

[ft[]fU[] [DSN] f^fu

ft[]fU[] [DSN ,É,Á,ç,Äff[]f^ f[]fX,ì'Ç%ÁA[]í[]œ[]A[]v[]-,ð[]s,ç,Ü,·[]B,±,è,ç,ìff[]f^ f[]fX,ìfRf"fsf...
 []f^,É'í,μ,Äf[]fjf<,É,È,è[]ACE»[]Ý,ìft[]fU[],ì,Ý,ºŽg—p,Ä,«,Ü,·[]B

| [fjfvVjtf"] | []à-¾ |
|--|---|
| [ft[]fU[] ff[]f^ f[]fX] f{fbfNjX | ,cSN ,ì-¼' O,Æ,»,è,É'í%ž,·,éfhf %ofCfo,ðŠÜ,p[]Aft[]fU[] [DSN ,ì^è— ,Ä,·[]Bft[]fU[] [DSN ,ðf_fuf<NjŠfbfN,·,é,Æ[]Afhf%ofCfoCEÅ— L,ìff[]f^ f[]fX,ìfZfbfgfAfbfv f_fCfA[]fO f{fbfNjX,º·\Žì,³,è,Ü,·[]B |
| ['Ç%Á | []V,μ,ft[]fU[] [ff[]f^ f[]fX,ð'Ç %Á,μ,Ü,·[]B['Ç%Á] ,ðfNjŠfbfN,·,é,Æ[]A[ff[]f^ f[]fX,ì[]v<K[]v[]-] f_fCfA[]fO f{fbfNjX,º·\Žì,³,è,Ü,·[]B,± ,ìf_fCfA[]fO f{fbfNjX,É,ìfhf%ofCfo,º^è—·\ Žì,³,è,Ü,·[]Bft[]fU[] [ff[]f^ f[]fX—p,É'Ç %Á,·,éfhf%ofCfo,ð'ì'ð,μ,Ü,·[]B[Š@—¹] ,ðfNjŠfbfN,·,é,Æ[]A,»,ìfhf%ofCfoCEÅ— L,ìff[]f^ f[]fX,ìfZfbfgfAfbfv f_fCfA[]fO f{fbfNjX,º·\Žì,³,è,Ü,·[]B |
| [[]í[]œ] | Šù'¶,ìff[]f^ f[]fX,ð[]í[]œ,μ,Ü,·[]B[[]í[]œ] ,ðfNjŠfbfN,·,é'O,É[]A[]í[]œ,·,éft[]fU[] [ff[]f^ f[]fX,ðfŠfXfg f{fbfNjX,Á'ì'ð,μ,Ä,¨,·K— v,º,è,Ü,·[]B |
| [[]v[]-] | fhf%ofCfoCEÅ—L,ìff[]f^ f[]fX,ìfZfbfgfAfbfv f_fCfA[]fO f{fbfNjX,ð·\Žì,μ,Ü,·[]B,± ,ìf_fCfA[]fO f{fbfNjX,Ä,í[]AŠù'¶,ìft[]fU[] [ff[]f^ f[]fX,ì[] []v[]-,ð·ì[]X,·,é,±,Æ,º,Ä,«,Ü,·[]B[[]v[]-] ,ðfNjŠfbfN,·,é'O,É[]A'í[]Ü,Æ,È,éft[]fU[] [ff[]f^ f[]fX,ðfŠfXfg f{fbfNjX,Á'ì'ð,μ,Ä,¨,·K— v,º,è,Ü,·[]B |
| [OK] | [ODBC ff[]f^ f[]fX fAfhf~fjXfgfCE[]f^] f_fCfA[]fO f{fbfNjX,ð·Ä,¶,Ü,·[]B[ft[]fU[] [ff[]f^ f[]fX] f{fbfNjX,É'í,·,é·ì[]X,ð"K—p,·,é,½,ß,É [OK] ,ðfNjŠfbfN,·,é·K—v,í,·,è,Ü,¹,ñ[]BfŠfXfg f{fbfNjX,É'í,·,é·ì[]X,ì[]A[]f[]f^ f[] []fX,ìfZfbfgfAfbfv f_fCfA[]fO f{fbfNjX,Ä [OK],ðfNjŠfbfN,μ,½Žž"_,Ä"K—p,³,è,Ü,¹,ñ[]B |
| [fLfff"fzf<] | [ODBC ff[]f^ f[]fX fAfhf~fjXfgfCE[]f^] f_fCfA[]fO f{fbfNjX,ð·Ä,¶,Ü,·[]B[fLfff"fzf<] ,ðfNjŠfbfN,μ,Ä,à [ft[]fU[] [ff[]f^ f[]fX] f{fbfNjX,Ö,ì·ì[]X,íŽæ,è[]Á,³,è,Ü,¹,ñ[]B |
| [fwf<fv] | fwwf<fv%æ-É,ð·\Žì,μ,Ü,·[]B |

[fvjXfef€ DSN] f^fu

fVfXfef€ DSN ,É,Â,ç,Äff[]f^ f[]fX,ì'Ç%ÁA[]í[]œ[]A[][]-,ð[]s,ç,Ü,·[]B,±,ê,ç,ìff[]f^ f[]
 []fX,ð[]Aft[]fU[][,Á,Í,È,fRf"fsf...[]f^,É'í,μ,Äf[][]fj<,É,μ,Ü,·[]BfVfXfef€[]A,Ü,½,Í[][]À,ðŽ[],Áft[]fU[][,í[]Af
 VfXfef€ DSN ,ìff[]f^ f[]fX,ðŽg—p,Á,«,Ü,·[]B

| f{fVfVfj} | []à-¾ |
|--|---|
| [fVfXfef€ ff[]f^ f[]fX] f{fbfNfX | ,cSN ,ì-¼'0,Æ,»,ê,É'í%øž,·,éfhf %ofCfo,ðŠÜ,p[]AfVfXfef€ DSN ,ì'ê— ,Á,·[]BfVfXfef€ DSN ,ðf_fuf<fNfŠfbfN,·,é,Æ[]Afhf%ofCfo[]À— L,ìff[]f^ f[]fX,ìfZfbfgfAfbfv f_fCfA[]fO f{fbfNfX,ª·\Ž!,ª,ê,Ü,·[]B |
| ['Ç%Á] | []V,μ,fVfXfef€ ff[]f^ f[]fX,ð'Ç %Á,μ,Ü,·[]B,± ,ìf{f^f",ðfNfŠfbfN,·,é,Æ[]A[]ff[]f^ f[] []fX,ì[]V<K[]í[]-] f_fCfA[]fO f{fbfNfX,ª·\ Ž!,ª,ê,Ü,·[]B,±,ìf_fCfA[]fO f{fbfNfX,É,ìfhf %ofCfo,ª^ê—·\Ž!,ª,ê,Ü,·[]BfVfXfef€ ff[]f^ f[]fX,ð'Ç%Á,·,éfhf%ofCfo,ð'í'ð,μ,Ü,·[]B[Š@ —] ,ðfNfŠfbfN,·,é,Æ[]A,»,ìfhf%ofCfo[]À— L,ìff[]f^ f[]fX,ìfZfbfgfAfbfv f_fCfA[]fO f{fbfNfX,ª·\Ž!,ª,ê,Ü,·[]B |
| [[]í[]œ] | Šù'¶,ìff[]f^ f[]fX,ð[]í[]œ,μ,Ü,·[]B[[]í[]œ] ,ðfNfŠfbfN,·,é'0,É[]A[]í[]œ,·,éVfXfef€ ff[]f^ f[]fX,ðfŠfXfg f{fbfNfX,Á'í'ð,μ,Ä,·,·K— v,ª, ,è,Ü,·[]B |
| [[][]-] | fhf%ofCfo[]À—L,ìff[]f^ f[]fX,ìfZfbfgfAfbfv f_fCfA[]fO f{fbfNfX,ª·\Ž!,μ,Ü,·[]B,± ,ìf_fCfA[]fO f{fbfNfX,Á,í[]AŠù'¶,ìfVfXfef€ ff[]f^ f[]fX,ì[][]-,ð·í[]X,·,é,± ,Æª,Á,«,Ü,·[]B[[][]-] ,ðfNfŠfbfN,·,é'0,É[]A'í[]Ü,Æ,È,éVfXfef€ ff[]f^ f[]fX,ðfŠfXfg f{fbfNfX,Á'í'ð,μ,Ä,·,·K— v,ª, ,è,Ü,·[]B |
| [OK] | [ODBC ff[]f^ f[]fX fAfhf~fjXfgf[]f^] f_fCfA[]fO f{fbfNfX,ð·Á,¶,Ü,·[]B[fVfXfef€ ff[]f^ f[]fX] f{fbfNfX,É'í,·,é'í[]X,ð"K— p,·,é,½,B,É [OK] ,ðfNfŠfbfN,·,é·K— v,í, ,è,Ü,¹,ñ[]BfŠfXfg f{fbfNfX,É'í,·,é·í[]X,í[]Af[]f^ f[] []fX,ìfZfbfgfAfbfv f_fCfA[]fO f{fbfNfX,Á [OK] ,ðfNfŠfbfN,μ,½Žž" _ ,Á"K—p,ª,ê,Ü,·[]B |
| [fLfff"zfz<] | [ODBC ff[]f^ f[]fX fAfhf~fjXfgf[]f^] f_fCfA[]fO f{fbfNfX,ð·Á,¶,Ü,·[]B[fLfff"zfz<] ,ðfNfŠfbfN,μ,Á,à [fVfXfef€ ff[]f^ f[]fX] f{fbfNfX,Ö,ì·í[]X,Ížæ,è[]A,ª,ê,Ü,¹,ñ[]B |
| [fwf<fv] | fwf<fv%øæ-É,ð·\Ž!,μ,Ü,·[]B |

[ftf@fcf< DSN] f^fu

ftf@fCf< DSN ,É,Â,ç,Äff[f^ f[fX,ì'Ç%ºÁAíœA[]Ñ-,ðs,ç,Ü,·B“~,¶fhf
%ºfCfo,ðfCf“fXfg[f<,μ,½,·,×,Ä,ìft[fU[]²<α—L,Â,«,éftf@fCf< fx[fX,ìff[f^ f
[fX,Â, ,èAft[fU[] ,É,æ,éff[f^fx[fX,Ö,ìfAfNfZfX,º%ºÁ“\,Â,·B,±,è,ç,ìff[f^ f
[fX,ðAft[fU[] ,É'í,μ,Äê—p,É,·,é•K—v,àAfrf“fsf...[f^ ,É'í,μ,Äf[f]f<,É,·,é•K—v,à, ,è,Ü,¹,ñB

f|f|fV|f|f“ □à-¾

ftf@fCf< ff[f^
f[fX f{fbfNfX [ff[f^ f[fX,ìé[Š] f{fbfNfX,É•\
Ž!,³,è,éftfHf<f_,ÉŠÜ,Ü,è,éftf@fCf< DSN
,ÆfTfufHf<f_,ð,·,×,Ä•Ž!,μ,Ü,·Bftf@fCf<
DSN ,ðf_fuf<fNfŠfbfN,·,é,ÆAfhf%ºfCfoEÄ—
L,ìff[f^ f[fX,ìfZfbfgfAfbfv f_fCfAf[]fO
f{fbfNfX,º•Ž!,³,è,Ü,·B

[‘Ç%ºÁ] □V,μ,çftf@fCf< ff[f^ f[fX,ð'Ç
%ºÁ,μ,Ü,·B,±
,ìf{f^f“,ðfNfŠfbfN,·,é,Æ[]A[ff[f^ f
[fX,ìV<K[]Ñ-] f_fCfAf[]fO f{fbfNfX,º•\
Ž!,³,è,Ü,·B,±,ìf_fCfAf[]fO f{fbfNfX,É,ìfhf
%ºfCfo,ºè—•Ž!,³,è,Ü,·Bftf@fCf< DSN —
p,É'Ç%ºÁ,·,éfhf
%ºfCfo,ð'ì,ð,μ,Ü,·B[Ú×Ý'è]
,ðfNfŠfbfN,·,é,ÆAftf@fCf< DSN
,É'í,·,éL[]fh,ðŽw'è,Ä,«,Ü,·B

[í[]œ] Šù'¶,ìff[f^ f[fX,ðí[]œ,μ,Ü,·B[í[]œ]
,ðfNfŠfbfN,·,é'O,ÉAí[]œ,·,éftf@fCf< ff[f^
f[fX,ðfŠfXfg f{fbfNfX,Â'ì,ð,μ,Ä,“,·K—
v,º, ,è,Ü,·B

[[]Ñ-] fhf%ºfCfoEÄ—L,ìff[f^ f[fX,ìfZfbfgfAfbfv
f_fCfAf[]fO f{fbfNfX,º•Ž!,μ,Ü,·B,±
,ìf_fCfAf[]fO f{fbfNfX,Â,íAŠù'¶,ìftf@fCf<
ff[f^ f[fX,ì[]Ñ-,ð'í[]X,·,é,±
,Æ,º,Ä,«,Ü,·B[[]Ñ-]
,ðfNfŠfbfN,·,é'O,ÉA'í[]Ü,Æ,È,éftf@fCf<
ff[f^ f[fX,ðfŠfXfg f{fbfNfX,Â'ì,ð,μ,Ä,“,·K—
v,º, ,è,Ü,·B

[ffBfCEfNfgfŠ,
ì
Ý'è] •Ž!'t,ìftfHf<f_,ðAODBC
fAfhf~fjfXfgfCE[f^,ìŽÀsŽž,É•\
Ž!,·,éŠù'èftfHf<f_,ÉÝ'è,μ,Ü,·B

[ff[f^ f
[fX,ìé[Š]] f|fCEf“fg ftfHf<f_,ð•Ž!,μ,Ü,·B,»ì
%ºº,ìfEfBf“fhfE,É,íA|fCEf“fg
ftfHf<f_,ìTfufHf<f_,Æftf@fCf< DSN ,º•\
Ž!,³,è,Ü,·BfefLfxfg f{fbfNfX,ì%ºE'α,É, ,é
%ººCEü,«-
î'ó,ðfNfŠfbfN,·,é,ÆAfffBfCEfNfgfŠ\ç'S'ì,º•
Ž!,³,è,Ü,·BODBC
fAfhf~fjfXfgfCE[f^,ìŽÀs“-[]º,ÉA[]º,É•\
Ž!,³,è,éŠù'èftfHf<f_,íAfvXfef€[]•ñ,ÉŽù,ß,ç,
è,Ä,ç,Ü,·,ºA|fffBfCEfNfgfŠ,ìÝ'è]
f{f^f“,Â•í[]X,·,é,±,Æ,º,Ä,«,Ü,·B

[1 ,Ää,ì [ff[f^ f[fX,ìé[Š] f{fbfNfX,É•\

ftfHf<f_Ö) Žl,³,é,éftfHf<f_δACE»Ÿ'1'ð,μ,Ä,ç,éftfHf<f_ì
 (fAfCfRf“) 1 ,Äã,ìftfHf<f_É•ïX,μ,Ü,·B
 [OK] [ODBC ff[]f^ f[]fX fAfhf~fjXfgfCE[]f^]
 f_fCfAf[]fO f{fbfNfX,ð•Ä,¶,Ü,·Bftf@fCf<
 ff[]f^ f[]fX f{fbfNfX,É'í,·,é•ïX,ð“K—
 p,·,é,½,B,É [OK] ,ðfNfŠfbfN,·,é•K—
 v,í, ,è,Ü,¹,ñBfŠfXfg
 f{fbfNfX,É'í,·,é•ïX,íAfff[]f^ f
 []fX,ìfZfbfgfAfbfv f_fCfAf[]fO f{fbfNfX,Ä
 [OK] ,ðfNfŠfbfN,μ,½Žž“_„Ä“K—p,³,è,Ü,·B
 [fLfff“fZf<] [ODBC ff[]f^ f[]fX fAfhf~fjXfgfCE[]f^]
 f_fCfAf[]fO f{fbfNfX,ð•Ä,¶,Ü,·B[fLfff“fZf<]
 ,ðfNfŠfbfN,μ,Ä,àAftf@fCf< ff[]f^ f[]fX
 f{fbfNfX,Ö,ì•ïX,íŽæ,èÄ,³,è,Ü,¹,ñB
 [fwf<fv] fwf<fv%œ-É,ð•Žl,μ,Ü,·B

[fhf%ofCfo] f^fu

fCf“fXfg[]f<,³,é,½ ODBC fhf%ofCfo,ÉŠÖ,·,éî•ñ,ð•Žl,μ,Ü,·B[±,ìfRf“fsf...[]f^,ÉfCf“fXfg[]f<,³,è,Ä,ç,é
 ODBC fhf%ofCfo] f{fbfNfX,É,íAfrf“fsf...[]f^,ÉfCf“fXfg[]f<[]í,Ý,ìfhf%ofCfo,ª•Žl,³,è,Ü,·B

fLfvfVfjf“ **à-¾**

[±,ìfRf“fsf... fRf“fsf...[]f^,ÉfCf“fXfg[]f<,³,è,Ä,ç,éSe
 []f^,ÉfCf“fXfg ODBC fhf%ofCfo,É,Ä,ç,ÄA-
 []f<,³,è,Ä,ç,é ¼'O[]Afo[]fWfjf“[]A%ïžĐ-¼[]Aftf@fCf<-
 ODBC fhf ¼[]Aftf@fCf<[]X[]V“úŽž,ð•Žl,μ,Ü,·B
 %ofCfo]
 f{fbfNfX
 [OK] [ODBC ff[]f^ f[]fX fAfhf~fjXfgfCE[]f^]
 f_fCfAf[]fO f{fbfNfX,ð•Ä,¶,Ü,·B
 [fLfff“fZf<] [ODBC ff[]f^ f[]fX fAfhf~fjXfgfCE[]f^]
 f_fCfAf[]fO f{fbfNfX,ð•Ä,¶,Ü,·B
 [fwf<fv] fwf<fv%œ-É,ð•Žl,μ,Ü,·B

fhf%ofCfo,ì'Ç%Ä,Æ[]íœ,Éžg—p,·,é [Ç%Ä] f{f^f“,Æ [íœ] f{f^f“,íA,±,ìf_fCfAf[]fO
 f{fbfNfX,É,í, ,è,Ü,¹,ñBODBC fhf%ofCfo,ì'Ç%Ä,â[]íœ,íAfhf%ofCfo,ìfZfbfgfAfbfv fv[]fOf%of€,ðžg—
 p,μ,Äs,π•K—v,ª, ,è,Ü,·B

[fgfCE[fX] f^fu

ODBC fhf%ofCfo f}f[]fWff,^a ODBC ŠÖ",ìCEÄ,Ño,μ,ðfgfCE[fX ('ÇÖ) ,.é•û-@,ðžw'è,μ,Ü,·BffXf^f€ fgfCE[fX DLL ,ðžg—p,μ,ÄAÇp'±"l,ÈfgfCE[fX^è"x,ì,Ý,ìfgfCE[fX^A"@"fgfCE[fX^A,Ü,½,ìffXf^f€ fgfCE[fX,ðžw'è,Ä,«,Ü,·B

fjfvfVfjf"

□à-¾

[fgfCE[fX,ð;.,@ ŠjŽn,·,é]

"@"fgfCE[fX,ð—
LCEø,É,μ,Ü,·B"@"fgfCE[fX,íA[ODBC
ff[]f^ f[]fX fAfhf~fjXfgfCE[f^]
f_fCfAf[]fO f{fbfNfX,^a·Ž!,³,è,Ä,ç
,éÄ't,ÉŽÄ[]s,³,è,Ü,·B"@"fgfCE[fX,íA
[]Ú'±,ì—L⁻³,É,©,©,í,ç, —
LCEø,É,Ä,«,Ü,·B[fgfCE[fX,ð;.,@ŠjŽn,·,
é],ðfNfŠfbfN,·,é,Æ[]Af{f^f",^a
[fgfCE[fX,ì'àž~]
f{f^f",É•ì,í,è,Ü,·B[fgfCE[fX,ì'àž~]
,ðfNfŠfbfN,·,é,Ü,Ä"@"fgfCE[fX,ì—
LCEø,Ä,·B

[Visual Studio Analyzer ,ìŠjŽn]

Visual Studio Analyzer ,ð—
LCEø,É,μ,Ü,·B[Visual Studio Analyzer
,ìŠjŽn] ,ðfNfŠfbfN,·,é,Æ[]Af{f^f",^a
[Visual Studio Analyzer ,ì'àž~]
f{f^f",É•ì,í,è,Ü,·B,±
,ìf{f^f",ðfNfŠfbfN,·,é,Æ[]AVisual Studio
Analyzer ,ì—³CEø,É,É,è,Ü,·B[Visual
Studio Analyzer ,ì'àž~]
,ðfNfŠfbfN,·,é,Ü,Ä Visual Studio
Analyzer ,ì—LCEø,Ä,·B

[f[]fO ftf@fCf<,ìpfX]

fgfCE[fX^ñ,ìŠi"[]ftf@fCf<,ìpfX,Æftf@fC
f<-¾,ð•\
Ž!,μ,Ü,·BfVfXfef€[]ñ,©,çŠù'è,ìpfX,Æf
tf@fCf<-¾ (SQL.LOG) ,^aŠ,,è—
,Ä,ç,è,Ü,·^a[]A•É,ìpfX,Æftf@fCf<-¾,ð"ü
—í,·,é,©[]A[ŽQ[]Æ]
,ðfNfŠfbfN,μ,ÄftfHf<f_,Æftf@fCf<,ð'l'ð,μ[]
A•É,ìftf@fCf<,ðžw'è,Ä,«,Ü,·B

[ŽQ[]Æ]

fRf"fsf...[]f^,ìftfHf<f_,ðžQ[]Æ,μ,Ä[]Af[]fO
ftf@fCf<,ìpfX,Æftf@fCf<-
¾,ð'l'ð,·,é,Æ,«,Éžg—p,μ,Ü,·B

[ffXf^f€ fgfCE[fX DLL]

fgfCE[fX,ìŽÄ[]s,Éžg—p,·,éftf@fCf<,ð
ODBCTRAC.DLL ftf@fCf<^ÈŠO,ìfgfCE[fX
DLL ,©,ç'l'ð,·,é,Æ,«,Éžg—
p,μ,Ü,·BMicrosoft Data Access SDK
,É•t'®,·,é ODBCTRAC.DLL
ftf@fCf<,ð[]A"C^Ó,ìffXf^f€ DLL
,É'u,«Š·,ì,é,±,Æ,^aÄ,«,Ü,·BffXf^f€ DLL
,ìpfX,·,æ,Ñftf@fCf<-¾,ð"ü—
í,·,é,©[]A[DLL ,ì'l'ð]
,ðfNfŠfbfN,μ,ÄftfHf<f_,ð'l'ð,μ,Ü,·B

[DLL ,ì'ò] fffBfCEfNfgfŠ\`č,đŽQ□Æ,μ,ÄffjXf^f€
fgfCE□[fX DLL ,đ'ò,·,é,Æ,«,ÉŽg—
p,μ,Ü,·□BDLL
,đ'ò,·,é,Æ□A,»,)fpfX,Æftf@fCf<-¼,ª
[fjXf^f€ fgfCE□[fX DLL] f{fbfNfX,É•\
Ž!,³,è,Ü,·□B

[OK] fgfCE□[fX,ì□Ý'è,ì•ï□X,đ“K—p,μ,Ä,©,ç
[ODBC ff□[f^ f□[fX fAfhf~fjXfgfCE□[f^]
f_fCfAf□fO f{fbfNfX,đ•Â,¶,Ü,·□B

[fLfff“fZf<] fgfCE□[fX,ì□Ý'è,ì•ï□X,đ“K—p,¹,,É [ODBC
ff□[f^ f□[fX fAfhf~fjXfgfCE□[f^]
f_fCfAf□fO f{fbfNfX,đ•Â,¶,Ü,·□B

[“K—p] [ODBC ff□[f^ f□[fX fAfhf~fjXfgfCE□[f^]
f_fCfAf□fO
f{fbfNfX,đ•Â,¶,,É□AfgfCE□[fX,Ö,ì•ï□X“à
—e,đ“K—p,μ,Ü,·□B•ï□X,ª^è□□s,í,è,Ä,č
,È,~,è,î□A,±,lf{f^f“,í'W□F•Ž!,³,è,Ü,·□B

[fwf<fv] fwf<fv%œ-Ê,đ•Ž!,μ,Ü,·□B

ff[]fU[] ff[]f^ f[]fX] f{fbfNfX

,±,lfŠfXfg,í[]ADSN ,ì-¼'O,Æ,»,ê,É'í%ž,·,éfhf%ofCfo,È,Ç[]Aft[]fU[][DSN ,đ,·,×,Ä·\
Ž!,μ,Ü,·[]Bft[]fU[][ff[]f^ f[]fX,É'í,μ,Äfhf%ofCfoĀ—L,ìff[]f^ f[]fX,ìfZfbfjgfAfbfv f_fCfAfofO
f{fbfNfX,đ·Ž!,·,é,É,í[]Aft[]fU[][DSN ,đf_fuf<fNfŠfbfN,μ,Ü,·[]B

【\□¬】

fhf%oCfoĀ—L,ìff□[f^ f□[fX,ìfZfbfgfAfbfv f_fCfAf□fO f{fbfNfX,đ•\Ž!,·,é,É,í□A[□\□¬]
,đNfŠfbfN,μ,Û,·□B,±,ìf_fCfAf□fO f{fbfNfX,Ā,í□AŠù'¶,ìft□[fU□[ff□[f^ f□[fX,ì\□¬,đ•í□X,·,é,±
,Æ,ª,Ā,«,Û,·□B'î□Û,Æ,È,éft□[fU□[ff□[f^ f□[fX,đfŠfXfg f{fbfNfX,Ā'íđ,μ,Ā,¨,•K—v,ª, ,è,Û,·□B

['Ç%oÁ]

□V,μ,ff□[f^ f□[fX,δ'Ç%oÁ,·,é,É,í□A['Ç%oÁ] ,đfNfŠfbfN,μ,Ü,·□B[ff□[f^ f□[fX,ì□V<K□ì□-] f_fCfAf□fO
f{fbfNfX,ª•\Ž!,³,ê,Ü,·□B,±,ìf_fCfAf□fO f{fbfNfX,É,ífhf%ofCfo,ª^ê—•\Ž!,³,ê,Ü,·□Bft□[fU□[ff□[f^ f□[fX
—p,É'Ç%oÁ,·,éfhf%ofCfo,đ'!đ,μ,Ü,·□B[Š@—¹] ,đfNfŠfbfN,·,é,Æ□A,»,ìfhf%ofCfoCEÅ—L,ìff□[f^ f\
□[fX,ìfZfbfgfAfbfv f_fCfAf□fO f{fbfNfX,ª•\Ž!,³,ê,Ü,·□B

【íœ】

Šù'¶,ìff[f^ f[fX,đfŠfXfg f{fbfNfX,©,çíœ,·,é,É,íA[íœ] ,đfNfŠfbfN,μ,Ü,·Bíœ,·,éff[f^ f
[fX,đfŠfXfg f{fbfNfX,Å'í'đ,μ,Ä,¨,•K—v,^a, ,è,Ü,·B

[OK]

[ODBC ff[f^ f[fX fAfhf~fjfXfgf[f^] f_fCfAf[fO f{fbfNfX,ð•Å,¶,é,É,íA[OK]
.đNfŠfbfN,μ,Û,·Bff[f^ f[fX fŠfXfg f{fbfNfX,É'í,·,é•ïX,đ“K—p,·,é,½,ß,É [OK] ,đNfŠfbfN,·,é•K—
v,í, ,è,Û,¹,ñBfŠfXfg f{fbfNfX,É'í,·,é•ïX,íAff[f^ f[fX,lfZfbfgfAfbfv f_fCfAf[fO f{fbfNfX,Å [OK]
.đNfŠfbfN,μ,½Žž“_„Å“K—p,³,è,Û,·B

[fLfff“fZf<]

[ODBC ff□[f^ f□[fX fAfhf~fjfXfgf□□[f^] f_fCfAf□fO f{fbfNfX,ð•À,¶,é,É,í□A[fLfff“fZf<]
,ðfNfŠfbfN,μ,Û,·□B[fLfff“fZf<] ,ðfNfŠfbfN,μ,Ä,à□Afff□[f^ f□[fX fŠfXfg
f{fbfNfX,Ö,ì•ï□X,íŽæ,è□Á,³,é,Û,¹,ñ□B

[fwf<fv]

,±,lf^fu,ÉŠÖ,·,éfwf<fv,đ•\Ž|,·,é,É,Í□A[fwf<fv] ,đNfŠfbfN,μ,Û,·□B

[fVfXfef€ ff[f^ f[fX] f{fbfNfX

,±,lfŠfXfg f{fbfNfX,íADSÑ ,ì-¼'O,Æ,»è,É'í%ž,·,éfhf%ofCfo,đŠÜ,pAfVfXfef€ DSN ,đ,·,x,Ä•\
Ž!,μ,Ü,·BfVfXfef€ ff[f^ f[fX ,É'í,μ,Äfhf%ofCfoEÅ—L,íf[f^ f[fX,lfZfbfgfAfbfv f_fCfAf□fo
f{fbfNfX,đ•Ž!,·,é,É,íAfVfXfef€ DSN ,đf_fuf·fNfŠfbfN,μ,Ü,·□B

【□□→】

fhf%oCfoEĀ—L,ìff□[f^ f□[fX,ìfZfbfgfAfbfv f_fCfAf□fO f{fbfNfX,đ•\Ž!,·,é,É,í□A[□□→]
,đNfŠfbfN,μ,Û,·□B,±,ìf_fCfAf□fO f{fbfNfX,Ā,í□AŠù'¶,ìfVfXfef€ ff□[f^ f□[fX,ì□□→,đ•í□X,·,é,±
,Æ,ª,Ā,«,Û,·□B'î□Û,Æ,È,éfVfXfef€ ff□[f^ f□[fX,đfŠfXfg f{fbfNfX,Ā'í'đ,μ,Ā,“,•K—v,ª, ,è,Û,·□B

['Ç%Á]

V,µ,νfxfef€ ff[f^ f[fX,đ'Ç%Á,·,é,É,Í[A['Ç%Á] ,đNfŠfbfN,µ,Ü,·B[ff[f^ f[fX,ìV<K[]-]
f_fCfAf[]fO f{fbfNfX,ª•\Ž!,³,ê,Ü,·B,±,ìf_fCfAf[]fO f{fbfNfX,É,ífhf%ofCfo,ª^ê—•\Ž!,³,ê,Ü,·BfVfxfef€
ff[f^ f[fX,đ'Ç%Á,·,éfhf%ofCfo,đ'!đ,µ,Ü,·B[Š@—¹] ,đNfŠfbfN,·,é,Æ[A,» ,ìfhf%ofCfoCEÅ—L,ìff[f^ f[
[]fX,ìfZfbfgfAfbfv f_fCfAf[]fO f{fbfNfX,ª•\Ž!,³,ê,Ü,·B

【íœ】

Šù'¶,jVfXfef€ ff[f^ f[fX,đfŠfXfg f{fbfNfX,©,çíœ,.,é,É,íA[íœ]

,đNfŠfbfN,μ,Ü,·Bíœ,.,éVfXfef€ ff[f^ f[fX,đfŠfXfg f{fbfNfX,Å'í'đ,μ,Ä,¨,•K—v,^a, ,è,Ü,·B

ftf@fCf< ff[]f^ f[]fX f{fbfNfX

,±,lfŠfXfg f{fbfNfX,íA[ff[]f^ f[]fX,ìê[]Š] f{fbfNfX,Å•\Ž!,³,ê,éftfHf<f_ÉŠÜ,Ü,ê,éftf@fCf< DSN
,ÆfTfuftfHf<f_đ,·,×,Ä•\Ž!,µ,Ü,·[]Bftf@fCf< DSN ,đf_fuf<fNfŠfbfN,·,é,Æ[]Afhf%oofCfoĀ—L,ìff[]f^ f[]
[]fX,ìfZfbfgfAfbfv f_fCfAf[]fO f{fbfNfX,²•\Ž!,³,é,Ü,·[]B

【\□¬】

fhf%oCfoEÅ—L,ìff□[f^ f□[fX,ìfZfbfgfAfbfv f_fCfAf□fO f{fbfNfX,đ•\Ž!,·,é,É,í□A[□\□¬]
,đNfŠfbfN,μ,Û,·□B,±,ìf_fCfAf□fO f{fbfNfX,Å,í□AŠù'¶,ìftf@fCf< ff□[f^ f□[fX,ì□\□¬,đ•í□X,·,é,±
,Æ,ª,Å,«,Û,·□B'î□Û,Æ,È,éftf@fCf< ff□[f^ f□[fX,đfŠfXfg f{fbfNfX,Å'í'đ,μ,Ä,¨,•K—v,ª, ,è,Û,·□B

['Ç%Á]

V,µ,ftf@fCf< ff[f^ f[fX,ð'Ç%Á,µ,Ü,·B[ff[f^ f[fX,ìV<Kòì-] f_fCfAfO f{fbfNfX,ª·\
Ž,³,è,Ü,·B,±,ìf_fCfAfO f{fbfNfX,É,ìfhf%ofCfo,ª^è—·Ž,³,è,Ü,·B,±,ìf_fCfAfO f{fbfNfX,É,ìfhf
%ofCfo,ª^è—·Ž,³,è,Ü,·B[V,µ,ftf@fCf< ff[f^ f[fX—p,É'Ç%Á,·,éfhf%ofCfo,ð'ì'ð,µ,Ä [Ú×Ý'è]
,ðfNfŠfbfN,·,é,ÆAftf@fCf< DSN ,É'ì,·,éL[f[fh,ðŽw'è,Å,«,Ü,·B

【íœ】

Šù'¶,}ff[f^ f[fX,ðíœ,μ,Ü,·B[íœ] ,ðfNfŠfbfN,·,é'O,ÉAíœ,·,éftf@fCf< ff[f^ f[fX,ðfŠfXfg
f{fbfNfX,Å'l'ð,μ,Ä,¨,•K—v,ª, ,è,Ü,·B

[ffBfCEfNfgfŠ,ìÝ'è]

•Ž!'+,ìffBfCEfNfgfŠ,ðAODBC fAfhf~fjfXfgfCE[f^,ìŽÀsŽž,É•\
Ž|,·,éŠù'èftfHf<f_ÉÝ'è,·,é,É,íA[ffBfCEfNfgfŠ,ìÝ'è] ,ðfNfŠfbfN,μ,Ü,·B

[ff[f^ f[fX,ìêš]

fjfCef“fg ftfHf<f_đ•\Žì,μ,Ü,·B,»ì%º,ìfEfBf“fhfE,É,íAjjfCef“fg ftfHf<f_ìfTfuftfHf<f_Æftf@fCf< DSN ,ª•\ Žì,³,è,Ü,·B%ŠúÝ’è,À,íAfvfXfef€î•ñ,ÉŽù,ß,ç,è,½Šù’èftfHf<f_ª•\Žì,³,è,Ü,·B

[1 ,Äã,iftHf<f_Ö] (fAfCfRf“)

[ff[f^ f[fX,iêŠ] ,É•Ž|,³,ê,éftHf<f_ðACE»Ý‘I’ð,µ,Ä,ç,éftHf<f_ì 1 ,Äã,iftHf<f_É•ïX,·,é,É,íA[1 ,Äã,iftHf<f_Ö] (fAfCfRf“) ,ðNfŠfbfN,µ,Ü,·B

[ftfHf<f_]

ftfHf<f_,ì"à—e,ð•\Žì,·,é,É,í□A[ftfHf<f_] f{fbfNfX,ÉftfHf<f_,ìfpfX,ð"ü—í,μ,Ü,·□B□â'ìfpfX□AjjfCEf"fg
ftfHf<f_,©,ç,ì'Š'ìfpfX,ì,ç,·,ê,©,ð"ü—í,Å,«,Ü,·□B

[ODBC fhf%ofCfo]/[Ú'±fv[f<,lf^fCf€fAfEfg]

fRf“fsf...[f^,ÉfCf“fXfg[f<,³,è,Ä,ç,éŠe ODBC fhf%ofCfo,íAÚ'±fv[f<,lf^fCf€fAfEfg flfvfVf#f“,Æ<α,É^è
—•\Ž!,³,è,Ü,·Bf^fCf€fAfEfg flfvfVf#f“,ðŸ'è,·,é,É,íA“C^Ó,ì ODBC fhf%ofCfo-
¼,ðf_fuf<fNfŠfbfN,μ,Ü,·B

[,±,ìfRf“fsf...[]f^,ÉfCf“fXfg[]f<,³,ê,Ä,ç,é ODBC fhf%ofCfo] f{fbfNfX

,±,ìfŠfXfg f{fbfNfX,í[]Afrf“fsf...[]f^,ÉfCf“fXfg[]f<,³,ê,Ä,ç,é ODBC fhf%ofCfo,ì-¼‘O[]Afo[]fWf#“[]A
%oìŽĐ-¼[]Aftf@fCf<-¼[]A[]X[]V“ úŽž,đ•\Ž|,μ,Ü,·[]B

[fgfCE[fX,đi,.,@ŠJŽn,.,é]

[ODBC ff[f^ f[fX fAfhf~fjXfgfCE[f^] f_fCfAfO f{fbfNfX,ì)\\
Ž!'+,ÉfgfCE[fX,đŽÀs,.,é,É,í[A[fgfCE[fX,đi,.,@ŠJŽn,.,é] ,đfNfŠfbfN,μ,Ü,·B" @ "lfgfCE[fX,íAÚ'±,ì—
L⁻³,É,©,©,í,ç,·—LCEø,É,Å,«,Ü,·B[fgfCE[fX,đi,.,@ŠJŽn,.,é] ,đfNfŠfbfN,.,é,ÆAf{f^f",^a
[fgfCE[fX,ì'âŽ~] f{f^f",É•ï,í,è,Ü,·B[fgfCE[fX,ì'âŽ~] f{f^f",đfNfŠfbfN,.,é,©A[ODBC ff[f^ f[fX
fAfhf~fjXfgfCE[f^] f_fCfAfO f{fbfNfX,đ•Å,¶,é,ÆA" @ "lfgfCE[fX,í⁻³CEø,É,È,è,Ü,·B

[Visual Studio Analyzer ,İŠJŽn]

Visual Analyzer fCxf“fg” □s,đĀep’±“l,ÉfgfĀ□[fX,·,é,É,Í□A[Visual Studio Analyzer ,İŠJŽn]
,đfNfŠfN,μ,Ü,·□B[Visual Studio Analyzer ,İŠJŽn] ,đfNfŠfN,·,é,Ā□Af{f^f“,ª [Visual Studio Analyzer
,l’âŽ~] f{f^f“,É•İ,í,è,Ü,·□B[Visual Studio Analyzer ,l’âŽ~] ,đfNfŠfN,·,é,Ā Visual Studio Analyzer ,l’-
³Āø,É,È,è,Ü,·□B

[f fO ftf@fCf<,lfpfX]

f fO ftf@fCf<,lfpfX,Æftf@fCf<-¼,ð•ïX,·,é,É,íA[f fO ftf@fCf<,lfpfX] f{fbfNfX,ÉfefLfXfg,ð“ü—
Í,μ,Ü,·B,±,lf{fbfNfX,íAfgfÆ[fXî•ñ,ª•Û'¶,³,ê,Ä,ç,éftf@fCf<,lfpfX,Æftf@fCf<-¼,ð•\
Ž!,μ,Ü,·BfVfXfef€î•ñ,©,çŠù'è,lfpfX,Æftf@fCf<-¼ (SQL.LOG) ,ªŠ,,,è“-
,Ä,ç,ê,Ü,·ªA•Ê,lfpfX,Æftf@fCf<-¼,ð“ü—Í,·,é,©A[ŽQÆ]
,ðNfŠfbfN,μ,ÄftfHf<f_,Æftf@fCf<,ð'!ð,μA•Ê,lfpf@fCf<,ðŽw'è,Å,«,Ü,·B

[ŽQÆ]

fRf“fsf... [f^, ðŽQÆ, μ, ÄAfO ft@fCf<, ð' ð, ·, é, Æ, «, ÉŽg—p, μ, Ü, ·B

[fj]Xf^f€ fgf€[fX DLL]

fgf€[fX, ÌŽÀs, ÉŽg—p, ., éftf@fCf<, ð ODBCTRAC.DLL ftf@fCf<^ÈŠO, Ìfgf€[fX DLL
, ©, ç'ì'ð, ., é, É, ÍA[fj]Xf^f€ fgf€[fX DLL] f{fbfNfX, É, »), ÌpfX, ", æ, Ñftf@fCf<-¼, ð"ü—Í, μ, Û, .BMicrosoft
Data Access SDK ,É•t' @, ., é ODBCTRAC.DLL ftf@fCf<, ðA"C^Ó, Ìfj]Xf^f€ DLL ,É'u, «Š, Ì, é, ±
, Æ, ð, Å, «, Û, .Bfj]Xf^f€ DLL ,ÌpfX, ", æ, Ñftf@fCf<-¼, ð"ü—Í, ., é, ©A[DLL ,ì'ì'ð]
, ðfNfŠfbfN, μ, ÅftfHf<f_ð'ì'ð, μ, Û, .B

[DLL ,ì'ð]

ffBfÇfNfgfŠ\ ç,ðŽQÆ,μ,ÄjXf^f€ fgfÇ[fX DLL ,ð'ì'ð,·,é,É,íA[DLL ,ì'ð] ,ðfNfŠfbfN,μ,Ü,·BDLL
,ð'ì'ð,·,é,ÆA,» ,ìpfX,Æftf@fCf<-¼,ª [fjXf^f€ fgfÇ[fX DLL] f{fbfNfX,É•\Ž,³,ê,Ü,·B

[OK]

fgf☒[fX,ì☒Ý'è•ï☒X,đŽó,~“ü,ê,Ä☒A[ODBC ff☒[f^ f☒[fX fAfhf~fjXfgf☒[f^] f_fCfAf☒fO
f{fbfNfX,đ•Â,¶,é,É,í☒A[OK] ,đfNfŠfbfN,μ,Ü,·☒B

[fLfff“fZf<]

fgf☒[fX,ì□Ý'è•ï□X,đŽó,~“ü,ê,,É□A[ODBC ff□[f^ f□[fX fAfhf~fjfxfgf☒[f^] f_fCfAf□fO
f{fbfNfx,ð•Â,¶,é,É,í□A[fLfff“fZf<] ,đfNfŠfbfN,μ,Ü,·□B

["K-p]

[ODBC f^ f\ fX fAfhf~fjfXfgf^] f_fCfAfO
f{fbfNfX,ð•Â,¶,.,ÉAfgf^fX,ìÝ'è•ïX,ðŽó,~"ü,ê,éê¶,íA["K-p]
,ðfNfŠfbfN,μ,Ü,·B•ïX,â^ê∅s,í,ê,Ä,ç,È,¯,ê,îA,±,ìf{f^f",í'W\F•Ž!,³,ê,Ü,·B

[ftf@fCf< ff[]f^ f[]fX] f^fu

ftf@fCf< DSN ,ðž,Äff[]f^ f[]fX,Éü'±,μ,Ü,·□B“~ ,ñfhf%ofCfo,ðfCf“fXfg[]f<,μ,½,·,×,Ä,ìft[]fU[][,ª<κ—
 L,Ä,«,éftf@fCf< f[]fX,ìff[]f^ f[]fX,Ä, ,è□Aft[]fU[][,É,æ,éff[]f^f[]fX,Ö,ìfAfNfZfX,ª%Ä^,Ä,·□B,±
 ,é,ç,ìff[]f^ f[]fX,ð□Aft[]fU[][,É'í,μ,Äè—p,É,·,é•K—v,à□Afrf“fsf...[]f^,É'í,μ,Äff[]ffj<,É,·,é•K—
 v,à, ,è,Ü,¹,ñ□B

| flfvfVfjf“ | □à-¾ |
|--|---|
| ftf@fCf< ff[]f^ f[]fX f{fbfNfX | [ff[]f^ f[]fX,ìè□Š] f{fbfNfX,É•\ Ž!,³,è,éftfHf<f_,ÉŠÜ,Ü,è,éftf@fCf< DSN ,ÆfTfufHf<f_,ð,·,×,Ä•Ž!,μ,Ü,·□BDSN ,ðf_fuf<fNfŠfbfN,·,é,Æff[]f^ f[]fX,Éü'± ,μ,Ü,·□B |
| [ff[]f^ f[] []fX,ìè□Š] | fjfCEf“fg ftfHf<f_,ð•Ž!,μ,Ü,·□B,»,)ì %oo°,ìfEfBf“fhfE,É,í□AfffCEf“fg ftfHf<f_,ìTfufHf<f_,Æftf@fCf< DSN ,ª•\ Ž!,³,è,Ü,·□BfefLfXfg f{fbfNfX,ì%oE'ª,É, ,é %oo°CEü,«— î'ó,ðfNfŠfbfN,·,é,Æ□A,»,)ffffBfCEfNfgfŠ[]'ç'S' ì,ª•Ž!,³,è,Ü,·□B |
| [1 ,Ä□ä,ì ftfHf<f_,Ö] (fAfCfRf“) | [ff[]f^ f[]fX,ìè□Š] f{fbfNfX,É•\ Ž!,³,è,éftfHf<f_,ð□ACE»Y'í'ð,μ,Ä,ç,éftfHf<f_,ì 1 ,Ä□ä,ìftfHf<f_,É•ì□X,μ,Ü,·□B |
| [DSN -¾] | ftf@fCf< ff[]f^ f[]fX f{fbfNfX,Ä'í'ð,³,è,Ä,ç ,éftf@fCf< DSN -¾,ð•\ Ž!,μ,Ü,·□B,Ü,½,í□A□V,μ,çftf@fCf< DSN - ¾,ð“ü—í,Ä,«,Ü,·□B |
| [□V<K□ì□~] | □V,μ,çftf@fCf< ff[]f^ f[]fX,ð'ç %oÄ,μ,Ü,·□B,± ,ìf{f^f“,ðfNfŠfbfN,·,é,Æ□A[ff[]f^ f[] []fX,ì□V<K□ì□~] f_fCfAf□fO f{fbfNfX,ª•\ Ž!,³,è,Ü,·□B,±,ìf_fCfAf□fO f{fbfNfX,É,ìfhf %ofCfo,ª^è—•Ž!,³,è,Ü,·□Bftf@fCf< DSN — p,É'ç%oÄ,·,éfhf %ofCfo,ð'í'ð,μ,Ü,·□B[□ú□×□Y'è] ,ðfNfŠfbfN,·,é,Æ□Aftf@fCf< DSN ,É'í,·,éfl□[]f□[]fh,ðžw'è,Ä,«,Ü,·□B |
| [OK] | [ODBC ff[]f^ f[]fX fAfhf~fjXfgfCE[]f^] f_fCfAf□fO f{fbfNfX,ð•Ä,ñ□Af{fbfNfX,ÄfnfCf %ofCfg•Ž!,³,è,Ä,ç,éftf@fCf< ff[]f^ f[] []fX□A,Ü,½,í [DSN -¾] f{fbfNfX,É“ü— í,μ,½ftf@fCf< ff[]f^ f[]fX,Éü'±,μ,Ü,·□B ftf@fCf< ff[]f^ f[]fX f{fbfNfX,É'í,·,é•ì□X,ð“K—p,·,é,½,β,É [OK] ,ðfNfŠfbfN,·,é•K—v,í, ,è,Ü,¹,ñ□BfŠfXfg f{fbfNfX,É'í,·,é•ì□X,í□Afff[]f^ f[] []fX,ìfZfbfgfAfbfv f_fCfAf□fO f{fbfNfX,Ä [OK] ,ðfNfŠfbfN,μ,½žž“_Ä“K—p,³,è,Ü,·□B |
| [flfff“fzf<] | ftf@fCf< ff[]f^ f[]fX,Éü'±,¹,·,É [ODBC |

ff[]f^ f[]fX fAfhf~fjXfgf[]f^] f_fCfAf[]fO
 f{fbfNfX,ð•Å,¶,Ü,·[]B[fLfff“fZf<]
 ,ðNfŠfbfN,µ,Ä,à[]Aftf@fCf< ff[]f^ f[]fX
 f{fbfNfX,Ö,ì•ï[]X,Ížæ,è[]Á,³,è,Ü,¹,ñ[]B
 [fwf<fv] fwf<fv%œ-Ê,ð•Ž!,µ,Ü,·[]B

[fRf“fsf...[]f^ ff[]f^ f[]fX] f^fu

ft[]fU[] [DSN ,Ü,½,½fVfXfef€ DSN ,ðž[],Åff[]f^ f[]fX,É[]Ú'±,µ,Ü,·[]BfRf“fsf...[]f^ ff[]f^ f[]fX,í,±
 ,ìRf“fsf...[]f^,É€Ä-L,Ä, ,è[]A<α-L,³,è,Ü,¹,ñ[]Bft[]fU[] [ff[]f^ f[]fX,í,±,ìRf“fsf...[]f^ ,ìft[]fU[] [,É€Ä
 -L,Ä,·[]B,±,ìRf“fsf...[]f^ ,ì,·,×,Ä,ìft[]fU[] [,Ü,½,½fVfXfef€ f[]fCfh,ìft[]fX,ì[]AfvfXfef€ ff[]f^ f[]fX,ðžg
 -p,·,é,±,Æ,³,Ä,«,Ü,·[]B

fifvfVfjf“ []à-¾

fRf“fsf...[]f^ ft[]fU[] [DSN ,ÆfvfXfef€ DSN ,ìfŠfXfg (DSN
 ff[]f^ f[]fX ,ì-¾'O,Æf^fCfv,ðŠÜ,p) ,Ä,·[]BDSN
 f{fbfNfX ,ðf_fuf·fNfŠfbfN,·,é,Æff[]f^ f[]fX,É[]Ú'±
 ,µ,Ü,·[]B

[[]V<K[]i[]-] []V,µ,çfRf“fsf...[]f^ ff[]f^ f[]fX,ð'Ç
 %œÄ,µ,Ü,·[]B,±
 ,ìf{f^f“ ,ðfNfŠfbfN,·,é,Æ[]A[ff[]f^ f[]
 []fX,ì[]V<K[]i[]-] f_fCfAf[]fO f{fbfNfX,³•\
 Ž!,³,è,Ü,·[]B,±,ìf_fCfAf[]fO f{fbfNfX,É,ìfhf
 %ofCfo,³è—•\
 Ž!,³,è,Ü,·[]Bft[]fU[] [,Ü,½,½fVfXfef€ DSN —
 p,É'Ç%œÄ,·,éfhf%ofCfo,ð'ð,µ,Ü,·[]B[ŽŽ,Ö]
 ,ðNfŠfbfN,·,é,Æ[]ADSN
 ,É'í,·,éfl[]f[]f[]fh,³K[]Ø,Ä, ,é,±
 ,Æ,ðŠm“F,Ä,«,Ü,·[]B

[OK] [ff[]f^ f[]fX,ì'ð) f_fCfAf[]fO
 f{fbfNfX,ð•Å,¶[]Af{fbfNfX,ÄfnfCf%ofCfg•\
 Ž!,³,è,Ä,ç,éRf“fsf...[]f^ ff[]f^ f[]fX,É[]Ú'±
 ,µ,Ü,·[]B

fRf“fsf...[]f^ ff[]f^ f[]fX
 f{fbfNfX,É'í,·,é•ï[]X,ð“K-p,·,é,½,ß,É [OK]
 ,ðNfŠfbfN,·,é•K-v,í, ,è,Ü,¹,ñ[]BfŠfXfg
 f{fbfNfX,É'í,·,é•ï[]X,ì[]Aft[]f^ f[]
 []fX,ìfZfbfgfAfbfv f_fCfAf[]fO f{fbfNfX,Ä
 [OK] ,ðNfŠfbfN,µ,½žž“_ ,Ä“K-p,³,è,Ü,·[]B

[fLfff“fZf<] fRf“fsf...[]f^ ff[]f^ f[]fX,É[]Ú'±,¹,·,É
 [ODBC ff[]f^ f[]fX fAfhf~fjXfgf[]f^]
 f_fCfAf[]fO
 f{fbfNfX,ð•Å,¶,Ü,·[]B[]mfLfff“fZf<[]n
 ,ðNfŠfbfN,µ,Ä,àRf“fsf...[]f^ ff[]f^ f[]fX
 f{fbfNfX,Ö,ì•ï[]X,Ížæ,è[]Á,³,è,Ü,¹,ñ[]B

[fwf<fv] fwf<fv%œ-Ê,ð•Ž!,µ,Ü,·[]B

ftf@fCf< ff[]f^ f[]fX f{fbfNfX

[ff[f^ f[fX,îêš] f{fbfNfX,É•Ž!,³,ê,éftfHf<f_ÉšÜ,Ü,ê,éftf@fCf< DSN ,ÆfTfufHf<f_,ð,·,×,Ä•\
Ž!,μ,Ü,·BDSN ,đf_fuf<fNfšfbfN,·,é,Æff[f^ f[fX,ÉÜ'±,μ,Ü,·B

[ff][f^ f][fX,ìéŠ]

fjfCEf“fg ftfHf<f_ ,đ•\Žì,μ,Ü,·B,» ,ì%° ,ìfEfBf“fhfE,É,íAjjfCEf“fg ftfHf<f_ ,ìfTfuftfHf<f_ ,Æftf@fCf< DSN ,đ•\ Žì,³,é,Ü,·BfefLfXfg f{fbfNfX,ì%°E‘x,É, ,é%°CEü,«-î^ó,đfNfŠfbfN,·,é,ÆA,» ,ìfffBfCEfNfgfŠ\‘ç‘S‘ì,đ•\ Žì,³,é,Ü,·B

[1 ,Âã,ìftHf<f_Ö] (fAfCfRf“)

[ff[f^ f[fX,ìéŠ] f{fbfNfX,É•Ž!³,é,éftHf<f_ðACE»Ý!‘ð,μ,Ä,ç,éftHf<f_ì 1
,Âã,ìftHf<f_É•ïX,μ,Ü,·B

[DSN -¼]

ftf@fCf< ff[]f^ f[][fX f{fbfNfX,Å'1'ð,³,ê,Ä,ç,éftf@fCf< DSN -¼,ð•\Ž!,μ,Ü,·□B,Ü,½,Í□A□V,μ,çftf@fCf<
DSN -¼,ð“ü—Í,Å,«,Ü,·□B

[Connect]

f{fbfNfX,ÅfnfCf%oofCf g•\Ž|,³,ê,Ä,č,éftf@fCf< DSN ,Ü,½,í [DSN -¼] f{fbfNfX,É“ü—í,³,ê,½ftf@fCf< DSN ,É□Ú’±,μ,Ü,·□B

[V<K]i]

V,μ,ϕftf@fCf< ff[f^ f[fX,δ'Ç%Á,μ,Ü,·B,±,lf{f^f“,ðfNfŠfbfN,·,é,ÆA[ff[f^ f[fX,i[V<K]i]
f_fCfAfO f{fbfNfX,ª•\Ž,³,ê,Ü,·B,±,lf_fCfAfO f{fbfNfX,É,íhf%oCfo,ª^ê—•\Ž,³,ê,Ü,·Bftf@fCf<
DSN —p,É'Ç%Á,·,éhf%oCfo,δ'l'ð,μ,Ü,·B[ŽŸ,Ö] ,ðfNfŠfbfN,·,é,ÆAftf@fCf< DSN
,É'í,·,éL[f[fh,ðŽw'è,Á,«,Ü,·B

[OK]

[ODBC ff[]f^ f[]fX fAfhf~fjXfgf[]f^] f_fCfAf[]fO f{fbfNfX,ð•Å,¶[]Af{fbfNfX,ÅfnfCf%°fCfG•\ Ž|,³,ê,Ä,č,éftf@fCf< ff[]f^ f[]fX[]A,Ü,½,Í [DSN -¼] f{fbfNfX,É“ü—Í,μ,½ftf@fCf< ff[]f^ f[]fX,É[]Ú'± ,μ,Ü,·[]B

ftf@fCf< ff[]f^ f[]fX f{fbfNfX,É'í,·,é•İ[]X,ð“K—p,·,é,½,β,É [OK] ,ðfNfŠfbfN,·,é•K—v,Í, ,è,Ü,¹,ñ[]BfŠfXfg f{fbfNfX,É'í,·,é•İ[]X,Í[]Aff[]f^ f[]fX,İfZfbfgfAfbfv f_fCfAf[]fO f{fbfNfX,Å [OK] ,ðfNfŠfbfN,μ,½Žž“_„Å“K —p,³,ê,Ü,·[]B

[fLfff“fZf<]

ftf@fCf< f□[f^ f□[fX,É□Ú'±,¹,,É [ODBC ff□[f^ f□[fX fAfhf~fjfXfgf□□[f^] f_fCfAf□fO
f{fbfNfX,ð•Â,¶,Ü,·□B□mfLfff“fZf<□n ,ðfNfŠfbfN,μ,Ä,àfRf“fsf...□[f^ ff□[f^ f□[fX
f{fbfNfX,Ö,ì•ï□X,ÍŽæ,è□Á,³,é,Ü,¹,ñ□B

fRf“fsf...[]f^ ff[]f^ f[]fX f{fbfNfX

ft[]fU[][DSN ,ÆfvfXfef€ DSN ,lfŠfXfg (DSN ,i-¼‘O,Æf^fCfv,ðŠÜ,þ) ,Å,·[]BDSN
.ðf_fuf·fNfŠfbfN,·,é,Æff[]f^ f[]fX,É[]Ú’±,µ,Ü,·[]B

[V<K]i~]

V,μ,ϕfRf“fsf...[f^ ff[f^ f[fX,δ'Ç%Á,μ,Ü,·B,±,lf{f^f“,đfNfŠfbfN,·,é,Æ[A[ff[f^ f[fX,ìV<K]i~]
f_fCfAfO f{fbfNfX,ª•Ž,³,ê,Ü,·B,±,lf_fCfAfO f{fbfNfX,É,ífhf%ofCfo,ª^ê—•\
Ž,³,ê,Ü,·Bf+U[Ü,½,ífVfXfef€ DSN —p,É'Ç%Á,·,éfhf%ofCfo,đ'í'đ,μ,Ü,·B[ŽŸ,Ö]
,đfNfŠfbfN,·,é,Æ[ADSN ,É'í,·,éL[f[fh,ª“K∅,Å ,é,±,Æ,đŠm”F,Å,«,Ü,·B

[OK]

[ff[]f^ f[][fX,ì'ð] f_fCfAf[]fO f{fbfNfX,ð•Â,¶[]Af{fbfNfX,ÅfnfCf%ofCfg•\Ž!,³,ê,Ä,č,éfRf“fsf...[]f^ ff[]f^ f[][fX,É[]Ú'±,μ,Ü,·[]B

fRf“fsf...[]f^ ff[]f^ f[][fX f{fbfNfX,É'Î,·,é•İ[]X,ð“K—p,·,é,½,B,É [OK] ,ðfNfŠfbfN,·,é•K— v,Í, ,è,Ü,¹,ñ[]BfŠfXfg f{fbfNfX,É'Î,·,é•İ[]X,Í[]Aff[]f^ f[][fX,İfZfbfgfAfbfv f_fCfAf[]fO f{fbfNfX,Å [OK] ,ðfNfŠfbfN,μ,½Žž“_ ,Å“K—p,³,è,Ü,·[]B

[fLfff“fZf<]

fRf“fsf...[]f^ ff[]f^ f[]fX,É[]Ú'±,¹,,É [ODBC ff[]f^ f[]fX fAfhf~fjXfgfCE[]f^] f_fCfAf[]fO
f{fbfNfX,ð•Â,¶,Ü,·[]B[]mfLfff“fZf<[]n ,ðfNfŠfbfN,μ,Ä,àfRf“fsf...[]f^ ff[]f^ f[]fX
f{fbfNfX,Ö,ì•ï[]X,ÍŽæ,è[]Á,³,è,Ü,¹,ň[]B

[Ů'±fv[f<] f^fu

Ů'±fv[f<,đŽg—p,μ,Ä,č,é,Æ,«,ÉA'í'đ,μ,½fhf
 %ofCfo,ìŮ'±'ò,žžšô,“,æ,ŇŮ'±f^fCf€fAfEfg,ìžžšô,đ•ïX,Ä,«,Ü,·B,Ü,½AŮ'±
 %oň“”,ì“CEv,đ~L^,·,épfH[f]f“fX f,fjf^,đ—LCEø,Ü,½,Í-³CEø,É∅,è'Ö,ì,é,±,Æ,ª,Ä,«,Ü,·B

| fjfvVfjf“ | à-¾ |
|----------------------------------|--|
| [ODBC fhf %ofCfo] f{fbfNfX | fRf“fsf...[f^,ÉfCf“fXfg[f<,³,è,Ä,č,éŠe ODBC fhf%ofCfo,É,Ä,č,ÄA- ¼'O,“,æ,Ňfv[f< f^fCf€fAfEfg,đ•\ Ž!,μ,Ü,·B |
| [Ů'±fv[f<,]f^f Cf€fAfEfg] | 'í'đ,μ,½fhf%ofCfo,ìŮ'±fv[f< f^fCf€fAfEfg,đ•b'P^É,ÄŸ'è,μ,Ü,·BŮ'±fv [f<,ì'@«,đŸ'è,·,é,É,íAfhf%ofCfo- ¼,đf_fuf<fNfŠfbfN,μ,Ü,·B |
| [—LCEø,É,·,é] | fpftfH[f]f“fX f,fjf^,đ—LCEø,É,μ,Ü,·B |
| [-³CEø,É,·,é] | fpftfH[f]f“fX f,fjf^,đ-³CEø,É,μ,Ü,·B |
| [ÄŽŽs,Ü,Ä,ì' ò,žžšô] | ODBC fhf%ofCfo f}fì[fWff,É,æ,èff[f^fx[fX fT[fò[,ìžg— p,ªs%oÄ“\,Ä, ,é,± ,Æ,ªCEŸ'm,³,è,é,ÆA^è'è,ì'ò,žžšô,ìCEä,É Ů'± ,ªÄŽŽs,³,è,Ü,·B[ÄŽŽs,Ü,Ä,ì'ò,žžšô] ,Ä•b'P^É,ÄŸ'è,μA'ò,žžšô,đ'²B,Ä,«,Ü, B“ü—í,·,é'l,íA“Žš,Ä 6 CE...-č-ž,É,·,é•K —v,ª, ,è,Ü,·B |
| [fwf<fv] | fwf<fv,đ•Ž!,μ,Ü,·B |

[Ů'±fv[f<,]f^fCf€fAfEfg]

'í'đ,μ,½fhf%ofCfo,]f^fCf€fAfEfgžžšô,đ•b'P^É,Äžw'è,μ,Ü,·B“ü—í,·,é'l,í“žš,É,·,é•K—v,ª, ,è,Ü,·B

[—LCEø,É,·,é]

□Ú'±,ìjpfH□[f}f“fX f,ffj^,ø—LCEø,É,μ,Û,·□B

[-³Œø,É,·,é]

□Ú'±,ìfpftfH□[f}f“fX f,ffj^,ð-³Œø,É,μ,Û,·□B

[ÄŽŹs,Ü,Ä,ì'ò,žžšô]

ÄÜ'±,Ü,Ä,ì'ò,žžšô,ð•b'P^Ê,Äžw'è,µ,Ü,·B

[OK]

[ODBC ff[f^ f[fX fAfhf~fjfXfgfCE[f^] f_fCfAf[fO f{fbfNfX,ð•Â,¶A'l'ð,μ,½Ú'±fv[f<,}f|fvfVf†f“,ð—
LCEø,É,μ,Û,·B

[fLfff“fZf<]

'l'ö,µ,½f|fvfVf†f“,ð—LÆø,É,¹,.,É [ODBC ff□[f^ f□[fX fAfhf~fjfXfgfÆ□[f^] f_fCfAf□fO
f{fbfNfX,ð•Â,¶,Ü,·□B

[fo][fWfjf“[i•ñ] f^fu

ODBC fRf“f[fif“fg,É,Â,ç,Ä,Ì[i•ñ,ð•\Ž!,μ,Û,·B[i•ñ,a•\Ž!,³,ê,éfRf“f[fif“fg,É,Í[Afhf%ofCfo
 f}f[fWff[Af][f\< f%ofCuf%ofŠ[AfCf“fXfg[f% DLL[A,“,æ,ÑfRfA fRf“f[fif“fg,ð\

| fifvfVfjf“ | [à-¾ |
|--|---|
| [ODBC fRfA fRf“f[fif“fg fo[fWfjf“[i•ñ] | Še ODBC fRfA fRf“f[fif“fg,Ì[à- ¾[Afo[fWfjf“[Aftf@fCf<- ¼[A,“,æ,Ñ[é[Š,ð•\Ž!,μ,Û,·B |
| f{fbfNfX | |
| [OK] | [ODBC ff[f^ f\ [fX fAfhf~fjfXfgfC[f^] f_fCfAf[fO f{fbfNfX,ð•\Ž!,μ,Û,·B |
| [fLfff“fZf<] | [ODBC ff[f^ f\ [fX fAfhf~fjfXfgfC[f^] f_fCfAf[fO f{fbfNfX,ð•\Ž!,μ,Û,·B |
| [wfwf<fv] | fwwf<fv,ð•\Ž!,μ,Û,·B |

—pCEêW

2 ftjF[]fY fRf~fbfg • aŽUfgf%of“fUfNfVf#f” ,đ 2 ftjF[]fY (‘Š) ,ÁfRf~fbfg , ,éfvf[]fZfX[]B[]Á[]%o ,ìftjF[]fY ,Á ,í[]Afgf%of“fUfNfVf#f” fvf[]fZfbfT ,É ,æ ,è[]Afgf%of“fUfNfVf#f” ,ì , ,x ,Á ,ì • “•a ,áfRf~fbfg%oÁ”\ ,Á , ,é ,± ,Æ ,aŠm”F ,³ ,é ,Ü , ·[]BŽŸ ,ìftjF[]fY ,Á ,í[]Afgf%of“fUfNfVf#f” ,ì , ,x ,Á ,ì • “•a ,áfRf~fbfg ,³ ,é ,Ü , ·[]B[]Á[]%o ,ìftjF[]fY ,Á ,í[]Afgf%of“fUfNfVf#f” ,ì ^ê • “ ,áfRf~fbfg •s%oÁ”\ ,Á , ,é ,Æ” » f ,³ ,é ,é ,Æ[]AZŸ ,ìftjF[]fY ,íŽA[]s ,³ ,é ,Ü , ,í ñ[]BODBC , Á ,í 2 ftjF[]fY fRf~fbfg ,íftjF[]fY ,³ ,é ,Ü , ,í ñ[]B

A

ANSI • Ä[]<KŠi<!%oi (American National Standards Institute) ,ì—[]BODBC API , í ANSI CEÄ ,Ñ[]o ,µfCEfxf< fCf“f^[]ftjFfCfX ,É[]€< ,µ ,Ä ,ç ,Ü , ·[]B

APD fAfVfŠfP[]fVf#f“ fpf%of[]f^<L[]qŽq (Application Parameter Descriptor) ,ì—[]B

API fAfVfŠfP[]fVf#f“ fvf[]fOf%of~f“fO fCf“f^[]ftjFfCfX (Application Programming Interface) ,ì— []BfAfVfŠfP[]fVf#f“ ,áf[]fCEfxf< fT[]fRfX ,ì—v<[] ,ÆŽÄ[]s ,ÉŽg—p , ,é[]A^ê~A ,ìf<[]f“f” ,Á , ·[]BODBC API , í ODBC ŠÖ[]” ,Á[]ñ[] ,³ ,é ,Ä ,ç ,Ü , ·[]B

ARD fAfVfŠfP[]fVf#f“ []s<L[]qŽq (Application Row Descriptor) ,ì—[]B

B

BLOB fofCfifŠ f%o[]fW flfufWfFfNfg (Binary Large Object) ,ì—[]B255 fofCfif ,È ,Ç[]A“Á”è ,ìfofCfif[] ,đ’ , ,ì ,é ,fCfifŠ f[]f^ ,Á , ·[]B’É[]([]A’á[]CE^ ,ìff[]f^ ,đŽw ,µ ,Ü , ·[]B , ± , ì , æ , x , È , ff[]f^ , đff[]f^ f[]fX , È’—[]M , , ,é[]è[]# , á[]Afff[]f^ f[]fX , © , çŽæ”¾ , , ,é[]è[]#[]Afff[]f^ , í •aŠ , , ,³ , é , Ü , ·[]B , ± , ì , æ , x , È , ff[]f^ , í “f[]f“fO f[]f^” ,Æ , à[]CEÄ , ì , è , Ü , ·[]B

C

C ff[]f^CE^ C fvf[]fOf%of€ (, ± , ì[]è[]#[]AfAfVfŠfP[]fVf#f”) , ÉŠÜ , Ü , é , é • ì[]” , ìff[]f^CE^[]B

CLI []uAPI[]v , đŽQ[]Æ , µ , Ä , ,¾ , ,³ , ç[]B

D

DBMS fff[]f^fx[]fXŠÇ—[]fVfXfef€ (Database Management System) ,ì—[]B • “— []” , Ì , È , ff[]f^fx[]fX ,Æf[]fU[][ŠÔ ,É’¶[]Ÿ , , ,é , ftfgfEfffA , ìfCEfCf , , ,Á , ·[]BDBMS , Á , í[]Afff[]f^fx[]fX , Ö , ì , , x , Á , ìfAfNfZfX , aŠÇ—[] ,³ , é , Ü , ·[]B

DBMS fx[]fX ,ìfhf%ofCfo fx^f“fhfAfff” ,ìff[]f^fx[]fX fGf“fwf” ,đCe—R , µ , Ä • “— []” , Ì , È , ff[]f^ , ÉfAfNfZfX , , ,é , fhf%ofCfo[]B

DDL fff[]f^’è<`CE¾CEè (Data Definition Language) ,ì—[]BSQL “à ,Áff[]f^ ,đ’€[] , , ,é , ì , Á , Ì , È , - []A’è< , , ,é , Xfe[]fYf[]f”fg , Á , ·[]B—á , Ì , í[]ACREATE TABLE[]ACREATE INDEX[]AGRANT[]AREVOKE , È , Ç , Á , ·[]B

DML fff[]f^’€[]iCE¾CEè (Data Manipulation Language) ,ì—[]BSQL “à ,Áff[]f^ ,đ’è< , , ,é , ì , Á , Ì , È , - []A’€[] , , ,đ , s , È , x , ½ , ß , ìfXfe[]fYf[]f”fg , Á , ·[]B—á , Ì , í[]AINSERT[]AUPDATE[]ADELETE[]ASELECT , È , Ç , Á , ·[]B

F

Fat fj[]fj< []ufuf[]fbfN fj[]fj<[]v , đŽQ[]Æ , µ , Ä , ,¾ , ,³ , ç[]B

I

IPD fCf“fvfŠf[]f“fe[]fVf#f” fpf%of[]f^<L[]qŽq (Implementation Parameter Descriptor) ,ì—[]B

IRD fCf“fvfŠf[]f“fe[]fVf#f” []s<L[]qŽq (Implementation Row Descriptor) ,ì—[]B

ISO/IEC — (International Standards Organization)/ (International Electrotechnical Commission) , ISO/IEC CEÄ, Ño, µfCExf< fCf^f^ftfFfCfX, É€', µ, Ä, ç, Ü, ·B

N

NULL 'I — ¼Ž! 'I, ÉŠ,, è" —, Ä, ç, ê, ½ 'I, ä, È, ç, ±, ÆB NULL 'I, A0 , Ü, ½, Í < ó" , Æ, Í ^ Ü, È, è, Ü, ·B

O

ODBC — fllf^f^ffllf^fxllfX fRflfNfefBfrfefB (Open Database Connectivity) , Ì— ãBf<llf^f^, Ì•W€fZfbfg, ð'è<` , , é API , ÌŽd—l, Ä, ·B, ±, Ìf<llf^f^, Ì•W€fZfbfg, ðfAfvfŠfPllfVf^f^ , ÄŽg— p, µ, ÄAfvfllf^ flfX, ÉŠÜ, Ü, è, éffllf^ , ÉfAfvfZfX, , , é, ±, Æ, ä, Ä, «, Ü, ·B

ODBC SDK — ODBC Software Development Kit , Ì— ãBODBC fAfvfŠfPllfVf^f^ , Æfhf%ofCfo, ÌŠJ" , ðŽx %o‡, , é»•i, Ä, ·B

ODBC fAfhf~fjXfgfCEllf^ — fCf^fxfgllf% DLL , ðCEÄ, Ño, µ, ÄAfvfllf^ flfX, ðÝ'è, , éŽÀs%oÄ" \ fvfllf%of€B

S

SAG — SQL Access Group , Ì— ãBSQL DBMS , ÉŠÖs, ðŽ, ÄŠé<Æ, ÌH<Æ<«" — 'I, Ä, ·BX/Open CEÄ, Ño, µfCExf< fCf^f^ftfFfCfX, ÌASQL Access Group , É, æ, éCE«<t, ÉŠî, Ä, ç, Ä, ç, Ü, ·B

SQL — ll'ç%o»llÆ%oiCE¼CEê (Structured Query Language) , Ì— ãBffllf^ , ÌNfGfŠAAXVVA, , æ, ÑŠÇ —, ðs, x, ½, ß, ÉAfvfŠfCEllfVf^f^fj< flfllf^fxllfX, ÄŽg—p, , é, éCE¼CEê, Ä, ·B

SQLSTATE — "Ä'è, ÌfGf%o, ðŽ!, ·A5 •qŽš, ÌlB

SQL fxfe llfgfllfg — flllfllfh, ÄŽn, Ü, èllAZÄs, , é, éfAfvfVf^f^ , ðŠ@'S, É<Lllq, , éllASQL , ÌŠ@'S, ÉftfCEllfyB—á, Ì, ÌASELECT * FROM Orders , È, Ç, Ä, ·BSQL fxfe llfgfllfg , Æfxfe llfgfllfg , Ì'Ü, È, è, Ü, ·B

SQL fllf^CE^ — ñ, Ü, ½, Ìfpf%ofllf^ , Ìffllf^CE^llBffllf^ flfX, É•Ü'q, , é, Ä, ç, éffllf^CE^ , Æ"— l, Ä, ·B

SQL "KllfCEfxf< — fhf%ofCfo, ÄfTfllfg, , é, é SQL92 •q-@ , ÌfCEfxf<llBfCEfxf<, É, ÌAEntryllAFIPS TransitionalllIntermediateA, Ü, ½, Í Full , ä, , è, Ü, ·B

X

X/Open — •Wll€, Æ, È, éllðCE, ð"lls, , éŠé<ÆllBSAG Šîll€, ð"lls, µ, Ü, ·B

fAfvfZfX fvf%of — SQL fxfe llfgfllfg , ðŽÄs, , é, ½, ß, Éffllf^fxllfX fGf^fWf^ , Äll—, , é, éfvf%ofllBC CE¼CEê, È, Ç, Ì'æ 3 llç'äCE¼CEê, ÄfRf^fpfCf<, , é, éŽÀs%oÄ" \fRllfh, Æ"—™ , Ìfvf%of , Ä, ·B

fAfvfŠfPllfVf^f^ — ODBC API , ÄŠÖ" , ðCEÄ, Ño, ·ŽÄs%oÄ" \fvfllf%of€B

fAfvfŠfPllfVf^f^lls<LllqŽq (ARD) — ñ, Ìllf^ffllf^ , , æ, ÑfAfvfŠfPllfVf^f^ , Ìfobftf@ , ÉŠÜ, Ü, è, éffllf^ , ð\ , <llqŽqllBfAfvfŠfPllfVf^f^ , É, æ, Ä, ÄŽw'è, , é, éffllf^ •İŠ , ÌCEä, Éffllf^lls, ð•\, µ, Ü, ·B

fAfvfŠfPllfVf^f^llfpf%ofllf^<LllqŽq (APD) — fAfvfŠfPllfVf^f^ , É, æ, Ä, ÄŽw'è, , é, é•İŠ , Ì'O, É SQL fxfe llfgfllfg , ÄŽg—p, , é, é"llfpf%ofllf^ , ð•\, <llqŽqllB

^É'užw'èllXllVfxfe llfgfllfg — CE»llÝ, Ìlls, ÉŠÜ, Ü, è, é'l, ðllXV , , é SQL fxfe llfgfllfgllB

^É'užw'èllíllæfxfe llfgfllfg — CE»llÝ, Ìlls, ðllíllæ , , é SQL fxfe llfgfllfgllB

^É'užw'è'€ CE»Ÿ,ìs,Ås,í,ê,é,.,x,Ä,Ì'€ B—
á,ì,ÌA^É'užw'èXV,,"æ,Ñ^É'užw'èfXfe[fgf"fgASQLGetDataASQLSetPos ,È,Ç,Å, B

fCf"fxfg[f% DLL ODBC frf"flflf"fg,ðfCf"fxfg[f<,μAff[f^ fl[fX,ðŸ'è,.,é DLL B

fCf" f^ [ftfFfCfX"K#fCfxf< fhf%ofCfo,ÅTf| [fg,³,è,é ODBC 3.7
fCf" f^ [ftfFfCfX,ìfCfxf<BfCfxf<,É,ìfRfA AfCfxf< 1A,Ü,½,ìfCfxf< 2 ,ª, ,è,Ü, B

fCf"fvfŠf[f"fe [fVfjf" s<Lqžq (IRD) fAfvfŠfP [fVfjf" ,É,æ,èŽw'è,³,è,é•İŠ, ,l'O,Éff [f^ s,ð\ ,<Lqžq B

fCf"fvfŠf[f"fe [fVfjf" fpf% [f^ <Lqžq (IPD) fAfvfŠfP [fVfjf" ,É,æ,èŽw'è,³,è,é•İŠ, ,ìCEä,É SQL fXfe [fgf"fg"à,ÅŽg—p,³,è,é"®"lfpf% [f^ ,ð\ ,<Lqžq B

^ø—p•, ,•t, <Ž•ÉŽq ^ø—
pŽ•ÉŽq,Å'í,Ü,è,½Ž•ÉŽqB<æ∅,è<L+•t, <Ž•ÉŽq,Å,ìA"ÁŽè•ŸŽš,ðŠÜ,β,½,èAfl [f [fh,ð^è'v,³,¹, é,±,Æ,ª,Å,«,«,Ü, (SQL92 ,Å,ìA<æ∅,è<L+•t, <Ž•ÉŽq,Æ,àCEÄ,Ì,è,Ü,.) B

-,,,βž,ŸCE^ SQL COBOL AC ,È,Ç,ì•È,ìCE¾CEè,Å<Lq,³,è,½fvf [fOf%of€,É'¼Ú—,,,βž,Ü,è,Ä,ç,é SQL fXfe [fgf"fg" BODBC ,Å,ìA—,,,βž,ŸCE^ SQL ,ìŽg—p,μ,Ü,¹,ñB u"Ä"l SQLv,,"æ,Ñu"®"l SQLv,àŽQAE,μ,Ä,¾,¾,ç B

fGfXfP [fv<â SQL fXfe [fgf"fg,ì<â B

fIfNfefbfg 8 frfbfg,Ü,½,í 1 fofCf [fB ufofCf [fv,àŽQAE,μ,Ä,¾,¾,ç B

fIfNfefbfg' fIfNfefbfg,Å\,³,è,é Afofbftf@,Ü,½,í,»,è,ÉŠÜ,Ü,è,éff [f^ ,l',³ B

fIfvfeBf~fXfeBfBfN"ŽžŽÀs\$CEä "ŽžŽÀs\$CEä,ðCEüä,³,¹,é,½,β,ì•û-@B,±,ì•û- @,Å,ìAAs,ìf [fbfN,³,è,Ü,¹,ñ,ªAAs,ªXV,Ü,½,ì [fœ,³,è,é'O,É Af [f f f<,É,æ,èAAs,ìA"Ç,ŸŽæ,èŽž'È~ ,Éps,ª•ìX,³,è,Ä,ç,é,©,Ç,ª,©,ªSm" F,³,è,Ü, B•ìX,³,è,Ä,ç ,é [è# ,ìAAXV,Ü,½,ì [fœ,ìŽÀs,Å,«,«,Ü,¹,ñB ufyfVf~fXfeBfBfN"ŽžŽÀs\$CEäv,ðŽQAE,μ,Ä,- ,¾,¾,ç B

, ©

f [f f< fAfvfŠfP [fVfjf" ,Éff [f^ s,ð•Ô, fVf f g E f f A, Ì^è" B" f [f f<" ,ÆCEÄ,Ì,è,é,ì AfRf" f sf... [f^' [—,Å\Ž,³,è,é" _Af [f f<,ª%æ-Éä,Å,ìCE»Ÿ^É'u,ðŽ!,.,æ,ª,É ACE<%Éfzfbfg,ì [f [f f< f<,ªCE<%Éfzfbfg"à,Å,ìCE»Ÿ^É'u,ðŽ!,.,½,β,Å, B

ŠO" fL [,Ü,©,ìfe [fuf<,ìžâfL [,Æ^è'v,.,é Afe [fuf<"à,ì 1 ,Å,Ü,½,í•; [,ì—ñ B

ŠO" CE<# ^è'v,.,é s,,"æ,Ñ^è'v,μ,È,ç s,ì—¼•û,ª•Ô,³,è,é CE<# B^è'v,μ,È,ç s,ÉŠÜ,Ü,è,é^è'v,μ,È,ç ,.,x,Ä,ì—ñ,ì'ì,ì NULL ,ÉŸ'è,³,è,Ü, B

CE^fCf"fwfP [f^ fAfvfŠfP [fVfjf" •ì" Afpf% [f^ A,Ü,½,í—ñ,ìff [f^ CE^ ,ðŽ!,.,½,β,É ODBC ŠÖ",É^ø,«"n, A,Ü,½,ì ODBC ŠÖ", ©,ç•Ô,³,è,é [f [f" BODBC ,Å,ìAC ,,"æ,Ñ SQL ,ì— ¼•û,ìCE^fCf"fwfP [f^ ,ª'è<,³,è,Ü, B

fj f^ f [fO ff [f^ fX [fX,ìCE^ Ž@,ð\ , Af [f^ fX [fX,ÉŠÜ,Ü,è,é^è~A,ìfVXfe f€ f [fuf< B" fXfL [f}" ,Ü,½,í "ff [f^ Ž< [f" ,Æ,àCEÄ,Ì,è,Ü, B

fj f^ f [fOŠÖ" ff [f^ fX [fX,ìfj f^ f [fO, ©,ç [f•ñ,ðŽæ"¾,.,é ODBC ŠÖ" B

ŠÄ« ff [f^ ,Ö,ìf AfNfz fX,ð s,xfOf [f of<,ÉfRf" fefLfXfg BŠÄ« ,ÉŠÜ,Ü,è,Ä,ç,é,.,x,Ä,ìÚ'± ,ìfšXfg,È,Ç AfOf [f of<,É [f•ñ,ªŠÄ« ,ÉŠÖ~A•t, ,ç,è,Ä,ç,Ü, B

ŠÄ« fnf"fhf< ŠÄ« ,ÉŠÖ,.,é [f•ñ,ðŠÜ, pff [f^ [f'ç,É'í,.,éfnf"fhf< B

fL [[s,ðŽ•É,.,é'l,ðŠÜ, p 1 ,Å,Ü,½,í•; [,ì—ñ B uŽâfL [v,,"æ,ÑuŠO" fL [v,àŽQAE,μ,Ä,- ,¾,¾,ç B

fL[fZfbfg p,s,lfTfFbf,đŽÀs,·,é·;□#f□[f^,Ü,½,lfL[fZfbfgfhfŠfuf“ f□[f^,ÁŽg—
p,³,è,é^è~A,lfL□□B

fL[fZfbfgfhfŠfuf“ f□[f^ fL[fZfbfg,đŽg—
p,μ,Ä□A□X□V,“,æ,Ñ□í□œ,³,è,½□s,ðCEŸ□o,·,éfXfNf□□[f^%Ä“\f□[f^□B

<L□qŽq —ñff□[f^,Ü,½,í“@“lfpf%□□[f^,ì,Ç,ì,ç,©,ÉŠÖ,·,é□í·ñ,đŠÜ,þff□[f^□\‘□□B<L□qŽq,ì·” —
□“í,É·\Ží,í’è<“,³,è,Ü,¹,ñ□BfAfvfŠfP□[fVfj“,©,ç<L□qŽq,Ö,ì’¼□Ú“í,ÉfAfNfZfX,í□AODBC
ŠÖ□“,Æ<L□qŽqfñf“fhf<,ðCEÄ,Ñ□o,μ,ÄftfB□[f^fh,ð’€□í,·,é,±,Æ,É,æ,Ä,Ä,ì,Y%Ä“\,É,É,è,Ü,·□B

Ší□ □“íCen,ìŠí□□BfRf“fsf...□[f^,Á,í 2 (2 □í□)“,â 10 (10 □í□)“,ª½,Žg,í,è,Ü,·□B

□s “Á’è,ìŽÀ’ì,ð·\,·□A’è~A,ìŠÖ~A,μ,½—ñ□B“fCEfR□[f^h“,Æ,àCEÄ,î,è,Ü,·□B

□s<L□qŽq fAfvfŠfP□[fVfj“,É,æ,èŽw’è,³,è,é·İŠ·,ì’O (fCf“fvfŠfj“fe□[fVfj“□s<L□qŽq,Ü,½,í
IRD)□A,Ü,½,í·İŠ·,ìCEä (fAfvfŠfP□[fVfj“□s<L□qŽq,Ü,½,í ARD) ,ì,ç,·,é,©,É□ACE<%ÉfZfbfg,ì—ñ,ð·\
,<L□qŽq□B

□sfXfe□[f^fX”z—ñ SQLFetch□ASQLFetchScroll□A,Ü,½,í SQLSetPos
,ðCEÄ,Ñ□o,μ,½CEä,ì□s,lfXfe□[f^fX,đŠÜ,p”z—ñ□B

□sfZfbfg fuf□fbfN f□[f^,É,æ,è□A’P’è,lfTfFbf“,Á·Ö,³,è,é^è~A,ì□s□B

□sfZfbfg fofbftf@ CE<%ÉfZfbfg,ì—ñ,ÉCE<□#,μ,Ä,ç,éfofbftf@□B□sfZfbfg’S’ì,lf□[f^,ª·Ö,³,è,Ü,·□B

□s’€□ì”z—ñ “Á’è,ì’ì,đŠÜ,p”z—ñ□B,±,ì’ì,í□AfvfŠfP□[fVfj“,É,æ,Ä,ÄŸ’è,³,è□ASQLSetPos
,ðŽÀ□s,·,é□Ú,É□A’í%ž,·,é□s,ª-³Ž<,³,è,é,±,Æ,ðŽí,μ,Ü,·□B

fNfGfŠ SQL fXfe□[fgf□f“fg□BSELECT fXfe□[fgf□f“fg,ì^Ó-;ÁŽg—p,³,è,é□é□#,à,·,è,Ü,·□B

<æ□Ø,è<L□t·t,«Ž~·ÉŽq ^ø—
pŽ~·ÉŽq,Á’í,Ü,è,½Ž~·ÉŽq□B<æ□Ø,è<L□t·t,«Ž~·ÉŽq,Á,í□A’ÁŽè·¶Žš,đŠÜ,ß,½,è□Afl□[f□□[f^,ð’è’v,³,¹,
é,±,Æ,ª,Ä,«,Ü,· (“ø—p·,·,·t,«Ž~·ÉŽq“,Æ,àCEÄ,î,è,Ü,·)□B

fNf%□CfAf“fg/fT□[fo□[ff□[f^f□□[fX,lfAfNfZfX·ú-@,ì^èŽí□B1,Á,Ü,½,í·;□“,lfNf
%□CfAf“fg,ªfT□[fo□[CEo—R,Áff□[f^,ÉfAfNfZfX,μ,Ü,·□B’É□□Afvf
%□CfAf“fg,Á,lf□[fU□[fCf“f^□[ftfFfCfX,ðŽÀ’·,μ□AfvT□[fo□[,Á,lf□[f^f□□[fX,Ö,lfAfNfZfX,ð□sCEä,μ,Ü,·□B

CE<%ÉfZfbfg SELECT fXfe□[fgf□f“fg,ðŽÀ□s,·,é,±,Æ,É,æ,è□í□—,³,è,é^è~A,ì□s□B

CE<□# fŠfCE□[fVfj□fj< ff□[f^f□□[fX“à,Á□s,ª’€□□BfŠfCE□[fVfj□fj< ff□[f^f□□[fX“à,Á□A’è,è,ì—
ñ,ÉŠÜ,Ü,è,é’ì,ð’è’v,³,¹,é,±,Æ,É,æ,è□A·;□“,lfe□[fuf“à,ì□s,ðCEŸ,ç,ÉfŠf“fN,³,¹,Ü,·□B

CE»Ÿ,ì□s f□[f^,ÁCE»Ÿf□[fCf“fg,³,è,Ä,ç,é□s□B’è’uŽw’è’€□í,íCE»Ÿ,ì□s,ÁŽÀ□s,³,è,Ü,·□B

fRf~fbfg (·,é) fgf%□f“fUfNfVfj“,Á,ì·ì□X,ð%□i<v“í,É·Ú·¶,·,é,±,Æ□B

,³

fT□[fo□[ff□[f^f□□[fX fNf%□CfAf“fg/fT□[fo□[ŠÄ<<,ÁŽÀ□s,·,é,æ,ª,ÉfffUfCf“,³,è,½ DBMS□BSQL
,·,æ,Ñfgf%□f“fUfNfVfj“,ð’½□É,É<@“\,Áftf□[fg,·,éfXf^f“fhfAf□f“,lf□[f^f□□[fX
fgf“fWf“,ªŠÜ,Ü,è,Ü,·□B,±,ì DBMS,í□ADBMS fX□[fX,lfhf%□Cf□,ðŽg—p,μ,ÁfAfNfZfX,Á,«,Ü,·□B—
á,ì,í□AOracle□Alformix□ADB/2□AMicrosoft SQL Server ,É,Ç,Á,·□B

fTf“fLf”fo 16 frfbfg fAfvfŠfP□[fVfj“,Á 32 frfbfg ODBC fhf%□Cfo,ªŽg—p,³,è,Ä,ç,é□é□#,ì□A16
frfbfg fAfhfCEfX,©,ç 32 frfbfg fAfhfCEfX,Ö,ì·İŠ·□A,Ü,½,í,·,ì<t□B

ŽÀ□s (·,é) SQL fXfe□[fgf□f“fg,ð□^—□,·,é,±,Æ□B

ŽÀ□sŽžff□[f^ fpf%□□[f^ SQLExecute ,Ü,½,í SQLExecDirect ,ªCEÄ,Ñ□o,³,è,½CEä,Éff□[f^,ª’ —
□M,³,è,éfpf%□□[f^□Bff□[f^,ªfpf%□□[f^ fofbftf@,É’u,©,è,é,ì,Á,í,É,□ASQL
fXfe□[fgf□f“fg,ìŽÀ□sŽž,Éff□[f^,ª’ —□M,³,è,é,½,ß□A”ŽÀ□sŽžff□[f^ fpf%□□[f^”

,ÆCEÄ,Î,ê,Û,·□B'Ê□□A□f"fo f□□f^,Í•ªš,,,³,ê,ÄŽÄ□sŽž,É'—□M,³,ê,Û,·□B

ŽÄ□sŽžff□f^—ñ SQLSetPos,ªCEÄ,Ñ□o,³,ê,½CEä,Éff□f^,ª'—□M,³,ê,é—ñ□Bff□f^,ª□sfZfbfg fofbftf@,É'u,©,ê,é,Î,Ä,Í,È,□AZÄ□sŽž,É'—□M,³,ê,é,½,β□A"ŽÄ□sŽžff□f^—ñ"
,ÆCEÄ,Î,ê,Û,·□B'Ê□□A□f"fo f□□f^,Í•ªš,,,³,ê,ÄŽÄ□sŽž,É'—□M,³,ê,Û,·□B

Ž"®fRf~fbfg f,□lfh fgf%of"fuFNFVf+f" fRf~fbfg f,□lfh,î^èží□Bfgf %of"fuFNFVf+f",ªŽÄ□s,³,ê,½'¼CEä,É□A,»,lfgf%of"fuFNFVf+f",ªfRf~fbfg,³,ê,Û,·□B

□WCEvŠÖ□" 'l,lfOf<□fv,©,ç'P^è,î'l,ð□□-,·,éšÖ□"□B½,,ì□é□□AGROUP BY,;,æ,Ñ HAVING <ª,Æ•¹ —p,³,ê,Û,·□B□WCEvŠÖ□",É,Í AVG□ACOUNT□AMAX□AMIN□A,;,æ,Ñ SUM ,ªŠÛ,Û,ê,Û,·□B□WCEvŠÖ□",Í "fzfbfgšÖ□" ,Æ,àCEÄ,Î,ê,Û,·□B□ufXfjf%šÖ□"□v,àžQ□Æ,µ,Ä,,¾,³,ç□B

□C□üžq 1 ,Ä,Û,½,Í•î□",lfe□[fuf<,ªŠÛ,Û,ê,éff□f^fx□fX□B

ŽáfL□[fe□[fuf<,ì□s,ð^è^Ó,Éž·Ê,·,é 1 ,Ä,Û,½,Í•î□",ì—ñ□B

Žè"®fRf~fbfg f,□lfh fgf%of"fuFNFVf+f" fRf~fbfg f,□lfh,î^èží□Bfgf%of"fuFNFVf+f",Í□ASQLTransact ,ðCEÄ,Ñ□o,·,±,Æ,É,æ,è□A-¾ž"l,ÉfRf~fbfg,³,ê,é•K—v,ª, ,è,Û,·□B

□€"ö (,·,é) SQL fXfe□[fgf□f"fg,ðfRf"fpfCf<,·,é,±,Æ□BSQL fXfe□[fgf□f"fg,ð□€"ö,·,é,± ,Æ,É,æ,è□A□f□fX fvf%of",ð□□-,µ,Û,·□B

□ó'Ö □Ü,µ,□à-¾,³,ê,½□A□f□C□f□f€,lfRf"fffBfVf+f"□B—á,î,í□A□Ü'±,É,Í 7 ,Ä,ì□ó'Ö (Š,,,è"- ,Ä,É,µ□AŠ,,,è"-,Ä□í,Ý□A□Ü'±□í,Ý□A—vff□f^,È,Ç) ,ª, ,è,Û,·□B□f□A□f□C□f□f€,ª"Á'è,ì□ó'Ö,Ä, ,é□é□f,É,ì,ÝŽÄ□s,³,ê,é€□í,à, ,è,Û,·□B—á,î,í□A□Ü'±,ì%ð□œ,í□A□Ü'±,ì□ó'Ö,ª "Š,,,è"- ,Ä□í,Ý" ,Ä, ,é□é□f,É,ì,Ý%Ä"\,Ä, ,è□A"□Ü'±□í,Ý" ,ì□ó'Ö,È,Ç,Ä,ÍŽÄ□s,³,ê,Û,¹,ñ□B

□ó'Ö,ì•İŠ fA□f□C□f□f€,ì□ó'Ö,ì•İ%»□BODBC ,Ä,í□AŠÄ«□A□Ü'±□A,;,æ,ÑfXfe□[fgf□f"fg,ìCEµ-š,È□ó'Ö,ì•İŠ,ª'è<,³,ê,Û,·□B

□Š—LŽÒ fe□[fuf<,ì□Š—LŽÒ□B

□f'f □A□CEä,ÉCEÄ,Ñ□o,³,ê,½□A'Á'è,lfnf"fhf<,ðžg—p,·,éšÖ□",É,Ä,ç ,Ä,ì□f'f□í•ñ,ðšÛ,p□f□fR□[fh□B□f'f□f□fR□[fh,í□AŠÄ«□A□Ü'±□A□f□f□f□f"fg□A,;,æ,Ñ<L□qžqfnf"fhf<,ÆŠ Ö~A•t,·,ç,ê,Ä,ç,Û,·□B

fXfjf%šÖ□"

'P^è,î'l,©,ç'P^è,î'l,ð□□-,·,éšÖ□"□B—á,î,í□A•¶žš—ñff□f^,î'á•¶žš/□-•¶žš,ð•İŠ,·,éšÖ□",È,Ç,Ä,·□B

fXfL□[f} □ufjf^f□fO□v,ðžQ□Æ,µ,Ä,,¾,³,ç□B

fXfNf□□[f<%Ä"vf□[fV< CE<%ÉfZfbfg,Á'O•û,Û,½,íCEä•û,É^Ú"® ,Ä,«,éjf□[fV<□B

fXfe□[fgf□f"fg SQL fXfe□[fgf□f"fg,ÉšÖ,·,é,·,x,Ä,ì□í•ñ,ð•Ü'¶,·,éRf"fe□□BfXfe□[fgf□f"fg,Æ SQL fXfe□[fgf□f"fg,Í^Û,È,è,Û,·□B

fXfe□[fgf□f"fg fnf"fhf< fXfe□[fgf□f"fg,ÉšÖ,·,é□í•ñ,ðšÛ,pff□f^□\ç,É'í,·,éfnf"fhf<□B

fXfgfAfh fvf□fV□[fWff □ufvf□fV□[fWff□v,ðžQ□Æ,µ,Ä,,¾,³,ç□B

□®□#<<%»<@" \ f□□f^f□□fX,ì□®□#<<,ð^Üž□,·,é,½,β,ÉfffUfCf",³,ê,½□ASQL ,lfTfufZfbfg□B

□Ä"l SQL -,β□ž,ÝCE^ SQL ,ì^èží□BSQL fXfe□[fgf□f"fg,ªfn□[fhfR□[fh%»»,³,ê,Ä,·,è□A□f□f□f□f%of€,ì,Û,©,ì•"ª,ªfRf"fpfCf<,³,ê,é,Æ,«,É SQL fXfe□[fgf□f"fg,àfRf"fpfCf<,³,ê,Û,·□B□u"®"l SQL□v,àžQ□Æ,µ,Ä,,¾,³,ç□B

□Ä"lfj□[fV< CE<%ÉfZfbfg"à,ì□X□V□A□í□œ□A,Û,½,í' }"ü,ðCEÝ□o,Ä,«,É,çfXfNf□□[f<%Ä"vf□[fV< f□B'Ê□□ACE<%ÉfZfbfg,lfRfs□[,ð□□-,·,é,±,Æ,É,æ,èžÁ'•,³,ê,Û,·□B

□Ü'± fhf%ofCfo,Æff□f^ f□□fX,ì"Á'è,lfCf"Xf^f"fx□B

Ú±fnf'fhf< Ú±,ÉŠÖ,·,éî•ñ,ðŠÜ,bff[f^v'ç,É'í,·,éfnf'fhf<B

Ú±fuf%ofEfy Ú±,·,éff[f^ f[fX,ðfjfbfgf[fNã,ÅCEÿðð,·,é,±,ÆBÚ±,ðfuf %ofEfy,·,é,Ú,É,íA,ç,·,Ä,©,íXfefbfv,ª•K—v,Èèèèè,è,è,Ü,·B—á,í,íAííííí,Éfjfbfgf[fNã,ÄfT[fof[ðfuf%ofEfy,µAŽÝ,É“Á”è,íT[fof[ã,Äff[f^fx[fX,ðfuf%ofEfy,µ,Ü,·B

fZfbfgfAfbfv DLL ufhf%ofCfo fZfbfgfAfbfv DLLv,·,æ,Ñufgf%of“fXfCE[f^ fZfbfgfAfbfv DLLv,ðŽQAE,µ,Ä,,¾,¾,çB

fZfbfgfŠÖ uWCEvŠÖ“v,ðŽQAE,µ,Ä,,¾,¾,çB

O•ûfXfNf[f< f^fcfv f[f< CE<%oÉfZfbfg,ð'O•ù,É,ì,Ý^Ú“@,Ä,«A^è“x,É 1 ,Ä,ìs,ðftfFbf',·,éff[f^f<B,Ü,Æ,ñ,ç,íŠfCE[fVfjif< ff[f^fx[fX,Ä,íA'O•ûfXfNf[f< f^fcfv f[f< f<,ì,Ý,ðftf[f,µ,Ü,·B

ŠCEY%o^—p%oA” « ^Ù,È,é DBMS ,ÉŠÜ,Ü,è,éff[f^,Ö,íAfnfzfx't,ÉAfnfvfšfP[fVfjif“,ª“““íR[fh,ðŽg—p,·,é<@“\B

,1/2

'½'wfhf%ofCfo uDBMS fx[fX,ífhf%ofCfov,ðŽQAE,µ,Ä,,¾,¾,çB

'P'wfhf%ofCfo uftf@fCf< fx[fX,ífhf%ofCfov,ðŽQAE,µ,Ä,,¾,¾,çB

'¼—ñ%o»%oA” « 2 ,Ä,ífgf%of“fUfNfVfjif“,ð“~Žž,ÉŽÀ[s,µ,½èèèè,ìCE<%oÉ,ªA,±,è,ç,ìfgf %of“fUfNfVfjif“,ð'±,·,Ä (“A'±,µ,Ä) ŽÀ[s,µ,½èèèè,ìCE<%oÉ,Æ“^è,É,È,é,©,ç,ª ,©Bff[f^fx[fX,ì©èèèè,ð^ÙŽ,·,é,É,íA'¼—ñ%o»%oA”\,Éfgf%of“fUfNfVfjif“,ª•K—v,Ä,·B

ff[f^CE^ ff[f^,ìCE`Ž@BODBC ,Ä,íAC ,·,æ,Ñ SQL ff[f^CE^,ªè<`¾,è,Ü,·B uCE^fCf“fWfP[f^v,àŽQAE,µ,Ä,,¾,¾,çB

ff[f^Ž<“' ufjf^ffo[v,ðŽQAE,µ,Ä,,¾,¾,çB

ff[f^ f[fX ft[fU[,ªAfnfzfx,·,éff[f^,Æ,»è,ÉŠÖ~A,·,éff[f^f[fefBf“fo fvXfef€ADBMSA,·,æ,Ñfjfbfgf[fN fv%ofbfgftfH[f€ (“íY,·,éèèèè)B

ff[f^'fofbftf@ ‘í%ž,·,é "ff[f^ fofbftf@" ,ÉŠÜ,Ü,è,é'í,ì'¾,ð^ø,«“n,fofbftf@Bff[f^'fofbftf@,íAfff[f^'í,ª NULL [í,Ä ,é,©,ç,ª ,©,È,ç,ðŽ!,·fCf“fWfP[f^,ì•U“í,É,àŽg—p,¾,è,Ü,·B

ff[f^ fofbftf@ ff[f^,ì^ø,«“n,µ,ÉŽg—p,¾,è,éfofbftf@B'½,,ìèèèèA“ff[f^'fofbftf@" ,æff[f^ fofbftf@,ÉŠÖ~A•t,·,ç,è,Ä,ç,Ü,·B

ff[f^fx[fX DBMS ,ÉŠÜ,Ü,è,éACEÁX,íff[f^,ìWèèèèèB uDBMSv,àŽQAE,µ,Ä,,¾,¾,çB

ff[f^fx[fX fgf“fwf“ DBMS ,ÉŠÜ,Ü,è,éfvfvgfEjFfA[BSQL fXfe[fvgf“fg,ð%oðí,µ,ÄŽÀ[s,µA• —“í,Éff[f^,ÉfAfnfzfx,µ,Ü,·B

fe[fuf< s,íRfCEfNfVfjif“B

“K[çCEfxf< fhf%ofCfo,½,íff[f^ f[fX,ÄfT[f[f,¾,è,Ä,ç,é^è~A,ì<@“\BODBC ,Ä,íAAPI “K[ç<fCEfxf<,·,æ,Ñ SQL “K[ç<fCEfxf<,ªè<`¾,è,Ü,·B

ffXfNfgfbfv ff[f^fx[fX fp[fVfif< fRf“fsf...[f^,ÄŽÀ[s,·,é,æ,ª,ÉfffUfCf“,¾,è,½ DBMSB,Ü,Æ,ñ,ç,ìèèèèA,±,è,ç,ì DBMS ,É,íXf^f“fhfA[f“,íff[f^fx[fX fgf“fwf“,í•”ð,¾,è,Ä,·,ç,·Aftf@fCf< fx[fX,ífhf%ofCfo,ðCe—R,µ,ÄfAfnfzfx,·,é•K— v,ª ,è,Ü,·BÉííA,±,è,ç,ífhf%ofCfo,ÉŠÜ,Ü,è,éfgf“fwf“,Ä,íASQL ,·,æ,Ñfgf%of“fUfNfVfjif“,É'í,·,éTf [fg,ª[sCEÁ,¾,è,Ä,ç,Ü,·B—á,í,íAdBASE[AParadox[ABtrieve[AFoxPro ,É,ç,ª ,è,Ü,·B

“@ì,ÉŠÖ,·,é•íX ODBC 3.x ,Æ ODBC 2.x ŠÔ,É,·,è“Á”è,ì<@“\,ÉŠÖ,·,é•íXB,± ,ì•íX,íASQL_ATTR_ODBC_VERSION ŠÁ<<'@<<,ª•íX,¾,è,é,±,Æ,É,æ,è“í,µ,Ü,·B

“~ŽžŽÄs□SCEä •□”,lfgf%of“fUfNfVf#”,a“~Žž,É“^è,lf□[f^,ÉfAfNfZfX,·,é<@“\□B

“@“I SQL -,,,ß□ž,ÝCE^ SQL ,ì^èž□B“@“I SQL ,Á,í□AZÄ□sŽž,É SQL fXfe□[fgf□“fg,²□□□,³,è,ÄfRf“fpfCf<,³,è,Ü,·□B□□□Ä“I SQL□v,àŽQ□AE,μ,Ä,,¾,³,¢□□B

“@“lf□[f< CE<%oÉfZfbfg“à,ì□X□V□A□□□□□A,Ü,½,í““ü,³,è,½□s,ðCEÿ□o,·,é,± ,AE,²,Ä,«,éfxfnf□□[f<%oÄ“\f□[f<□B

fhf%ofCfo ODBC API ,ìŠÖ□”,ðCEöŠ),·,é<□[f“ f” f%ofCfuf%ofŠ□Bfhf%ofCfo,í 1 ,Á,ì DBMS ,Éí,μ,Ä“Á’è,³,è,Ä,¢,Ü,·□B

fhf%ofCfo fzfbfgfAfbfv DLL fhf%ofCfo“Á—L,lfCf“fXfg□[f<□í•ñ,“,æ,Ñ□Ý’è<@“\,ðŠÜ,p DLL□B

fhf%ofCfo f}f□[fWff fAfVfŠfP□[fVf#“,ÁŽg—p,·,éfhf%ofCfo,Ö,lfAfNfZfX,ðŠÇ—□,·,é<□[f“ f” f%ofCfuf %ofŠ□Bfhf%ofCfo f}f□[fWff,í□Afhf%ofCfo,lf□□[fh/fAf“f□□[fh,ð□s,¢□A“K□Ø,Éfhf%ofCfo,É ODBC ŠÖ□”,ìCEÄ,Ñ□o,μ,ð^ø,«“n,μ,Ü,·□B,Á,Ü,è□Afhf%ofCfo f}f□[fWff,í□AODBC ŠÖ□”,ìCEÄ,Ñ□o,μ,ð^ø,«“n,μ,Ä,¢,éŠÖ,É□Afhf%ofCfo,Ö,ì□Ú’± (□Ú’±%oð□□) ,ð□s,¢,Ü,·□B

fgf%of“fUfNfVf#” □□<AE,lfAfgf~fbfN‘P^Ê□Bfgf%of“fUfNfVf#”,ì□□<AE,Á,í□A□<AE‘S‘ì,ðŠ@—¹,·,é•K— v,²,·,è,Ü,·□Bfgf%of“fUfNfVf#”,ì^è•”,²Ž,“s,·,é,AE□Afgf%of“fUfNfVf#”‘S‘ì,²Ž,“s,μ,Ü,·□B

fgf%of“fUfNfVf#”•a—£ fgf%of“fUfNfVf#”,ð□A,Ü,©,ì,·,x,Ä,lfgf%of“fUfNfVf#”,ì%oe<¿,©,ç•a—£ ,·,éfxfnfVf#“□B

fgf%of“fUfNfVf#”•a—£fCEfxf< fgf%of“fUfNfVf#”,²•a—£,³,è,é“x□#,¢□Bfgf%of“fUfNfVf#”•a— £fCEfxf<,É,í□ARead Uncommitted□ARead Committed□ARepeatable Read□ASerializable□A,“,æ,Ñ Versioning ,ì 5 Ží—p,²,·,è,Ü,·□B

fgf%of“fXfCE□[f^ DLL ff□[f^,ì•¶ŽšfZfbfg,ð•İŠ,·,é DLL□B

fgf%of“fXfCE□[f^ fzfbfgfAfbfv DLL fgf%of“fXfCE□[f^“Á—L,lfCf“fXfg□[f<□í•ñ,“,æ,Ñ□Ý’è<@“\ ,ðŠÜ,p DLL□B

Í

fofCf 8 frfbfg,Ü,½,í 1 flfNfefbfg□□uflfNfefbfg□v,àŽQ□AE,μ,Ä,,¾,³,¢□□B

fofCf“fffBf“fo “@ŽCE,ì□ê□#,í□ACE<%oÉfZfbfg,ì—ñ,Ü,½,í SQL fXfe□[fgf□“fg,lfpf %of□□[f^ ,ðfAfVfŠfP□[fVf#“•í□”,ÉŠÖ~A•t,·,é“@□ì,ðŽw,μ,Ü,·□B~¼ŽCE,ì□ê□#,í□A,»,ìŠÖ~A,ðŽw,μ,Ü,·□B

fofCf“fffBf“fo flftfZfbfg ,·,x,Ä,ìCE<□#,³,è,½—ñ□A,Ü,½,lfpf%of□□[f^ ff□[f^,Éí,·,éff□[f^ fofbftf@ fAfhfCEfX,“,æ,Ñ’,¾fCf“fWfP□[f^ fofbftf@ fAfhfCEfX,É%oÄ,ì,ç,è,é’□B□V,μ,¢fAfhfCEfX,²□□□,³,è,Ü,·□B

fofbftf@ fAfVfŠfP□[fVf#“,AEfhf%ofCfoŠÖ,Áff□[f^,ì^ø,«“n,μ,ÉŽg—p,·,éfxfnfVf#“ f□f,fs,ì^è•“□B‘É□□Afofbftf@,íí,É,É,Á,Ä,¢,Ü,· (“ff□[f^ fofbftf@” ,AE “ff□[f^·fofbftf@” ,É,Ç)□B

fpf%of□□[f^ SQL fXfe□[fgf□“fg,ì•í□”□Bfpf%of□□[f^,É,í□Afpf%of□□[f^ f}□[f□[.Ü,½,í<^—â•,, (?) ,²•t,¢,Ä,¢,Ü,·□Bfpf %of□□[f^ ,í□AfxfnfVf#“•í□”□A,“,æ,Ñfxfe□[fgf□“fgŽÄ□sŽž,ÉŽæ“¾,³,è,é,»,ìí,ÉCE<□#,³,è,Ä,¢,Ü,·□B

fpf%of□□[f^<L□qŽq SQL fXfe□[fgf□“fg,ÁŽg—p,³,è,éŽÄ□sŽžfpf%of□□[f^,ð•v,·<L□qŽq□Bfpf %of□□[f^ ,í□AfxfnfVf#“□[fVf#“,É,æ,èŽw‘è,³,è,é•İŠ,ì‘O (fAfVfŠfP□[fVf#“ fpf%of□□[f^<L□qŽq,Ü,½,í APD)□A,Ü,½,í•İŠ,ìCEä (fCf“fvfŠf□“fe□[fVf#“ fpf%of□□[f^<L□qŽq,Ü,½,í IPD) ,ì,¢,·,é,©,É•v,³,è,Ü,·□B

fpf%of□□[f^ fXfe□[f^fX”z—ñ SQLExecDirect ,Ü,½,í SQLExecute ,ðCEÄ,Ñ□o,μ,½CEä,lfpf %of□□[f^ ,lfXfe□[f^fX,ðŠÜ,p”z—ñ□B

fpf%of□□[f^‘€□”z—ñ “Á’è,ìí,ðŠÜ,p”z—ñ□B,± ,ìí,í□AfxfnfVf#“□[fVf#“,É,æ,Á,Ä□Ý’è,³,è□ASQLExecDirect ,Ü,½,í SQLExecute ,ðŽÄ□s,·,é□Ú,É□Aí %ož,·,éfpf%of□□[f^ ,²~ž<,³,è,é,±,AE,ðŽí,μ,Ü,·□B

fnf"fhf< ftf@fCf<,Ü,½,Íff[]f^[]\ç,È,Ç,ð^è^Ó,ÉŽ^•É,·,é'[]Bfnf"fhf<,í[]Afnf"fhf<,ð[][]-,μ,ÄŽg—p,·,é\ ftfgfEfffA,É'í,μ,Ä,ì,Ý—L—p,Ä,·,ª[]A,Ü,©,ì\ftfgfEfffA,É,æ,è^ø,«"n,ª,è,Ä[]Afcfef€,ðŽ^•É,·,é[]è[]#,à, ,è,Ü ,·,[]BODBC ,Ä,í[]AŠ^<«[]AÚ'±[]Afxfe[]fgf[]"fg[]A,·,æ,Ñ<L[]qŽq,ìfnf"fhf<,ª'è<,ª,è,Ü,·,[]B

frf...[] 1 ,Ä,Ü,½,í,·,[]",ìfe[]fuf<,ÉŠÜ,Ü,è,éff[]f^,ð\Ž!,·,é•û-@[]B'É[]Afrf...[],í[]A1 ,Ä,Ü,½,í,·,[]",ìfe[]fuf<,É'¶[]Ý,·,é—ñ,ì\TfufZfbfg,Æ,μ,Ä,ü[]-,ª,è,Ü,·,[]BODBC ,Ä,í[]A^è"É"í,Éfrf... [][,Æfe[]fuf<,í"~"™,Ä,·,[]B

ftf@fCf< f[]f[]f^ f[]fX []Ú'±[]î•ñ,ª .DSN ftf@fCf<,É•Ü'¶,ª,è,éff[]f^ f[]fX[]B

ftf@fCf< fx[]fX,ìfhf%ofCfo •" —[]"í,Éff[]f^,É'¼[]ÚfAfNfZfX,·,éfhf%ofCfo[]B,±,ì[]è[]#[]Afhf %ofCfo,É,ìff[]f^fx[]fX fgf"fwf",ªŠÜ,Ü,è,Ä,·,è[]Afhf%ofCfo,Æff[]f^ f[]fX,ì—¼•û,ì-ðŠ,,ð %oÉ,½,μ,Ü,·,[]B

ftfB[]f<fh []u—ñ[]v,ðŽQ[]Æ,μ,Ä,,ª/4,ª,ç[]B

ftfFbf^ (,·,é) Ç<%oÉfZfbfg,©,ç 1 ,Ä,Ü,½,í,·,[]",ì[]s,ðŽæ"ª/4,·,é,±,Æ[]B

fvf[]fV[]fWff f[]f[]f^fx[]fX,ì-¼'0•t,«fìfufWfFfNfg,Æ,μ,Ä•Ü'¶,ª,è,é[]A1 ,Ä,Ü,½,í,·,[]",ìfvfŠRf"fpfCf<[]í,Ý SQL fxfe[]fgf[]"fg,ìfOf<[]fv[]B

fvf[]fV[]fWff—ñ
fvf[]fV[]fWffÇÄ,Ñ[]o,μ,ì^ø[]"[]Afvf[]fV[]fWff,Ä•Ô,ª,è,é'í[]A,Ü,½,ìfvf[]fV[]fWff,Ä[]i[]-,ª,è,éÇ<%oÉfZfbfg,ì —ñ[]B

fuf[]fbfN f[]f[]f< ^è"x,É•,·,[]",ìff[]f^[]s,ðftfFbf^ ,Ä,«,éff[]f<[]B

fyfvf~fxfefBfbfN"ŽŽŽÀ[]s[]ÇEä '¼—ñ%o»%oÄ"\[]«,ðŽÀ'•,·,é•û-@[]B,±,ì•û- @,Ä,í[]A[]s,ªf[]fbfN,ª,è,Ä[]A,Ü,©,ìfgf%of"fuFfVfj#f",Ä,±,è,ç,ì[]s,ð•ì[]X,Ä,«,É,- ,É,è,Ü,·,[]BufìfvfefBf~fxfefBfbfN"ŽŽŽÀ[]s[]ÇEäv,àŽQ[]Æ,μ,Ä,,ª/4,ª,ç[]B

,Ü

f[]fVf" f[]f[]f^ f[]fX fCefWfXfgfŠ,È,Ç[]AfvfXfef€,É•Ü'¶,ª,è,é[]Ú'±[]î•ñ,ìff[]f^ f[]fX[]B

f[]f^ff[]f^ SQL fxfe[]fgf[]"fg,ìfpf%of[]f^,Ü,½,ìÇ<%oÉfZfbfg,ì—ñ,ð•\,ff[]f^[]B— á,ì,í[]A[]f[]f^Ç^[]A[]f[]f^'·[]A[]f[]f^[]f^,ì, "x,È,Ç,Ä,·,[]B

-B,è'í ODBC ŠÖ[]",Ä•Ô,ª,è,é'í[]B

,Ç

fŠfef%of< SQL fxfe[]fgf[]"fg,ÉŠÜ,Ü,è,éŽÀ[]Ú,ìff[]f^'í,ð•\,·,¶Žš[]B

fÇfR[]fh []u[]s[]v,ðŽQ[]Æ,μ,Ä,,ª/4,ª,ç[]B

—ñ []s,ÉŠÜ,Ü,è,é[]î•ñ,ì'P^èfAfCfef€,ð•Ü'¶,·,éfrf"fefi[]B"ftfB[]f<fh" ,Æ,àÇEÄ,ì,è,Ü,·,[]B

f[]f[]f<fofbfN (,·,é) fgf%of"fuFfVfj#f",Ä•ì[]X,ª,è,½'í,ðÇ³,ì[]ó'Ô,É-B,·,±,Æ[]B

f[]fbfN f[]f<f[]f[]fU[][ŠÄ<<,Ä[]A[]s,Ö,ìfAfNfZfX,ð[]ÇEÄ,·,é,½,β,É DBMS ,ªŽg— p,·,éfvf[]fZfX[]B'É[]ADBMS ,Ä,ì[]s,©[]A[]s,Ü,½,ìfy[]fW,ªf[]fbfN,ª,è,Ä,ç,é,±,Æ,ðŽ!,·,[]s,ªŠÜ,Ü,è,Ä,ç,é•" —[]"í,Éfy[]fW,Éfrfbfg,ð[]Ý'è,μ,Ü,·,[]B

f[]f"fo f[]f^ 255 fofCfg,Ü,½,í•¶Žš,È,Ç[]A'Á'è,ì'•,ª,ð'í,ì,éfofCfifŠ,Ü,½,í•¶Žš— ñff[]f^[]B'É[]A'âÇ^,ìff[]f^,ðŽw,μ,Ü,·,[]B,±,ì,æ,±,Éff[]f^,í[]A[]f[]f^ f[]fX,É'—[]M,·,é[]è[]#,â[]A[]f[]f^ f[]fX,©,çŽæ"ª/4,·,é[]è[]#,É•ªŠ,,ª,è,Ä'—[]M,ª,è,Ü,·,[]B,±,ì,æ,±,Éff[]f^,í[]A"BLOB" ,Ü,½,í "CLOB" ,Æ,àÇEÄ,ì,è,Ü,·,[]B

