

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

ft[fU[ DSN ,É,Â,ç,Äff[f^ f[fX,ì'Ç%ÁAíœAñ→,ðs,ç,Û,·B,±,ê,ç,ìff[f^ f[fX,ìfRf"fsf...  
 [f^,É'í,μ,Äff[fj<,É,È,èAÇ»Ý,ìft[fU[,ì,Ý,Žg—p,Á,«,Û,·B

<b>fjfvfjff“</b>	<b>à-¾</b>
[ft[fU[ ff[f^ f[fX] f{fbfNfX	,cSN ,ì-¼'O,Æ,»,ê,É'í%Ž,·,éfhf %ofCfo,ðŠÛ,pAft[fU[ DSN ,ì^ê— ,Á,·Bft[fU[ DSN ,ðf_fuf<NfŠfbfN,·,é,ÆAfhf%ofCfoEÁ— L,ìff[f^ f[fX,ìfZfbfgfAfbfv f_fCfAfffO f{fbfNfX,Ž·\Žì,³,è,Û,·B
[Ç%Á	ñV,μ,ft[fU[ ff[f^ f[fX,ð'Ç %Á,μ,Û,·B[Ç%Á] ,ðfNfŠfbfN,·,é,ÆA[ff[f^ f[fX,ìñV<Kñ→] f_fCfAfffO f{fbfNfX,Ž·\Žì,³,è,Û,·B,± ,ìf_fCfAfffO f{fbfNfX,É,ìfhf%ofCfo,Ž^ê—·\ Žì,³,è,Û,·Bft[fU[ ff[f^ f[fX—p,É'Ç %Á,·,éfhf%ofCfo,ð'ì'ð,μ,Û,·B[Š@—¹] ,ðfNfŠfbfN,·,é,ÆA,»,ìfhf%ofCfoEÁ— L,ìff[f^ f[fX,ìfZfbfgfAfbfv f_fCfAfffO f{fbfNfX,Ž·\Žì,³,è,Û,·B
[ííœ]	Šù'¶,ìff[f^ f[fX,ðííœ,μ,Û,·B[ííœ] ,ðfNfŠfbfN,·,é'O,ÉAííœ,·,éft[fU[ ff[f^ f[fX,ðfŠfXfg f{fbfNfX,Á'ì'ð,μ,Ä,¨,·K— v,Ž,·,è,Û,·B
[ñ→]	fhf%ofCfoEÁ—L,ìff[f^ f[fX,ìfZfbfgfAfbfv f_fCfAfffO f{fbfNfX,ð·\Žì,μ,Û,·B,± ,ìf_fCfAfffO f{fbfNfX,Á,íAŠù'¶,ìft[fU[ ff[f^ f[fX,ìñ ñ→,ð·íX,·,é,±,Æ,Ž,Á,«,Û,·B[ñ→] ,ðfNfŠfbfN,·,é'O,ÉA'ííœ,Æ,È,éft[fU[ ff[f^ f[fX,ðfŠfXfg f{fbfNfX,Á'ì'ð,μ,Ä,¨,·K— v,Ž,·,è,Û,·B
[OK]	[ODBC ff[f^ f[fX fAfhf~fjXfgfœ[f^] f_fCfAfffO f{fbfNfX,ð·Á,¶,Û,·B[ft[fU[ ff[f^ f[fX] f{fbfNfX,É'í,·,é·íX,ð“K—p,·,é,½,ß,É [OK] ,ðfNfŠfbfN,·,é·K—v,í,·,è,Û,¹,ñBfŠfXfg f{fbfNfX,É'í,·,é·íX,íAfff[f^ f [fX,ìfZfbfgfAfbfv f_fCfAfffO f{fbfNfX,Á [OK],ðfNfŠfbfN,μ,½ŽŽ“_„Á“K—p,³,è,Û,¹,ñB
[fLfff“fzf<]	[ODBC ff[f^ f[fX fAfhf~fjXfgfœ[f^] f_fCfAfffO f{fbfNfX,ð·Á,¶,Û,·B[fLfff“fzf<] ,ðfNfŠfbfN,μ,Ä,à [ft[fU[ ff[f^ f[fX] f{fbfNfX,Ö,ì·íX,íŽæ,èÁ,³,è,Û,¹,ñB
[fwf<fv]	fwf<fv%œ-É,ð·\Žì,μ,Û,·B

**[fvXfef€ DSN] f^fu**

fVfXfef€ DSN ,É,Á,č,Äff□f^ f□fX,ì'Ç%Á□A□í□œ□A□□→,ð□s,č,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

<b>f{fVfVfj^f"</b>	<b>□à-¾</b>
[fVfXfef€ ff□f^ f□fX] f{fbfNfX	,cSN ,ì-¼' O,Æ,»,,é,É'í%øž,·,éfhf %ofCfo,ðŠÜ,p□AfVfXfef€ DSN ,ì'ê— ,Á,·□BfVfXfef€ DSN ,ðf_fuf<fNfŠfbfN,·,é,Æ□Afhf%ofCfoCEÁ— L,ìff□f^ f□fX,ìfZfbfgfAfbfv f_fCfA□fO f{fbfNfX,ª•\Žì,³,è,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□ì□→] f_fCfA□fO f{fbfNfX,ª•\ Žì,³,è,Ü,·□B,±,ìf_fCfA□fO f{fbfNfX,É,ìfhf %ofCfo,ª^ê—•\Žì,³,è,Ü,·□BfVfXfef€ ff□f^ f□fX,ð'Ç%Á,·,éfhf%ofCfo,ð'í'ð,μ,Ü,·□B[Š@ —] ,ðfNfŠfbfN,·,é,Æ□A,»,,ìfhf%ofCfoCEÁ— L,ìff□f^ f□fX,ìfZfbfgfAfbfv f_fCfA□fO f{fbfNfX,ª•\Žì,³,è,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%ofCfoCEÁ—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•ì□X,·,é,± ,Æª,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•ì□X,í□A□f□f^ f□fX, ìfZfbfgfAfbfv f_fCfA□fO f{fbfNfX,Á [OK] ,ðfNfŠfbfN,μ,½Žž" _ ,Á"K—p,³,è,Ü,·□B
[fLfff"fZf<]	[ODBC ff□f^ f□fX fAfhf~fjfxfgfCE□f^] f_fCfA□fO f{fbfNfX,ð•Á,¶,Ü,·□B[fLfff"fZf<] ,ðfNfŠfbfN,μ,Á,à [fVfXfef€ ff□f^ f□fX] f{fbfNfX,Ö,ì•ì□X,ÍŽæ,è□A,³,è,Ü,¹,ñ□B
[fwf<fv]	fwf<fv%øæ-É,ð•\Žì,μ,Ü,·□B

**[ftf@fcf< DSN] f^fu**

ftf@fCf< DSN ,É,Â,ç,Äff[f^ f[fX,ì'ç‰Á□A□íœ□A□V□→,ð□s,ç,Ü,·□B“”,lfhf  
 %ofCfo,ðfCf“fXfg□[f<,µ,½,·,×,Ä,ìf†□[fU□[,²<α—L,Á,«,éftf@fCf< fx□[fX,ìff□[f^ f  
 □[fX,Á, ,è□Aft□[fU□[ ,É,æ,éff□[f^fx□[fX,Ö,ìfAfNfZfX,²‰Á“\,Á,·□B,±,è,ç,ìff□[f^ f  
 □[fX,ð□Aft□[fU□[ ,É,í,µ,Ä□è—p,É,·,é•K—v,à□Afrf“fsf...□[f^ ,É,í,µ,Äff□[fj<,É,·,é•K—v,à, ,è,Ü,¹,ñ□B

**flfjVfjf“ □à-¾**

ftf@fCf< ff□[f^ f[fX,ìè□Š] f{fbfNfX,É•\ Žì,³,è,éftfHf<f\_ ,ÉŠÜ,Ü,è,éftf@fCf< DSN ,ÆfTfuftfHf<f\_ð,·,×,Ä•\Žì,µ,Ü,·□Bftf@fCf< DSN ,ðf\_fuf<fNfŠfbfN,·,é,Æ□Afhf‰ofCfoCEÁ—L,ìff□[f^ f[fX,ìfZfbfgfAfbfv f\_fCfA□fO f{fbfNfX,²•\Žì,³,è,Ü,·□B

['ç‰Á] □V,µ,çftf@fCf< ff□[f^ f[fX,ð'ç‰Á,µ,Ü,·□B,± ,ìf{f^f“,ðfNfŠfbfN,·,é,Æ□A[ff□[f^ f[fX,ì□V<K□ì□→] f\_fCfA□fO f{fbfNfX,²•\ Žì,³,è,Ü,·□B,±,ìf\_fCfA□fO f{fbfNfX,É,ìfhf %ofCfo,²è—•\Žì,³,è,Ü,·□Bftf@fCf< DSN —p,É'ç‰Á,·,éfhf %ofCfo,ð'ì'ð,µ,Ü,·□B[□Ú□×□Ý'è] ,ðfNfŠfbfN,·,é,Æ□Aftf@fCf< DSN ,É'í,·,éfl□[f□□[fh,ðŽw'è,Á,«,Ü,·□B

□íœ] Šù'¶,ìff□[f^ f[fX,ð□íœ,µ,Ü,·□B[□íœ] ,ðfNfŠfbfN,·,é'O,É□A□íœ,·,éftf@fCf< ff□[f^ f[fX,ðfŠfXfg f{fbfNfX,Á'ì'ð,µ,Ä,“,•K—v,², ,è,Ü,·□B

□V□→] fhf‰ofCfoCEÁ—L,ìff□[f^ f[fX,ìfZfbfgfAfbfv f\_fCfA□fO f{fbfNfX,ð•\Žì,µ,Ü,·□B,± ,ìf\_fCfA□fO f{fbfNfX,Á,ì□AŠù'¶,ìftf@fCf< ff□[f^ f[fX,ì□V□→,ð•ì□X,·,é,± ,Æ,²,Á,«,Ü,·□B[□V□→] ,ðfNfŠfbfN,·,é'O,É□A'í□Ú,Æ,È,éftf@fCf< ff□[f^ f[fX,ðfŠfXfg f{fbfNfX,Á'ì'ð,µ,Ä,“,•K—v,², ,è,Ü,·□B

[fffBfCEfNfgfŠ, ì □Ý'è] •\Žì't,ìftfHf<f\_ ,ð□AODBC fAfhf~fjfXfgfCE□[f^ ,ìŽÀ□sŽž,É•\ Žì,·,éŠù'èftfHf<f\_ ,É□Ý'è,µ,Ü,·□B

[ff□[f^ f[fX,ìè□Š] fJfCEf“fg ftfHf<f\_ ,ð•\Žì,µ,Ü,·□B,»ì %‰,ìfEfBf“fhfE,É,ì□AJfCEf“fg ftfHf<f\_ ,ìTfuftfHf<f\_ ,Æftf@fCf< DSN ,²•\ Žì,³,è,Ü,·□BfefLfxfg f{fbfNfX,ì‰E'α,É, ,é %‰œÜ,«- î'ó,ðfNfŠfbfN,·,é,Æ□AfffBfCEfNfgfŠ\ç'S'ì,²•\Žì,³,è,Ü,·□BODBC fAfhf~fjfXfgfCE□[f^ ,ìŽÀ□s“ -□‰,É□Á□‰,É•\ Žì,³,è,éŠù'èftfHf<f\_ ,ì□AfvXfef€□ì•ñ,ÉŽù,β,ç, è,Á,ç,Ü,·,²□A[fffBfCEfNfgfŠ,ì□Ý'è] f{f^f“,Á•ì□X,·,é,±,Æ,²,Á,«,Ü,·□B

[1 ,Á□ă,ì] fff□[f^ f[fX,ìè□Š] f{fbfNfX,É•\

ftfHf<f\_Ö) Žl,³,ê,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  
 [fLffff“fZf<] [ODBC ff[]f^ f[]fX fAfhf~fjXfgfCE[]f^]  
 f\_fCfAf[]fO f{fbfNfX,ð•Ä,¶,Ü,·B[fLffff“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,ê,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  
 [fLffff“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,<sup>a</sup> ODBC ŠÖ[] ,ìCEÄ,Ñ[]o,μ,ðfgfCE[fX ('Ç[]Ö) ,.é•û-@,ðžw'è,μ,Û,·[]BffjXf^f€ fgfCE[fX DLL ,ðžg—p,μ,Ä[]ACEp'±“l,ÈfgfCE[fX[]A^è“x,ì,Ý,ìfgfCE[fX[]A“@“ìfgfCE[fX[]A,Û,½,ìffjXf^f€ fgfCE[fX,ðžw'è,Ä,«,Û,·[]B

### fjfvfVfjf“

□à-¾

[fgfCE[fX,ð[]i,·,® ŠjŽn,·,é]

“®“ìfgfCE[fX,ð—  
LCEø,É,μ,Û,·[]B“®“ìfgfCE[fX,ì[]A[ODBC  
ff[]f^ f[]fX fAfhf~fjXfgfCE[f^]  
f\_fCfAf[]fO f{fbfNfX,<sup>a</sup>•Ž!,<sup>3</sup>,è,Ä,ç  
,é[]Ä't,ÉŽÄ[]s,<sup>3</sup>,è,Û,·[]B“®“ìfgfCE[fX,ì[]A  
[]Ú'±,ì—L-<sup>3</sup>,É,©,©,í,ç,·—  
LCEø,É,Ä,«,Û,·[]B[fgfCE[fX,ð[]i,·,®ŠjŽn,·,  
é] ,ðfNfŠfbfN,·,é,Æ[]Af{f^f“,<sup>a</sup>  
[fgfCE[fX,ì'âŽ~]  
f{f^f“ ,É•ì,í,è,Û,·[]B[fgfCE[fX,ì'âŽ~]  
,ðfNfŠfbfN,·,é,Û,Ä“®“ìfgfCE[fX,ì—  
LCEø,Ä,·[]B

[Visual Studio Analyzer ,ìŠjŽn]

Visual Studio Analyzer ,ð—  
LCEø,É,μ,Û,·[]B[Visual Studio Analyzer  
,ìŠjŽn] ,ðfNfŠfbfN,·,é,Æ[]Af{f^f“,<sup>a</sup>  
[Visual Studio Analyzer ,ì'âŽ~]  
f{f^f“ ,É•ì,í,è,Û,·[]B,±  
,ìf{f^f“ ,ðfNfŠfbfN,·,é,Æ[]AVisual Studio  
Analyzer ,ì-<sup>3</sup>CEø,É,É,è,Û,·[]B[Visual  
Studio Analyzer ,ì'âŽ~]  
,ðfNfŠfbfN,·,é,Û,Ä Visual Studio  
Analyzer ,ì—LCEø,Ä,·[]B

[f[]fO ftf@fCf<,ìpfX]

fgfCE[fX[]î•ñ,ìŠi“[ftf@fCf<,ìpfX,Æftf@fC  
f<-¾,ð•\  
Ž!,μ,Û,·[]BfvfXfef€[]î•ñ,©,çŠù'è,ìpfX,Æf  
tf@fCf<-¾ (SQL.LOG) ,<sup>a</sup>Š,,è“-  
,Ä,ç,è,Û,·,[]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,«,Û,·[]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,Û,·[]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,Û,·[]BMicrosoft Data Access SDK  
,É•t'®,·,é ODBCTRAC.DLL  
ftf@fCf<,ð[]A“C^Ó,ìffjXf^f€ DLL  
,É'u,«Š·,ì,é,±,Æ,<sup>a</sup>Ä,«,Û,·[]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,Û,·[]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,»,ìpfX,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,ÍADSÑ ,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%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'ìđ,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\_fCfAfO f{fbfNfX,ð•Â,¶,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\_fCfAfO 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,<sup>3</sup>,é,Û,<sup>1</sup>,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,íADSÑ ,ì-¼'O,Æ,»è,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%oÁ]

V,μ,νfXfef€ ff[f^ f[fX,đ'Ç%oÁ,·,é,É,Í[A['Ç%oÁ] ,đfNfŠfbfN,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%oCfo,ª^ê—•\Ž!,³,ê,Ü,·BfVfXfef€  
ff[f^ f[fX,đ'Ç%oÁ,·,éfhf%oCfo,đ'!đ,μ,Ü,·B[Š@—¹] ,đfNfŠfbfN,·,é,Æ[A,»ìfhf%oCfoCEÅ—L,ìff[f^ f[  
[fX,ìfZfbfgfAfbfv f\_fCfAf[]fO f{fbfNfX,ª•\Ž!,³,ê,Ü,·B



## 【íœ】

Šù'¶,ǰVfXfef€ 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,<sup>a</sup>, ,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,lfZfbfgfAfbfv f\_fCfAf[]fO f{fbfNfX,²•\Ž!,³,é,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'¶,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]  
,ðNfŠfbfN,·,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

[ffBfCfNfgfŠ,ìŸ'è]

•Ž!'+,ìffBfCfNfgfŠ,ðAODBC fAfhf~fjfXfgfC[f^,ìŽÀsŽž,É•\  
Ž|,·,éŠù'èftfHf<f\_ÉŸ'è,·,é,É,íA[ffBfCfNfgfŠ,ìŸ'è] ,ðfNfŠfbfN,μ,Û,·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 ,Âä,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 ,Âä,iftHf<f\_É•ïX,·,é,É,íA[1 ,Âä,iftHf<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^fCfAfEfg]**

fRf“fsf...[f^,ÉfCf“fXfg[f<,³,è,Ä,ç,éŠe ODBC fhf%ofCfo,íAÚ'±fv[f<,lf^fCfAfEfg flfvfVf#f“,Æ<α,É^è  
—•\Ž!,³,è,Ü,·Bf^fCfAfEfg 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,íAfrf“fsf...[f^,ÉfCf“fXfg[f<,³,ê,Ä,ç,é ODBC fhf%ofCfo,ì-¼‘O□Afo□[fWf#“□A  
%oĩŽĐ-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",<sup>a</sup>  
[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,ðĈep’±“l,ÉfgfĈ□[fX,·,é,É,Í□A[Visual Studio Analyzer ,İŠJŽn]  
,ðfNfŠfbfN,μ,Ü,·□B[Visual Studio Analyzer ,İŠJŽn] ,ðfNfŠfbfN,·,é,Æ□Af{f^f“,<sup>q</sup> [Visual Studio Analyzer  
,l’âŽ~] f{f^f“,É•İ,í,è,Ü,·□B[Visual Studio Analyzer ,l’âŽ~] ,ðfNfŠfbfN,·,é,Æ Visual Studio Analyzer ,l’  
³Ĉø,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 ftf@fCf<, ð' l' 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, »), ÌfpfX, ", 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 ,ÌfpfX, ", 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,<sup>a</sup> [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~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,ìY'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,Å,«,éftf@fCf< f[]fX,ìff[]f^ f[]fX,Å, ,è□Aft[]fU[][,É,æ,éff[]f^f[]fX,Ö,ìfAfNfZfX,ª%Å“\,Å,·□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

<b>flfvfVfjf“</b>	<b>□à-¾</b>
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□AjjfCEf“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,»,)ffBfCEfNfgfŠ□\ç'S' ì,ª•Ž!,³,è,Ü,·□B
[1 ,Ä□ã,ì ftfHf<f_,Ö] (fAfCfRf“)	[ff[]f^ f[]fX,ìè□Š] f{fbfNfX,É•\ Ž!,³,è,éftfHf<f_,ð□ACE»□Y'ì'ð,μ,Ä,ç,éftfHf<f_,ì 1 ,Ä□ã,ìftfHf<f_,É•ì□X,μ,Ü,·□B
[DSN -¾]	ftf@fCf< ff[]f^ f[]fX f{fbfNfX,Å'ì'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,Å,«,Ü,·□B
[□V<K□ì□~]	□V,μ,çftf@fCf< ff[]f^ f[]fX,ð'ç %oÅ,μ,Ü,·□B,± ,ìf{f^f“,ðfNfŠfbfN,·,é,Æ□A[ff[]f^ 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%oÅ,·,éfhf %ofCfo,ð'ì'ð,μ,Ü,·□B[□ú□×□Y'è] ,ðfNfŠfbfN,·,é,Æ□Aftf@fCf< DSN ,É'í,·,éfl□f□□fH,ðžw'è,Å,«,Ü,·□B
[OK]	[ODBC ff[]f^ f[]fX fAfhf~fjXfgfCE□f^] f_fCfAf□fO f{fbfNfX,ð•Å,ñ□Af{fbfNfX,ÅfnfCf %ofCfg•Ž!,³,è,Ä,ç,éftf@fCf< ff[]f^ 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□Aftf@f^ f[] f[]fX,ìfZfbfgfAfbfv f_fCfAf□fO f{fbfNfX,Å [OK] ,ðfNfŠfbfN,μ,½žž“_Å“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[]AfvXfef€ 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•ì[]X,ð“K-p,·,é,½,β,É [OK]  
 ,ðNfŠfbfN,·,é•K-v,í, ,è,Ü,¹,ñ[]BfŠfXfg  
 f{fbfNfX,É'í,·,é•ì[]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\_đ,·,×,Ä•\  
Ž!,μ,Ü,·BDSN ,đf\_fuf<fNfšfbfN,·,é,Æff[f^ f[fX,ÉÚ'±,μ,Ü,·B

## [ff][f^ f][fX,ìéŠ]

fjfCEf“fg ftfHf<f\_ ,đ•\Žì,μ,Ü,·□B,» ,ì%° ,ìfEfBf“fhfE,É,í□AjjfCEf“fg ftfHf<f\_ ,ìfTfuftfHf<f\_ ,Æftf@fCf< DSN ,đ•\ Žì,³,é,Ü,·□BfefLfXfg f{fbfNfX,ì%°E‘α,É, ,é%°CEü,«-î^ó,đfNfŠfbfN,·,é,Æ□A,» ,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,íhf%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^ f fX fAfhf~fjXfgf^] f\_CfAfO f{fbfNfX,ð•Å,¶Af{fbfNfX,ÅfnfCf%oCf%g•\  
Ž|,³,ê,Ä,ç,étf@fCf< f^ f[fX□A,Ü,½,Í [DSN -¼] f{fbfNfX,É“ü—Í,μ,½tf@fCf< f^ f[fX,É□Ú’±  
,μ,Ü,·□B

tf@fCf< f^ f[fX f{fbfNfX,É’í,·,é•İ□X,ð“K—p,·,é,½,ß,É [OK] ,ðNfŠfbfN,·,é•K—v,Í, ,è,Ü,¹,ñ□BfŠfXfg  
f{fbfNfX,É’í,·,é•İ□X,Í□Aff^ f[fX,İfZfbfgfAfbfv f\_CfAfO f{fbfNfX,Å [OK] ,ðNfŠfbfN,μ,½Žž“\_„Å“K  
—p,³,ê,Ü,·□B

## [fLfff“fZf<]

ftf@fCf< fff[f^ fff[fX,Éff'±,1,,É [ODBC fff[f^ fff[fX fAfhf~fjfXfgfEfff[f^] f\_fCfAfffO  
f{fbfNfX,ð•Á,¶,Ü,·Bffmflfff“fZf<ffn ,ðfNfŠfbfN,μ,Ä,àfRf“fsf...fff[f^ fff[f^ fff[fX  
f{fbfNfX,Ö,ì•ïffX,ÍŽæ,èffÁ,<sup>3</sup>,é,Ü,<sup>1</sup>,ñffB

**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,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,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,<sup>3</sup>,é,Ü,<sup>1</sup>,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

<b>fjfvVfjf“</b>	<b>à-¾</b>
[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%ofCfuf%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,ìà-  
fRf“f[fif“fg ¾[Afo[fWfjf“[Aftf@fCf<-  
fo[fWfjf“[i•ñ ¼[A,“,æ,Ñ[êŠ,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

[wfv] fwfv,ð•\Ž!,μ,Û,·B

## —pCEêW

**2 ftjF[]fY fRf~fbfg** • aŽUfgf%of“fUfNfVf#f”, ð 2 ftjF[]fY (‘Š), ÅfRf~fbfg, , éfvf[]fZfX[]B[]Å[]%o , ìftjF[]fY, Å, í[]Afgf%of“fUfNfVf#f” fvf[]fZfbfT, É, æ, è[]Afgf%of“fUfNfVf#f”, ì, , x, Å, ì•”•a, ðfRf~fbfg%oÅ“\ , Å, , é, ±, Æ, aŠm“F, ³, è, Û, ·[]BŽŸ, ìftjF[]fY, Å, í[]Afgf%of“fUfNfVf#f”, ì, , x, Å, ì•”•a, ðfRf~fbfg, ³, è, Û, ·[]B[]Å[]%o , ìftjF[]fY, Å[]Afgf%of“fUfNfVf#f”, ì^ê•”, ðfRf~fbfg•s%oÅ“\, Å, , é, Æ”»f, ³, è, é, Æ[]AZŸ, ìftjF[]fY, íŽA[]s, ³, è, Û, ¹, ñ[]BODBC , Å, í 2 ftjF[]fY fRf~fbfg, ìftjF[]fY, ³, è, Û, ¹, ñ[]B

## A

**ANSI** • Å[]<KŠi<!%oi (American National Standards Institute) , ì—[]BODBC API , í ANSI ÇÄ, Ñ[]o, µfÇfxf< fCf“f^[]ftjFfCfX, É[]€<, µ, Å, ç, Û, ·[]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“, ðf[]fÇfxf< fT[]fRfX, ì—v<[], ÆŽÄ[]s, ÉŽg—p, , é[]A^ê~A, ìf<[]f“f“, Å, ·[]BODBC API , í ODBC ŠÖ[]”, Å[]\~³, è, Å, ç, Û, ·[]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, ìfofCfifg[]”, ð’ , ì, éfofCfifŠ ff[]f^, Å, ·[]B’É[]([]A^âÇ^, ìff[]f^, ðŽw, µ, Û, ·[]B, ±, ì, æ, x , Èff[]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, x, Èff[]f^, ì “f[]f“fO ff[]f^” , Æ, àÇÄ, ì, è, Û, ·[]B

## C

**C ff[]f^Ç^** C fvf[]fOf%of€ ( , ±, ì[]è[]#[]AfAfvfŠfP[]fVf#f”) , ÉŠÛ, Û, è, é•ì[]”, ìff[]f^Ç^[]B

**CLI** []uAPI[]v, ðŽQ[]Æ, µ, Å, , ¾, ³, ç[]B

## D

**DBMS** ff[]f^fx[]fXŠÇ—[]fVfXfef€ (Database Management System) , ì—[]B•”— []“ì, Èff[]f^fx[]fX, Æf[]fU[][ŠÔ, É’¶[]Ÿ, , éfvf[]gfEfffA, ìfÇfCf,, Å, ·[]BDBMS , Å, í[]Aff[]f^fx[]fX, Ö, ì, , x, Å, ìfAfvfZfX, aŠÇ—[], ³, è, Û, ·[]B

**DBMS fx[]fX, ìfhf%ofCfo** fx^f“fhfAfvf”, ìff[]f^fx[]fX fGf“fwf”, ðÇeo—R, µ, Å•”— []“ì, Èff[]f^, ÉfAfvfZfX, , éfhf%ofCfo[]B

**DDL** ff[]f^è<`Ç¾Çè (Data Definition Language) , ì—[]BSQL “à, Åff[]f^, ð’€[]i, , é, ì, Å, í, È, - []A’è< , , éfXfe[]fYf[]f“fg, Å, ·[]B—á, ì, í[]ACREATE TABLE[]ACREATE INDEX[]AGRANT[]AREVOKE , È, Ç, Å, ·[]B

**DML** ff[]f^€[]iÇ¾Çè (Data Manipulation Language) , ì—[]BSQL “à, Åff[]f^, ð’è< , , é, ì, Å, í, È, - []A’€[]i, ðos, È, x, ½, ì, ìfXfe[]fYf[]f“fg, Å, ·[]B—á, ì, í[]AINSERT[]AUPDATE[]ADELETE[]ASELECT , È, Ç, Å, ·[]B

## F

**Fat fj[]fj<** []ufuf[]fbfN fj[]fj<[]v, ðŽQ[]Æ, µ, Å, , 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**  □'□Ů•W□€%»>@□\ (International Standards Organization)/□'□Ů“d<C•W□€%»i<c (International Electrotechnical Commission) ,ì—ª□BODBC API ,í ISO/IEC CEÄ,Ñ□o,µfCEfxf< fCf“f^□[ftfFfCfX,É□€',µ,Ä,ç,Ü,·□B

## N

**NULL 'I**  -¾Ž!‘l,ÉŠ,,è“-,Ä,ç,ê,½'l,ª,È,ç,±,Æ□BNULL 'l,□A0 ,Ü,½,Í<ó” ,Æ,í^ù,È,è,Ü,·□B

## O

**ODBC**  f□□[fvf“ f□□[f^fx□□[fX fRfJfNfefBfrefeB (Open Database Connectivity) ,ì—ª□Bf<□[f^f“ ,ì•W□€fZfbfg,ð'è<` , ,é API ,ìŽd—l,Ä,·□B,±,ìf<□[f^f“ ,ì•W□€fZfbfg,ðfAfvfŠfP□□[fVf#“ ,Äžg—p,µ,Ä□Afff□[f^ f□□[fX,ÉŠÜ,Ü,è,éfff□[f^ ,ÉfAfnfZfX, , ,é,±,Æ,ª,Ä,« ,Ü,·□B

**ODBC SDK**  ODBC Software Development Kit ,ì—ª□BODBC fAfvfŠfP□□[fVf#“ ,Æfhf%ofCfo,ìŠj” ,ðžx %o‡, , ,é□»•i,Ä,·□B

**ODBC fAfhf~fjXfgfCE□[f^**  fCf“fXfg□□[f% DLL ,ðCEÄ,Ñ□o,µ,Ä□Afff□[f^ f□□[fX,ðŸ'è, , ,éŽÀ□s%oÄ“\ fvf□□of%of€□B

## S

**SAG**  SQL Access Group ,ì—ª□BSQL DBMS ,ÉŠÖ□S,ðž□,ÄŠé<Æ,ì□H<Æ<«“~‘ì,Ä,·□BX/Open CEÄ,Ñ□o,µfCEfxf< fCf“f^□[ftfFfCfX,í□ASQL Access Group ,É,æ,éCE«<t,ÉŠî,Ä,ç,Ä,ç,Ü,·□B

**SQL**  □\‘ç%»□Æ%»iCE¾CEê (Structured Query Language) ,ì—ª□Bfff□[f^ ,ìfNfGfŠ□A□X□V□A, , ,æ,ÑšČ —□,ð□s,ª,½,ß,É□AfvfŠfCE□□[fVf#fj< f□□[f^fx□□[fX,Äžg—p,¾,è,éCE¾CEê,Ä,·□B

**SQLSTATE**  “Ä'è,ìfGf%»□□[ ,ðž!,·□A5 •¶Žš,ì'□B

**SQL fXfe□[fgf□f“fg**  f□□[f□□[fh,Äžn,Ü,è□AŽÄ□s,¾,è,éAfnfVf#“ ,ðŠ@‘S,É<L□q, , ,é□ASQL ,ìŠ@‘S,ÉftfCE□□[fY□B—á,ì,ì□ASELECT \* FROM Orders ,È,Ç,Ä,·□BSQL fXfe□[fgf□f“fg,ÆfXfe□[fgf□f“fg,ì^ù,È,è,Ü,·□B

**SQL fff□[f^CE^**  —ñ,Ü,½,ìfpf%»f□□[f^ ,ìfff□[f^CE^□Bfff□[f^ f□□[fX,É•Ü'¶,¾,è,Ä,ç,éfff□[f^CE^ ,Æ“— l,Ä,·□B

**SQL “K□fCEfxf<**  fhf%»ofCfo,ÄfTf□□[fg,¾,è,é SQL92 •¶-@ ,ìfCEfxf<□BfCEfxf<,É,í□AEntry□AFIPS Transitional□AIntermediate□A,Ü,½,Í Full ,ª, ,è,Ü,·□B

## X

**X/Open**  •W□€ ,Æ,È,é□ðCE□,ð”□s, , ,éŠé<Æ□BSAG Šî□€ ,ð”□s,µ,Ü,·□B

**fAfnfZfX fvf%»f“**  SQL fXfe□[fgf□f“fg,ðžÄ□s, , ,é,½,ß,Éfff□[f^fx□□[fX fGf“fWf“ ,Ä□□—,¾,è,éfvf%»f“□BC CE¾CEê,È,Ç,ì'æ 3 □ç'äCE¾CEê,ÄfRf“fpcfCf<,¾,è,éŽÀ□s%oÄ“\fR□□[fh,Æ“~“™ ,ìfvf%»f“ ,Ä,·□B

**fAfvfŠfP□□[fVf#“**  ODBC API ,ÄŠÖ□□ ,ðCEÄ,Ñ□o,·ŽÄ□s%oÄ“\fvf□□of%»of€□B

**fAfvfŠfP□□[fVf#“□s<L□qžq (ARD)**  — ñ,ìf□[f^fff□[f^ , ,æ,ÑfAfvfŠfP□□[fVf#“ ,ìfofbftf@ ,ÉŠÜ,Ü,è,éfff□[f^ ,ð\ ,<L□qžq□BfAfvfŠfP□□[fVf#“ ,É,æ,Ä,Äžw'è,¾,è,éfff□[f^ •ìŠ ,ìCEä,Éfff□[f^□s,ð•\,µ,Ü,·□B

**fAfvfŠfP□□[fVf#“ fpf%»f□□[f^<L□qžq (APD)**  fAfvfŠfP□□[fVf#“ ,É,æ,Ä,Äžw'è,¾,è,é•ìŠ ,ì'O,É SQL fXfe□[fgf□f“fg,Äžg—p,¾,è,é“@“ìfpf%»f□□[f^ ,ð•\ ,<L□qžq□B

**^É'užw'è□X□VfXfe□[fgf□f“fg**  CE»□Ÿ,ì□s,ÉŠÜ,Ü,è,é'l,ð□X□V, , ,é SQL fXfe□[fgf□f“fg□B

**^É'užw'è□í□æfXfe□[fgf□f“fg**  CE»□Ÿ,ì□s,ð□í□æ, , ,é SQL fXfe□[fgf□f“fg□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,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,Î,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,àŽQÆ,μ,Ä,¾,³,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,¾,³,ç B

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

**fIfvfeBf~fXfeBfBfN"ŽžŽÀ s\$CEä** "ŽžŽÀ s\$CEä,ðCEüä,³,¹,é,½,β,ì•û-@ B,±,ì•û-@,Å,ìA s,ìf [fbfN,³,è,Ü,¹,ñ,ªA s,ªXV,Ü,½,ì [fœ,³,è,é'O,É Af [f f f<,É,æ,èA s,ìA"Ç,ŸŽæ,èŽž'È~ ,É s,ª•ìX,³,è,Ä,ç,é,©,Ç,ª,©,ªSm" F,³,è,Ü, B•ìX,³,è,Ä,ç ,é [è# ,ìA Xv,Ü,½,ì [fœ,ìŽÀ s,Å,«,Ü,¹,ñB ufyfVf~fXfeBfBfN"ŽžŽÀ s\$CEäv,ðŽQÆ,μ,Ä,-¾,³,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<,ª%æ-É ä,Å,ìCE»Ÿ^É'u,ðŽ!,.,æ,ª,É ACE<%É f zfbfg,ìf [f f f<,ªCE<%É f zfbfg"à,Å,ìCE»Ÿ^É'u,ðŽ!,.,½,β,Å, B

**ŠO•"fL [** ,Ü,©,ìfe [fuf<,ìžâfL [ ,Æ^è'v,.,é Af [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,éCE<#B^è'v,μ,È,ç s,ÉŠÜ,Ü,è,éè'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 ŠO",É^ø,«"n, A,Ü,½,ì ODBC ŠO", ©,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^ f x [fX,ìCE^ Ž@,ð\ , Af [f^ f x [fX,ÉŠÜ,Ü,è,éè~A,ìfvXfe f e [fuf<B" fXfL [f}" ,Ü,½,í "ff [f^ Ž< [f" ,Æ,àCEÄ,Î,è,Ü, B

**fj f^ f [fOŠO"** ff [f^ f x [fX,ìfj f^ f [fO, ©,çî•ñ,ðŽæ"¾,.,é ODBC ŠO" B

**ŠÅ<<** ff [f^ ,Ö,ìf AfNfz fX,ð s,xfOf [f of<,ÉfRf" fefL fXfg BŠÅ<<,ÉŠÜ,Ü,è,Ä,ç,é,.,x,Ä,ìÚ'± ,ìfš fXfg,È,Ç AfOf [f of<,Éî•ñ,ªŠÅ<<,ÉŠO~A•t, ,ç,è,Ä,ç,Ü, B

**ŠÅ<<fnf"fhf<** ŠÅ<<,ÉŠO,.,éî•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,àŽQÆ,μ,Ä,-¾,³,ç B

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

**fL[fZfbfgfhfŠfuf“ f□[f^** fL[fZfbfg,đŽg—  
p,μ,Ä□A□X□V,“,æ,Ñ□í□œ,³,é,½□s,ðCEŸ□o,·,éXfNf□□[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,é,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,é,Ü,·□B

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

**□s<L□qŽq** fAfvfŠfP□[fVfj“,É,æ,èŽw’è,³,é,é·İŠ·,ì’O (fCf“fvfŠfP“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,ÍfXfe□[f^fX,đŠÜ,p”z—ñ□B

**□sfZfbfg** fuf□fbfN f□[f^,É,æ,è□A’P’è,lfTfFbf“,Á·Ö,³,é,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,é,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,é□ASQLSetPos  
,ðŽÀ□s,·,é□Ú,É□A’í%ž,·,é□s,ª-³Ž<,³,é,é,±,Æ,ðŽí,μ,Ü,·□B

**fNfGfŠ** SQL fXfe□[fgf□f“fg□BSELECT fXfe□[fgf□f“fg,ì^Ó-;ÁŽg—p,³,é,é□é□#,à,·,é,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□□[fh,ð^è’v,³,¹,  
é,±,Æ,ª,Ä,«,Ü,· (“ø—p·,·,·t,«Ž~·ÉŽq“,Æ,àCEÄ,î,é,Ü,·)□B

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

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

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

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

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

,<sup>3</sup>

**fT□[fo□[ ff□[f^fX□[fX** fNf%□CfAf“fg/fT□[fo□[ŠÄ<<,ÁŽÀ□s,·,é,æ,ª,ÉfffUfCf“,³,é,½ DBMS□BSQL  
,·,æ,Ñfgf%□f“fUfNfVfj“,ð’½□É,É<@“\,Áftf□[fg,·,éXf^f“fhfAf□f“,Íff□[f^fX□[fX  
fgf“fWf“,ªŠÜ,Ü,è,Ü,·□B,±,ì DBMS,í□ADBMS fX□[fX,Ífhf%□Cfo,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,é,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□[f^** SQLExecute ,Ü,½,Í SQLExecDirect ,ªCEÄ,Ñ□o,³,é,½CEä,Éff□[f^,ª’—  
□M,³,é,épf%□f□[f^□Bff□[f^,ªpf%□f□[f^ fofbftf@,É’u,©,é,é,ì,Á,í,É,□ASQL  
fXfe□[fgf□f“fg,ìŽÀ□sŽž,Éff□[f^,ª’—□M,³,é,é,½,ß□A”ŽÀ□sŽžff□[f^ fpf%□f□[f^”

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

**ŽÄ□sŽžff□f^—ñ SQLSetPos**,æCEÄ,Ñ□o,³,ê,½CEä,Éff□f^,æ'—□M,³,ê,é—ñ□Bff□f^,æ□sfZfbfg fofbftf@,É'u,©,ê,é,Î,Ä,Í,È,□AŽÄ□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•âš,,,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",æŽÄ□s,³,ê,½'¼CEä,É□A,»,lfgf%of"fuFNFVf+f",æfRf~fbfg,³,ê,Û,·□B

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

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

**ŽâfL□** fe□□fuf<,l□s,ð^è^Ó,Éž·Ê,·,é 1 ,Ä,Û,½,Í•□",l—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,æ,è,Û,·□B

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

**□ó'Ö** □Û,μ,□à-¾,³,ê,½□AfAfCfef€,lfRf"fffBfVf+f"□B—á,ì,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) ,æ,è,Û,·□BfAfCfef€ ,æ"Á'è,ì□ó'Ö,Ä,·,é□é□#,É,ì,ÝŽÄ□s,³,ê,é€□í,à,è,Û,·□B—á,ì,í□A□Ú'±,ì%ð□œ,í□A□Ú'±,ì□ó'Ö,æ"Š,,,è"- ,Ä□í,Ý" ,Ä,·,é□é□#,É,ì,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** fAfCfef€,ì□ó'Ö,ì•ì%»□BODBC ,Ä,í□AŠÄ«□A□Ú'±□A,;,æ,ÑfXfe□□fg□□f"fg,ìCEμ-š,È□ó'Ö,ì•İš,æ"è",³,ê,Û,·□B

**□š—LžÒ** fe□□fuf<,l□š—LžÒ□B

**□f'f** □AČEä,ÉCEÄ,Ñ□o,³,ê,½□A'Á'è,lfnf"fhf<,ðžg—p,·,éŠÖ□",É,Ä,ç ,Ä,ì□f'f□í•ñ,ðšÛ,pfCEfR□□fh□B□f'fCEfR□□fh,í□AŠÄ«□A□Ú'±□AfXfe□□fg□□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,ì,í□A•¶žš—ñff□f^,ì'â•¶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□{f<** CE<%ÉfZfbfg,Á'O•û,Û,½,íCEä•û,É^Ú"® ,Ä,«,éjf□□f<□B

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

**fXfe□□fg□□f"fg fnf"fhf<** fXfe□□fg□□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^fx□□fX,ì□®□#<<,ð^Úž□,·,é,½,β,ÉfffUfCf",³,ê,½□ASQL ,lfTfufZfbfg□B

**□Ä"l SQL** -,β□ž,ÝCE^ SQL ,ì^èží□BSQL fXfe□□fg□□f"fg,æfn□□fhfR□□fh%»»,³,ê,Ä,·,è□Afvf□□fOf%of€ ,ì,Û,©,ì•"•æ,æfRf"fpfCf<,³,ê,é,Æ,«,É SQL fXfe□□fg□□f"fg,àfRf"fpfCf<,³,ê,Û,·□B□u"®"l SQL□v,àžQ□Æ,μ,Ä,,¾,³,ç□B

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

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

Ú±fnfhf< Ú±,ÉŠÖ,·,éî·ñ,ðŠÜ,bff[f^ç,ÉÍ,·,éfnfhf<B

Ú±fuf%fFY Ú±,·,éff[f^ f[fX,ðfjfbfgf[fNä,ÁÇÿö,·,é,±,ÆBÚ±,ðfuf  
%fFY,·,éÚ,É,íA,ç,·,Á,©,íXfefbfv,ª•K—v,Èèèèè,è,è,Ü,·B—á,í,íAÁ%  
·,Éjfbfgf[fNä,ÁfT[fO,ðfuf%fFY,µAŽY,É“Á”è,íT[fO,Áff[f^fx[fX,ðfuf%fFY,µ,Ü,·B

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

fZfbfgŠÖ” uWCEvŠÖ”v,ðŽQÆ,µ,Ä,,¾,¾,çB

‘O•ûfXfNf[f< f^fcfv f[f< CE<%ÈfZfbfg,ð‘O•ù,É,ì,Ý^Ú”@,Á,«A^è“x,É 1  
·,Á,ìs,ðftfFbf’,·,éff[fA<B,Ü,Æ,ñ,ç,íŠfC[fVfj< ff[f^fx[fX,Á,íA‘O•ûfXfNf[f< f^fcfv f[f< f  
f,ì,Ý,ðftf[f,µ,Ü,·B

‘ŠCEY%—p%Ä”\« ^Ù,È,é DBMS  
·,ÉŠÜ,Ü,è,éff[f^,Ö,íAfnfzfx’t,ÉAfAfvfŠfP[fVfj“,ª”·,íR[fh,ðŽg—p,·,é<@”\B

**, 1/2**

‘1/2’wfhf%ofCfo uDBMS fx[fX,ífhf%ofCfov,ðŽQÆ,µ,Ä,,¾,¾,çB

‘P’wfhf%ofCfo utft@fC< fx[fX,ífhf%ofCfov,ðŽQÆ,µ,Ä,,¾,¾,çB

‘¾—ñ%»%Ä”\« 2 ,Á,ígf%of“fUfNfVfj“,ð”~Žž,ÉŽÀs,µ,½èèèè,ìCE<%È,ªA,±,è,ç,ígf  
%of“fUfNfVfj“,ð’±,·,Á (“A±,µ,Ä) ŽÀs,µ,½èèèè,ìCE<%È,Æ”^è,É,È,é,©,Ç,x  
·,©Bff[f^fx[fX,ìèèèèè,ð^ÚŽ,·,é,É,íA‘¾—ñ%»%Ä”\,Égf%of“fUfNfVfj“,ª•K—v,Á,·B

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

ff[f^Ž<‘ ufff^ffOv,ðŽQÆ,µ,Ä,,¾,¾,çB

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

ff[f^‘fobftf@ ‘í%ž,·,é "ff[f^ fobftf@"  
·,ÉŠÜ,Ü,è,é,ì,·,ð^ø,«“n,·fobftf@Bff[f^‘fobftf@,íAfff[f^‘I,ª NULL í[·,Á ,·,é,©,Ç,x  
·,©,È,Ç,ðŽ!,·fCf“fWfP[f^,ì•Ü“í,É,àŽg—p,¾,è,Ü,·B

ff[f^ fobftf@ ff[f^,ì^ø,«“n,µ,ÉŽg—p,¾,è,éfofbftf@B‘½,,ìèèèèA“ff[f^‘fobftf@” ,æff[f^  
fobftf@,ÉŠÖ~A•t,·,ç,è,Ä,ç,Ü,·B

ff[f^fx[fX DBMS ,ÉŠÜ,Ü,è,éACÉAX,íff[f^,ìWèèèèBµDBMSv,àŽQÆ,µ,Ä,,¾,¾,çB

ff[f^fx[fX fgf“fwf” DBMS ,ÉŠÜ,Ü,è,éfftfgfEjFfAßSQL fXfe[f,fgf“fg,ð%øðí,µ,ÄŽÀs,µA•  
—“I,Éff[f^,ÉfAfnfzfx,µ,Ü,·B

fe[fuf< s,íRfCefNfVfj“B

“K[]fCfxf< fhf%ofCfo,½,íff[f^ f[fX,ÁfT[f,¾,é,Á,ç,é^è~A,ì<@”\BODBC ,Á,íAAPI  
“K[]<fCfxf<,·,æ,Ñ SQL “K[]<fCfxf<,ªè<,¾,è,Ü,·B

ffXfNfgfbfv ff[f^fx[fX fp[fNfj< fRf“fsf...[f^,ÁŽÀs,·,é,æ,x,ÉffUfCf“,¾,è,½  
DBMSB,Ü,Æ,ñ,ç,ìèèèèA,±,è,ç,ì DBMS ,É,íXf^f“fhfA[f”,ìff[f^fx[fX  
fgf“fwf“,ì”“ø,¾,é,Á,·,ç,·Aftf@fC< fx[fX,ífhf%ofCfo,ðCo—R,µ,ÁfAfnfzfx,·,é•K—  
v,ª,è,Ü,·BÉíA,±,è,ç,ífhf%ofCfo,ÉŠÜ,Ü,è,éfgf“fwf”,Á,íASQL ,·,æ,Ñfgf%of“fUfNfVfj“,ÉÍ,·,éTfj  
[fg,ª\$CEÀ,¾,é,Á,ç,Ü,·B—á,í,íAdbASE[]AParadox[]ABtrieve[]AFoxPro ,É,Ç,ª,è,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 ŠÀ<<’@[]<,ª•íX,¾,è,é,±,Æ,É,æ,è”[]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□□œ□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),·,éf<□[f’f” f%ofCfuf%ofŠ□Bfhf%ofCfo,í 1 ,Á,ì DBMS ,É’í,μ,Ä’Ä’è,³,è,Ä,¢,Ü,·□B

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

fhf%ofCfo f}f□[fWff fAfVfŠfP□[fVf†”,ÁŽg—p,·,éfhf%ofCfo,Ö,lfAfNfZfX,ðŠÇ—□,·,éf<□[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□œ) ,ð□s,¢,Ü,·□B

fgf%of“fUfNfVf†” □ì<AE,lfAfVf~fbfN’P^Ê□Bfgf%of“fUfNfVf†”,ì□ì<AE,Á,í□A□ì<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—£ ,·,éfAfNfVf†”□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<□î•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 flftfZfbfg ,·,x,Ä,ìCE<□†,³,è,½—ñ□A,Ü,½,lfpf%of□□[f^ ff□[f^,É’í,·,éff□[f^ fofbftf@ fAfhfCEfX,“,æ,Ñ’,¾fCf“fWfP□[f^ fofbftf@ fAfhfCEfX,É%oÄ,¿,è,é’□B□V,μ,¢fAfhfCEfX,²□□~³,è,Ü,·□B

fofbftf@ fAfVfŠfP□[fVf†”,Æfhf%ofCfoŠÖ,Äff□[f^,ì^ø,«“n,μ,ÉŽg—p,·,éfAfVfŠfP□[fVf†” f□f,š,ì^è•“□B’É□□Afobftf@,í’í,É,É,Ä,Ä,¢,Ü,· (“ff□[f^ fofbftf@” ,Æ “ff□[f^·fobftf@” ,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□AfvfVfŠfP□[fVf†”•í□”□A,“,æ,ÑfXfe□[fgf□“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□AfvfVfŠfP□[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,ì’l,ðŠÜ,p”z—ñ□B,± ,ì’l,í□AfvfVfŠfP□[fVf†”,É,æ,Ä,Ä□Ý’è,³,è□ASQLExecDirect ,Ü,½,í SQLExecute ,ðŽÄ□s,·,é□Ú,É□A’í %ož,·,éfpf%of□□[f^ ,²~³Ž<,³,è,é,±,Æ,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[]Afcfef€,ðŽ^•É,·,é[]è[]#,à, ,è,Ü ,·,[]BODBC ,Ä,í[]AŠÄ<<[]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[]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•û,ì-ðŠ,,,ð %oÉ,½,μ,Ü,·,[]B

**ftfB[]f<fh** []u—ñ[]v,ðŽQ[]Æ,μ,Ä,,¾,¾,ç[]B

**ftfFbf` (,·,é)** Ç<%oÉfZfbfg,©,ç 1 ,Ä,Ü,½,í,·,[]",ì[]s,ðŽæ"¾,·,é,±,Æ[]B

**fvf[]fV[]fWff** 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<** ^è"x,É•,[]",ìff[]f^[]s,ðftfFbf` ,Ä,«,éff[]f<[]B

**fyfvf~fxfefBfbfN"ŽŽÄ[]s[]ÇEä** '¼—ñ%o»%oÄ"\[]«,ðŽÄ'•,·,é•û-@[]B,±,ì•û- @,Ä,í[]A[]s,ªf[]fbfN,ª,è,Ä[]A,Ü,©,ìfgf%of"fuFfVfj",Ä,±,è,ç,ì[]s,ð•ì[]X,Ä,«,- ,É,è,Ü,·,[]BufìfvfefBf~fxfefBfbfN"ŽŽÄ[]s[]ÇEä[]v,àŽQ[]Æ,μ,Ä,,¾,¾,ç[]B

## ,Ü

**f[]fvf" f[]f^ f[]fX** fCefWfXfgfŠ,È,Ç[]AfvfXfef€,É•Ü'¶,ª,è,é[]Ú'±[]i•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^%of[]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,éŽÄ[]Ü,ìff[]f^'í,ð•\,·,¶Žš[]B

**fÇfR[]fh** []u[]s[]v,ðŽQ[]Æ,μ,Ä,,¾,¾,ç[]B

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

**f[]f<fofbfN (,·,é)** fgf%of"fuFfVfj",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,Éfrfbbfg,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"¾,·,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



