

fVfXfef€ DSN ,É,Â,ç,Äff□f^ f□fX,ì'Ç%Á□A□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□□fjf<,É,μ,Ü,·□BfVfXfef€□A,Ü,½,ÍCE CEÀ,ðŽ□,Áft□fU□[,í□AfVfXfef€ DSN ,ìff□f^ f□fX,ðŽg—p,Á,«,Ü,·□B

f{fVfVfj}	□à-¾
[fVfXfef€ ff□f^ f□fX] f{fbfNfX	,cSN ,ì-¼' O,Æ,»,ê,É'í%øž,·,éfhf %øfCfo,ðŠÜ,p□AfVfXfef€ DSN ,ì'ê— ,Á,·□BfVfXfef€ DSN ,ðf_fuf<fNfŠfbfN,·,é,Æ□Afhf%øfCfoCEÁ— L,ìff□f^ f□fX,ìfZfbfgfAfbfv f_fCfA□fO f{fbfNfX,ª•\Žì,³,ê,Ü,·□B
['Ç%Á	□V,μ,fVfXfef€ ff□f^ f□fX,ð'Ç %øÁ,μ,Ü,·□B,± ,ìf{f^f",ðfNfŠfbfN,·,é,Æ□A[ff□f^ f□fX,ì□V<K□í□→] f_fCfA□fO f{fbfNfX,ª•\Žì,³,ê,Ü,·□B,±,ìf_fCfA□fO f{fbfNfX,É,ìfhf%øfCfo,ª^ê—•\Žì,³,ê,Ü,·□BfVfXfef€ ff□f^ f□fX,ð'Ç%Á,·,éfhf%øfCfo,ð'í'ð,μ,Ü,·□B[Š@—],ðfNfŠfbfN,·,é,Æ□A,»,ìfhf%øfCfoCEÁ—L,ìff□f^ f□fX,ìfZfbfgfAfbfv f_fCfA□fO f{fbfNfX,ª•\Žì,³,ê,Ü,·□B
[□í□œ]	Šù'¶,ìff□f^ f□fX,ð□í□œ,μ,Ü,·□B[□í□œ] ,ðfNfŠfbfN,·,é'O,É□A□í□œ,·,éVfXfef€ ff□f^ f□fX,ðfŠfXfg f{fbfNfX,Á'í'ð,μ,Ä,·,•K—v,ª,è,Ü,·□B
[□□→]	fhf%øfCfoCEÁ—L,ìff□f^ f□fX,ìfZfbfgfAfbfv f_fCfA□fO f{fbfNfX,ª•\Žì,μ,Ü,·□B,±,ìf_fCfA□fO f{fbfNfX,Á,í□AŠù'¶,ìfVfXfef€ ff□f^ f□fX,ì□□→,ð•í□X,·,é,±,Æ,ª,Á,«,Ü,·□B[□□→] ,ðfNfŠfbfN,·,é'O,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~fjfxfgfCE□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,³,ê,Ü,·□B
[fLffff"zfz<]	[ODBC ff□f^ f□fX fAfhf~fjfxfgfCE□f^] f_fCfA□fO f{fbfNfX,ð•Á,¶,Ü,·□B[fLffff"zfz<] ,ðfNfŠfbfN,μ,Ä,à [fVfXfef€ ff□f^ f□fX] f{fbfNfX,Ö,ì•í□X,Ížæ,è□Á,³,ê,Ü,¹,ñ□B
[fwf<fv]	fwf<fv%øæ-É,ð•\Žì,μ,Ü,·□B

[ftf@fcf< DSN] f^fu

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,è,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,Ä[]s,ª•K—v,ª, ,è,Ü,·B

[fgfCE[fX] f^fu

ODBC fhf%ofCfo f}f[]fWff,^a ODBC ŠÖ[] ,ìCEÄ,Ñ[]o,μ,ðfgfCE[fX ('Ç[]Ö) ,.é•û-@,ðžw'è,μ,Ü,·[]BffjXf^f€ fgfCE[fX DLL ,ðžg—p,μ,Ä[]ACEp'±“l,ÈfgfCE[fX[]A^è“x,ì,Ý,ìfgfCE[fX[]A“@“ìfgfCE[fX[]A,Ü,½,ìffjXf^f€ fgfCE[fX,ðžw'è,Ä,«,Ü,·[]B

fjfvfVfjf“

□à-¾

[fgfCE[fX,ð[]i,·,® ŠjŽn,·,é]

“®“ìfgfCE[fX,ð—
LCEø,É,μ,Ü,·[]B“®“ìfgfCE[fX,í[]A[ODBC
ff[]f^ f[]fX fAfhf~fjXfgfCE[f^]
f_fCfAf[]fO f{fbfNfX,^a•Ž!,³,è,Ä,ç
,é[]Ä't,ÉŽÄ[]s,³,è,Ü,·[]B“®“ìfgfCE[fX,í[]A
[]Ú'±,ì—L-³,É,©,©,í,ç,·—
LCEø,É,Ä,«,Ü,·[]B[fgfCE[fX,ð[]i,·,®ŠjŽn,·,
é] ,ðfNfŠfbfN,·,é,Æ[]Af{f^f“,^a
[fgfCE[fX,ì'âž~]
f{f^f“,É•ì,í,è,Ü,·[]B[fgfCE[fX,ì'âž~]
,ðfNfŠfbfN,·,é,Ü,Ä“®“ìfgfCE[fX,í—
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'âž~]
f{f^f“,É•ì,í,è,Ü,·[]B,±
,ìf{f^f“,ðfNfŠfbfN,·,é,Æ[]AVisual Studio
Analyzer ,í-³CEø,É,É,è,Ü,·[]B[Visual
Studio Analyzer ,ì'âž~]
,ðfNfŠfbfN,·,é,Ü,Ä Visual Studio
Analyzer ,í—LCEø,Ä,·[]B

[f[]fO ftf@fCf<,ìpfX]

fgfCE[fX[]î•ñ,ìŠi“[ftf@fCf<,ìpfX,Æftf@fC
f<-¾,ð•\
Ž!,μ,Ü,·[]BfVfXfef€[]î•ñ,©,çŠù'è,ìpfX,Æf
tf@fCf<-¾ (SQL.LOG) ,^aŠ,,è—
,Ä,ç,è,Ü,·,[]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

[ffjXf^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,ìffjXf^f€ DLL
,É'u,«Š·,ì,é,±,Æ,^aÄ,«,Ü,·[]BffjXf^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'ì'ò,·,é,Æ,«,ÉŽg—
p,μ,Ü,·□BDLL
,đ'ì'ò,·,é,Æ□A,»,ìfpfX,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,±,ìf{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

,±,İfŠfXfg,ÍADS N ,ì-¼'O,Æ,»,ê,É'í%ž,·,éfhf%oCfo,È,ÇAft[]fU[][DSN ,đ,·,×,Ä·\
Ž!,μ,Ü,·Bft[]fU[][ff[]f^ f[]fX,É'î,μ,Äfhf%oCfoEÅ—L,İff[]f^ f[]fX,İfZfbfjgfAfbfv f_fCfAfofO
f{fbfNfX,đ·Ž!,·,é,É,ÍAft[]fU[][DSN ,đ_fuf:fNfŠfbfN,μ,Ü,·B

【\□¬】

fhf%oCfoĒĀ—L,ìff□[f^ f□[fX,ìfZfbfgfAfbfv f_fCfAf□fO f{fbfNfX,đ•\Ž!,·,é,É,í□A[□\□¬]
,đfNfŠfbfN,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'í'đ,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,é,Ü,·□B,±,ìf_fCfAf□fO f{fbfNfX,É,ífhf%ofCfo,^aê—•\Ž!,³,é,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,é,Ü,·□B

【íœ】

Šù'¶,ìff[]f^ f[]fX,ðfŠfXfg f{fbfNfX,©,ç[]íœ,·,é,É,íA[[]íœ] ,ðfNfŠfbfN,μ,Ü,·B[]íœ,·,éff[]f^ f
[]fX,ðfŠfXfg f{fbfNfX,Å'l'ð,μ,Ä,¨,•K—v,^a, ,è,Ü,·B

[OK]

[ODBC ff[f^ f[fX fAfhf~fjfXfgf[f^] f_fCfAf[fO f{fbfNfX,ð•Â,¶,é,É,íA[OK]
,ðNfŠfbfN,μ,Û,·Bff[f^ f[fX fŠfXfg f{fbfNfX,É'í,·,é•ïX,ð“K—p,·,é,½,ß,É [OK] ,ðNfŠfbfN,·,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]
,ðNfŠfbfN,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] ,đfNfŠfbfN,μ,Û,·□B

[fVfXfef€ ff[f^ f[fX] f{fbfNfX

,±,lfŠfXfg f{fbfNfX,íADS N ,ì-¼'O,Æ,»ê,É'í%ž,·,éfhf%ofCfo,đŠÜ,pAfVfXfef€ DSN ,đ,·,×,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%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'¶,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'ì'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,Û,·Bíœ,.,éVfXfef€ ff[f^ f[fX,đfŠfXfg f{fbfNfX,Å'í'đ,μ,Ä,¨,•K—v,^a, ,è,Û,·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%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'¶,ìftf@fCf< ff□[f^ f□[fX,ì□□→,đ•í□X,·,é,±
,Æ,ª,Ā,«,Û,·□B'î□Û,Æ,È,éftf@fCf< ff□[f^ f□[fX,đfŠfXfg f{fbfNfX,Ā'í'đ,μ,Ā,¨,•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

[ff][f^ f][fX,ìèŠ]

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,Å,íAfvfXfef€î•ñ,ÉŽù,ß,ç,è,½Šù’èftfHf<f_ª•\Žì,³,è,Ü,·B

[1 ,Âã,ìftHf<f_Ö] (fAfCfRf“)

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

[ftfHf<f_]

ftfHf<f_,"à—e,ð•\Ž|,.,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,Û,·Bf^fCf€fAfEfg flfvfVf#f“,ðŸ'è,·,é,É,íA“C^Ó,ì ODBC fhf%ofCfo-
¼,ðf_fuf<fNfŠfbfN,μ,Û,·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•ī,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]
,đfNfŠfbfN,μ,Ü,·□B[Visual Studio Analyzer ,İŠJŽn] ,đfNfŠfbfN,·,é,Æ□Af{f^f“,^q [Visual Studio Analyzer
,l’âŽ~] f{f^f“,É•İ,í,è,Ü,·□B[Visual Studio Analyzer ,l’âŽ~] ,đfNfŠfbfN,·,é,Æ 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]
,ðfNfŠfbfN,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 [f]fXf^f€ fgfÇ[fX DLL] f{fbfNfX,É•\Ž,³,ê,Ü,·B

[OK]

fgfĀ[fX,ìŸ'è•ïX,đŽó,~“ü,ê,ÄA[ODBC ff[f^ f[fX fAfhf~fjXfgfĀ[f^] f_fCfAf_fO
f{fbfNfX,đ•Â,¶,é,É,íA[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~fjXfgf☒[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,ìY'è•ïX,ðŽó,~“ü,ê,éê‡,íA["K—p]
,ðNfŠfbfN,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“~ ,¶fhf%ofCfo,ðfCf“fXfg[]f<,µ,½,·,×,Ä,ìft[]fU[][,ª«—
 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[]fj<,É,·,é•K—
 v,à, ,è,Ü,¹,ñ□B

f[]fVfj“	□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]	fjfcE“fg ftfHf<f_,ð•Ž!,µ,Ü,·□B,»,)ì %º,ìfEfBf“fhfE,É,í□AjjfcE“fg ftfHf<f_,ìTfufHf<f_,Æftf@fCf< DSN ,ª•\ Ž!,³,è,Ü,·□BfefLfXfg f{fbfNfX,ì%E'ª,É, ,é %ºCEü,«— î´ó,ðfNfŠfbfN,·,é,Æ□A,»,)ffBfCEfNfgfŠ□\´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»Ý'í'ð,µ,Ä,ç,éftfHf<f_,ì 1 ,Ä□ä,ìftfHf<f_,É•ìX,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,½,í□A□V,µ,çftf@fCf< DSN - ¾,ð“ü—í,Ä,«,Ü,·□B
[□V<K□□~]	□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□□~] 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[ü×Ý'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,¶□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•ìX,ð“K—p,·,é,½,ß,É [OK] ,ðfNfŠfbfN,·,é•K—v,í, ,è,Ü,¹,ñ□BfŠfXfg f{fbfNfX,É'í,·,é•ìX,í□Aftf@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,À,à[]Aftf@fCf< ff[]f^ f[]fX
 f{fbfNfX,Ö,ì•i[]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€Å-L,Å, ,è[]A<α-L,³,è,Ü,¹,ñ[]Bft[]fU[] [ff[]f^ f[]fX,í,±,ìRf"fsf...[]f^ ,ìft[]fU[] [,É€Å
 -L,Å,·[]B,±,ìRf"fsf...[]f^ ,ì,·,×,Å,ìft[]fU[] [,Ü,½,½fVfXfef€ f[]fCfh,ìft[]fX,ì[]AfvfXfef€ ff[]f^ f[]fX,ðžg
 -p,·,é,±,Æ,³,Å,«,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) ,Å,·[]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
 %œÅ,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%œÅ,·,éfhf%ofCfo,ð'ð,µ,Ü,·[]B[ŽŽ,Ö]
 ,ðNfŠfbfN,·,é,Æ[]ADSN
 ,É'í,·,éfl[]f[]f[]fh,³K[]Ø,Å, ,é,±
 ,Æ,ðŠm"F,Å,«,Ü,·[]B

[OK] [ff[]f^ f[]fX,ì'ð) f_fCfAf[]fO
 f{fbfNfX,ð•Å,¶[]Af{fbfNfX,ÅfnfCf%ofCfg•\
 Ž!,³,è,Å,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•i[]X,ð"K-p,·,é,½,β,É [OK]
 ,ðNfŠfbfN,·,é•K-v,í, ,è,Ü,¹,ñ[]BfŠfXfg
 f{fbfNfX,É'í,·,é•i[]X,ì[]Aft[]f^ f[]
 []fX,ìfZfbfgfAfbfv f_fCfAf[]fO f{fbfNfX,Å
 [OK] ,ðNfŠfbfN,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~fjXfgf[]f^]
 f_fCfAf[]fO
 f{fbfNfX,ð•Å,¶,Ü,·[]B[]mfLfff"fZf<[]n
 ,ðNfŠfbfN,µ,À,àRf"fsf...[]f^ ff[]f^ f[]fX
 f{fbfNfX,Ö,ì•i[]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 ,ðf_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\‘č‘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,ífhf%oCfo,ª^ê—•\Ž,³,ê,Ü,·Bftf@fCf<
DSN —p,É'Ç%Á,·,éfhf%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 f^ fX fAfhf~fjXfgf^] f_CfAfO f{fbfNfX,ð•Å,¶Af{fbfNfX,ÅfnfCf%oCf%g•\
Ž|,³,é,Ä,ç,étf@fCf< f^ fX□A,Ü,½,Í [DSN -¼] f{fbfNfX,É“ü—Í,μ,½ftf@fCf< f^ fX,É□Ú’±
,μ,Ü,·□B

ftf@fCf< f^ fX f{fbfNfX,É’í,·,é•ïX,ð“K—p,·,é,½,β,É [OK] ,ðNfŠfbfN,·,é•K—v,Í, ,è,Ü,¹,ñ□BfŠfXfg
f{fbfNfX,É’í,·,é•ïX,í□Aff^ fX,ìfZfbfgfAfbfv f_CfAfO f{fbfNfX,Å [OK] ,ðNfŠfbfN,μ,½Žž“_„Å“K
—p,³,é,Ü,·□B

[fLfff“fZf<]

ftf@fCf< fff[f^ fff[fX,Éú'±,1,,É [ODBC fff[f^ fff[fX fAfhf~fjXfgfE[f^] f_fCfAfffO
f{fbfNfX,ð•Á,¶,Ü,·BmfLfff“fZf<n ,ðfNfŠfbfN,μ,Ä,àfRf“fsf...ff[f^ fff[fX
f{fbfNfX,Ö,ì•ïX,ÍŽæ,èÁ,³,é,Ü,¹,ñB

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]Ø,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,Û,·[]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,Û,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,Û,·[]B

[fLfff“fZf<]

fRf“fsf...[f^ ff[f^ f[fX,ÉÚ±,1,,É [ODBC ff[f^ f[fX fAfhf~fjfXfgfCE[f^] f_fCfAfO
f{fbfNfX,ð•Â,¶,Ü,·BmfLfff“fZf<n ,ðfNfŠfbfN,μ,Ä,àfRf“fsf...[f^ ff[f^ f[fX
f{fbfNfX,Ö,ì•ïX,ÍŽæ,èÁ,³,é,Ü,¹,ñB

[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,ÉØ,è'Ö,ì,é,±,Æ,ª,Ä,«,Ü,·B

fjfvfj“	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

[—LŒø,É,·,é]

□Ú'±,ìjpfH□[f}f“fX f,ffj^,ø—LŒø,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,éRf“f[fif“fg,É,Í□Afhf%ofCfo
f}f□[fWff□A]□[f\< f%ofCuf%ofŠ□Afcf“fXfg□[f% DLL□A,“,æ,ÑfRfA fRf“f[fif“fg,ð\
□¬,·,é,»,ì¹¼,ìftf@fCf<,ªŠÛ,Û,ê,Û,·□B

fifvfVfjf“

□à-¾

[ODBC fRfA Še ODBC fRfA fRf“f[fif“fg,ì□à-
fRf“f[fif“fg ¾□Afo□[fWfjf“□Aftf@fCf<-
fo□[fWfjf“[i•ñ ¼□A,“,æ,Ñ□ê□Š,ð•\Ž!,μ,Û,·□B
]

f{fbfNfX

[OK] [ODBC ff□[f^ f□[fX fAfhf~fjfXfgf□[f^]
f_fCfAf□fO f{fbfNfX,ð•\Ž!,μ,Û,·□B

[fLfff“fZf<] [ODBC ff□[f^ f□[fX fAfhf~fjfXfgf□[f^]
f_fCfAf□fO f{fbfNfX,ð•\Ž!,μ,Û,·□B

[wf<fv] fwf<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,afRf~fbfg%oÁ\ ,Á, ,é,±,Æ,ªSm“F,³,è,Û,·[]BŽÿ,ìftjF[]fY,Á,í[]Afgf%of“fUfNfVf#f”,ì, ,x,Á,ì”•a,afRf~fbfg,³,è,Û,·[]B[]Á[]%o ,ìftjF[]fY,Á[]Afgf%of“fUfNfVf#f”,ì^è”•a,afRf~fbfg•s%oÁ\,Á, ,é,Æ”»f,³,è,é,Æ[]AZÿ,ìftjF[]fY,íŽA[]s,³,è,Û,¹, ñ[]BODBC ,Á,í 2 ftjF[]fY fRf~fbfg,ìftjF[]fY,³,è,Û,¹,ñ[]B

A

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

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

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

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

B

BLOB fofCfifŠ f%o[]fW flfufWfFfNfg (Binary Large Object) ,ì—ª[]B255 fofCfif,È,Ç[]A“Á^è,ìfofCfifg[]”,đ’ ,ì,éfofCfifŠ ff[]f^,Á,·[]B’É[]([]A^âCE^,ìff[]f^,ðŽw,µ,Û,·[]B,±,ì,æ,ª ,Éff[]f^,ðff[]f^ f[]fX,É’—[]M, ,é[]è[]#,â[]Aff[]f^ f[]fX,©,çŽæ“¾, ,é[]è[]#[]Aff[]f^,í•ªŠ,,³,è,Û,·[]B,± ,ì,æ,ª,Éff[]f^,í “f[]f“fO ff[]f^” ,Æ,àCEÄ,ì,è,Û,·[]B

C

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

CLI []uAPI[]v,ðŽQ[]Æ,µ,Ä,,¾,³,ç[]B

D

DBMS ff[]f^fx[]fXŠÇ—[]fVfXfef€ (Database Management System) ,ì—ª[]B•— []“l,Éff[]f^fx[]fX,Æf[]fU[][ŠÔ,É’¶[]Ý, ,éfvf[]gfEfffA,ìfCEfCf,,Á,·[]BDBMS ,Á,í[]Aff[]f^fx[]fX,Ö,ì, ,x,Á,ìfAfNfZfX,ªŠÇ—[],³,è,Û,·[]B

DBMS fx[]fX,ìfhf%ofCfo fx^f“fhfAf[]f”,ìff[]f^fx[]fX fGf“fwf”,ðCe—R,µ,Ä•— []“l,Éff[]f^,ÉfAfNfZfX, ,éfhf%ofCfo[]B

DDL ff[]f^è<`CE¾CEè (Data Definition Language) ,ì—ª[]BSQL “à,Áff[]f^,ð’€[]i, ,é,ì,Á,í,È,- []A’è<’, ,éfxfe[]f[]fgf[]f“fg,Á,·[]B—á,ì,í[]ACREATE TABLE[]ACREATE INDEX[]AGRANT[]AREVOKE ,È,Ç,Á,·[]B

DML ff[]f^€[]iCE¾CEè (Data Manipulation Language) ,ì—ª[]BSQL “à,Áff[]f^,ð’è<’, ,é,ì,Á,í,È,- []A’€[]i,ðs,È,ª,½,ß,ìfxfe[]f[]fgf[]f“fg,Á,·[]B—á,ì,í[]AINSERT[]AUPDATE[]ADELETE[]ASELECT ,È,Ç,Á,·[]B

F

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

I

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

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

^É'užw'è'€ CE»Ÿ,ìs,Ås,í,ê,é,.,x,Ä,Ì'€ B—
á,ì,ÎA^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< 1 A,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,ß,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,Î,è,Ü,.) B

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

fGfXfP [fv<â SQL fXfe [fgf"fg,ì<â B

fIfNfefbfg 8 frfbfg,Ü,½,í 1 fofCf [B ufofCf [v,àŽQÆ,μ,Ä,¾,¾,ç B

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

fIfvfeBf~fXfeBfBfN"ŽŽŽÀs\$CEä "ŽŽŽÀs\$CEä,ðCEüä,³,¹,é,½,ß,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,ì [f"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 [f,ìAAXV,Ü,½,ì [fœ,ìŽÀs,Å,«,Ü,¹,ñB ufyfVf~fXfeBfBfN"ŽŽŽÀs\$CEäv,ðŽQÆ,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,Î,è,é,ì AfRf" f sf... [f^' [—,Å\Ž,³,è,é" _Af [f f f<,ª%æ-É ä,Å,ìCE»Ÿ^É'u,ðŽ!,.,æ,ª,É ACE<%É f z f b f g,ì [f [f f< f<,ªCE<%É f z f b f g"à,Å,ìCE»Ÿ^É'u,ðŽ!,.,½,ß,Å, B

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

ŠO" CE< [f ^è'v,.,é s,,"æ,Ñ^è'v,μ,È,ç s,ì—¼•û,ª•Ô,³,è,é CE< [f 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^ [f^ A,Ü,½,í—ñ,ìff [f^ CE^ ,ðŽ!,.,½,ß,É ODBC ŠÖ",É^ø,«"n, A,Ü,½,ì ODBC ŠÖ", ©,ç•Ô,³,è,é [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^ f x [fX,ìCE^ Ž @,ð\ , Af [f^ f x [fX,ÉŠÜ,Ü,è,é^è~A,ìfVfXfe f e [fuf< B " fXfL [f } " ,Ü,½,í "ff [f^ Ž< [f " ,Æ,àCEÄ,Î,è,Ü, B

fj f^ f [fOŠÖ" ff [f^ f x [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 B ŠÄ« ,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'ì,ðŠÜ, p 1 ,Å,Ü,½,í• [f],ì—ñ B uŽâfL [[v,,"æ,ÑuŠO" fL [[v,àŽQÆ,μ,Ä,-¾,¾,ç B

fL□[fZfbfg □s,lfTfFbf^,δŽÀ□s,·,é·i□#f□[f^<,Ü,½,ÍfL□[fZfbfgfhfŠfuf“ f□[f^<,ÁŽg—
p,³,è,é^è~A,ÍfL□□B

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

<L□qŽq —ñff□[f^,Ü,½,Í“@“lfpf%□□[f^,ì,Ç,ì,ç,©,ÉŠÖ,·,é□í·ñ,δŠÜ,þff□[f^□\‘□□B<L□qŽq,ì·”—
□“i,É·\Žì,í‘è<,³,è,Ü,¹,ñ□BfAfVfŠfP□[fVf#f“,©,ç<L□qŽq,Ö,ì‘¼□Ú“i,ÉfAfNfZfX,Í□AODBC
ŠÖ□“,Æ<L□qŽqfñf“fhf<,δCEÄ,Ñ□o,μ,ÄftfB□[f^<fh,δ‘€□ì,·,é,±,Æ,É,æ,Ä,Ä,ì,Y%Ä“\,É,É,è,Ü,·□B

Ší□” □“ìCen,ÌŠí□□BfRf“fsf...□[f^,Á,Í 2 (2 □i□)“,â 10 (10 □i□)“,ª½,Žg,í,è,Ü,·□B

□s “Á‘è,ìŽÀ‘ì,δ·\,·□A‘è~A,ÌŠÖ~A,μ,½—ñ□B“fCEfR□[f^“ ,Æ,àCEÄ,Í,è,Ü,·□B

□s<L□qŽq fAfVfŠfP□[fVf#f“,É,æ,èŽw‘è,³,è,é·İŠ·,ì‘O (fCf“fVfŠfP□[fVf#f“□s<L□qŽq,Ü,½,Í
IRD)□A,Ü,½,Í·İŠ·,ìCEä (fAfVfŠfP□[fVf#f“□s<L□qŽq,Ü,½,Í ARD) ,ì,ç,·,é,©,É□ACE<%ÉfZfbfg,ì—ñ,δ·\
,<L□qŽq□B

□sfXfe□[f^fX”z—ñ **SQLFetch**□**SQLFetchScroll**□A,Ü,½,Í **SQLSetPos**
,δCEÄ,Ñ□o,μ,½CEä,ì□s,ÍfXfe□[f^fX,δŠÜ,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,Íff□[f^ ,ª·Ö,³,è,Ü,·□B

□s‘€□ì”z—ñ “Á‘è,ì‘i,δŠÜ,p”z—ñ□B,±,ì‘i,Í□A fAfVfŠfP□[fVf#f“,É,æ,Ä,Äÿ‘è,³,è□ASQLSetPos
,δŽÀ□s,·,é□Ü,É□A‘í%ž,·,é□s,ª-³Ž<,³,è,é,±,Æ,δŽì,μ,Ü,·□B

fNfGfŠ SQL fXfe□[fgf□f“fg□B**SELECT** fXfe□[fgf□f“fg,ì^Ó-i,ÁŽg—p,³,è,é□è□# ,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,δŠÜ,ß,½,è□A fL□[f□□[f^,δ^è‘v,³,¹,
é,±,Æ,ª,Ä,« ,Ü,· (“ø—p·,·,·t,«Ž~·ÉŽq” ,Æ,àCEÄ,Í,è,Ü,·)□B

fNf%□CfAf“fg/fT□[fo□[ff□[f^fX□[fX,ÍfAfNfZfX·ú-@,ì^èŽí□B1 ,Á,Ü,½,Í·i□“,ÍfNf
%□CfAf“fg,ªfT□[fo□[CEo—R,Áff□[f^ ,ÉfAfNfZfX,μ,Ü,·□B‘É□□A fNf
%□CfAf“fg,Á,Íf□[fU□[fCf“f^□[ftfFfCfX,δŽÀ‘·,μ□A fT□[fo□[,Á,Íff□[f^fX□[fX,Ö,ÍfAfNfZfX,δ□sCEä,μ,Ü,·□B

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

CE<□# fŠfCE□[fVf#fif< ff□[f^fX□[fX“à,Á□s,ª‘€□□BfŠfCE□[fVf#fif< ff□[f^fX□[fX“à,Á□A‘è,ì—
ñ,ÉŠÜ,Ü,è,é‘i,δ^è‘v,³,¹,é,±,Æ,É,æ,è□A·i□“,Ífe□[fuf<“à,ì□s,δCEÿ,ç,ÉfŠf“fN,³,¹,Ü,·□B

CE»□ÿ,ì□s f□[f^<,ÁCE»□ÿfCf“fg,³,è,Ä,ç,é□□B^É‘uŽw‘è‘€□ì,íCE»□ÿ,ì□s,ÁŽÀ□s,³,è,Ü,·□B

fRf~fbfg (,·,é) fgf%□f“fUfNfVf#f“,Á,ì·i□X,δ%□i<v“i,É·Ü·¶,·,é,±,Æ□B

fT□[fo□[f□[f^fX□[fX fNf%□CfAf“fg/fT□[fo□[ŠÄ<<,ÁŽÀ□s,·,é,æ,ª,ÉfffUfCf“,³,è,½ DBMS□BSQL
,·,æ,ÑfGf%□f“fUfNfVf#f“,δ‘½□É,É<@“\,Áftf□[fg,·,éfXf^f“fhfAf□f“,Íff□[f^fX□[fX
fGf“fWf“,ªŠÜ,Ü,è,Ü,·□B,±,ì DBMS ,Í□ADBMS fX□[fX,Ífhf%□CfO,δŽg—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□[fVf#f“,Á 32 frfbfg ODBC fhf%□Cfo,ªŽg—p,³,è,Ä,ç,é□è□#,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,δ□^—□,·,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,»,Ífgf%of"fuFNFVf+f",ªfRf~fbfg,³,ê,Û,·□B

□WCEvŠÖ□" 'l,ÍfOf<□fv,©,ç'P^è,Í'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 "fzfbbfgšÖ□" ,Æ,àCEÄ,Î,ê,Û,·□B□ufXfjf%šÖ□"□v,àŽQ□Æ,μ,Ä,,¾,³,ç□B

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

□ó'Ö,ì•İŠ fA□f□C□f□€,ì□ó'Ö,ì•İ%»□BODBC ,Ä,Í□AŠÄ«□A□Ú'±□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,Ífnf"fhf<,ðŽg—p,·,éŠÖ□",É,Ä,ç ,Ä,ì□f'f□í•ñ,ðŠÛ,þfCEfR□f□h□B□f'fCEfR□f□h,Í□AŠÄ«□A□Ú'±□A□f□f□f"fg□A,·,æ,Ñ<L□qŽqfnf"fhf<,ÆŠ Ö~A•t,·,ç,ê,Ä,ç,Û,·□B

fXfjf%šÖ□"

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

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

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

fXfe□[fgf□f"fg SQL fXfe□[fgf□f"fg,ÉŠÖ,·,é,·,x,Ä,ì□í•ñ,ð•Ú'¶,·,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,þff□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^fx□fX,ì□®□#<<,ð^Úž□,·,é,½,β,ÉfffUfCf",³,ê,½□ASQL ,ÍfTufZfbfg□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%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' }"ú,ðCEÝ□o,Ä,«,É,çfXfNf□□[f<%Ä"vf□[fV< f□B'Ê□□ACE<%ÉfZfbfg,ÍfRfs□[,ð□□-,·,é,±,Æ,É,æ,èŽÁ'•,³,ê,Û,·□B

□Ú'± fhf%ofCfo,Æff□f^ f□fX,ì"Á'è,ÍfCf"fxf^f"fx□B

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

Ú±fuf%oEfY Ú±,·,éff[f^ f[fX,ðfjfbfgf[fNã,ÅCEÿð,·,é,±,ÆBÚ±,ðfuf %oEfY,·,é,Ú,É,íA,ç,·,Ä,©,íXfefbfv,ª•K—v,Èèèè,ª,è,Ü,·B—á,í,íAÁ%o ,Éfjfbfgf[fNã,ÄfT[fO[.ðfuf%oEfY,µAŽY,É“Á”è,íT[fO[ã,Äff[f^fx[fX,ðfuf%oEfY,µ,Ü,·B

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

fZfbfgŠÖ” uWCEvŠÖ”v,ðŽQAE,µ,Ä,,¾,¾,çB

‘O•ûfXfNf[f< f^fcfv f[f< CE<%oÉfZfbfg,ð‘O•ú,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%oÄ”\« ^Ú,È,é DBMS ,ÉŠÜ,Ü,è,éff[f^,Ö,íAfnfzfx’t,ÉAfnfzfx’f,ª“·,íR[fh,ðŽg—p,·,é<@”\B

, 1/2

‘½‘wfhf%oCfo uDBMS fx[fX,ífhf%oCfov,ðŽQAE,µ,Ä,,¾,¾,çB

‘P‘wfhf%oCfo uftf@fCf< fx[fX,ífhf%oCfov,ðŽQAE,µ,Ä,,¾,¾,çB

‘¾—ñ%o»%oÄ”\« 2 ,Ä,ífgf%of“fUfNfVfj”,ð”~Žž,ÉŽÀ[s,µ,½èèè,ìCE<%oÉ,ªA,±,è,ç,ífgf %of“fUfNfVfj”,ð’±,·,Ä (“A’±,µ,Ä) ŽÀ[s,µ,½èèè,ìCE<%oÉ,Æ”^è,É,È,é,©,ç,ª ,©Bff[f^fx[fX,ìèèèè,ð^Úž,·,é,É,íA‘¾—ñ%o»%oÄ”\,Éfgf%of“fUfNfVfj”,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,ðŽQAE,µ,Ä,,¾,¾,çB

ff[f^Ž<‘ ufff^ffOv,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%oBfgftfH[f€ (“íY,·,éèèè)B

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

ff[f^ fofbftf@ ff[f^,ì^ø,«“n,µ,Éžg—p,¾,è,éfofbftf@B‘½,,ìèèèA“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^,ìWèèèèB uDBMSv,ðŽQAE,µ,Ä,,¾,¾,çB

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

fe[fuf< [s,íRfCEfNfVfj”B

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

ffXfNfgfbfv ff[f^fx[fX fp[fNfif< fRf“fsf...[f^,ÄŽÀ[s,·,é,æ,ª,ÉfffUfCf”,¾,è,½ DBMSB,Ü,Æ,ñ,ç,ìèèèA,±,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%oCfo,ðCe—R,µ,ÄfAfnfzfx,·,é•K— v,ª,è,Ü,·BÉèèèA,±,è,ç,ífhf%oCfo,ÉŠÜ,Ü,è,éfgf“fwf”,Ä,íASQL ,·,æ,Ñfgf%of“fUfNfVfj”,É’í,·,éTf [fg,ª\$CEÁ,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 ŠÖ,É,·,è“Á”è,ì<@”\,ÉŠÖ,·,é•íXB,± ,ì•íX,íASQL_ATTR_ODBC_VERSION ŠÄ<<’@è<`¾,è,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□”,ðCEöšJ,·,é<□[f“ f” f%ofCfuf%ofš□Bfhf%ofCfo,í 1 ,Á,ì DBMS ,Éí,μ,Ä“Ä’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,ðšC—□,·,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,Ä,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,lfAfVf~fbfN’P^É□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<¿,©,¢•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•¼žšfZfbfg,ð•š,·,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□B□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 flftfZfbg ,·,x,Ä,ìCE<□#,³,è,½—ñ□A,Ü,½,lfpf%of□□[f^ ff□[f^,Éí,·,éff□[f^ fofbftf@ fAfVfšfP□[fVf#”,æ,Ñ,·,³fCf“fWfP□[f^ fofbftf@ fAfVfšfP□[fVf#”,É%oÄ,ì,ç,è,é’□B□V,μ,¢fAfVfšfP□[fVf#”,²□□□,³,è,Ü,·□B

fobftf@ fAfVfšfP□[fVf#”,æfhf%ofCfošÖ,Äff□[f^,ì^ø,«“n,μ,Éžg—p,·,éfxfnfVf#” f□f,š,ì^è•“□B’É□□Afofobftf@,íí,É,É,Ä,Ä,¢,Ü,· (“ff□[f^ fofbftf@” ,AE “ff□[f^·fobftf@” ,É,¢)□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□AfxfnfVfšfP□[fVf#“•í□”□A,“,æ,ÑfxfnfVfšfP□[fVf#”fgžÄ□sžž,Éžæ“¾,³,è,é,»,ì’l,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□AfxfnfVfšfP□[fVf#”,É,æ,èžw’è,³,è,é•š,ì’O (fxfnfVfšfP□[fVf#” fpf%of□□[f^<L□qžq,Ü,½,í APD)□A,Ü,½,í•š,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^ fXfCE□[f^fX”z—ñ SQLExecDirect ,Ü,½,í SQLExecute ,ðCEÄ,Ñ□o,μ,½CEä,lfpf %of□□[f^,lfXfCE□[f^fX,ðšÜ,p”z—ñ□B

fpf%of□□[f^“€□”z—ñ “Ä’è,ì’l,ðšÜ,p”z—ñ□B,± ,ì’l,í□AfxfnfVfšfP□[fVf#”,É,æ,Ä,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,ðžì,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[]AfAfCfef€,ðŽ^•É,·,é[]è[]#,à, ,è,Ü ,·,[]BODBC ,Ä,í[]AŠ^<«[]AÚ'±[]AfXfe[]f[]g[]f"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·ù-@[]B'É[][]Afrf...[][,í[]A1 ,Ä,Ü,½,í,·,[]",ìfe[]fuf<,É'[]Y,·,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'±[]i·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·ù,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,·,[]",ìfvfŠfRf"fpfCf<[]í,Ý SQL fXfe[]f[]g[]f"fg,ìfOf<[]fv[]B

fvf[]fV[]fWff—ñ
fvf[]fV[]fWffÇÄ,Ñ[]o,μ,ì^ø[]"[]Afvf[]fV[]fWff,Ä·Ö,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,«,é[]f[]f<[]B

fyfvf~fXfefBfbfN"~ŽŽÄ[]s[]ÇEä '¼—ñ%o»%oÄ"\[]«,ðŽÄ'·,·,é·ù-@[]B,±,ì·ù- @,Ä,í[]A[]s,ªf[]fbfN,ª,è,Ä[]A,Ü,©,ì[]gf%of"fUfNfVf#f",Ä,±,è,ç,ì[]s,ð·ì[]X,Ä,«,É,- ,É,è,Ü,·,[]BufìfvfefBf~fXfefBfbfN"~ŽŽÄ[]s[]ÇEä[]v,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'±[]i·ñ,ìff[]f^ f[]fX[]B

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

-B,è'í ODBC ŠÖ[]",Ä·Ö,ª,è,é'í[]B

,Ç

fŠfef%of< SQL fXfe[]f[]g[]f"fg,ÉŠÜ,Ü,è,éŽÄ[]Ü,ìff[]f^'í,ð·\,·ªŽš[]B

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

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

f[]f<f[]fbfN (,·,é) fgf%of"fUfNfVf#f",Ä·ì[]X,ª,è,½'í,ðÇ³,ì[]ó'Ö,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,Éfrfbbfg,ð[]Y'è,μ,Ü,·,[]B

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

