å,·BfNf%oXf\fbfh,ìŽÀÆ»,íC,Ç,lfIfufWfFfNfgftfB[f<fh,ìŽÀsŽž'l,É,à^É'¶,μ,Å,í,È,è,Ü,¹,ñB

fNf%oXf\fbfh,ðéÆ³/₄,·,é,É,íC'è<` ,ðŠ)Žn,·,éfL[f□[fh,Å, ,é **procedure** ,Ü,¹/₂,í **function** ,ì'O,É—\—ñÆè **class** ,ðŽw'è,μ,Ü,·B

fNf%oXf\fbfh,ì'è<` □éÆ³/₄,Å,íCŽ`·Éžq Self ,íf\fbfh,ðfAfnfefBfu,·,éfNf%oX,ð·\,μ,Ü,·BfNf%oXf\fbfh,Å,ì Self ,ìÆ^,í **class of** ClassType ,Å,· (ClassType ,íf\fbfh,^aŽÀÆ»,³,é,Ä,ç,éfNf%oXCE^,ðŽ!,μ,Ü,·)□BSelf ,ífNf%oXf\fbfh“à,lfIfufWfFfNfgŽQÆ,ð·\,³,É,ç,ì,Å□CSelf ,ðŽg,Á,ÄftfB[f<fh□Cfvf□pfefB□C'Éí\fbfh,ÉfAfnfZfX,·,é,±,Æ,í,Å,«,Ü,¹,ñB,μ,©,μ□CSelf ,É,æ,Á,ÄfRf“fXfgf%oXf^ ,à'¹/₄,lfNf%oXf\fbfh,ðCEÄ,Ñ□o,·,±,Æ,í,Å,«,Ü,·B

fNf%oXf\fbfh,ífNf%oXŽQÆ,Ü,¹/₂,lfIfufWfFfNfgŽQÆ,É,æ,Á,ÄCEÄ,Ñ□o,¹,Ü,·BfIfufWfFfNfgŽQÆ,É,æ,Á,ÄCEÄ,Ñ□o,·é□#□CfIfufWfFfNfgŽQÆ,ífNf%oX,í Self fpf%oX□[f^ ,Æ,μ,Ä“n,³,è,Ü,·B

ŽQÆ04111

ClassType

fftfHf<fgā^ÊlfufWfFfNfg

protected •”

published •”

forward fNf%ofXéĈ³/₄

—á04112

ŽŸ,lfR[fh,lfNf%ofXf[f\fbfh GetClassName ,ðé¼,μCCEÀ'è,³,ê,½f\fbfhŽQÆ,É,æ,Á,Ä,» ,lfNf%ofXf[f\fbfh,ÉfAfNfZfX,μ,Û,·B

type

```
TMyObject = class (TObject)
    class function GetClassName: string;
end;
```

var

```
MyObject: TMyObject;
AString: string;
```

begin

```
AString := TMyObject.GetClassName;
MyObject := TMyObject.Create;
AString := MyObject.GetClassName;
```

end;

forward fNf%ofXéCE¾04113

ŽQÆ —á

fífufWfFfNfgĚ^,đŽ-‘O,ÉéCE¾,·,ê,îC,»,ê,đŠ@‘S,É’è<`,μ,È,-

,Ä,àC¼,ífífufWfFfNfgĚ^éCE¾,ĀŽg,!,Û,·B,±

,ê,íCfVf“f{f<,đéCE¾,μ,½Ěã,ĀŠ@‘S,É’è<`,·,é“_ĀCŽè‘±,«,âŠÖ”,ì forward éCE¾,É,æ,Ž—
,Ä,ç,Û,·B

forward éCE¾,íC“^,ĚĚ^éCE¾•”,É, ,éfNf%ofX,ìÊí,ìéCE¾,É,æ,Á,Ä%đĚ^,μ,È,-

,Ä,í,È,è,Û,¹,ñBforward éCE¾,đŽg,α,ÆC‘ŠĚÝ,É^É‘Ě,·,éfNf%ofX,đéCE¾,Ā,«,Û,·B

ŽQÆ04114

fNf%ofXf\fbfh

fftfHf<fgã^ÊlfufWfFfNfg

Forward

f\fbfh,ìŽÀĚ»

protected •”

published •”

—á04115

fNf%ofX,ì forward □éĀ¼,đŽŸ,ÉŽì,μ,Û,·□B

type

```
  TMyClass = class;
```

ŽŸ,É□CfNf%ofX,đ“˘,¶Ā^□éĀ¼fuf□fbfN“à,ĀŠ@‘S,É□éĀ¼,μ,È,,Ā,í,È,è,Û,¹ñ□B‘É□í,íŽŸ,ì,æ,α
,É,μ,Û,·□B

type

```
  TMyClass = class;
```

```
  TYourClass = class (TSomething)
```

```
    MyClassField: TMyClass;
```

```
    ...
```

```
end;
```

```
  TMyClass = class (TObject)
```

```
    MyField: TMyType;
```

```
    ...
```

```
end;
```

flfufWfFfNfg,ìŽg,ç•û,ì•ïX04116

ŽQÆ

V,μ,çf,ffç,ìflfufWfFfNfg,ìŽg,ç•û,É,Â,ç,ÄŽÿ,ì“_•ïX,³,ê,Û,μ,½B

- ŽQÆf,ffç
- fNfbfhflfCf“f^
- flfufWfFfNfgŽQÆ
- ŽA[sŽžÇ^î•ň

ŽQÆ04117

fifufWfFfNfgéCE¾,ì•iX

fvfpfefB

f\fbfhffBfXfpbf`ì•iX

ŽQÆ04119

f\fbfhf|fCf“f^

flfufWfFfNfgŽQÆ

ŽÀsŽžCE^i•ñ

fbfhfCf“f^04120

ŽQÆ —á

Delphi ,Á,ÍCfIfufWfFfNfgfVfbfh,Á, ,éŽè±
,«CE^,ðéCE¾,Á,«,é,½,ßC“Á’è,ìfufWfFfNfgfCf“fXf^f“fX,ì“Á’è,ìfV
fbfh,ðŽÀsŽž,ÉCEÄ,Ño,¹,Ü,·BfVfbfhfCf“f^,É’í,·,éŽå,È—~“_,ÍCfIfufWfFfNfg,ðŠg’£
,·,é,ì,ÉC□V,μ,çfIfufWfFfNfg,ì”h□¶,ÆfVfbfh,ìf□fo□f%ofCfh,ðŽÀs,·,é,ì,Á,í,È,□C, ,é“®□ì,ð•Ê
,ìfIfufWfFfNfg,É^í”C,μ,Ü,·□B

Delphi ,Á,ÍCfVfbfhf|
fCf“f^,ðŽg,Á,Ä“Á’è,ìê□Š,ì“Á’è,ìfR□fH,ÉfCxf“fg,ðCE<□±,·,é,½,ßCf{f^f“ ,ìfNfŠfbfN,É,æ,Á,Ä“Á’
è,ìftfH□f€,ìfVfbfh,ðCEÄ,Ño,¹,Ü,·BTButton , ©,ç□V,μ,çfNf
%ofX,ð”h□¶,³,¹,Ä□C,»,ìfNfŠfbfN“®□ì,ðf□fo□f%ofCfh,·,é,©,í,è,ÉC-Ú“ì,ì”®□ì,³Š,,è“-
,Ä,ç,è,½“Á’è,ìfIfufWfFfNfgfCf“fXf^f“fX (’Éí,ìf{f^f“,ðŠÜ,ÞftfH□f€) ,ìfVfbfh,É□Cfvf□fOf%of}
,ìŠù’¶,ìfIfufWfFfNfg,ðCE<□±,μ,Ü,·□B

fVfbfhf|Cf“f^□éCE¾,ÍCŠÖ□”,Ü,½,ìŽè±,«,ìfvf□fgf^fCfv,ìCEä,É—\-ñCEè **of object**
,ðŽw’è,·,é“_,Á□C’É□í,ìŽè±,«CE^□éCE¾,Æ^Ù,È,è,Ü,·□B

ŽQÆ04121

ŽQÆf,fff<

fIfufWfFfNfgŽQÆ

ŽÀsŽžCE^î•ň

—á04122

ŽŸ,lfR[fh,lfvfbfhfjfcf“f^,ðéCE¾,μ,Ü,·B

type

TNotifyEvent = **procedure** (Sender: TObject) **of object**;

TNotifyEvent CE^,lfufWfFfNfgftfB[f<fh,ÍCprocedure(Sender: TObject)
,Æ,μ,ÄéCE¾,μ,½,Ç,lfufWfFfNfgf[vbfh,É'í,μ,Ä,à'ã“üCEÝŠ·«^a, ,è,Ü,·B

type

TAnObject = **class** (TObject)

FOnClick: TNotifyEvent;

end;

TAnotherObject = **class** (TObject)

procedure AMethod (Sender: TObject);

end;

var

AnObject: TAnObject;

AnotherObject: TAnotherObject;

begin

AnObject := TAnObject.Create;

AnotherObject := TAnotherObject.Create;

AnObject.FOnClick := AnotherObject.AMethod;

end;

flfufWfFfNfgŽQÆ04123

ŽQÆ —á

Delphi ,Á,íCflfufWfFfNfgŽQÆ,Æ,μ,Ä'm,ç,è,Ä,ç,éCflfufWfFfNfgCE^,Ö,lfj
fCf" f^,ð□□¬,Ä,«,Ü,·□B,±,è,íCflfufWfFfNfg,lfCf" fXf^f" fX,Ä,í'€□,ð%Ä"
,É,·,éflfufWfFfNfgCE^,Æ,í'íQÆ"l,Ä,·□BflfufWfFfNfgŽQÆCE^,í□f^fNf%ofX,Ü,½,í□f^fNf
%ofXCE^,ÆCEÄ,î,è,é,±,Æ,à, ,è,Ü,·□B

flfufWfFfNfgŽQÆ,ðŽg,î,îŽÿ,ì,ç,·,è,©,ðŽÄ□s,Ä,«,Ü,·□B
▪ ŽQÆ,ÉS,,è"-,Ä,ç,è,éCE^,lfCf" fXf^f" fX,ð□□¬,·,é
▪ fNf%ofXf□f□f□f,ðCEÄ,Ñ□o,·,±,Æ,É,æ,Ä,ÄflfufWfFfNfgCE^,É,Ä,ç,Ä,î□î·ñ,ðŽæ"¾,·,é
fNf%ofXŽQÆCE^,îŽÿ,ì□é□±,É-ð-š,ç,Ü,·□B
▪ %¼'zfrf" fXfgf%ofNf^,ðŽg,Ä,Ä□CfRf" fpcfCf<Žž,ÉŽÄ□Ü,ìCE^,æCE^,Ü,Ä,Ä,ç
,É,çflfufWfFfNfg,ð□□¬,·,é□é□±
▪ fNf%ofXf□f□f□f,ðŽg,Ä,Ä□CfRf" fpcfCf<Žž,ÉŽÄ□Ü,ìCE^,æCE^,Ü,Ä,Ä,ç,É,çfNf%ofX,ð□ —
□,·,é□é□±
▪ is %%%ŽŽžq,ì%EfIfyf%of" fh,Æ,μ,Ä□CfRf" fpcfCf<Žž,ÉCE^,æCE^,Ü,Ä,Ä,ç
,É,çCE^,ÄCE^f ffbfN,ðŽÄ□s,·,é□é□±
▪ as %%%ŽŽžq,ì%EfIfyf%of" fh,Æ,μ,Ä□CfRf" fpcfCf<Žž,ÉCE^,æCE^,Ü,Ä,Ä,ç
,É,çCE^,Ö,lf ffbfNCE^flfffXfg,ðŽÄ□s,·,é□é□±
flfufWfFfNfgŽQÆ,ðéCE¾,·,é□é□±,í-ñCè class ,ðŽg,ç,Ü,·□B,½,Æ,î,í□C TObject
CE^,Ö,îŽQÆ,ð□□¬,·,é,É,îŽÿ,ì,æ,π,É,μ,Ü,·□B

type

TObjectRef = **class of** TObject;

fNf%ofXCE^Ž·ÉŽq,í'í%ž,·,éflfufWfFfNfgŽQÆCE^,ì'l,Æ,μ,Ä<@"\,μ,Ü,·□B

flfufWfFfNfgŽQÆCE^'l,Ç,ì□ä^ÉflfufWfFfNfgŽQÆCE^,É'í,μ,Ä,à□C'ä"üÉÝŠ-□«,ª, ,è,Ü,·□B,μ,
½,ª,Ä,Äfvf□f□f%of€
,ìŽÄ□sŽž,ÉCflfufWfFfNfgŽQÆCE^,ì'í□",í,»,ì'è<'í□Ü,lfifufWfFfNfg□C,Ü,½,í,»,lfifufWfFfNfg,
©,ç'è<' ,ª,½,·,x,Ä,ì%º^ÉflfufWfFfNfg,ðŽQÆ,Ä,«,Ü,·□B

flfufWfFfNfgŽQÆCE^,ì'í□",í□CflfufWfFfNfg,ðCE»ÝŽQÆ,μ,Ä,ç,È,ç,±,Æ,ðŽì,· **nil** ,É,È,é,±
,Æ,ª, ,è,Ü,·□B

,Ç,lfifufWfFfNfg,à□CflfufWfFfNfg,lfNf%ofX,ÉŽQÆ,ð·Ô,·□CClassType ,Æ,ç,π□f□f□f□fŠÖ□",ð
TObject ,©,çEp□³,μ,Ü,·□BClassType ,ª·Ô,·'l,ìCE^,í TClass ,Ä□C,±,ìCE^,í **class of** TObject
,Æ,μ,Ä□éCE¾,ª,è,Ü,·□B,Ä,Ü,è□CClassType ,ª·Ô,·'l,í□CŽg,π'O,É,æ,è-¾šm,È
%º^ÉflfufWfFfNfgCE^,ÉCE^flfffXfg,μ,È,,Ä,í,È,è,Ü,¹,ñ□BŽÿ,É-á,ðŽì,μ,Ü,·□B

if Control <> **nil** **then**
 ControlClass := TControlClass(Control.ClassType) **else**
 ControlClass := **nil**;

fRf" fXfgf%ofNf^ ,ÆflfufWfFfNfg,ìŽQÆ

fRf" fXfgf%ofNf^ ,flfufWfFfNfgŽQÆCE^,ì'í□"ŽQÆ,ÄCEÄ,Ñ□o,¹,Ü,·□B,±
,è,É,æ,Ä,Ä□CflfufWfFfNfg,ì'½-ì,È□□¬□C,Ä,Ü,èŽÄ□Ü,ìCE^,æfRf" fpcfCf<Žž,ÉCE^,Ü,Ä,Ä,ç
,É,çflfufWfFfNfg,ì□□¬,ª%Ä"
,É,È,è,Ü,·□B

'É□í□CflfufWfFfNfgŽQÆCE^,É,æ,Ä,ÄCEÄ,Ñ□o,ª,è,éfrf" fXfgf%ofNf^ ,í%¼'zfrf" fXfgf
%ofNf^ ,Ä,·□BÄ□l"l,ÉCEÄ,Ñ□o,ª,è,éfrf" fXfgf
%ofNf^ ,ìŽÄCE»,í□CflfufWfFfNfgŽQÆ,Ä'l'ð,ª,è,éŽÄ□Ü,ì (ŽÄ□sŽž,ì)
flfufWfFfNfgCE^,É^É'¶,μ,Ü,·□B

ŽQÆ04124

fRf" fXfgf%oofNf^,ÆffXfgf%oofNf^

—á04125

ŽŸ,lfR[fh,ílfufWfFfNfgŽQAE,ì³,μ,çŽg,ç•û,ðŽ!,μ,Ä,ç,Ü,·B

```
type
  TObjectRef = class of TObject;
  TDescendant = class(TObject)
  end;
var
  ObjectRef: TObjectRef;
  AnObject: TObject;
  ADescendant: TDescendant;
begin
  AnObject := TObject.Create;
  ADescendant := TDescendant.Create;
  ObjectRef := TObject;
  { '½'Ô«,ðŽ!,·fR[fh,ð}'ü,μ,Ü,· }
  ObjectRef := TDescendant;
  { '½'Ô«,ðŽ!,·fR[fh,ð}'ü,μ,Ü,· }
end;
```


fvf[]fpfefB04127

ŽQ[]Æ

fIfufWfFfNfg,É,İfvf[]fpfefB,đŽw'è,Å,«,Ü,·[]Bfvf[]fpfefB,İfIfufWfFfNfgftfB[]f<fh,Æ“—
l,ÉfGf“fhft[]fU[][CEü,¯,Å,·,ª[]C“à·”“İ,É,İftfB[]f<fh,İ'l,đ“Ç,Ý[]',«,·,é[]f[]
fbfh,đffvfvZf<%»»,Å,«,Ü,·[]BfIfufWfFfNfg“à,İfvf[]fpfefB'è<` ,Å,İ[]C'@[]«,İ“Ç,Ý[]',«,ÉŠÖ~A,µ,½fAf
Nfvfþf“,Æ,»»,İfNf%ofX,İfIfufWfFfNfg,İ-¼'O•t,«'@[]«,đ[]éCE¾,µ,Ü,·[]Bfvf[]fpfefB,İ—
á,É,İ[]CftfH[]f€,İfLffvfvþf“[]CftfHf“fg,İfTfCfY[]Cff[]f^fx[]fXfe[]fuf<,İ-¼'O,È,Ç,ª, ,è,Ü,·[]B

fvf[]fpfefB,đŽg,ª

,Æ[]C•Ú[]CİftfB[]f<fh,Ö,İfAfNfZfX,đ[]\$[]CEä,µ,½,è[]C,»,é^ÈŠO,Å,İftfB[]f<fh,É[]CE@,İ,é,à,İ,İ•İ[]X,É'İ,
·,é•>[]İ—p,đ[][][]—,µ,½,è,Å,«,Ü,·[]B

fvf[]fpfefB,İfIfufWfFfNfg“à,Å,İftfB[]f<fh,đŠg'£

,µ,½,à,İ,Å,·[]B,Ç,İ,ç,àfIfufWfFfNfg,İ'@[]«,đŽ!,·,İ,ÉŽg,İ,Ü,·,ª[]CftfB[]f<fh,İ“C^Ó,É[]CEÿ[] ,à•İ[]X,ª,
Å,«,éŠi“[^È'u,É,·,·,È,ç,İ,É'İ,µ[]Cfvf[]fpfefB,İ'@[]«,Ö,İfAfNfZfX,đ,æ,è[]x,©,[]\$[]CEä,Å,«,é,æ,ª
,É,µ,Ü,·[]B,Ü,½[]Cfvf[]fpfefB,İfAfNfvþf“ ,đ'@[]«,İ“Ç,Ý[]',«,ÉŠÖ~A•t,·,é•û-@,à—
^,İ[]C'@[]«,İ[]CEvŽŽ,à%Å“\,É,µ,Ü,·[]B

fvf[]fpfefB,É,Å,ç,Ä,İžŸ,İšefgfsfbfN,đŽQ[]Æ,µ,Ä,,¾,¾,ç[]B

- fvf[]fpfefB,İ[]\•¶
- fvf[]fpfefB,İ“Ç,Ý[]o,µ,Æ[]',«[]ž,Ý—p,İftfB[]f<fh
- ”z—ñfvf[]fpfefB
- fAfNfZfXf[]f[]fbfh
- fCf“fffbfNfXŽw'èžq
- Ši“[Žw'èžq
- fvf[]fpfefBf[]f[]fo[]f%[]fCfh
- “Ç,Ý[]o,µ[]é—p,Æ[]',«[]ž,Ý[]é—p,İfvf[]fpfefB

ŽQÆ04128

fIfufWfFfNfgéCE¾,ì•ïX

fIfufWfFfNfg,ìŽg,ç•û,ì•ïX

f\FbfhfffBfXfpbf̀,ì•ïX

fvf[]pfefB,ì\•¶04129

ŽQ[]Æ —á

fvf[]pfefB,ì'è` ,Á,ífvf[]pfefB,ì-¼'O,ÆCE^[]Cfvf[]pfefB,ì"Ç,Ý[]o,μ (CEÿ[],) ,Æ[]',«[]ž,Ý (•ì[]X)
,ÉŠÖ~A,·,éfAfNfVf‡f",đŽw'è,μ,Û,·[]Bfvf[]pfefB,É,íftf@fCf<CE^`ÉŠO,ì"C^Ó,ìCE^,đŽw'è,Á,«,Û,·[]
B

-
-
-
-

fvf[]pfefB,ì'l,đfvf%[]Cf×[]fgftfB[]f<fh,â•ÛCEiftfB[]f<fh,ÉŠi"l,μ[]C"Ç,Ý[]o,μf[]f\fbfh,â[]',«[]ž,Ýf[]fbfh,đŽg,Á,Á'l,đŽæ"¾,Û,½,í[]Ý'è,·,é,±,Æ,ª,æ,, ,è,Û,·[]B"Ç,Ý[]o,μ,â[]',«[]ž,Ý,ª
%¼'zf[]fbfh,Á, ,é[]ê[]#[]C,»,è,ç,đ%°^ÊfjfufWfFfNfgCE^,Áfi[]fo[]f%[]Cfh,·,é,±
,Æ,É,æ,Á,Ä[]Cfvf[]pfefB,đŽg,xfR[]fh,É%°e<¿,đ—
^,ì,,É[]Cfvf[]pfefB,ì"Ç,Ý[]',«,ì" @[]ì,đ•ì[]X,Á,«,Û,·[]B

fvf[]pfefB,ì'l,đ[]Ý'è,·,é,É,í
'ã"ü•¶,đŽg,ª

-

fvf[]pfefB,ì'l,đŽæ,è[]o,·,É,í
fvf[]pfefB,đŽQ[]Æ,·,é

-

—á04130

ŽŸ,ìéĒ¾,í 0 ` 359<,ì'l,đ,Æ,ê,é Heading fvjfpfefB,đŽ,Á%¼'z TCompass
fRf'fgf[f<,đ'è<,μ,Ü,·BHeading fvjfpfefB,ì'è<,Á,íC'l,ª FHeading ftjB[f<fh,©,ç"Ç,Ýo,μ
%oÁ"\,ÁCSetHeading f\fbfh,É,æ,Á,Á'l,đ',«ž,p,±,Æ,đŽw'è,μ,Á,ç,Ü,·B

type

```
THeading = 0..359;  
TCompass = class(TControl)  
  private  
    FHeading: THeading;  
    procedure SetHeading(Value: THeading);  
  published  
    property Heading: THeading read FHeading write SetHeading;  
    :  
  end;
```

ŽQÆ04131

"z—ňfvf[]pfefB

fvf[]pfefB,ì"Ç,Ý[]o,μ,Æ[]',«[]ž,Ý—p,ìftB[][f<fh

fCf"fffbfNfXŽw'èŽq

"Ç,Ý[]o,μ[]ê—p,Æ[]',«[]ž,Ý[]ê—p,ìfvf[]pfefB

Ši"[]Žw'èŽq

fvf[]pfefB,ì“Ç,Ý[]o,μ,Æ[]',«[]ž,Ý—p,ìftfB[][f<fh04132

ŽQ[]Æ —á

fvf[]pfefB,đŽ® ,ĂŽQ[]Æ,·,é[]ê[]#[]Cread Žw'èŽq,ĂŽ!,³,è,éftfB[][f<fh,Ü,½,í[]f[]\fbfh,đŽg,Á,Ă'l,đ“Ç,Ý[]o,μ,Ü,·[]Bfvf[]pfefB,đ'ă“ü·¶,ĂŽQ[]Æ,·,é[]ê[]#[]Cwrite Žw'èŽq,ĂŽ!,³,è,éftfB[][f<fh,Ü,½,í[]f[]\fbfh,đŽg,Á,Ă'l,đ[]',«[]ž,Ý,Ü,·[]B

,½,Æ,!,í[]C**read** ·”,ĂftfB[][f<fh,ì'l,đ·Ô,μ,½,è[]C**write** ·”,ĂftfB[][f<fh,đ[]Ý'è,μ,Ă'¼,ì·>[]ì—p,đ[]i[]¬,μ,½,è,Ă,«,Ü,·[]B

f[]f: ftfB[][f<fh,Æ,í^á,ç[]Cfvf[]pfefB,í·ï[]”fpf%[]f[]f^,Æ,μ,Ă“n,¹,Ü,¹,ñ[]B,Ü,½[]C@ %° %°ŽŽŽq,đŽg,Á,Ăfvf[]pfefB,ìfAfhf[]fX,đŽæ,è[]o,·,±,Æ,à,Ă,«,Ü,¹,ñ[]B,±,è,í[]C**read** Žw'èŽq,Æ **write** Žw'èŽq,ì—¼·ù,³ftfB[][f<fhŽ·ÊŽq,đŽ!,·[]ê[]#,É,à“—,Ă,í,Ü,è,Ü,·[]B,μ,½,³,Á,Ă[]Cf[]f\fbfh,đŽ!,·fAfNfZfXŽw'èŽq,ì^è·ù,Ü,½,í—¼·ù,đ[]Cfvf[]pfefB,ì[]«—^,ìŽACE»,ĂŽ©—R,É·í[]X,Ă,«,Ü,·[]B

—á04133

ŽŸ,lfR[fh,lfvf[fpfefB AValue ,đéĈ¾,μC,»,lfAfNfZfXf[fbfh SetValue ,đ'è` ,μ,Ü,·B

type

TPropObject = **class** (TObject)

FValue: Integer;

procedure SetValue(NewValue: Integer);

property AValue: Integer **read** FValue **write** SetValue;

end;

procedure TPropObject.SetValue(NewValue: Integer);

begin

FValue := NewValue;

UpdateScreen;

end;

ŽQÆ04134

fvfıpfefB,ı\•¶

”z—ñfvfıpfefB

“Ç,Ýo,μê—p,Æı,«ž,Ýê—p,ıfvfıpfefB

"z—ñfvf[]pfefB04135

ŽQ[]Æ —á

"^,[]CE^,ì'ì,ð•;[]"Ž[],;fCf"fffbfNfX,É,æ,Á,ÄŽQ[]Æ,·,é,Æ,ç,æ"_,Á"z—ñ,Æ,Ü,Ú"~,[]@@"\ ,ìfvf[]pfefB,ð[]éCE¾,·,é,±,Æ,ª,Ä,«,Ü,·[]B,μ,©,μ"z—ñ,Æ,Í^á,ç[]Cfvf[]pfefB'S'ì,ðŽQ[]Æ,·,é,± ,Æ,Í,Ä,«,·[]C"z—ñ,ìSe—v'f,¾,·,ðŽQ[]Æ,Ä,«,Ü,·[]B,±,ì,æ,æ,Éfvf[]pfefB,ð"z—ñfvf[]pfefB,Æ,ç,ç ,Ü,·[]B

"z—ñfvf[]pfefB,Ä,ÍŽÿ,ì 2 ,Ä,ª[]d—v,Ä,·[]B

- "z—ñfvf[]pfefB,ì[]éCE¾
- "z—ñfvf[]pfefB,Ö,ìfAfNfZfX

"z—ñfvf[]pfefB,ì[]éCE¾

"z—ñfvf[]pfefB,ìfCf"fffbfNfX,ì-¼'O,ÆCE^,ðŽw'è,·,éfcf"fffbfNfXfjpf %oof[]f^fŠfXfg,ð[]éCE¾,·,é,±,Æ,ð[]œ,ç,Ä[]C"z— ñfvf[]pfefB,ì[]éCE¾,Í'¼,ìfvf[]pfefB,ì[]é[]±,Æ"" ,[],Ä,·[]B

fjpf%oof[]f^[]éCE¾,ð^í,b,ì,ÉfjfbfR () ,ì,©,ì,è,ÉŠpfjfbfR [] ,ðŽg,æ,±,Æ,ð[]œ,ç ,Ä[]CfCf"fffbfNfXfjpf%oof[]f^fŠfXfg,ìCE^ Ž® ,ÍŽè^±,«,âŠÖ[]" ,ì%o¼fjpf %oof[]f^fŠfXfg,ì[]é[]±,Æ"" ,[],Ä,·[]B"z—

ñCE^,Ä,ì[]±~CE^,ìfCf"fffbfNfX,¾,·,μ,©Žw'è,Ä,«,Ü,¹,ñ,ª[]C"z—ñfvf[]pfefB,Ä,Í,ç ,·,é,ìCE^ ,àŽw'è,Ä,«,é,±,Æ,É'[]^Ó,μ,Ä,,¾,¾,ç[]B

"z—ñfvf[]pfefB,ìfAfNfZfXŽw'èŽq,Äf[]fbfhŽ^-ÉŽq,ðŽì,¾,È,,Ä,Í,È,è,Ü,¹,ñ[]B,Ä,Ü,è[]C"z— ñfvf[]pfefB,ì **read** Žw'èŽq,Æ **write** Žw'èŽq,Ä,ìftfB[]f<fh-¼,ðŽw'è,Ä,«,Ü,¹,ñ[]B

"z—ñfvf[]pfefB,ìfAfNfZfXŽw'èŽq,ÄŽì,¾,è,éfcf[]fbfh,ìŽÿ,ì<K'¥,É[]],Ä,Ä,ç,Ü,·[]B

- "z—ñfvf[]pfefB,ì **read** Žw'èŽq,ÄŽì,¾,è,éfcf[]fbfh,ì[]Cfvf[]pfefB,ìfCf"fffbfNfXfjpf %oof[]f^fŠfXfg,ÉŽì,¾,è,é,ì,Æ"" ,[]" ,ÆCE^ ,ìfjpf%oof[]f^,ð,Æ,éŠÖ[]" ,Ä,È,- ,Ä,Í,È,ç,·,[]C,»,ìŠÖ[]" ,ìCE<%oÉCE^ ,ìfvf[]pfefBCE^ ,Æ^è'v,μ,È,,Ä,Í,È,ç,È,ç
- "z—ñfvf[]pfefB,ì **write** Žw'èŽq,ÄŽì,¾,è,éfcf[]fbfh,ì[]Cfvf[]pfefB,ìfCf"fffbfNfXfjpf %oof[]f^fŠfXfg,ÉŽì,¾,è,é,ì,Æ"" ,[]" ,ÆCE^ ,ìfjpf%oof[]f^,ð,Æ,éŽè'± ,«[]C,·,æ,Ñfvf[]pfefBCE^ ,Æ"" ,[]CE^ ,ì'è[]"fjpf%oof[]f^,Ü,½,Í'Ç%oÁ'ì,Ä,È,,Ä,Í,È,ç,È,ç

"z—ñfvf[]pfefB,Ö,ìfAfNfZfX

"z—ñfvf[]pfefB,ÉfAfNfZfX,·,é,É,ì[]Cfvf[]pfefBŽ^-ÉŽq,ìCEä,ÉŠpfjfbfR [] ,Ä^í,ñ,¾Äfjpf %oof[]f^,ðŽw'è,μ,Ü,·[]B"z—ñfvf[]pfefB,ðŽg,æ,Æ,«,Í"z—ñ'S'ì,É,ìfAfNfZfX,Ä,«,Ü,¹,ñ[]B

f}f<f fCf"fffbfNfXfvf[]pfefB

"z—ñfvf[]pfefB,É,Í"z—ñ,Æ"" ,[],·,[]" ,ìfCf"fffbfNfX,ðŽw'è,Ä,«,Ü,·[]B**read** f[]fbfh,Æ **write** f[]fbfh,É'ì%ož,·,éfcf%oof[]f^,ì[]CfCf"fffbfNfX,Æ"" ,[]ft[]fU[][Ž^-ÉŽq,ðŽ,Ä,Ä,ç,È,- ,Ä,Í,È,ç,·,[]CfCf"fffbfNfX,Æ"" ,[][]±,É•Ä,ñ,Ä,ç,È,,Ä,Í,È,è,Ü,¹,ñ[]B

ŽQÆ04136

ffftHf<fg,ì”z—ñfvf[]fpfefB

fvf[]fpfefB,ì“Ç,Ý[]o,μ,Æ[]’,«[]ž,Ý—p,ìftfB[]f<fh

fCf“fffbfNfXŽw’èŽq

fvf[]fpfefB,ì[]\•¶

“Ç,Ý[]o,μ[]ê—p,Æ[]’,«[]ž,Ý[]ê—p,ìfvf[]fpfefB

—á04137

"z—ñfvf□fpfefB,ì□éCE¾,ì—á

"z—ñfvf□fpfefB,ìfAfNfZfX

"z—ñfvf[]fpfefB,ìé¼,ì—á04138

ŽŸ,ìfR[]fh,í•Ÿš—ñ,ì"z—ñ,ÉŽ—,½fvf[]fpfefB,ðé¼,μCfvf[]fpfefB—p,É read f<[]f`f",Æ
write f<[]f`f",ðé¼,μ,Û,·B

```
property MyStrings[Index: Integer]: string read GetMyString write  
SetMyString;  
function GetMyString(Index: Integer): string;  
procedure SetMyString(Index: Integer; const NewElement: string);
```

"z—ñfvf[]fpfefB,lfAfNfZfX04139

ŽŸ,ì"z—ñ[]éĚ¼,ª, ,é[]ê[]‡,lfAfNfZfX,đĚ©,Ä,Ý,Û,·[]B

```
property MyStrings[Index: Integer]: string read GetMyString write  
SetMyString;
```

ŽŸ,ì,æ,ª,ÉĚŸ[]ö•¶Žš—ñ,ì[]Ý'è,ª,Ä,«,Û,·[]B

```
var  
  YourString: string;  
begin  
  YourString := MyStrings[1];  
  MyStrings[2] := 'This is a string.';  
end;
```

ffftfHf<fg,ì"z—ñfvf[]pfefB04140

ŽQ□Æ

"z—ñfvf[]pfefB,đffftfHf<fgfvf[]pfefB,Æ,μ,Ä□éC¾¼,·,é,Æ□C-¼'O,đŽg,í,È,ç,Ä"z—
ñ,đŽQ□Æ,Ä,«□CfCf"fffbfNfX,ªŽw'è,³,è,Ä,ç,é,©,ì,æ,α,ÉlfufWfFfNfg,đ□^—
□,Ä,«,Ü,·□BflfufWfFfNfg,É,ÍffftfHf<fgfvf[]pfefB,đ 1 ,Ä,¾¼, Žw'è,Ä,«,Ü,·□B

ffftfHf<fg,ì"z—ñfvf[]pfefB,đ□éC¾¼,·,é,É,Í□Cdefault Žw—ß,đ"z—ñfvf[]pfefB,ìCä,É'Ç
%oÄ,μ,Ü,·□B

type

```
TMyObject = class(TObject)
```

```
    property X[Index: Integer]: Integer read GetElement; default;
```

```
end;
```

ffftfHf<fg,ì"z—ñfvf[]pfefB,ÉfAfNfZfX,·,é,É,Í□Cfvf[]pfefB-

¼,đŽw'è,¹,·,É□CflfufWfFfNfgŽ`•ÉŽq,ìCä,ÉfCf"fffbfNfX,đ'Ç%oÄ,μ,Ü,·□B,½,Æ,ì,î□Cä,ì—
á,ì,æ,α,É□éC¾¼,ª, ,é□é#□CŽÿ,ìfR□fh,ÍffftfHf<fgfvf[]pfefB X ,É'¼□ÚfAfNfZfX,μ,Ü,·□B

var

```
    MyObject: TMyObject;
```

begin

```
    MyObject.X[1] := 42;
```

```
    MyObject[2] := 1993;
```

end;

flfufWfFfNfgŽQ□Æ,ìCä,ÉŠpfjfbfR [] ,É^í,Ü,è,½fCf"fffbfNfX,ìfŠfXfg,ªŽw'è,³,è,Ä,ç

,é□é#□CfRf"fpfCf%o,ìflfufWfFfNfgC^,ÍffftfHf<fg,ì"z—

ñfvf[]pfefB,đŽ©"®"l,É'l'ð,μ,Ü,·□BflfufWfFfNfgC^,ÉffftfHf<fg,ì"z—ñfvf[]pfefB,ªŽw'è,³,è,Ä,ç

,È,ç□é#□CfRf"fpfCf%o,ªfGf%o□[,đ□o—í,μ,Ü,·□B

flfufWfFfNfg,ªffftfHf<fg,ì"z—ñfvf[]pfefB,đ'è<` ,·,é□é#□C"h□¶,μ,½flfufWfFfNfg,ÍffftfHf<fg,ì"z—

ñfvf[]pfefB,đŽ©"®"l,ÉCp³,μ,Ü,·□B"h□¶,μ,½flfufWfFfNfg,Í□CffftfHf<fg,ì"z—

ñfvf[]pfefB,đ□éC¾¼,μ'¼,·,±,Æ,à%oB,·,±,Æ,à,Ä,«,Ü,¹,ñ□B

ŽQÆ04141

"z—ñfvfıpfefB

fvıpfefB,ı\•¶

fCf“ffbfNfXŽw’èŽq04142

ŽQ□Æ —á

fvf□pfefB, l'è<` ,Á, lfvfVfjf“ ,ÁfCf“ffbfNfXŽw’èŽq, đŽg, l, Ü, ·□BfCf“ffbfNfXŽw’èŽq, đŽg, l, l□C, ç, ,Á, ©, lfvf□pfefB, Á“` , lfvfNfZfXf□fjbh, đ<α—L, Á, «, Ü, ·□BfCf“ffbfNfXŽw’èŽq, l index Žw—
ß, Æ, ±, è, É'±, -32767 □` 32767 , l□@□“ , ©, ç, È, è, Ü, ·□B

index Žw’èŽq, ^a•t, ç, ½fvf□pfefB, lfvfNfZfXŽw’èŽq, lfvfjbhŽ` •ÉŽq, đŽl, ³, È, -
, Á, l, È, è, Ü, ¹, ñ□B, Á, Ü, è□C**index** Žw’èŽq, l•t, ç, ½fvf□pfefB, l **read** Žw’èŽq, Æ **write**
Žw’èŽq, lftfB□[f<fh-¼, đŽl, ¹, Ü, ¹, ñ□B

index Žw’èŽq, ^a•t, ç, ½fvf□pfefB, ÉfAfNfZfX, ·, é□ê□#□Cfvf□pfefB’è<` , ÉŽw’è, ³, è, ½□@□“l, l’Ç
%oÁ, lfpf%of□□[f^, Æ, μ, ÁfAfNfZfXf□fjbh, É“n, ³, è, Ü, ·□B, ±, l, ½, ß□C**index** Žw’èŽq, ^a•t, ç
, ½fvf□pfefB, lfvfNfZfXf□fjbh, l□@□“CE^, l’Ç%oÁ, l’lfpf%of□□[f^, đ, Æ, é•K—v, ^a, , è, Ü, ·□B
fvf□pfefB **read** ŠÖ□“ , Á, l□C’Ç%oÁ, lfpf%of□□[f^, l□ÁCEä, lfpf%of□□[f^, Á, È, , Á, l, È, è, Ü, ¹, ñ□B
fvf□pfefB **write** Žè’±, «, Á, l□C’Ç%oÁ, lfpf%of□□[f^, l□ÁCEä, ©, ç 1 , Á’O, lfpf%of□□[f^, Á, È, -
, Á, l, È, è, Ü, ¹, ñ□B, Á, Ü, è□C□V, μ, çfvf□pfefB’l, đŽl, ·fpf%of□□[f^, l’¼’O, ÉŽw’è, ·, é•K—v, ^a, , è, Ü, ·□B

ŽQÆ04143

"z—ñfvfıpfefB

fvıpfefB,ı\•¶

—á04144

ŽŸ,lfR[fh,lfufWfFfNfg TRectangle ,đŽw'è,μ[CfCf“ffbfNfXfvf[fpfefB Left, Top, Right, Bottom ,đ[éCE¾,μ,Û,·[B

type

```
TRectangle = class
  private
    FCoordinates: array[0..3] of Longint;
    function GetCoordinate(Index: Integer): Longint;
    procedure SetCoordinate(Index: Integer; Value: Longint);
  public
    property Left: Longint index 0
      read GetCoordinate write SetCoordinate;
    property Top: Longint index 1
      read GetCoordinate write SetCoordinate;
    property Right: Longint index 2
      read GetCoordinate write SetCoordinate;
    property Bottom: Longint index 3
      read GetCoordinate write SetCoordinate;
    property Coordinates[Index: Integer]: Longint
      read GetCoordinate write SetCoordinate;
    :
  end;
```

Rectangle ,ª[ã,ì—á,Å'è<` ,³,é,Ä,ç,é TRectangle CE^ ,lfufWfFfNfgŽQ[Æ,Å, ,é,Æ,·,é,Æ[CŽŸ,ì
2 ,Å,ì•¶,í“™%º;É,È,è,Û,·[B

```
Rectangle.Right := Rectangle.Left + 100;  
Rectangle.SetCoordinate(2, Rectangle.GetCoordinate(0) + 100);
```


Ši" [Žw'èŽq04145

ŽQAE

fvf[]pfefB'è<` , []È—à%oÁ" \, ÈŽw'èŽq, Á, , é stored, default, nodefault
 , ÍŠi" [Žw'èŽq, ÆCEÁ, Î, ê, Û, · []B, ±, ê, ç, ÌŽw'èŽq, Í []C**published** fvf[]pfefB—
 p, É [] [] —, ³, ê, ½ŽÁ []sŽžCE ^ []î•ñ, Ì^è'è, Ì"Á []« , ð []\$CEä, µ, Û, · []BŠi" [Žw'èŽq, Í'É []í, Ìfvf[]pfefB ("z—
 ñ^ÈŠO, Ìfvf[]pfefB) , É'Í, µ, Ä, ^¾, ~ftf [] []fg, ³, ê, Ä, ç, Û, · []B

Ši" [Žw'èŽq, Í []Cfvf[]pfefB, ³fvf[]fOf%of€fR [] [fh, Á, Ç, Ì, æ, x, ÉŽg, í, ê, é, ©, É, Á, ç, Ä%oe<¿, ð—
 ^, Ì, Û, ¹, ñ []B, µ, ©, µ []CDelphi , ÌfrfWf...fAf<fNf%ofXf%ofCfuf
 %ofŠ, Á, Í []CŠi" [Žw'èŽq, Á [] [] —, ³, ê, ½ []î•ñ, ðŽg, Á, Ä []CftfH [] [f€ftf@fCf<, É, , éfRf" f]
 [] [f"fg, Ìfvf[]pfefB' l, ðŽ © " @ " l, É•Û' ¶, µ, ½, èf [] [] [fh, µ, Û, · (, ±, ê, ðfvf[]pfefB' l, Ìftf@fCfŠf" fO, Æ, ç
 , ç, Û, ·) []B**stored** Žw—ß, Ìfvf[]pfefB, ð, Ç, ±, Éftf@fCfŠf" fO, ·, é, ©, ðŽw'è, µ, Û, · []B**default** , Æ
 nodefault , Ìfvf[]pfefB, Ìfvf[]pfefB, ÌffftfHf<fg' l, Æ'z'è' l, ðŽw'è, µ, Û, · []B

fRf" f] [] [f"fg, Ì []ó' Ó, ð•Û' ¶, ·, é []ê [] []CDelphi , ÌfrfWf...fAf<fNf%ofXf%ofCfuf%ofŠ, ÌfRf" f] [] [f"fg, Ì
 published fvf[]pfefB, ðCE, è•Ó, µŽg, ç, Û, · []B**stored** Žw'èŽq, Ì~ _—
 []'è" []CftfB [] [f<fh []CŠÖ []" , ÌŠef []f\fbfh, ð•] %o
 ¿, µ, ½CE<%oÉ, É, æ, Á, Ä []Cfvf[]pfefB, ð•Û' ¶, ·, é, ©, Ç, x
 , ©, ðfvf[]pfefB, ², Æ, É []\$CEä, µ, Û, · []BCE<%oÉ, ³ False , È, ç, Ìfvf[]pfefB, Í•Û' ¶, ³, ê, · []CTrue , È, ç, Ì
 default Žw'èŽq, Á—^, Ì, ç, ê, ½' l (' ¶ []Ý, ·, é []ê [] []
 , Æfvf[]pfefB, ÌCE»Ý' l, ³ " äŠr, ³, ê, Û, · []BCE»Ý' l, ³ffftfHf<fg' l, É"™ , µ, ~, è, Ìfvf[]pfefB, Í•Û' ¶, ³, ê, · []Cfff
 tfHf<fg' l, É"™ , µ, , È, ç, © fvf[]pfefB, ÉffftfHf<fg' l, ³Žw'è, ³, ê, Ä, ç, È, ~, è, Ì []Cfvf[]pfefB, Í•Û' ¶, ³, ê, Û, · []B

ŽQÆ04146

fvfıpfefB,ı\•¶

fvf[]fpfefBfi[]fo[]f%ofCfh04147

ŽQ[]Æ —á

fvf[]fpfefBfCf“f^[]ftfF[]fX,đŠÜ,Ü,È,čfvf[]fpfefB’è<`,Ífvf[]fpfefBfi[]fo[]f
%ofCfh,ÆĀĀ,Ī,ê,Ü,·[]Bfvf[]fpfefBfi[]fo[]f%ofCfh,đŽg,ı,İ[]CĒp[]³fvf[]fpfefB,İ
%oÂŽ<[]«[]CfAfNfZfXŽw’èŽq[]CŠi”[Žw’èŽq,đ”h[]fNf%ofX,É,æ,Á,Ä·İ[]X,Å,«,Ü,·[]B

[]Å,à’P[]f,È[]\·[]ĀĒ`Ž®,Å,İ[]Cfvf[]fpfefBfi[]fo[]f%ofCfh,ÍĒp[]³fvf[]fpfefBŽ`·ÉŽq,ªĀă,ë,É·t,č,½
—\—ñĀĒ **property**,¾,~,ÅŽw’è,μ,Ü,·[]B,±,İ[]\·[]f,Ífvf[]fpfefB,İ%oÂŽ<[]«,đ·İ[]X,·,é,Æ,«,ÉŽg,č
,Ü,·[]B,½,Æ,ı,İ[]C**protected**·”,İ†,ÅŠî-{}fNf

%ofX,ªfvf[]fpfefB,đ’è<`,·,é[]ê[]#[]Cfvf[]fpfefBfi[]fo[]f%ofCfh,đ **public**·”,Ü,½,Í **published**
·”,Å[]éĀ¾,·,é,±,Æ,É,æ,Á,Ä[]C”h[]fNf%ofX,Ífvf[]fpfefB,İ%oÂŽ<[]«,đ[]f[]¬,Å,«,Ü,·[]B

fvf[]fpfefBfi[]fo[]f%ofCfh,É,Í **read, write, stored**,İ,Ù,©,É[]C**default**,Ü,½,Í **nodefault**
,đŽw’è,Å,«,Ü,·[]B,±,é,ç,İŽw’èŽq,ı,č,·,è,à[]C’İ%ož,·,éĒp[]³Žw’èŽq,đfi[]fo[]f

%ofCfh,μ,Ü,·[]Bfvf[]fpfefBfi[]fo[]f%ofCfh,ÍĒp[]³AfNfZfXŽw’èŽq,đ·İ[]X,μ,½,è[]C·s’«,μ,Ä,č
,éAfNfZfXŽw’èŽq,đ’Ç%oÄ,·,é,±,Æ,İ,Å,«,Ü,·,ª[]CfAfNfZfXŽw’èŽq,đ[]í[]œ,·,é,±,Æ,İ,Å,«,Ü,¹,ñ[]B

ŽQÆ04148

fAfNfZfXf\fbfh

fv\fpfefB,)\•¶

Ši"[\Žw'èŽq

—á04149

ŽŸ,lfR[fh,íCEp³fvf[]pfefB,ì%oÁŽ<[]«[]CfAfNfZfXŽw'èŽq[]CŠi"[Žw'èŽq,ðfvf[]pfefBf[]fo[]f
%ofCfh,Ā•Ī[]X,μ,Ů,·[]B

type

```
TBase = class
:
protected
  property Size: Integer read FSize;
  property Text: string read GetText write SetText;
  property Color: TColor read FColor write SetColor stored False;
:
end;
```

type

```
TDerived = class(TBase)
:
protected
  property Size write SetSize;
published
  property Text;
  property Color stored True default clBlue;
:
end;
```

“Ç,Ý□o,μ□ê—p,Æ□’,«□ž,Ý□ê—p,lfvf□fpfefB04150

ŽQ□Æ

fvf□fpfefB□éCE¾,ì **read** •”,Ü,½,Í **write** •”,ð□È—ª,·,é,±,Æ,É,æ,Á,Ä□C“Ç,Ý□o,μ□ê—
p,Ü,½,Í□’,«□ž,Ý□ê—p,lfvf□fpfefB,ð□ì□¬,Á,«,Ü,·□B,½,Æ,ì,Î□C“Ç,Ý□o,μ□ê—
pfvf□fpfefB,ð□ì□¬,·,é,É,Í **read** f□f□fbfh,¾,¬,ðžw’è,μ,Ü,·□B

type

```
TAnObject = class (TObject)  
    property AProperty: TypeX read GetAnObject;  
end;
```

fvf□fpfefB,ð□Ý’è,·,é□f□fbfh,ð’ñ<Ÿ,μ,È,†,±
,Æ,É,æ,Á,Ä□CfGf“fhft□[fU□[,É’Î,μ,Äfvf□fpfefB,ð“Ç,Ý□o,μ□ê—p,É,μ,Ü,·□B“Ç,Ý□o,μ□ê—
pfvf□fpfefB,É□’,«□ž,ñ,¾,è□’,«□ž,Ý□ê—pfvf□fpfefB,ð“Ç,Ý□o,»,¤,Æ,·,é,Æ□CfRf“fpfCf<fGf
%o□[,ª”□¶,μ,Ü,·□B

ŽQÆ04151

"z—ňfvf[]pfefB

fvf[]pfefB,ì“Ç,Ý[]o,µ,Æ[]',«[]ž,Ý—p,ìftfB[]f<fh

fvf[]pfefB,ì[]\•¶

ŽQÆ04153

fifufWfFfNfgéCE¾,ì•ïX

fifufWfFfNfg,ìŽg,ç•û,ì•ïX

fvfïpfefB

“®“If fbfh04154

“®“If fbfh éCE¾,Á,Í dynamic Žw—β,đŽg,č,Ü,·BfRf“fpfCf%o,Í“ÆŽ©,ìfCf“ffbfNfX,đŠ,,è“-
,Ä,Ü,·B,±,ìfCf“ffbfNfX,Í•%o,ì”,É,È,é,±,Æ,ª,è,Ü,·,ªCí,ÉŽg,α,Æ,ÍCEÀ,è,Ü,¹,ñB

fNf%ofX,ì%o¼‘zf fbfhfe [fuf<,ìfGf“fgfŠ,ì,©,í,è,ÉC“®“If fbfh
fbfh,ªfCf“fXf^f“fX”Ôt,É,æ,Á,ÄffBfXfpfbf`,³,è,é“_đœ,ç,ÄC“®“If fbfh,Í%o¼‘zf fbfh
fbfh,Æ“~,¶<@“\,đŽ,ì,Ü,·B”®“If fbfh,Æ%o¼‘zf fbfh,ì‘à,«,È^á,ç,ÍC“®“If fbfh
fbfh,ìffBfXfpfbf`,Á,Í½ŽžŠÔ,ª,©,©,é,±,Æ,Á,·B

fbfZ[fW^—ffbfh04155

Delphi ,Å,í“®“lf\fbfh,ì,Ù,©,ÉCfbfZ[fW^—ffbfh,Æ,ç,κ“Á•Ê,ÈÈ`Ž®,ì“®“lf\fbfh,ð”ö,!,Ä,ç,Ü,·B

fbfZ[fW^—ffbfh,Å,íŽÿ,ì 3 ,Â,^ad—v,Å,·B

- fbfZ[fWfnf“fhf%o,ìéCE³/₄
- fbfZ[fW,iffBfXfpbf`
- CEp³fbfZ[fWfnf“fhf%o,ìCEÄ,Ño,μ

fbfZ[fWfnf“fhf%,ìéCE¾04156

fbfZ[fW^—f\fbfh,É,ÍŽŸ,ì 4 ,Á,ìá,«,È“Á’¥,ª, ,è,Û,·B

- í,ÉŽè±,«,Á, ,é
- **message** Žw—ß,É,æ,Á,ÄéCE¾, ,é
- **message** ,ìCEã,É“@“lfCf“ffbfNfX,Æ,µ,Ä@““è”,ð,Æ,é
- ‘P^è,ìfpf%of[f^ ,ð,Æ,èC,» ,é,í **var** fpf%of[f^ ,Á,È,,Ä,Í,È,ç,È,ç

fbfZ[fWfnf“fhf%,í cdeclC%¾‘zC“@“lCfI[f%ofCfhC’ŠÛ,ì,ç, ,è,ìf\fbfh,àŽ,Ä,Û,¹,ñB

^è”É“l,ÈfbfZ[fW^—f\fbfh,ì—á,ðŽŸ,ÉŽì,µ,Û,·B

type

```
TMyControl = class (TWinControl)
```

```
  procedure WMPaint(var Message: TWMPaint); message WM_PAINT;
```

```
end;
```

f\fbfh-¼Cfpf%of[f^ -¼Cfpf%of[f^CE^,í d—v,Á,í, ,è,Û,¹,ñB,½,Æ,í,í
%º^ÉCE^,íC“~,lfbfZ[fWCE^,Éí,µ,Ä‘S,^Û,È,éfnf“fhf%,ðéCE¾,Á,«,Û,·B

type

```
TMyOtherControl = class (TMyControl)
```

```
  procedure PaintIt(var Info); message WM_PAINT;
```

```
end;
```

fbfz[fW,iffBfXfpbf` 04157

ŽÀÛ,ifbfz[fW,iffBfXfpbf`,íCTObject ,©,çEp³,μ,½ Dispatch ,Æ,ç,xf\fbfh,É,æ,Á,ÄŽÀs,³,ê,Û,·B

CEp³fñfbfZñ[fWfnf“fhf%o,ìCEÄ,Ñño,µ04158

fñfbfZñ[fWfnf“fhf%ofñfbfh“à,Ä,íCfIfufWfFfNfg,ìñã^ÊCE^,©,çCEp³,µ,½fñfbfZñ[fWfnf“fhf%o,
ðCEÄ,Ñño,¹,Ü,·ñBfñfbfh,ì-¼'O,Æfpf%ofñf^,í•í,í,é,±,Æ,³, ,é,ì,ÅñCinherited
,ðŽg,Ä,ÄCEp³fñfbfh,ðCEÄ,Ñño,µ,Ü,·ñBñã^Êfñfbfh,ì-¼'O,ðŽw'è,·,é•K-v,í, ,è,Ü,¹,ññB
,½,Æ,í,íñCñã,ì-á,ÉŽ,í,µ,½ WMPaint fñfbfh,íŽÿ,ì,æ,æ,ÉŽÀCE»,Ä,«,Ü,·ñB

```
procedure TMyControl.WMPaint(var Message: TWMPaint);  
begin  
  with Message do  
  begin  
    ...  
    inherited;  
    ...  
  end;  
end;
```

CEÄ,Ñño,³,é,éCEp³fñfbfh,íñC“˘,ñfñfbfZñ[fWfCf“ffbfNfX,ðŽñ,Ä,Ä,ç,Ü,· (,±,ìñêñ,í
WM_PAINT ,Ä,·)ñB,½,Æ,í,íñCñã,ì-á,ÄñéCE¾,³,è,Ä,ç,éfñfbfh TMyOtherControl.PaintIt
,³CEp³•ñ,ðŠÜ,ñ,Ä,ç,éñêññCCEÄ,Ñño,³,é,éfñfbfh,í TMyControl.WMPaint ,É,È,è,Ü,·ñB

fftfHfçfgfñfbfZñ[fWfnf“fhf%o

fñfbfZñ[fWfnf“fhf%ofñfbfh“à•”,Ä,ì inherited ,ìCEÄ,Ñño,µ,í,ç
,Ä,Ä,à^Ä'S,Ä,·ñBñã^ÊCE^,ª“Á'è,ìfñfbfZñ[fWfCf“ffbfNfX,É,Ä,ç,Ä“Á'è,ìfñfbfZñ[fWfnf“fhf%o
,ðñéCE¾,µ,È,çñêññCinherited ,É,æ,Ä,Ä TObject fñfbfh,ì DefaultHandler
,³CEÄ,Ñño,³,è,Ü,·ñB

'ŠŮf\fbfh04159

—á

'ŠŮf\fbfh, íCfNf%ofX"à, ÅéÉ¾¾, ¯, ¯s, í, êCŽÀ'•, ¯'è<` , ¯, ê, Ä, ç, È, ç%¼'zf\fbfh, Ü, ½, í" @ "lf\fbfh, ·B, » , í'è<` , í%º^ÊfNf%ofX, Ü, ÅŽ, , ¯%ºz, ¯, ê, Ü, ·B'SŮf\fbfh, íCf" f^ [ftjF [fX, Ì, Ý, ð'è<` , µC, » , ÌŠî, Æ, È, é'€ì, í'è<` , µ, Ü, ¯, ñB

abstract Žw—ß, ¯éÉ¾¾, ÉŠÜ, Ü, ê, Ä, ç, é, ÆCf\fbfh, í'SŮf\fbfh, É, È, è, Ü, ·Bf\fbfh, ð
abstract , ÆéÉ¾¾, Å, «, é, Ì, íCÅ%º, É **virtual** , Ü, ½, í **dynamic**
, ÆéÉ¾¾, ¯, ê, ½, Æ, «, ¾, ¯, Å, ·B

'ŠŮf\fbfh, Ìf [fo [f%ofCfh, íC**inherited** f\fbfh, ðCEÄ, Ño, ¯, È, ç, ±, Æ, ðœ, ç, Ä'Êí, Ì%¼'zf\fbfh, Ü, ½, í" @ "lf\fbfh, Æ" , ¶, Å, ·B

'ŠŮf\fbfh, ðCEÄ, Ño, ·, ÆCŽÀsŽž, É—áŠO, ¯¶¬, ¯, ê, Ü, ·B

—á04160

ŽŸ,ì—á,Å,í'ŠŮfſfjbfh,ðéŒ¼,μ,Ä,ç,Ü,·B

type

 TMyObject = **class**

procedure Something; **virtual; abstract;**

end;

fi[]fo[]f%ofCfhŽw—B04161

%¼'zf[]f[]fh,Á,Í VMT fx[]fXfffBfXfpfbf` ,Æ“®“lfffBfXfpfbf` ,ì 2 Ží—
p,lfffBfXfpfbf` ,ðŽÀ[]s,Á,« ,é,ì,Á[]C%¼'zf[]f[]fh,Æ“®“l[]f[]fh,ðfi[]fo[]f%ofCfh,·,éf[]f[]
fbfh,í[]C**virtual** ,Æ **dynamic** ,ð[]EJ,è•Ô,·,©,í,è,É override Žw—B,ðŽg,ç,Ü,·[]B

ŽŸ,É—á,ðŽl,μ,Ü,·[]B

type

TAnObject = **class**

procedure P; **virtual**;

end;

TAnotherObject = **class**(TAnObject)

procedure P; **override**;

end;

TAnotherObject Ć^,í[]C,» ,ì P f[]f[]fh,ð virtual ,Ü,½,í dynamic ,É,æ,Á,Ä[]é[]C¾,Á,« ,Ü,·,²[]C,±
,ê,ç,ì^Ó-ì,·,é,à,ì,í^Ü,È,è,Ü,·[]B,±,ì,Ç,ì,ç,à[]C^Ü,È,éf[]f[]fh P ,ð“±“ü,μ,Ä[]C[]p[]³,μ,½ P
,ðfi[]fo[]f%ofCfh,Á,Í,È, 'uŠ,μ,Ü,·[]B

¼'zfRf“fXfgf%ofNf^04162

V,μ,cfXf^fCf<,lfufWfFfNfg,É,¼'zfRf“fXfgf
%ofNf^,đŽw'è,Å,«,Ü,·B,½,Æ,¡,CTObject.Create,¼'zfRf“fXfgf
%ofNf^,Å,Í, ,è,Ü,¹,ñ,²C'½,,ì VCL fufufWfFfNfg,¼'zfRf“fXfgf%ofNf^,đŽ,Á,Ä,ç,Ü,·B

ŽĀsŽžfGf%o[04163

ŽĀsŽžfGf%o[,Ā,íŽÿ,ìĒ`Ž®ĀfGf%o[f]fbfZ[fW,ª•\Ž|,³,êCfvf[fOf%of€,ª|—¹,µ,Û,·B

Run-time error nnn at xxxxxxxx

nnn ,íŽĀsŽžfGf%o["Ō+[]Cxxxxxxxx ,íŽĀsŽžfGf%o[fAfhfĒfX,Ā,·B

SysUtils ftfjfbfg,ðŽg,Ā,½ Delphi fAfvfŠfP[fVf+f" ,Ā,í[]C,Û,Æ,ñ,Ç,ìŽĀsŽžfGf%o[,ª= áŠŌ,Ō•İŠ,³,ê,é,ì,Ā[]CfAfvfŠfP[fVf+f" ,ð|—¹,³,¹, ,ÉfGf%o[,ð%ðĒĒ^,Ā,«,Û,·B,±,ê,ð—áŠŌ[]^ =[]Æ,ç,ç,Û,·B

ŽĀsŽžfGf%o[,í^È%º,ì 3 ,Ā,lfjfefSfŠ,É•ª—p,Ā,«,Û,·B

- "ü[]o—lfGf%o[(fGf%o["Ō+[] 100[]`149)
- 'v-½"lfGf%o[(fGf%o["Ō+[] 200[]`255)
- flfyfĒ[]fEfBf"fOfVfXfef€fGf%o[

"ü[]o—lfGf%o[

"ü[]o—lfGf%o[,ª<N,«,é,Æ[]C,» ,ì•¶,ª { \$|+ } []ó'Ō,ĀfRf"fpfCf<,³,ê,Ā,ç,é[]ê[]#,lfvf[fOf%of€,ª|—¹,µ,Û,·B { \$|- } []ó'Ō,Ā,lfvf[fOf%of€,ìŽĀs,ª'±[]s,³,ê[]CIOResult SŌ[]" ,É,æ,Ā,ĀfGf%o[,ª•ñ[][],³,ê,Û,·B

"Ō+[] fGf%o[

[]à-¾

| | | |
|-----|-----------------------------------|--|
| 100 | fffBfXfN"Ç,Ý[]o,µfGf%o[| Ē^•t,«ftf@fCf<,É'í,·,é Read ,Āftf@fCf<,ì[]l,í,é,ð %ºz,!,Ā"Ç,Ý[]o,» ,æ,Æ,µ,½[]ê[]#,É•\Ž ,³,ê,é |
| 101 | fffBfXfN[]',«[]ž,ÝfGf%o[| CloseFile[]CWrite[]CWriteIn[]CFlush ,ì,ç , , ,ê, ©,ĀfffBfXfN,ª,ç,Ā,Ī,ç,É,È,Ā,½[]ê[]#,É•\Ž ,³,ê,é |
| 102 | ftf@fCf<,ªŠ, ,è"—,Ā,ç,ê,Ā,ç,Û,¹,ñ | Reset[]CRewrite[]CAppend[]CRename[]CErase ,ì,ç , , ,ê, ©,Ā Assign ,Û,½,Í AssignFile ,ìĒĀ,Ñ[]o,µ,É,æ,Ā,Āftf@fCf<•Ī[]" ,Ō- ¼'Ō,ª'ă"ü,³,ê,Ā,ç,È,ç[]ê[]#,É•\Ž ,³,ê,é |
| 103 | ftf@fCf<,ªŠ,ç,Ā,ç,Û,¹,ñ | CloseFile[]CRead[]CWrite[]CSeek[]CEof[]CFilePos[]C FileSize[]CFlush[]CBlockRead[]CBlockWrite ,ì,ç , , ,ê, ©,Āftf@fCf<,ªŠ,ç,Ā,ç,È,ç[]ê[]#,É•\Ž ,³,ê,é |
| 104 | ftf@fCf<,ª"ü—í—p,ÉŠ,ç,Ā,ç,Û,¹,ñ | fefLfxfgftf@fCf<,É'í,·,é Read[]CReadIn[]CEof[]CEoln[]CSeekEof[]CSeekEoln ,ì,ç, , ,ê, ©,Āftf@fCf<,ª"ü—í—p,ÉŠ,ç,Ā,ç ,È,ç[]ê[]#,É•\Ž ,³,ê,é |
| 105 | ftf@fCf<,ª[]o—í—p,ÉŠ,ç,Ā,ç,Û,¹,ñ | fefLfxfgftf@fCf<,É'í,·,é Write ,Æ WriteIn ,Ā Console fAfvfŠfP[fVf+f" ,ð¶[]—,µ,È, ©,Ā,½[]ê[]#,É•\Ž ,³,ê,é |
| 106 | []"[]Ē`Ž®,ª-³Ēø,Ā,· | Read ,Û,½,Í Readln ,ĀfefLfxfgftf@fCf<, ©,ç"Ç,Ý[]o,µ,½[]"[]l,ª³,µ,ç[]"[]Ē` Ž®,Ā,È,ç[]ê[]#,É•\Ž ,³,ê,é |

'v-½"lfGf%o[

'v-½"lfGf%o[,ª<N,«,é,Æ[]Cfvf[fOf%of€,í,·,® ,É|—¹,µ,Û,·B

SysUtils ftfjfbfg,ðŽg,Ā,½fAfvfŠfP[fVf+f" (,Û,Æ,ñ,Ç,ì Delphi fAfvfŠfP[fVf+f") ,Ā,í[]C'v-½"lfGf%o[,í—áŠŌ,Ō•İŠ,³,ê,Û,·BĒĀX,lfGf%o[,ð¶[]—,·,ÉfGf%o[[]ðĒĒ,É,Ā,ç,Ā,ì[]Ū[]x,í[]C'í

%ž,·,é—áŠO,ì□à-¾,đŽQ□Æ,μ,Ä,,¾,³,ç□B

"Ô† fGf%□[f□fbfZ□[fW —áŠO

| | | |
|-----|-----------------------------------|--|
| 200 | f[f□,É,æ,é□œŽZ | <u>EDivByZero</u> |
| 201 | "í^íŒÿ□,fGf%□[| <u>ERangeError</u> |
| 202 | fXf^fbfNfI□[fo□[ftf□□[| <u>EStackOverflow</u> |
| 203 | f□□[fvfI□[fo□[ftf□□[fGf%□[| <u>EOutOfMemory</u> |
| 204 | -³Œø,È fCf" f^'€□ì | <u>EInvalidPointer</u> |
| 205 | •," @□-□""_fI□[fo□[ftf□□[| <u>EOverflow</u> |
| 206 | •," @□-□""_fAf" f_□[ftf□□[| <u>EUnderflow</u> |
| 207 | -³Œø,È•," @□-□""_%%ŽZ | <u>EInvalidOp</u> |
| 215 | ŽZ□p%%ŽZfI□[fo□[ftf□□[fGf%□[| <u>EIntOverflow</u> |
| 216 | fAfNfZfX^á"½ | <u>EAccessViolation</u> |
| 217 | □kCtrl□I+□kC□I | <u>EControlC</u> |
| 218 | "ÁŒ -½—ß | <u>EPrivilege</u> |
| 219 | -³Œø,ÈŒ^fLfffXfg | <u>EInvalidCast</u> |
| 220 | -³Œø,ÈfofŠfAf" fgŒ^fLfffXfg | <u>EVariantError</u> |
| 221 | -³Œø,ÈfofŠfAf" fg'€□ì | <u>EVariantError</u> |
| 222 | fofŠfAf" fgf□[fbfhŒÄ,Ñ□o,μ | <u>EVariantError</u> fffBfXfpfbf`ff,ª, ,è,Ü,¹,ñ |
| 223 | fofŠfAf" fg"z—ñ,đ□ì□-,Ä,«,Ü,¹,ñ | <u>EVariantError</u> |
| 224 | fofŠfAf" fg,É"z—ñ,ª"ü,Á,Ä,ç,Ü,¹,ñ | <u>EVariantError</u> |
| 225 | fofŠfAf" fg"z—ñ«ŠEfGf%□[| <u>EVariantError</u> |
| 226 | TLS □%Šú%»fGf%□[| |

fIfyfŒ□[fefBf"fofVfXfef€fGf%□[

"ü□o—IfGf%□[,Æ'v-½" IfGf%□[^ÈŠO,ì,·,x,Ä,IfGf%□[,í□CWin32 ,IfGf%□[ŠÖ□",Á, ,é
GetLastError ,Á•Ô,³,è,éfGf%□[fR□[fh,É,æ,Á,Ä•ñ□□,³,è,Ü,·□BfGf
%□[fR□[fh,ì'l,IfIfyfŒ□[fefBf"fofVfXfef€,É,æ,Á,Ä^Ü,È,è,Ü,·,ª□CWin32 ,If}ffj...
fAf<,Á,»,è,ç,ì'l,ì^è—,đŽQ□Æ,Ä,«,Ü,·□B



fgfsfbfN,ªCE©,Â,©,è,Û,¹,ñ00878

CEÿ□ð,µ,½fgfsfbfN,ªCE©,Â,©,è,Û,¹,ñ,Â,µ,½□Bfwf<fvftf@fCf<,É-à'è,ª, ,é,©□C,»,ìfgfsfbfN,Ö,ìfŠ
 f“fN,É-à'è,ª, ,é,Æ□l,!,ç,ê,Û,·□B□m-
 ÚŽÿ□n□C□mfL□[f□□[fh□n,Û,½,í□mfefLfXfgCEÿ□ð□nf^fu,ðŽg,x,Æ,±
 ,ìfgfsfbfN,ðCE©,Â,¯,ç,ê,é,©,à,µ,ê,Û,¹,ñ□B

fgfsfbfN,ðCEÿ□ð,·,é,É,í

- 1 fJfefSfŠ•Ê,ÉfgfsfbfN,ðfuf%ofEfY,·,é,½,ß,É□m-ÚŽÿ□nf^fu,ðfNfŠfbfN,µ,Û,·□B
- 2 □mfL□[f□□[fh□nf^fu,ðfNfŠfbfN,·,é,Æ□ð^ø□€-Ú,ìfŠfXfg,ª•\Ž!,³,ê,Û,·□B
 'T,µ,Ä,ç,éCE¾—t,í“ü—í,·,é,©fŠfXfg,ðfXfNf□□[f<,µ,Ä'T,µ,Û,·□B
- 3 □mfefLfXfgCEÿ□ð□nf^fu,ðfNfŠfbfN,·,é,Æ,»,ì'PCEê,Û,½,íCEê<â,ªCEÿ□ð,³,ê,Û,· (Windows NT
 3.51,ì,Ý)□B

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This is associated with the Delphi 95 project file document.

