

Index

Numerics

 128-bit arithmetic and logical operations
 631

 64-Bit arithmetic and logical Operations
 623

A

 a_adrsToStr (socket module) 761, 778
 a_appendFile (blobs module) 54
 a_appendFileExtended (blobs module) 55
 Abstract classes in HOWL 523
 a_bToStr (conversions module) 117
 a_bufToBlob1 (blobs module) 52
 a_bufToBlob2 (blobs module) 52
 a_cat (blobs module) 48
 a_cat (strings module) 1040
 a_catbuf (strings module) 1045
 a_catbuf2 (strings module) 1045
 a_catbuf3 (strings module) 1045
 a_catsub (blobs module) 50
 a_catsub (strings module) 1043
 a_catz (strings module) 1042
 accept (socket module) 762
 AccessDenied (exceptions module) 307
 AccessViolation (exceptions module) 309
 Accumulate (timer class) 1134
 a_cmdLn (args module) 9
 a_columnize2 (strings module) 1022
 a_columnize3 (strings module) 1022
 _acos (math module) 652
 acos (math module) 652
 acos32 (math module) 653
 acos64 (math module) 653
 acos80 (math module) 653
 _acot (math module) 654
 acot (math module) 654
 aco32 (math module) 654
 acot64 (math module) 654
 acot80 (math module) 654
 a_cpy (blobs module) 42
 a_cpy (strings module) 965
 a_cpyz (strings module) 965
 _acsc (math module) 655
 acsc (math module) 655
 acsc32 (math module) 655
 _acsc64 (math module) 655
 acsc80 (math module) 655
 addDays (date module) 287
 addDays (date/time module) 298
 addHours (time class module) 1130
 addHours (time module) 1121
 addl (math module) 632
 addMins (time class module) 1130
 addMins (time module) 1121
 addMonths (date/time module) 287, 299
 addq (math routine) 623
 addSecs (time class module) 1130
 addSecs (time module) 1121
 addYears (date/time module) 288, 299
 a_delete (strings module) 973
 a_delLeadingSpaces (strings module) 975
 a_delTrailingSpaces (strings module) 976
 a_deTab2 (strings module) 1026
 a_deTab3 (strings module) 1027
 adrsToStr (socket module) 761, 778
 a_dToStr (conversions module) 123
 a_e32ToStr (conversions module) 236
 a_e64ToStr (conversions module) 235
 a_e80ToStr (conversions module) 234
 a_enTab2 (strings module) 1030
 a_enTab3 (strings module) 1030
 a_extract (patterns module) 727
 a_extractBase (filesys module) 448
 a_extractExt (filesys module) 450
 a_extractFilename (filesys module) 451
 a_extractPath (filesys module) 452
 a_first (strings module) 967
 afterRow (arrays module) 19
 a_get (environment module) 301
 a_getField2 (strings module) 1011
 a_getField3 (strings module) 1012
 a_getFullPathName (filesys module) 460
 a_gets (blobs module) 64
 a_gets (file class module) 334
 a_gets (file I/O module) 429
 a_gets (socket module) 795
 a_gets (stdin module) 875
 a_h128ToStr (conversions module) 145
 a_h16ToStr (conversions module) 136
 a_h32ToStr (conversions module) 138
 a_h64ToStr (conversions module) 141
 a_h80ToStr (conversions module) 143
 a_h8ToStr (conversions module) 132

a_i128ToStr (conversions module) 181
 a_i16ToStr (conversions module) 173
 a_i32ToStr (conversions module) 176
 a_i64ToStr (conversions module) 178
 a_i8ToStr (conversions module) 170
 a_insert (strings module) 972
 a_joinPaths (filesys module) 453
 a_last (strings module) 969
 alloc (blobs module) 37
 allocAligned (blobs module) 38
 allocBlockInHeap (memory module) 677
 a_load (blobs module) 53
 a_loadExtended (blobs module) 53
 a_lower (strings module) 1035
 a_lToInt (conversions module) 129
 andl (math module) 637
 andq (math module) 628
 a_normalize (filesys module) 455
 append (lists module) 613
 appendFile (blobs module) 54
 append_index (list module) 613
 append_last (list module) 614
 append_node (list module) 613
 appException 489
 AppException procedure 485
 Application Framework 485
 appStart 488
 AppStart procedure 485
 appTerminate 489
 AppTerminate procedure 485
 a_qToStr (conversions module) 125
 a_r32ToStr (conversions module) 243
 a_r64ToStr (conversions module) 243
 a_r80ToStr (conversions module) 242
 arb (patterns module) 728
 a_reverse (strings module) 1036
 arg.a_cmdLn 9
 arg.args 12
 arg.a_v 11
 arg.c 10
 arg.cmdLn 9
 arg.delete 11
 arg.destroy 12
 arg.globalOptions 12
 arg.localOptions 13
 arg.v 10
 args (args module) 12
 Arithmetic and logical operations (128-bit)

631
 Arithmetic and logical operations (64-bit) 623
 a_rmv1stWord1 (strings module) 1016
 a_rmv1stWord2 (strings module) 1017
 a_rmvLastWord1 (strings module) 1018
 a_rmvLastWord2 (strings module) 1018
 a_rmvTrailingSpaces (strings module) 979
 a_roman (conversions module) 245
 Array manipulation 15
 Array operations 18
 array.afterRow 19
 array.beforeRow 19
 array.cpy 18
 array.daAlloc 16
 array.daFree 16
 array.dArray 15
 array.element 17
 array.endreduce 19
 array.index 17
 array.IsItDynamic 17
 array.IsItVar 17
 array.lookupTable 22
 array.reduce 19
 array.reduction 19
 array.transpose 20
 ArrayBounds (exceptions module) 308
 ArrayShapeViolation (exceptions module) 308
 asDword (HLA module) 470
 _asec (math module) 656
 asec (math module) 656
 asec32 (math module) 656
 asec64 (math module) 656
 asec80 (math module) 656
 _asin (math module) 651
 asin (math module) 651
 asin32 (math module) 651
 asin64 (math module) 651
 asin80 (math module) 651
 AssertionFailed (exceptions module) 306
 Assignments (blobs module) 42
 a_subBlob (blobs module) 44
 a_substr (strings module) 966
 asWord (HLA module) 470
 Asynchronous remote procedures 745
 atan (math module) 646

atan32 (math module) 646
 atan64 (math module) 646
 atan80 (math module) 646
 a_tbToStr (conversions module) 127
 atof (conversions module) 244
 atoi128 (conversions module) 185
 atoi16 (conversions module) 183
 atoi32 (conversions module) 184
 atoi64 (conversions module) 185
 atoi8 (conversions module) 182
 a_toNativePath (filesys module) 460
 a_toString (date/time module) 291, 299
 a_toString (time class module) 1131
 a_toString (time module) 1123
 atou128 (conversions module) 222
 atou16 (conversions module) 220
 atou32 (conversions module) 220
 atou64 (conversions module) 221
 atou8 (conversions module) 219
 a_toUnixPath (filesys module) 457
 a_toWin32Path (filesys module) 458
 atPos (patterns module) 708
 a_translate (strings module) 1038
 a_trim (strings module) 978
 a_truncate (strings module) 970
 AttemptToDerefNull (exceptions module)
 306
 AttemptToFreeNULL (exceptions module)
 308
 a_u128ToStr (conversions module) 217
 a_u16ToStr (conversions module) 210
 a_u32ToStr (conversions module) 213
 a_u64ToStr (conversions module) 215
 a_u8ToStr (conversions module) 206
 a_upper (strings module) 1034
 a_v (args module) 11
 a_wToStr (conversions module) 120

B

Back tracking 729
 Back tracking support in pattern matching
 functions 731
 BadFileHandle (exceptions module) 306
 BadObjPtr (exceptions module) 306
 beforeRow (arrays module) 19
 bind (socket module) 762
 Bisynchronous remote procedures 745
 Bit manipulation 25
 Bitmaps (HOWL) 510

bits.cnt 25
 bits.coalese 33
 bits.distribute function 32
 bits.extract 32
 bits.merge16 29
 bits.merge32 28
 bits.merge8 29
 bits.nibbles16 31
 bits.nibbles32 30
 bits.nibbles8 31
 bits.reverse16 26
 bits.reverse32 26
 bits.reverse8 27
 bkgColor_g (in HOWL apps) 488
 Blob accessor functions 39
 Blob assignment functions 42
 Blob comparison functions 45
 Blob concatenation functions 48
 Blob conversion functions 51
 Blob extraction functions 44
 Blob internal representation 36
 Blob scanning functions 45
 Blob variable initialization and allocation
 37
 blob.a_appendFile 54
 blob.a_appendFileExtended 55
 blob.a_bufToBlob1 52
 blob.a_bufToBlob2 52
 blob.a_cat 48
 blob.a_catsub 50
 blob.a_cpy 42
 blob.a_gets 64
 blob.alloc 37
 blob.allocAligned 38
 blob.a_load 53
 blob.a_loadExtended 53
 blob.appendFile 54
 blob.a_subBlob 44
 blob.bufToBlob2 51
 blob.bufToBlob3 51
 blob.cat2 49
 blob.cat3 49
 blob.catbuf2 50
 blob.catbuf3a 50
 blob.catbuf3b 51
 blob.catbuf4 51
 blob.catsub 49
 blob.catsub4 49

blob.catSub5 49
blob.chpos 47
blob.chpos2 47
blob.chpos3 47
blob.cpy 43
blob.destroy 39
blob.eof 42
blob.eoln 64
blob.eq 45
blob.fillb 43
blob.filld 44
blob.fillw 43
blob.free 39
blob.get 64
blob.getByte 60
blob.getc 64
blob.getDword 61
blob.getf 64
blob.geth128 64
blob.geth16 64
blob.geth32 64
blob.geth64 64
blob.geth8 64
blob.geth80 64
blob.geti128 64
blob.geti16 64
blob.geti32 64
blob.geti64 64
blob.geti8 64
blob.getLword 62
blob.getQword 62
blob.gets 64
blob.getTbyte 62
blob.getu128 64
blob.getu16 64
blob.getu32 64
blob.getu64 64
blob.getu8 64
blob.getWord 61
blob.index 46
blob.index2 46
blob.index3 46
blob.indexStr 46
blob.indexStr2 46
blob.indexStr3 46
blob.init 37
blob.init16 37
blob.length 39
blob.load 53
blob maxlen 40
blob.ne 45
blob.newLine 63
blob.put 64
blob.putb 63
blob.putBool 63
blob.putByte 57
blob.putc 63
blob.putcset 63
blob.putcSize 63
blob.putd 63
blob.putDword 58
blob.pute32 64
blob.pute64 64
blob.pute80 64
blob.puth128 63
blob.puth16 63
blob.puth16Size 63
blob.puth32 63
blob.puth32Size 63
blob.puth64 63
blob.puth64Size 63
blob.puth8 63
blob.puth80 63
blob.puth80Size 63
blob.puth8Size 63
blob.puti128 63
blob.puti128Size 63
blob.puti16 63
blob.puti16Size 63
blob.puti32 63
blob.puti32Size 63
blob.puti64 63
blob.puti64Size 63
blob.puti8 63
blob.puti8Size 63
blob.putl 63
blob.putLword 59
blob.putq 63
blob.putQword 58
blob.putr32 64
blob.putr64 64
blob.putr80 64
blob.puts 63
blob.putsSize 63
blob.puttb 63
blob.putTbyte 59

blob.putu128 64
 blob.putu128Size 64
 blob.putu16 63
 blob.putu16Size 63
 blob.putu32 63
 blob.putu32Size 63
 blob.putu64 63
 blob.putu64Size 64
 blob.putu8 63
 blob.putu8Size 63
 blob.putw 63
 blob.putWord 58
 blob.rchpos 48
 blob.rchpos2 48
 blob.rchpos3 48
 blob.rcursor 40
 blob.read 60
 blob.readAt 60
 blob.readLn 64
 blob.realloc 38
 blob.reset 42
 blob.rindex 46
 blob.rindex2 46
 blob.rindex3 46
 blob.rindexStr 46
 blob.rindexStr2 46
 blob.rindexStr3 46
 blob.save 55
 blob.setLength 39
 blob.setMaxlen 40
 blob.setrCursor 41
 blob.setwCursor 41
 blob.subBlob 44
 blob.wcursor 41
 blob.write 55
 blob.writeAt 57
 blobRec (blobs module) 36
 Blobs 35
 blobs.hhf 35
 BlockAlreadyFree (exceptions module) 308
 blockInHeap (memory module) 677
 BoundInstr (exceptions module) 310
 Breakpoint (exceptions module) 309
 brk (strings module) 999
 brk2 (strings module) 999
 brk3 (strings module) 1000
 bSize (conversions module) 92

bToBuf (conversions module) 101
 bToStr (conversions module) 115
 bufToBlob2 (blobs module) 51
 bufToBlob3 (blobs module) 51
 Buttons (HOWL) 557
C
 c (args module) 10
 CannotCreateDir (exceptions module) 307
 CannotFreeMemory (exceptions module) 308
 CannotRemoveDir (exceptions module) 307
 CannotRemoveFile (exceptions module) 307
 CannotRenameFile (exceptions module) 308
 Case insensitive character matching routines 720
 case macro 1097
 cat (strings module) 1041
 cat (zstrings module) 1140
 cat2 (blobs module) 49
 cat2 (strings module) 1041
 cat3 (blobs module) 49
 cat3 (strings module) 1041
 catb (strings module) 1053
 catbool (strings module) 1047
 catbuf (strings module) 1046
 catbuf2 (blobs module) 50
 catbuf2 (strings module) 1046
 catbuf3a (blobs module) 50
 catbuf3a (strings module) 1046
 catbuf3b (blobs module) 51
 catbuf3b (strings module) 1046
 catbuf4 (blobs module) 51
 catbuf4 (strings module) 1046
 catc (strings module) 1048
 catcset (strings module) 1050
 catcSize (strings module) 1049
 catd (strings module) 1059
 cate32 (strings module) 1089
 cate64 (strings module) 1090
 cate80 (strings module) 1090
 cath128 (strings module) 1066
 cath128Size (strings module) 1067
 cath16 (strings module) 1057
 cath16Size (strings module) 1058
 cath32 (strings module) 1060

cath32Size (strings module) 1060
 cath64 (strings module) 1062
 cath64Size (strings module) 1062
 cath80 (strings module) 1064
 cath80Size (strings module) 1064
 cati128 (strings module) 1076
 cati128Size (strings module) 1077
 cati16 (strings module) 1071
 cati16Size (strings module) 1072
 cati32 (strings module) 1073
 cati32Size (strings module) 1073
 cati64 (strings module) 1075
 cati64Size (strings module) 1075
 cati8 (strings module) 1068
 cati8Size (strings module) 1070
 catl (strings module) 1066
 catq (strings module) 1061
 catr32 (strings module) 1091
 catr64 (strings module) 1092
 catr80 (strings module) 1093
 cats (strings module) 1051
 catsSize (strings module) 1052
 catsub (blobs module) 49
 catsub (strings module) 1043
 catsub4 (blobs module) 49
 catsub4 (strings module) 1044
 catsub5 49
 catsub5 (strings module) 1044
 cattb (strings module) 1064
 catu128 (strings module) 1087
 catu128Size (strings module) 1087
 catu16 (strings module) 1081
 catu16Size (strings module) 1082
 catu32 (strings module) 1083
 catu32Size (strings module) 1083
 catu64 (strings module) 1085
 catu64Size (strings module) 1085
 catu8 (strings module) 1079
 catu8Size (strings module) 1080
 catw (strings module) 1056
 catz (strings module) 1042
 cd (filesys module) 464
 CDFailed (exceptions module) 307
 Character classification 65
 Character concatenation functions 1048
 Character insertion/removal functions
 (console module) 78
 Character matching functions 715

Character set concatenation functions
 1048
 Character set construction 259
 Character set searching functions 999
 Character sets 251
 Character utilities 65
 charInStr (strings module) 1010
 chars.isAlpha 66
 chars.isAlphaNum 68
 chars.isASCII 71
 chars.isCtrl 71
 chars.isDigit 68
 chars.isGraphic 70
 chars.isLower 67
 chars.isSpace 70
 chars.isUpper 67
 chars.isXDigit 69
 chars.toLowerCase 65
 chars.toUpperCase 65
 charToCset (character sets) 262
 Check boxes (HOWL) 500
 Checkable objects (HOWL) 532
 checkPoint (timer class) 1135
 chpos (blobs module) 47
 chpos (strings module) 994
 chpos2 (blobs module) 47
 chpos2 (strings module) 994
 chpos3 (blobs module) 47
 chpos3 (strings module) 994
 Circles (HOWL) 505
 Class traits 955
 Clickable objects (HOWL) 529
 Client applications (socket module) 774
 Client/Server applications 771
 Client/server communication 774
 client_t.close 775
 client_t.create 775
 client_t.destroy 775
 Close (file class module) 316
 Close (file I/O module) 344
 close (memory-mapped files module) 669
 Close (socket module) 775
 close (socket module) 763
 clrLn (console module) 77
 clrToBOLN (console module) 77
 clrToBOScrn (console module) 78
 clrToEOLN (console module) 77
 clrToEOScrn (console module) 78

cls (console module) 77
 cmdLn (args module) 9
 cnt (bits module) 25
 coalesce (bits module) 33
 cocall (coroutines module) 249
 cofree (coroutines module) 249
 columnize3 (strings module) 1023
 columnize4 (strings module) 1023
 Combo boxes (HOWL) 570
 Combobox (HOWL) 502
 Command-line arguments 9
 Compile-time traits (stl) 956
 Compiling HOWL applications 492
 complement (character sets) 270
 Concatenation functions (blobs module)
 48
 connect (socket module) 763
 Console clearing functions 76
 Console display control 73
 Console output colors 81
 Console scrolling 80
 console.clrLn 77
 console.clrToBOLN 77
 console.clrToBOScrn 78
 console.clrToEOLN 77
 console.clrToEOScrn 78
 console.cls 77
 console.deleteChar 79
 console.deleteChars 80
 console.deleteLine 80
 console.deleteLines 80
 console.down 74
 console.gotoC 73
 console.gotoxy 73
 console.home 77
 console.insertChar 78
 console.insertChars 78
 console.insertLine 79
 console.insertLines 79
 console.left 75
 console.ndown 75
 console.nleft 75
 console.nright 76
 console.nup 74
 console.restoreCursor 76
 console.right 75
 console.saveCursor 76
 console.scrollDown 81
 console.scrollUp 80
 console.setAttrs 81
 console.up 74
 Container objects (HOWL) 539
 Containers (HOWL) 541
 ControlC (exceptions module) 309
 conv.a_bToStr 117
 conv.a_dToStr 123
 conv.a_e32ToStr 236
 conv.a_e64ToStr 235
 conv.a_e80ToStr 234
 conv.a_h128ToStr 145
 conv.a_h16ToStr 136
 conv.a_h32ToStr 138
 conv.a_h64ToStr 141
 conv.a_h80ToStr 143
 conv.a_h8ToStr 132
 conv.a_i128ToStr 181
 conv.a_i16ToStr 173
 conv.a_i32ToStr 176
 conv.a_i64ToStr 178
 conv.a_i8ToStr 170
 conv.a_lToStr 129
 conv.a_qToStr 125
 conv.a_r32ToStr 243
 conv.a_r64ToStr 243
 conv.a_r80ToStr 242
 conv.a_roman 245
 conv.a_tbToStr 127
 conv.atof 244
 conv.atoi128 185
 conv.atoi16 183
 conv.atoi32 184
 conv.atoi64 185
 conv.atoi8 182
 conv.atou128 222
 conv.atou16 220
 conv.atou32 220
 conv.atou64 221
 conv.atou8 219
 conv.a_u128ToStr 217
 conv.a_u16ToStr 210
 conv.a_u32ToStr 213
 conv.a_u64ToStr 215
 conv.a_u8ToStr 206
 conv.a_wToStr 120
 conv.bSize 92
 conv.bToBuf 101

conv.bToStr 115
conv.dSize 93
conv.dToBuf 103
conv.dToStr 122
conv.e32ToBuf 231
conv.e32ToStr 234
conv.e64ToBuf 231
conv.e64ToStr 233
conv.e80ToBuf 230
conv.e80ToStr 232
conv.getDelimiters 88
conv.getUnderscores 87
conv.h128Size 100
conv.h128ToBuf 113
conv.h128ToStr 144
conv.h16Size 97
conv.h16ToBuf 109
conv.h16ToStr 134
conv.h32Size 97
conv.h32ToBuf 110
conv.h32ToStr 137
conv.h64Size 98
conv.h64ToBuf 111
conv.h64ToStr 139
conv.h80Size 99
conv.h80ToBuf 112
conv.h80ToStr 142
conv.h8Size 96
conv.h8ToBuf 108
conv.h8ToStr 130
conv.hhf 83
conv.i128Size 160
conv.i128ToBuf 166
conv.i128ToStr 179
conv._i16Size 157
conv.i16Size 158
conv.i16ToBuf 163
conv.i16ToStr 172
conv.i32Size 159
conv.i32ToBuf 164
conv.i32ToStr 175
conv.i64Size 159
conv.i64ToBuf 165
conv.i64ToStr 177
conv.i8Size 157
conv.i8ToBuf 162
conv.i8ToStr 168
conv._intToBuf128 157

conv._intToBuf128Size 157
conv._intToBuf64Size 157
conv.lSize 95
conv.lToBuf 106
conv.lToStr 128
conv.qSize 94
conv.qToBuf 104
conv.qToStr 124
conv.r32ToBuf 239
conv.r32ToStr 241
conv.r64ToBuf 238
conv.r64ToStr 240
conv.r80ToBuf 237
conv.r80ToStr 240
conv.roman 245
conv.setDelimiters 89
conv.setUnderscores 85
conv.strToFlt 245
conv.strToh128 155
conv.strToh16 152
conv.strToh32 153
conv.strToh64 154
conv.strToh8 151
conv.strToi128 191
conv.strToi16 188
conv.strToi32 189
conv.strToi64 190
conv.strToi8 187
conv.strTou128 228
conv.strTou16 224
conv.strTou32 225
conv.strTou64 226
conv.strTou8 223
conv.tbSize 94
conv.tbToBuf 105
conv.tbToStr 126
conv.u128Size 196
conv.u128ToBuf 202
conv.u128ToStr 216
conv._u16Size 193
conv.u16Size 194
conv.u16ToBuf 199
conv.u16ToStr 208
conv._u32Size 193
conv.u32Size 195
conv.u32ToBuf 200
conv.u32ToStr 211
conv.u64Size 195

conv.u64ToBuf 201
 conv.u64ToStr 214
 conv._u8Size 193
 conv.u8Size 193
 conv.u8ToBuf 197
 conv.u8ToStr 204
 conv.wSize 93
 conv.wToBuf 102
 conv.wToStr 119
 Conversion format control 84
 Conversion functions (blobs module) 51
 ConversionError (exceptions module) 306
 Conversions 83
 coret (coroutines module) 250
 Coroutines 247
 coroutines.hhf 247
 coroutine_t.cocall 249
 coroutine_t.cofree 249
 coroutine_t.create 248
 _cos (math module) 642
 cos (math module) 642
 cos32 (math module) 642
 cos64 (math module) 642
 cos80 (math module) 642
 _cot (math module) 647
 cot (math module) 647
 cot32 (math module) 647
 cot64 (math module) 648
 cot80 (math module) 648
 Counting the number of set bits in an object 25
 cpy (arrays module) 18
 cpy (blobs module) 43
 cpy (character sets) 260
 cpy (strings module) 965
 cpy (zstrings module) 1140
 cpyz (strings module) 966
 create (coroutines module) 248
 create (file class module) 314
 create (list module) 612
 create (memory-mapped files module) 668
 create (socket module) 775
 create (tables module) 1099– 1100
 create (threads module) 1103
 create (time class module) 1129
 create (timer class) 1134
 createCriticalSection (threads module) 1109
 createEvent (threads module) 1107
 createSemaphore (threads module) 1110
 createTLS (threads module) 1105
 create_wBase (HOWL) 525
 create_wCheckable (HOWL) 533
 create_wClickable (HOWL) 530
 create_wFilledFrame (HOWL) 535
 create_wSurface 534
 Creating new list class types 610
 Critical sections 1108
 cs.charToCset 262
 cs.complement 270
 cs.cpy 260
 cs.difference 269
 cs.empty 259
 cs.eq 257
 cs.extract 266
 cs.intersection 268
 cs.IsEmpty 251
 cs.member 252
 cs.ne 258
 cs.psubset 255
 cs.psupserset 256
 cs.rangeChar 263
 cs.removeChar 272
 cs.removeStr 275
 cs.removeStr2 276
 cs.setunion 268
 cs.strToCset 265
 cs.subset 253
 cs.superset 254
 cs.unionChar 271
 cs.unionStr 273
 cs.unionStr2 274
 _csc (math module) 649
 csc (math module) 649
 csc32 (math module) 649
 csc64 (math module) 649
 csc80 (math module) 649
 Current system time 1122
 Cursor position within a pattern 730
 curTime (date/time module) 1122
 curTime (time class module) 1130

D

daAlloc (arrays module) 16
 daFree (arrays module) 16
 dArray (arrays module) 15
 Date functions 279

date.addDays 287
 date.addMonths 287
 date.addYears 288
 date.a_toString 291
 date.daterec 279
 date.dayNumber 285
 date.dayOfWeek 285
 date.daysBetween 286
 date.daysLeft 285
 date.fromJulian 284, 298
 date.isLeapYear 281
 date.isValid 282
 date.outputFormat 280
 date.pack 283
 date.setFormat 290
 date.setSeparator 290
 date.subDays 288
 date.subMonths 288
 date.subYears 288
 date.today 289, 299
 date.toJulian 283
 date.toString 291
 date.unpack 283
 date.utc 289
 date.validate 282
 daterec (date/time module) 279
 DateStarted (timer class) 1134
 DateStopped (timer class) 1134
 datetime.hhf 279, 1113
 dayNumber (date/time module) 285, 298
 dayOfWeek (date/time module) 285, 298
 daysBetween (date/time module) 286,
 298
 daysLeft (date/time module) 285, 298
 Declaring Blob variables 36
 default macro 1097
 Deferred evaluation 729
 Delay functions 681
 delete (args module) 11
 delete (filesys module) 463
 delete (lists module) 615
 delete (strings module) 974
 delete3 (strings module) 974
 delete4 (strings module) 974
 deleteChar (console module) 79
 deleteChars (console module) 80
 deleteCriticalSection (threads module)
 1109
 deleteEvent (threads module) 1107
 delete_first (list module) 616
 delete_index (list module) 615
 delete_last (list module) 616
 deleteLine (console module) 80
 deleteLines (console module) 80
 delete_node (list module) 616
 deleteSemaphore (threads module) 1111
 delLeadingSpaces (strings module) 975
 delLeadingSpaces1 (strings module) 976
 delLeadingSpaces2 (strings module) 976
 delTrailingSpaces (strings module) 977
 delTrailingSpaces1 (strings module) 977
 delTrailingSpaces2 (strings module) 977
 Deque (stl) 960
 destroy (args module) 12
 destroy (blobs module) 39
 destroy (HOWL) 525
 destroy (list module) 612
 destroy (memory-mapped files module)
 668
 destroy (socket module) 775
 destroy (tables module) 1099– 1100
 deTab2 (strings module) 1027
 deTab3a (strings module) 1028
 deTab3b (strings module) 1028
 deTab4 (strings module) 1029
 difference (character sets) 269
 difference (date/time module) 298
 difference (time class module) 1130
 Directory and File manipulation functions
 463
 Directory and file predicates 461
 dirIn (filesys module) 467
 dirInCwd (filesys module) 467
 disable (HOWL) 526, 529
 DiskFullError (exceptions module) 307
 distribute (bits module) 32
 DivideError (exceptions module) 310
 divl (math module) 633
 divq (math routine) 624
 down (console module) 74
 Drag list boxes (HOWL) 570
 dSize (conversions module) 93
 dtClass.make_timeClass 1125
 dToBuf (conversions module) 103
 dToStr (conversions module) 122
 durationToSecs (time module) 1116

E

e32ToBuf (conversions module) 231
 e32ToStr (conversions module) 234
 e64ToBuf (conversions module) 231
 e64ToStr (conversions module) 233
 e80ToBuf (conversions module) 230
 e80ToStr (conversions module) 232
 Eager evaluation 729
 Edit boxes (HOWL) 504, 566
 Editors (HOWL) 566
 element (arrays module) 17
 elementsAreObjects_c (stl) 956– 957, 959
 Ellipses (HOWL) 505
 empty (character sets) 259
 enable (HOWL) 526, 529
 enabled (HOWL) 525
 endMatch (pattern matching module) 707
 EndOfFile (exceptions module) 307
 endreduce (arrays module) 19
 endswitch macro 1097
 endwForm 486, 496
 endwMainMenu 497
 endwRadioSet 512
 endwSubMenu 498
 enTab2 (strings module) 1031
 enTab3a (strings module) 1032
 enTab3b (strings module) 1032
 enTab4 (strings module) 1033
 enterCriticalSection (threads module)
 1109
 env.a_get 301
 env.get 301
 env.hhf 301
 Environment variables 301
 eof (blobs module) 42
 eof (file I/O module) 346
 eoln (blobs module) 64
 eoln (file I/O module) 427
 eoln (stdin module) 873
 eoln2 (stdin module) 873
 eq (blobs module) 45
 eq (character sets) 257
 eq (strings module) 980
 Events (threads module) 1107
 ex.AccessDenied 307
 ex.AccessViolation 309
 ex.ArrayBounds 308

ex.ArrayShapeViolation 308
 ex.AssertionFailed 306
 ex.AttemptToDerefNULL 306
 ex.AttemptToFreeNULL 308
 ex.BadFileHandle 306
 ex.BadObjPtr 306
 ex.BlockAlreadyFree 308
 ex.BoundInstr 310
 ex.Breakpoint 309
 ex.CannotCreateDir 307
 ex.CannotFreeMemory 308
 ex.CannotRemoveDir 307
 ex.CannotRemoveFile 307
 ex.CannotRenameFile 308
 ex.CDFailed 307
 ex.ControlC 309
 ex.ConversionError 306
 ex.DiskFullError 307
 ex.DivideError 310
 ex.EndOfFile 307
 ex.exceptionMsg 311
 ex.ExecutedAbstract 306
 ex.fDenormal 310
 ex.fDivByZero 310
 ex.FileCloseError 307
 ex.FileNotFound 306
 ex.FileOpenFailure 307
 ex.FileReadError 307
 ex.FileSeekError 307
 ex.FileWriteError 307
 ex.fInexactResult 310
 ex.fInvalidOperation 310
 ex.fOverflow 310
 ex.fStackCheck 310
 ex.fUnderflow 310
 ex.IllegalChar 306
 ex.IllegalInstr 309
 ex.InPageError 309
 ex.IntoInstr 310
 ex.InvalidAlignment 306
 ex.InvalidDate 308
 ex.InvalidDateFormat 308
 ex.InvalidHandle 309
 ex.InvalidTime 309
 ex.InvalidTimeFormat 309
 ex.MemoryAllocationFailure 308
 ex.MemoryFreeFailure 308
 ex.NoMemory 309

ex.PointerNotInHeap 308
 ex.printExceptionError 311
 ex.PrivInstr 309
 ex.SingleStep 309
 ex.StackOverflow 309
 ex.StringIndexError 305
 ex.StringOverflow 305
 ex.TimeOverflow 309
 ex.TooManyCmdLnParms 306
 ex.ValueOutOfRange 305
 ex.WidthTooBig 306
 exactlyNChar (patterns module) 717
 exactlyNCset (patterns module) 713
 exactlyNiChar (patterns module) 722
 exactlyNtoMChar (patterns module) 719
 exactlyNtoMCset (patterns module) 715
 exactlyNtoMiChar (pattern matching module) 724
 exceptionMsg (exceptions module) 311
 Exceptions 303
 excepts.hhf 303
 ExecutedAbstract (exceptions module)
 306
 exists (filesys module) 461
 _exp (math module) 660
 exp (math module) 660
 exp32 (math module) 660
 exp64 (math module) 660
 exp80 (math module) 660
 Extended-precision arithmetic functions
 623
 extract (bits module) 32
 extract (character sets) 266
 extract (patterns module) 726
 extractExt (filesys module) 450
 extractFilename (filesys module) 451
 Extraction functions (blobs module) 44
 extractPath (filesys module) 453

F

fail (patterns module) 708
 fastAppend_c (stl) 956– 957, 959
 fastElementSwap_c (stl) 956– 957, 960
 fastInsert_c (stl) 956– 957, 959
 fastPrepend_c (stl) 956– 957, 959
 fastRemove_c (stl) 956– 957, 959
 fastSearch_c (stl) 956– 957, 960
 fastSwap_c (stl) 956– 957, 960
 fd_clr (socket module) 769

fDenormal (exceptions module) 310
 fd_isset (socket module) 769
 fDivByZero (exceptions module) 310
 fd_set (socket module) 769
 fd_zero (socket module) 769
 fence (patterns module) 708
 File class 313
 File I/O module 341
 File information functions 462
 File input routines 425
 File system routines 445
 file.create 314
 fileclass.hhf 313
 FileCloseError (exceptions module) 307
 fileIn (filesys module) 465
 fileInCwd (filesys module) 466
 fileio.a_gets 429
 fileio.append 348
 fileio.Close 344
 fileio.eof 346
 fileio.eoln 427
 fileio.flush 345
 fileio.get (fileio module) 443
 fileio.getc 428
 fileio.getf 442
 fileio.geth128 441
 fileio.geth16 438
 fileio.geth32 439
 fileio.geth64 440
 fileio.geth8 437
 fileio.geti128 433
 fileio.geti16 430
 fileio.geti32 431
 fileio.geti64 432
 fileio.geti8 430
 fileio.gets 428
 fileio.getu128 436
 fileio.getu16 435
 fileio.getu32 435
 fileio.getu64 436
 fileio.getu8 434
 fileio.hhf 341
 fileio.newln 356
 fileio.Open 341
 fileio.OpenNew 343
 fileio.position 349
 fileio.put 424
 fileio.putb 365

fileio.putbool 357
fileio.putc 358
fileio.putcset 361
fileio.putcsizE 360
fileio.putd 373
fileio.pute32 416, 943
fileio.pute64 417
fileio.pute80 418
fileio.puth128 385
fileio.puth128Size 386
fileio.puth16 370
fileio.puth16Size 371
fileio.puth32 374
fileio.puth32Size 375
fileio.puth64Size 378
fileio.puth8 366
fileio.puth80 381
fileio.puth80Size 382
fileio.puth8Size 367
fileio.puti128 399
fileio.puti128size 400
fileio.puti16Size 393
fileio.puti16size 391
fileio.puti32 394
fileio.puti32Size 395
fileio.puti64 397
fileio.puti64size 398
fileio.puti8 388
fileio.putl 384
fileio.putq 377
fileio.putr32 420
fileio.putr64 421
fileio.putr80 423
fileio.puts 362
fileio.putssize 363
fileio.puttb 380
fileio.putu128 413
fileio.putu128size 414
fileio.putu16 405
fileio.putu16size (file I/O module) 407
fileio.putu32 408
fileio.putu32size 409
fileio.putu64 411
fileio.putu64size 412
fileio.putu8 402
fileio.putu8size 404
fileio.putw 369
fileio.read 425
fileio.ReadLn 426
fileio.rewind 347
fileio.rSeek 351
fileio.seek 350
fileio.size 353
fileio.truncate 352
fileio.write 354
Filename and pathname string functions 445
FileNotFoundException (exceptions module) 306
FileOpenFailure 307
FileReadError (exceptions module) 307
FileSeekError (exceptions module) 307
filesys.a_extractBase 448
filesys.a_extractExt 450
filesys.a_extractFilename 451
filesys.a_extractPath 452
filesys.a_getFullPathName 460
filesys.a_joinPaths 453
filesys.a_normalize 455
filesys.a_toNativePath 460
filesys.a_toUnixPath 457
filesys.a_toWin32Path 458
filesys.cd 464
filesys.delete 463
filesys.dirIn 467
filesys.dirInCwd 467
filesys.exists 461
filesys.extractExt 450
filesys.extractFilename 451
filesys.extractPath 453
filesys.fileIn 465
filesys.fileInCwd 466
filesys.fileWithSuffix 465
filesys.getFullPath 460
filesys.gwd 464
filesys.hasDriveLetter 445
filesys.hasExtension 446
filesys.hasPath 448
filesys.hasUncName 447
filesys.hhf 445
filesys.isDir 462
filesys.isFile 461
filesys.itemInCwd 468
filesys.itemWithSuffix 468
filesys.joinPaths 454
filesys.mkdir 463
filesys.normalize1 456

filesys.normalize2 456
 filesys.rename 464
 filesys.rmdir 465
 filesys.size 462
 filesys.toNativePath1 460
 filesys.toNativePath2 460
 filesys.toUnixPath1 457
 filesys.toUnixPath2 458
 filesys.toWin32Path1 459
 filesys.toWin32Path2 459
 filevar.a_gets 334
 filevar.Close 316
 filevar.get 339
 filevar.getc 333
 filevar.getf 339
 filevar.geth128 339
 filevar.geth16 338
 filevar.geth32 338
 filevar.geth64 338
 filevar.geth8 337
 filevar.geti128 336
 filevar.geti16 335
 filevar.geti32 335
 filevar.geti64 335
 filevar.geti8 334
 filevar.gets 333
 filevar.getu16 336
 filevar.getu32 336
 filevar.getu64 337
 filevar.getu8 336
 filevar.handle 315
 filevar.newLine 318
 filevar.Open 315
 filevar.OpenNew 315
 filevar.put 332
 filevar.putb 319
 filevar.putbool 317
 filevar.putc 318
 filevar.putcset 318
 filevar.putcsizes 318
 filevar.putd 321
 filevar.pute32 329
 filevar.pute64 329
 filevar.pute80 330
 filevar.puth16Size 321
 filevar.puth64Size 322
 filevar.puth8Size 320
 filevar.puti128 326
 filevar.puti128size 326
 filevar.puti16 324
 filevar.puti16size 325
 filevar.puti32 325
 filevar.puti32size 325
 filevar.puti64 325
 filevar.puti64size 325
 filevar.putr32 330
 filevar.putr64 331
 filevar.puts 319
 filevar.putssize 319
 filevar.puttb 322
 filevar.putu16size 327
 filevar.putu8 326
 filevar.putw 320
 filevar.read 333
 filevar.ReadLn 333
 filevar.write 317
 fileWithSuffix (filesys module) 465
 FileWriteError (exceptions module) 307
 fillb (blobs module) 43
 filld (blobs module) 44
 fillw (blobs module) 43
 filteredNodeInList (lists module) 618
 filteredNodeInListReversed (lists module)
 618
 findInCset (strings module) 1003
 findInCset2 (strings module) 1003
 findInCset3 (strings module) 1003
 flInexactResult (exceptions module) 310
 flInvalidOperation (exceptions module)
 310
 first (strings module) 968
 first2 (strings module) 968
 first3 (strings module) 968
 firstNChar (patterns module) 718
 firstNCset (patterns module) 713
 firstNiChar (patterns module) 722
 Fixed length hexadecimal numeric to nuff-
 er conversions 101
 Fixed size hexadecimal size functions 92
 Floating-point concatenation functions
 1088
 Floating-point functions 640
 Floating-point numeric output using sci-
 entific notation (socket module) 790
 Floating-point numeric to buffer conver-
 sions, exponential form 230

flush (file I/O module) 345
 FlushInput (stdin module) 873
 Forms (HOWL) 541
 fOverflow (exceptions module) 310
 free (blobs module) 39
 free (memory module) 673
 freeBlockInHeap (memory module) 678
 fromJulian (date/time module) 284, 298
 fromSecs (time class module) 1129
 fromSecs (time module) 1117
 fromUnixTime (time module) 1118
 fromWinFileTime (time module) 1119
 fStackCheck (exceptions module) 310
 fUnderflow (exceptions module) 310

G

ge (strings module) 983
 get (blobs module) 64
 get (environment module) 301
 get (file class module) 339
 get (fileio module) 443
 get (socket module) 801
 get (stdin module) 883
 getAdrs (socket module) 777
 getByte (blobs module) 60
 getc (blobs module) 64
 getc (file class module) 333
 getc (file I/O module) 428
 getc (socket module) 795
 getc (stdin module) 874
 getCurrentThreadHandle (threads module)
 1105
 getDelimiters (conversions module) 88
 getDword (blobs module) 61
 get_enabled (HOWL) 526
 get_exStyle (HOWL) 528
 getf (blobs module) 64
 getf (file class module) 339
 getf (file I/O module) 442
 getf (socket module) 800
 getf (stdin module) 883
 getField3 (strings module) 1013
 getField4 (strings module) 1013
 getFileName (memory-mapped files mod-
 ule) 669
 getFullPath (filesys module) 460
 geth128 (blobs module) 64
 geth128 (file class module) 339
 geth128 (file I/O module) 441

geth128 (socket module) 800
 geth128 (stdin module) 877
 geth16 (blobs module) 64
 geth16 (file class module) 338
 geth16 (file I/O module) 438
 geth16 (socket module) 799
 geth16 (stdin module) 876
 geth32 (blobs module) 64
 geth32 (file class module) 338
 geth32 (file I/O module) 439
 geth32 (socket module) 799
 geth32 (stdin module) 876
 geth64 (blobs module) 64
 geth64 (file class module) 338
 geth64 (file I/O module) 440
 geth64 (socket module) 800
 geth64 (stdin module) 877
 geth8 (blobs module) 64
 geth8 (file class module) 337
 geth8 (file I/O module) 437
 geth8 (socket module) 799
 geth8 (stdin module) 875
 geth80 (blobs module) 64
 get_handle (HOWL) 526
 get_height (HOWL) 528
 gethostbyaddr (socket module) 769
 gethostbyname (socket module) 768
 gethostname (socket module) 768
 geti128 (blobs module) 64
 geti128 (file class module) 336
 geti128 (file I/O module) 433
 geti128 (socket module) 797
 geti128 (stdin module) 880
 geti16 (blobs module) 64
 geti16 (file class module) 335
 geti16 (file I/O module) 430
 geti16 (socket module) 796
 geti16 (stdin module) 878
 geti32 (blobs module) 64
 geti32 (file class module) 335
 geti32 (file I/O module) 431
 geti32 (socket module) 796
 geti32 (stdin module) 879
 geti64 (blobs module) 64
 geti64 (file class module) 335
 geti64 (file I/O module) 432
 geti64 (socket module) 797
 geti64 (stdin module) 879

geti8 (blobs module) 64
 geti8 (file class module) 334
 geti8 (file I/O module) 430
 geti8 (socket module) 796
 geti8 (stdin module) 878
 getLword (blobs module) 62
 getMalloc (memory-mapped files module)
 670
 getNode (tables module) 1099, 1102
 get_objectID (HOWL) 526
 get_onHeap (HOWL) 526
 getOpen (memory-mapped files module)
 669
 get_parentForm (HOWL) 526
 get_parentHandle (HOWL) 526, 528
 getpeername (socket module) 769
 getPort (socket class module) 778
 getPos (patterns module) 708
 getQword (blobs module) 62
 getref (memory module) 676, 679
 gets (blobs module) 64
 gets (file class module) 334
 gets (file I/O module) 428
 gets (socket module) 795
 gets (stdin module) 874
 getsockname (socket module) 769
 get_style (HOWL) 528
 getTbyte (blobs module) 62
 setTimeout (socket class module) 777
 getTLS (threads module) 1106
 getu128 (blobs module) 64
 getu128 (file class module) 337
 getu128 (file I/O module) 436
 getu128 (socket module) 798
 getu128 (stdin module) 882
 getu16 (blobs module) 64
 getu16 (file class module) 336
 getu16 (file I/O module) 435
 getu16 (socket module) 798
 getu16 (stdin module) 881
 getu32 (blobs module) 64
 getu32 (file class module) 336
 getu32 (file I/O module) 435
 getu32 (socket module) 798
 getu32 (stdin module) 881
 getu64 (blobs module) 64
 getu64 (file class module) 337
 getu64 (file I/O module) 436

getu64 (socket module) 798
 getu64 (stdin module) 882
 getu8 (blobs module) 64
 getu8 (file class module) 336
 getu8 (file I/O module) 434
 getu8 (socket module) 797
 getu8 (stdin module) 880
 get_visible (HOWL) 526
 getWhiteSpace (patterns module) 727
 get_width (HOWL) 528
 getWord (blobs module) 61
 getWordDelims (patterns module) 726
 get_x (HOWL) 528
 get_y (HOWL) 528
 globalOptions (args module) 12
 gotorc (console module) 73
 gotoxy (console module) 73
 Graphic objects (HOWL) 548
 gt (strings module) 982
 gwd (filesys module) 464

H

h128Size (conversions module) 100
 h128ToBuf (conversions module) 113
 h128ToStr (conversions module) 144
 h16Size (conversions module) 97
 h16ToBuf (conversions module) 109
 h16ToStr (conversions module) 134
 h32Size (conversions module) 97
 h32ToBuf (conversions module) 110
 h32ToStr (conversions module) 137
 h64Size (conversions module) 98
 h64ToBuf (conversions module) 111
 h64ToStr (conversions module) 139
 h80Size (conversions module) 99
 h80ToBuf (conversions module) 112
 h80ToStr 142
 h8Size (conversions module) 96
 h8ToBuf (conversions module) 108
 h8ToStr (conversions module) 130
 handle (file class module) 315
 handle (HOWL) 524
 handle (stdin module) 871
 handle (stdio module) 885
 hasDriveLetter (filesys module) 445
 hasExtension (filesys module) 446
 hasPath (filesys module) 448
 hasUncName (filesys module) 447
 Hexadecimal concatenation functions

- 1053
- Hexadecimal conversions 91
 Hexadecimal input from a socket 799
 Hexadecimal numeric size functions 92
 Hexadecimal numeric to buffer conversions 101
 Hexadecimal numeric to string conversions 115
 Hexadecimal size functions 96
 hide (HOWL) 526, 529
 High-level language statements 1097
 HLA macros and constants 469
 HLA Object Windows Library 485
 HLA string data type 961
 hla.asDword 470
 hla.asWord 470
 hla.hhf 469
 hla.IsHex 469
 hla.IsInt 469
 hla.IsNumber 469
 hla.IsNumeric 470
 hla.IsOrdinal 470
 hla.IsReal 469
 hla.IsUns 469
 _hla.make_listClass 610
 hll.cswitch 1098
 hll.usebubblesort 1098
 home (console module) 77
 HOWL 485
 HOWL Declarative Language 495
 HOWL object hierarchy 522
 HOWL Run-time Library 521
 HowlMainApp 485
- I
- i128Size (conversions module) 160
 i128TBuf (conversions module) 166
 i128ToStr (conversions module) 179
 _i16Size (conversions module) 157
 i16Size (conversions module) 158
 i16ToBuf (conversions module) 163
 i16ToStr (conversions module) 172
 i32Size (conversions module) 159
 i32ToBuf (conversions module) 164
 i32ToStr (conversions module) 175
 i64Size (conversions module) 159
 i64ToBuf (conversions module) 165
 i64ToStr (conversions module) 177
 i8Size (conversions module) 157
- i8ToBuf (conversions module) 162
 i8ToStr (conversions module) 168
 ichpos (strings module) 995
 ichpos2 (strings module) 995
 ichpos3 (strings module) 995
 Icons (HOWL) 591
 idivl (math module) 633
 idivq (math module) 625
 ieq (strings module) 983
 ige (strings module) 985
 igt (strings module) 985
 iindex (strings module) 989
 iindex3 (strings module) 990
 ile (strings module) 985
 IllegalChar (exceptions module) 306
 IllegalInstr (exceptions module) 309
 ilt (strings module) 984
 imodl (math module) 635
 imodq (math module) 626
 imull (math module) 636
 imulq (math module) 627
 index (arrays module) 17
 index (blobs module) 46
 index (list module) 617
 index (strings module) 988
 index2 (blobs module) 46
 index2 (strings module) 988
 index3 (blobs module) 46
 index3 (strings module) 988
 indexStr 46
 indexStr2 (blobs module) 46
 indexStr3 (blobs module) 46
 ine (strings module) 984
 init (blobs module) 37
 init (strings module) 963
 init16 (blobs module) 37
 Initializing and allocating blob variables 37
 InPageError (exceptions module) 309
 insert (lists module) 614
 insert (strings module) 972
 insert3 (strings module) 972
 insert4 (strings module) 973
 insertChar (console module) 78
 insertChars (console module) 78
 insert_first (list module) 615
 insert_index (list module) 614
 insertLine (console module) 79

insertLines (console module) 79
 insert_node (list module) 615
 intersection (character sets) 268
 IntoInstr (exceptions module) 310
 _intToBuf128 (conversions module) 157
 _intToBuf128Size (conversions module)
 157
 _intToBuf32 (conversions module) 157
 _intToBuf32Size (conversions module)
 157
 _intToBuf64Size (conversions module)
 157
 InvalidArgument (exceptions module)
 306
 InvalidDate (exceptions module) 308
 InvalidDateFormat (exceptions module)
 308
 InvalidHandle (exceptions module) 309
 InvalidTime (exceptions module) 309
 InvalidTimeFormat (exceptions module)
 309
 irchpos (strings module) 997
 irchpos2 (strings module) 998
 irchpos3 (strings module) 998
 irindex (strings module) 992
 irindex2 (strings module) 992
 irindex3 (strings module) 993
 isAlloc field in stl classes 960
 isAlpha (chars module) 66
 isAlphaNum (chars module) 68
 IsArray_c (stl) 956– 957
 isArray_c (stl) 958
 isASCII (chars module) 71
 isContainer_c (stl) 956– 957
 isCtrl (chars module) 71
 isDeque_c (stl) 956– 958
 isDigit (chars module) 68
 isDir (filesys module) 462
 IsEmpty (character sets) 251
 isFile (filesys module) 461
 isGraphic (chars module) 70
 IsHex (HLA module) 469
 isInHeap (memory module) 674
 IsInt (HLA module) 469
 IsItDynamic (arrays module) 17
 IsItVar (arrays module) 17
 isLeapYear (date/time module) 281, 298
 isList_c (stl) 956– 958

isLower (chars module) 67
 IsNumber (HLA module) 469
 IsNumeric (HLA module) 470
 IsOrdinal (HLA module) 470
 isRandomAccess_c (stl) 956– 958
 IsReal (HLA module) 469
 isSpace (chars module) 70
 isSTL_c 955
 isTable_c (stl) 956– 958
 IsUns (HLA module) 469
 isUpper (chars module) 67
 isValid (date/time module) 282, 298
 isValid (time class module) 1129
 isValid (time module) 1115
 isValid (time module) 1115
 isValue (date/time module) 1115
 isVector_c (stl) 956– 957
 isXDigit (chars module) 69
 item (tables module) 1099
 itemInCwd (filesys module) 468
 itemWithSuffix (filesys module) 468

J

joinPaths (filesys module) 454

L

l_arb (patterns module) 729
 last (strings module) 969
 last2 (strings module) 969
 last3 (strings module) 970
 Lazy/deferred evaluation 729
 le (strings module) 982
 leaveCriticalSection (threads module)
 1110
 left (console module) 75
 Left-text check boxes 500
 Left-text radio buttons (HOWL) 512
 Left-text radio set buttons (HOWL) 513
 len (zstrings module) 1138
 length (blobs module) 39
 length (strings module) 964
 l_ExactlyNtoMChar (patterns module)
 720
 l_ExactlyNtoMCset (patterns module)
 715
 l_ExactlyNtoMiChar (patterns module)
 724
 Linux 605
 linux.hhf 605
 List (stl) 960

List boxes (HOWL) 508, 570
List constructor and destructor 612
List procedures, methods, and iterators 611
list.append_index 613
list.append_last 614
list.append_node 613
list.create 612
list.delete_first 616
list.delete_index 615
list.delete_last 616
list.delete_node 616
list.destroy 612
list.index 617
list.insert_first 615
list.insert_index 614
list.insert_node 615
list.numNodes 613
listen (socket module) 763
Lists 607
lists.hhf 607
list_t (lists module) 607
list_t.append 613
list_t.delete 615
list_t.filteredNodeInList 618
list_t.filteredNodeInListReversed 618
list_t.insert 614
list_t.nodeInList 617
list_t.nodeInListReversed 617
list_t.reverse 619
list_t.search 620
list_t.sort 620
list_t.xchgNodes 620
_ln (math module) 664
ln (math module) 664
ln32 (math module) 664
ln64 (math module) 664
ln80 (math module) 664
l_NorLessChar (patterns module) 718
l_NorLessCset (patterns module) 713
l_NorLessiChar (patterns module) 723
l_NorMoreChar (patterns module) 719
l_NorMoreCset (patterns module) 714
l_NorMoreiChar (patterns module) 723
l_NtoMChar (patterns module) 719
l_NtoMCset (patterns module) 714
l_NtoMiChar (patterns module) 724
load (blobs module) 53
localOptions (args module) 13
_log (math module) 663
log (math module) 663
log32 (math module) 663
log64 (math module) 663
log80 (math module) 663
Logarithmic arithmetic operations 640
l_OneOrMoreChar (patterns module) 717
l_OneOrMoreCset (patterns module) 712
l_OneOrMoreiChar (patterns module) 722
lookup (tables module) 1099, 1101
Lookup tables 22
lookupTable (arrays module) 22
lower (strings module) 1036
lower1 (strings module) 1036
lower2 (strings module) 1036
lSize (conversions module) 95
lt (strings module) 981
lToBuf (conversions module) 106
lToStr (conversions module) 128
l_ZeroOrMoreChar (patterns module) 717
l_ZeroOrMoreCset (patterns module) 712
l_ZeroOrMoreiChar (patterns module) 721
l_ZeroOrOneChar (patterns module) 716
l_ZeroOrOneCset (patterns module) 711
l_ZeroOrOneiChar (patterns module) 721

M

make_timeClass (time class module) 1125
Mashalling parameters 745
match (pattern matching module) 707
Matching an arbitrary sequence of characters 728
matchiStr (patterns module) 725
matchiWord (patterns module) 726
matchStr (patterns module) 724
matchToiStr (patterns module) 725
matchToStr (patterns module) 725
matchWord (patterns module) 725
Math functions 623
math._acos 652
math.acos 652
math.acos32 653
math.acos64 653
math.acos80 653
math._acot 654
math.acot 654
math.acot32 654

math.acot64 654	math.imodl 635
math.acot80 654	math.imodq 626
math._acsc 655	math.imull 636
math.acsc 655	math.imulq 627
math.acsc32 655	math._ln 664
math.acsc64 655	math.ln 664
math.acsc80 655	math.ln32 664
math.addl 632	math.ln64 664
math.addq 623	math.ln80 664
math.andl 637	math._log 663
math.andq 628	math.log 663
math._asec 656	math.log32 663
math.asec 656	math.log64 663
math.asec32 656	math.log80 663
math.asec64 656	math.modl 634
math.asec80 656	math.modq 626
math._asin 651	math.mull 635
math.asin 651	math.mulq 627
math.asin32 651	math.negl 636
math.asin64 651	math.negq 628
math.asin80 651	math.notl 639
math._atan 646	math.notq 630
math.atan 646	math.orl 638
math.atan32 646	math.orq 629
math.atan64 646	math._sec 650
math.atan80 646	math.sec32 650
math._cos 642	math.sec64 650
math.cos 642	math.sec80 650
math.cos32 642	math.shll 639
math.cos64 642	math.shlq 630
math.cos80 642	math.shrl 640
math._cot 647	math.shrq 631
math.cot32 647	math._sin 641
math.cot64 648	math.sin 641
math.cot80 648	math.sin32 641
math._csc 649	math.sin64 641
math.csc32 649	math.sin80 641
math.csc64 649	math._sincos 645
math.csc80 649	math.sincos 645
math.divl 633	math.sincos32 645
math._exp 660	math.sincos64 645
math.exp 660	math.sincos80 645
math.exp32 660	math.subl 632
math.exp64 660	math.subq 624
math.exp80 660	math._tan 644
math.hhf 623	math.tan 644
math.idivl 633	math.tan32 644
math.idivq 625	math.tan64 644

math.tan80 644
 math.TenToX 659
 math._tenToX 659
 math.tenToX32 659
 math.tenToX64 659
 math.tenToX80 659
 math.TwoToX 658
 math._twoToX 658
 math.twoToX32 658
 math.twoToX64 658
 math.twoToX80 658
 math.xorl 638
 math.xorq 629
 math._YtoX 661
 math.ytoX 661
 math.YtoX32 661
 math.YtoX64 661
 math.YtoX80 661
 maxlen (blobs module) 40
 mem.alloc 671
 mem.alloc1 (memory module) 671
 mem.alloc2 (memory module) 672
 mem.allocBlockInHeap 677
 mem.blockInHeap (memory module) 677
 mem.free 673
 mem.freeBlockInHeap 678
 mem.getref 676
 mem.isInHeap 674
 mem.isInHeap (memory module) 674
 mem.newref 676
 mem.realloc 673
 mem.realloc1 673
 mem.realloc2 673
 mem.size 675
 mem.stat 675
 mem.talloc 674
 mem.zalloc 672
 member (character sets) 252
 Memory management 671
 memory.hhf 671
 MemoryAllocationFailure (exceptions module) 308
 MemoryFreeFailure (exceptions module) 308
 Memory-mapped I/O 667
 Menu separator items 498
 Menu widgets (HOWL) 497
 Menus (HOWL) 541
 merge32, merge16, merge8 (bits module) 28
 mkdir (filesys module) 463
 mmap.hhf 667
 mmap_t.close 669
 mmap_t.create 668
 mmap_t.destroy 668
 mmap_t.getFileName 669
 mmap_t.getMalloc 670
 mmap_t.getOpen 669
 mmap_t.open 668
 mmap_t.openNew 668
 modl (math module) 634
 modq (math module) 626
 move (HOWL) 528
 mSleep (os module) 682
 msStarted (timer class) 1134
 msStopped (timer class) 1134
 mull (math module) 635
 mulq (math module) 627

N

_name (HOWL) 525
 ndown (console module) 75
 ne (blobs module) 45
 ne (character sets) 258
 ne (strings module) 981
 negl (math module) 636
 negq (math module) 628
 newln (blobs module) 63
 newln (file class module) 318
 newln (file I/O module) 356
 newln (socket module) 779
 newln (stderr module) 805
 newln (stdout module) 887
 newref (memory module) 676
 nextWidget (HOWL) 525
 nibbles32, nibbles16, nibbles8 (bits module) 30
 nleft (console module) 75
 nodeInList (lists module) 617
 nodeInListReversed (lists module) 617
 nodePtr_t (lists module) 607
 NoMemory (exceptions module) 309
 norLessChar (patterns module) 718
 norLessCset (patterns module) 713
 norLessiChar (patterns module) 722
 normalize1 (filesys module) 456
 normalize2 (filesys module) 456

norMoreChar (patterns module) 718
 norMoreCset (patterns module) 714
 norMoreiChar (patterns module) 723
 notl (math module) 639
 notq (math routine) 630
 nright (console module) 76
 ntoMChar (patterns module) 719, 723
 ntoMCset (patterns module) 714
 numNodes (list module) 613
 nup (console module) 74

O

objectID (HOWL) 525
 onClick (HOWL) 530
 onClose (HOWL) 529
 onCreate (HOWL) 529
 onDblClick (HOWL) 530
 oneChar (patterns module) 716
 oneCset (patterns module) 710
 oneiChar (patterns module) 720
 oneOrMoreChar (patterns module) 717
 oneOrMoreCset (patterns module) 712
 oneOrMoreiChar (patterns module) 721
 oneOrMorePat (patterns module) 710
 oneOrMoreWS (patterns module) 728
 onePat (patterns module) 709
 One-shot timers (HOWL) 601
 onHeap (HOWL) 525
 onPaint (HOWL) 534
 Open (file class module) 315
 Open (file I/O module) 341
 open (memory-mapped files module) 668
 OpenNew (file class module) 315
 OpenNew (file I/O module) 343
 openNew (memory-mapped files module)
 668
 orl (math module) 638
 orq (math routine) 629
 OS functions 681
 os.hhf 681
 os.mSleep 682
 os.sleep 682
 os.system 681
 OutputFormat (date/time module) 280

P

pack (date/time module) 283
 pack (time module) 1116
 parentForm (HOWL) 525
 parentHandle (HOWL) 525

Passing byte parameters on the stack 3
 Passing dword parameters on the stack 5
 Passing lword parameters on the stack 7
 Passing parameters by reference and by
 value 2

Passing parameters to Standard Library
 routines 1

Passing qword parameters on the stack 6
 Passing tbyte parameters on the stack 7
 Passing word parameters on the stack 5

Passwords (HOWL) 508

pat.a_extract 727
 pat.arb 728
 pat.atPos 708
 pat.endMatch 707
 pat.exactlyNChar 717
 pat.exactlyNCset 713
 pat.exactlyNiChar 722
 pat.exactlyNtoMChar 719
 pat.exactlyNtoMCset 715
 pat.exactlyNtoMiChar 724
 pat.extract 726
 pat.fail 708
 pat.FailRec object 732
 pat.fence 708
 pat.firstNChar 718
 pat.firstNCset 713
 pat.firstNiChar 722
 pat.getPos 708
 pat.getWhiteSpace 727
 pat.getWordDelims 726
 pat.l_arb 729
 pat.l_ExactlyNtoMChar 720
 pat.l_ExactlyNtoMCset 715
 pat.l_ExactlyNtoMiChar 724
 pat.l_NorLessChar 718
 pat.l_NorLessCset 713
 pat.l_NorLessiChar 723
 pat.l_NorMoreChar 719
 pat.l_NorMoreCset 714
 pat.l_NorMoreiChar 723
 pat.l_NtoMChar 719
 pat.l_NtoMCset 714
 pat.l_NtoMiChar 724
 pat.l_OneOrMoreChar 717
 pat.l_OneOrMoreCset 712
 pat.l_OneOrMoreiChar 722
 pat.l_ZeroOrMoreChar 717

pat.l_ZeroOrMoreCset 712
 pat.l_ZeroOrMoreiChar 721
 pat.l_ZeroOrOneChar 716
 pat.l_ZeroOrOneCset 711
 pat.l_ZeroOrOneiChar 721
 pat.match 707
 pat.matchiStr 725
 pat.matchiWord 726
 pat.matchStr 724
 pat.matchToiStr 725
 pat.matchToStr 725
 pat.matchWord 725
 pat.norLessChar 718
 pat.norLessCset 713
 pat.norLessiChar 722
 pat.norMoreChar 718
 pat.norMoreCset 714
 pat.norMoreiChar 723
 pat.ntoMChar 719
 pat.ntoMCset 714
 pat.ntoMiChar 723
 pat.oneChar 716
 pat.oneCset 710
 pat.oneiChar 720
 pat.oneOrMoreChar 717
 pat.oneOrMoreCset 712
 pat.oneOrMoreiChar 721
 pat.oneOrMorePat 708, 710
 pat.oneOrMoreWS 728
 pat.onePat pattern matching function 709
 pat.peekChar 715
 pat.peekCset 710
 pat.peekiChar 720
 pat.peekWS 728
 pat.peekWSorEOS 728
 pat.position 707
 pat.setWhiteSpace 727
 pat.setWordDelims 726
 pat.skip 708
 pat._success_ macro 732
 pat.upToChar 716
 pat.upToCset 711
 pat.upToiChar 720
 pat.upToiStr 725
 pat.upToStr 725
 pat.WSorEOS 728
 pat.WSthenEOS 728
 pat.zeroOrMoreChar 716
 pat.zeroOrMoreCset 712
 pat.zeroOrMoreiChar 721
 pat.zeroOrMorePat 710
 pat.zeroOrMoreWS 727
 pat.zeroOrOneChar 716
 pat.zeroOrOneCset 711
 pat.zeroOrOneiChar 720
 pat.zeroOrOnePat 710
 Pattern matching 683
 peekc (stdin module) 874
 peekChar (patterns module) 715
 peekCset (patterns module) 710
 peekiChar (patterns module) 720
 peekWS (patterns module) 728
 peekWSorEOS (patterns module) 728
 Periodic timers (HOWL) 601
 Pie wedges (HOWL) 509
 PointerNotInHeap (exceptions module)
 308
 Polygons (HOWL) 509
 position (patterns module) 707
 Predicates (chars module) 66
 prefix (strings module) 986
 prefix3 (strings module) 987
 printExceptionError (exceptions module)
 311
 PrivInstr (exceptions module) 309
 processMessage (HOWL) 526
 Progress bars (HOWL) 511, 576
 Proxy function (remote procedure call)
 745
 Proxy functions (remote procedure calls)
 750
 psubset (character sets) 255
 psuperset (character sets) 256
 Push buttons (HOWL) 511
 put (blobs module) 64
 put (file class module) 332
 put (file I/O module) 424
 put (socket module) 793
 put (stderr module) 869
 put (stdout module) 951
 put (strings module) 1095
 putb (blobs module) 63
 putb (file class module) 319
 putb (file I/O module) 365
 putb (socket module) 781
 putb (stderr module) 813

putb (stdout module) 895
putbool (blobs module) 63
putbool (file class module) 317
putbool (file I/O module) 357
putbool (socket module) 779
putbool (stderr module) 805
putbool (stdout module) 887
putByte (blobs module) 57
putc (blobs module) 63
putc (file class module) 318
putc (file I/O module) 358
putc (socket module) 779
putc (stderr module) 806
putc (stdout module) 888
putcset (blobs module) 63
putcset (file class module) 318
putcset (file I/O module) 361
putcset (socket module) 780
putcset (stderr module) 809
puteset (stdout module) 891
putcSize (blobs module) 63
putcsize (file class module) 318
putcsize (file I/O module) 360
putcsize (socket module) 780
putcSize (stderr module) 808
putcSize (stdout module) 890
putd (blobs module) 63
putd (file class module) 321
putd (file I/O module) 373
putd (socket module) 783
putd (stderr module) 820
putd (stdout module) 902
putDword (blobs module) 58
pute32 (blobs module) 64
pute32 (file class module) 329
pute32 (file I/O module) 416
pute32 (socket module) 790
pute32 (stderr module) 861
pute32 (stdout module) 944
pute64 (blobs module) 64
pute64 (file class module) 329
pute64 (file I/O module) 417
pute64 (socket module) 791
pute64 (stderr module) 862
pute64 (stdout module) 944
pute80 (blobs module) 64
pute80 (file class module) 330
pute80 (file I/O module) 418
pute80 (socket module) 791
pute80 (stderr module) 863
pute80 (stdout module) 945
puth128 (blobs module) 63
puth128 (file class module) 323
puth128 (file I/O module) 385
puth128 (socket module) 785
puth128 (stderr module) 831
puth128 (stdout module) 914
puth128Size (file class module) 323
puth128Size (file I/O module) 386
puth128Size (socket module) 785
puth128Size (stderr module) 832
puth128Size (stdout module) 915
puth16 (blobs module) 63
puth16 (file class module) 320
puth16 (fileio module) 370
puth16 (socket module) 782
puth16 (stderr module) 818
puth16 (stdout module) 900
puth16Size (blobs module) 63
puth16Size (file I/O module) 371
puth16Size (fileclass module) 321
puth16Size (socket module) 782
puth16Size (stderr module) 819
puth16Size (stdout module) 901
puth32 (blobs module) 63
puth32 (file class module) 321
puth32 (file I/O module) 374
puth32 (socket module) 783
puth32 (stderr module) 821
puth32 (stdout module) 903
puth32Size (blobs module) 63
puth32Size (file class module) 321
puth32Size (file I/O module) 375
puth32Size (socket module) 783
puth32Size (stderr module) 822
puth32Size (stdout module) 904
puth64 (blobs module) 63
puth64 (file class module) 322
puth64 (file I/O module) 377
puth64 (socket module) 784
puth64 (stderr module) 824
puth64 (stdout module) 906
puth64Size (blobs module) 63
puth64Size (file class module) 322
puth64Size (file I/O module) 378
puth64Size (socket module) 784

puth64Size (stderr module) 825
 puth64Size (stdout module) 907
 puth8 (blobs module) 63
 puth8 (file class module) 320
 puth8 (fileio module) 366
 puth8 (socket module) 781
 puth8 (stdout module) 896
 puth80 (blobs module) 63
 puth80 (file class module) 322
 puth80 (file I/O module) 381
 puth80 (socket module) 784
 puth80 (stderr module) 827
 puth80 (stdout module) 910
 puth80Size (blobs module) 63
 puth80Size (file class module) 323
 puth80Size (file I/O module) 382
 puth80Size (socket module) 784
 puth80Size (stderr module) 828
 puth80Size (stdout module) 911
 puth8Size (blobs module) 63
 puth8Size (file class module) 320
 puth8Size (file I/O module) 367
 puth8Size (socket module) 782
 puth8Size (stderr module) 815
 puth8Size (stdout module) 897
 puti128 (blobs module) 63
 puti128 (file class module) 326
 puti128 (file I/O module) 399
 puti128 (socket module) 787
 puti128 (stderr module) 845
 puti128 (stdout module) 928
 puti128Size (blobs module) 63
 puti128size (file class module) 326
 puti128size (file I/O module) 400
 puti128size (socket module) 788
 puti128size (stderr module) 845
 puti128size (stdout module) 928
 puti16 (blobs module) 63
 puti16 (file class module) 324
 puti16 (file I/O module) 391
 puti16 (socket module) 786
 puti16 (stderr module) 837
 puti16 (stdout module) 920
 puti16Size (blobs module) 63
 puti16size (file class module) 325
 puti16size (file I/O module) 393
 puti16size (socket module) 786
 puti16Size (stderr module) 838
 puti16Size (stdout module) 921
 puti32 (blobs module) 63
 puti32 (file class module) 325
 puti32 (file I/O module) 394
 puti32 (socket module) 786
 puti32 (stderr module) 840
 puti32 (stdout module) 923
 puti32Size (blobs module) 63
 puti32size (file class module) 325
 puti32size (file I/O module) 395
 puti32size (socket module) 787
 puti32Size (stderr module) 841
 puti32Size (stdout module) 924
 puti64 (blobs module) 63
 puti64 (file class module) 325
 puti64 (file I/O module) 397
 puti64 (socket module) 787
 puti64 (stderr module) 842
 puti64 (stdout module) 925
 puti64Size (blobs module) 63
 puti64size (file class module) 326
 puti64size (file I/O module) 398
 puti64size (socket module) 787
 puti64Size (stderr module) 843
 puti64Size (stdout module) 926
 puti8 (blobs module) 63
 puti8 (file class module) 324
 puti8 (file I/O module) 388
 puti8 (socket module) 786
 puti8 (stderr module) 834
 puti8 (stdout module) 917
 puti8Size (blobs module) 63
 puti8size (file class module) 324
 puti8size (file I/O module) 390
 puti8size (socket module) 786
 puti8Size (stderr module) 836
 puti8Size (stdout module) 919
 putl (blobs module) 63
 putl (file class module) 323
 putl (file I/O module) 384
 putl (socket module) 785
 putl (stderr module) 830
 putl (stdout module) 913
 putLword (blobs module) 59
 putq (blobs module) 63
 putq (file class module) 322
 putq (file I/O module) 377
 putq (socket module) 783

putq (stderr module) 823
putq (stdout module) 905
putQword (blobs module) 58
putr32 (blobs module) 64
putr32 (file class module) 331
putr32 (file I/O module) 420
putr32 (socket module) 792
putr32 (stdout module) 947
putr64 (blobs module) 64
putr64 (file class module) 331
putr64 (file I/O module) 421
putr64 (socket module) 792
putr64 (stderr module) 866
putr64 (stdout module) 948
putr80 (blobs module) 64
putr80 (file class module) 331
putr80 (file I/O module) 423
putr80 (socket module) 793
putr80 (stderr module) 867
putr80 (stdout module) 949
puts (blobs module) 63
puts (file class module) 319
puts (file I/O module) 362
puts (socket module) 780
puts (stderr module) 810
puts (stdout module) 892
putsSize (blobs module) 63
putssize (file class module) 319
putssize (file I/O module) 363
putsSize (socket module) 780
putsSize (stderr module) 811
putsSize (stdout module) 893
puttb (blobs module) 63
puttb (file class module) 322
puttb (file I/O module) 380
puttb (socket module) 784
puttb (stderr module) 827
puttb (stdout module) 909
putTbyte (blobs module) 59
putu128 (blobs module) 64
putu128 (file class module) 328
putu128 (file I/O module) 413
putu128 (socket module) 790
putu128 (stderr module) 858
putu128 (stdout module) 941
putu128Size (blobs module) 64
putu128size (file class module) 328
putu128Size (file I/O module) 414

putu128Size (socket module) 790
putu128Size (stderr module) 859
putu128Size (stdout module) 941
putu16 (blobs module) 63
putu16 (file class module) 327
putu16 (file I/O module) 405
putu16 (socket module) 788
putu16 (stderr module) 850
putu16 (stdout module) 933
putu16Size (blobs module) 63
putu16size (file class module) 327
putu16size (socket module) 789
putu16Size (stderr module) 851
putu16Size (stdout module) 934
putu32 (blobs module) 63
putu32 (file class module) 327
putu32 (file I/O module) 408
putu32 (socket module) 789
putu32 (stderr module) 853
putu32 (stdout module) 936
putu32Size (blobs module) 63
putu32size (file class module) 327
putu32size (socket module) 789
putu32Size (stderr module) 854
putu32Size (stdout module) 937
putu64 (blobs module) 63
putu64 (file class module) 328
putu64 (file I/O module) 411
putu64 (socket module) 789
putu64 (stderr module) 855
putu64 (stdout module) 938
putu64Size (blobs module) 64
putu64size (file class module) 328
putu64size (file I/O module) 412
putu64size (socket module) 789
putu64Size (stderr module) 856
putu64Size (stdout module) 939
putu8 (blobs module) 63
putu8 (file class module) 326
putu8 (file I/O module) 402
putu8 (socket module) 788
putu8 (stderr module) 847
putu8 (stdout module) 930
putu8Size (blobs module) 63
putu8size (file class module) 327
putu8size (file I/O module) 404
putu8size (socket module) 788
putu8Size (stderr module) 849

- putu8Size (stdout module) 932
- putw (blobs module) 63
- putw (file class module) 320
- putw (file I/O module) 369
- putw (socket module) 782
- putw (stderr module) 817
- putw (stdout module) 899
- putWord (blobs module) 58
- putz (socket module) 780
- putzSize (socket module) 781
- Q**
- qSize (conversions module) 94
- qToBuf (conversions module) 104
- qToStr (conversions module) 124
- R**
- r32ToBuf (conversions module) 239
- r32ToStr (conversions module) 241
- r64ToBuf (conversions module) 238
- r64ToStr (conversions module) 240
- r80ToBuf (conversions module) 237
- r80ToStr (conversions module) 240
- Radio button sets 512
- Radio button styles 512
- Radio buttons 511
- Radio buttons (HOWL) 511
- Radio set buttons (HOWL) 513
- Random numbers 741
- rangeChar (character sets) 263
- rbrk (strings module) 1000
- rbrk2 (strings module) 1000
- rbrk3 (strings module) 1000
- rchpos (blobs module) 48
- rchpos (strings module) 996
- rchpos2 (blobs module) 48
- rchpos2 (strings module) 996
- rchpos3 (blobs module) 48
- rchpos3 (strings module) 997
- rcursor (blobs module) 40
- RDL (Remote procedure call Declaration Language) 746
- read (blobs module) 60
- read (file class module) 333
- read (file I/O module) 425
- read (socket module) 794
- read (stdin module) 872
- readAt (blobs module) 60
- readLn (blobs module) 64
- ReadLn (file class module) 333
- ReadLn (file I/O module) 426
- readLn (socket module) 795
- ReadLn (stdin module) 873
- Real to string output using decimal notation 1091
- Real to string output using scientific notation 1089
- realloc (blobs module) 38
- realloc (memory module) 673
- realloc1 (memory module) 673
- realloc2 (memory module) 673
- Rectangles (HOWL) 514
- recv (socket module) 763
- recvfrom (socket module) 763
- reduce (arrays module) 19
- reduction (arrays module) 19
- releaseSemaphore (threads module) 1112
- Remote Procedure Call Protocol 745
- Remote procedure call servers 751
- Remote procedure calls (RPCs) 745
- Remote procedure types 745
- removeChar (character sets) 272
- removeStr (character sets) 275
- removeStr2 (character sets) 276
- rename (filesys module) 464
- reset (blobs module) 42
- resize (HOWL) 528
- restart (timer class) 1135
- restoreCursor (console module) 76
- reverse (lists module) 619
- reverse (strings module) 1037
- reverse1 (strings module) 1037
- reverse2 (strings module) 1037
- reverse32, reverse16, reverse8 (bits module) 26
- rfindInCset (strings module) 1004
- rfindInCset2 (strings module) 1004
- rfindInCset3 (strings module) 1005
- right (console module) 75
- rindex (blobs module) 46
- rindex (strings module) 991
- rindex2 (blobs module) 46
- rindex2 (strings module) 991
- rindex3 (blobs module) 46
- rindex3 (strings module) 991
- rindexStr (blobs module) 46
- rindexStr2 (blobs module) 46
- rindexStr3 (blobs module) 46

- rmkdir (filesystems module) 465
- rmv1stChar1 (strings module) 1014
- rmv1stChar2 (strings module) 1015
- rmv1stWord3 (strings module) 1020
- rmvLastChar1 (strings module) 1015
- rmvLastChar2 (strings module) 1016
- rmvLastWord2 (strings module) 1020
- rmvLastWord3 (strings module) 1021
- rmvTrailingSpaces1 (strings module) 979
- rmvTrailingSpaces2 (strings module) 980
- roman (conversions module) 245
- Round rectangles (HOWL) 514
- RPC (remote procedure calls) 745
- RPC Declaration Language 746
- RPC Servers 751
- rskipInCset (strings module) 1001
- rskipInCset2 (strings module) 1001
- rskipInCset3 (strings module) 1002
- rspan (strings module) 999
- rspan2 (strings module) 999
- rspan3 (strings module) 999
- Running (timer class) 1134
- Run-time traits (stl) 956

- S**
- save (blobs module) 55
- saveCursor (console module) 76
- Scanning functions (blobs module) 45
- Scroll bars (HOWL) 515, 577
- scrollDown (console module) 81
- scrollUp (console module) 80
- search (lists module) 620
- _sec (math module) 650
- sec (math module) 650
- sec32 (math module) 650
- sec64 (math module) 650
- sec80 (math module) 650
- secsBetweenTimes (time class module) 1130
- secsBetweenTimes (time module) 1119
- select (socket module) 764
- Semaphores 1110
- send (socket module) 765
- sendto (socket module) 765
- Server applications (socket module) 771
- server_t.close 775
- server_t.create 775
- server_t.destroy 775
- setAdrs (socket module) 777
- setAttrs (console module) 81
- setDelimiters (conversions module) 89
- setEvent (threads module) 1107
- set_exStyle (HOWL) 528
- set_focus (HOWL) 529
- setFormat (date/time module) 290
- setFormat (time module) 1123
- set_height (HOWL) 528
- setLength (blobs module) 39
- setMaxLen (blobs module) 40
- set_onHeap (HOWL) 526
- set_parentHandle (HOWL) 526, 528
- setPort (socket class module) 778
- setxCursor (blobs module) 41
- setSeparator (date/time module) 290
- set_style (HOWL) 528
- setTimeout (socket class module) 777
- setTimeout (socket module) 768
- setTimeout2 (socket class module) 777
- setTLS (threads module) 1106
- setUnderscores (conversions module) 85
- setunion (character sets) 268
- setwCursor (blobs module) 41
- setWhiteSpace (patterns module) 727
- set_width (HOWL) 528
- setWordDelims (patterns module) 726
- set_x (HOWL) 528
- set_y (HOWL) 528
- Shell commands 681
- shll (math module) 639
- shlq (math routine) 630
- show (HOWL) 526, 529
- shrl (math module) 640
- shrq (math module) 631
- Signed integer concatenation functions 1068
- Signed integer input (socket module) 796
- Signed integer numeric output (socket module) 785
- _sin (math module) 641
- sin (math module) 641
- sin32 (math module) 641
- sin64 (math module) 641
- sin80 (math module) 641
- _sincos (math module) 645
- sincos (math module) 645
- sincos32 (math module) 645
- sincos64 (math module) 645

sincos80 (math module) 645
 SingleStep (exceptions module) 309
 size (filesys module) 462
 size (memory module) 675
 skip (patterns module) 708
 skipInCset (strings module) 1000
 skipInCset2 (strings module) 1000
 skipInCset3 (strings module) 1001
 sleep (os module) 682
 sock.a_adrsToStr 761
 sock.accept 762
 sock.adrsToStr 761
 sock.bind 762
 sock.close 763
 sock.connect 763
 sock.fd_clr 769
 sock.fd_isset 769
 sock.fd_set 769
 sock.fd_zero 769
 sock.gethostbyaddr 769
 sock.gethostbyname 768
 sock.gethostname 768
 sock.getpeername 769
 sock.getsockname 769
 sock.listen 763
 sock.recv 763
 sock.recvfrom 763
 sock.select 764
 sock.send 765
 sock.sendto 765
 sock.setTimeout 768
 sock.socket 765
 sock.socketCleanup 761
 sock.socketInit 761
 sock.strToAdrs 762
 socket (socket module) 765
 Socket class operations 775
 Socket classes 770
 socketCleanup (socket module) 761
 socketInit (socket class module) 761
 Sockets 761
 sort (lists module) 620
 span (strings module) 999
 span2 (strings module) 999
 span3 (strings module) 999
 spread2 (strings module) 1024– 1025
 spread3 (strings module) 1025
 StackOverflow (exceptions module) 309
 Standard Error output routines 803
 Standard input routines 871
 Standard output routines 885
 Standard Template Library 953
 start (timer class) 1135
 stat (memory module) 675
 stderr.hhf 803
 stderr.newLine 805
 stderr.put 869
 stderr.putb 813
 stderr.putbool 805
 stderr.putc 806
 stderr.putcset 809
 stderr.putcSize 808
 stderr.putd 820
 stderr.pute32 861
 stderr.pute64 862
 stderr.pute80 863
 stderr.puth128 831
 stderr.puth128Size 832
 stderr.puth16 818
 stderr.puth16Size 819
 stderr.puth32 821
 stderr.puth32Size 822
 stderr.puth64 824
 stderr.puth64Size 825
 stderr.puth80 827
 stderr.puth80Size 828
 stderr.puth8Size 815
 stderr.puti128 845
 stderr.puti128Size 845
 stderr.puti16 837
 stderr.puti16Size 838
 stderr.puti32 840
 stderr.puti32Size 841
 stderr.puti64 842
 stderr.puti64Size 843
 stderr.puti8 834
 stderr.puti8Size 836
 stderr.putl 830
 stderr.putq 823
 stderr.putr64 866
 stderr.putr80 867
 stderr.puts 810
 stderr.putsSize 811
 stderr.puttb 827
 stderr.putu128 858
 stderr.putu128Size 859

stderr.putu16 850
stderr.putu16Size 851
stderr.putu32 853
stderr.putu32Size 854
stderr.putu64 855
stderr.putu64Size 856
stderr.putu8 847
stderr.putu8Size 849
stderr.putw 817
stderr.write 804
stdin.a_gets 875
stdin.eoln 873
stdin.eoln2 873
stdin.FlushInput 871
stdin.get 883
stdin.getc 874
stdin.getf 883
stdin.geth128 877
stdin.geth16 876
stdin.geth32 876
stdin.geth64 877
stdin.geth8 875
stdin.geti128 880
stdin.geti16 878
stdin.geti32 879
stdin.geti64 879
stdin.geti8 878
stdin.gets 874
stdin.getu128 882
stdin.getu16 881
stdin.getu32 881
stdin.getu64 882
stdin.getu8 880
stdin.handle 871
stdin.hhf 871
stdin.peekc 874
stdin.read 872– 873
stdin.ReadLn 873
stdout.handle 803, 885
stdout.hhf 885
stdout.newln 887
stdout.put 951
stdout.putb 895
stdout.putbool 887
stdout.putc 888
stdout.putcset 891
stdout.putcSize 890
stdout.putd 902
stdout.pute32 944
stdout.pute64 944
stdout.pute80 945
stdout.puth128 914
stdout.puth128Size 915
stdout.puth16 900
stdout.puth16Size 901
stdout.puth32 903
stdout.puth32Size 904
stdout.puth64 906
stdout.puth64Size 907
stdout.puth8 896
stdout.puth80 910
stdout.puth80Size 911
stdout.puth8Size 897
stdout.puti128 928
stdout.puti128Size 928
stdout.puti16 920
stdout.puti16Size 921
stdout.puti32 923
stdout.puti32Size 924
stdout.puti64 925
stdout.puti64Size 926
stdout.puti8 917
stdout.puti8Size 919
stdout.putl 913
stdout.putq 905
stdout.putr32 947
stdout.putr64 948
stdout.putr80 949
stdout.puts 892
stdout.putsSize 893
stdout.puttb 909
stdout.putu128 941
stdout.putu128Size 941
stdout.putu16 933
stdout.putu16Size 934
stdout.putu32 936
stdout.putu32Size 937
stdout.putu64 938
stdout.putu64Size 939
stdout.putu8 930
stdout.putu8Size 932
stdout.putw 899
stdout.write 886
stl.elementsAreObjects_c 956– 957, 959
stl.fastAppend_c 956– 957, 959
stl.fastElementSwap_c 956– 957, 960

stl.fastInsert_c 956– 957, 959
 stl.fastPrepend_c 956– 957, 959
 stl.fastRemove_c 956– 957, 959
 stl.fastSearch_c 956– 957, 960
 stl.fastSwap_c 956– 957, 960
 stl.isArray_c 956– 957
 stl.isArray_c 958
 stl.isContainer_c 956– 957
 stl.isDeque_c 956– 958
 stl.asList_c 956– 958
 stl.isRandomAccess_c 956– 958
 stl.isTable_c 956– 958
 stl.isVector_c 956– 957
 stl.supportsAppend_c 957– 958
 stl.supportsCompare_c 956– 958
 stl.supportsCursor_c 956– 957, 959
 stl.supportsElementSwap_c 956– 957,
 959
 stl.supportsForEach_c 956– 957, 959
 stl.supportsInsert_c 956– 958
 stl.supportsObjSwap_c 956– 957, 959
 stl.supportsOutput_c 956– 958
 stl.supportsPrepend_c 956– 958
 stl.supportsRemove_c 956– 958
 stl.supportsForEach_c 956– 957
 stl.supportsSearch_c 956– 957, 959
 stl.supportsSwap_c 956– 957
 stl.vector 953
 stop (timer class) 1135
 str.a_cat 1040
 str.a_catbuf 1045
 str.a_catbuf2 1045
 str.a_catbuf3 1045
 str.a_catsub 1043
 str.a_catz 1042
 str.a_columnize2 1022
 str.a_columnize3 1022
 str.a_cpy 965
 str.a_cpyz 965
 str.a_delete 973
 str.a_delLeadingSpaces 975
 str.a_delTrailingSpaces 976
 str.a_deTab2 1026
 str.a_deTab3 1027
 str.a_enTab2 1030
 str.a_enTab3 1030
 str.a_first 967
 str.a_getField2 1011
 str.a_getField3 1012
 str.a_insert 972
 str.a_last 969
 str.alloc (memory/string module) 679
 str.a_lower 1035
 str.a_reverse 1036
 str.a_rmv1stWord1 1016
 str.a_rmv1stWord2 1017
 str.a_rmvLastWord1 1018
 str.a_rmvLastWord2 1018
 str.a_rmvTrailingSpaces 979
 str.a_spread2 1024
 str.a_substr 966
 str.a_translate 1038
 str.a_trim 978
 str.a_truncate 970
 str.a_upper 1034
 str.brk 999
 str.brk2 999
 str.brk3 1000
 str.cat 1041
 str.cat2 1041
 str.cat3 1041
 str.catb 1053
 str.catbool 1047
 str.catbuf 1046
 str.catbuf2 1046
 str.catbuf3a 1046
 str.catbuf3b 1046
 str.catbuf4 1046
 str.catc 1048
 str.catcset 1050
 str.catcSize 1049
 str.catd 1059
 str.cate32 1089
 str.cate64 1090
 str.cate80 1090
 str.cath128 1066
 str.cath128Size 1067
 str.cath16 1057
 str.cath16Size 1058
 str.cath32 1060
 str.cath32Size 1060
 str.cath64 1062
 str.cath64Size 1062
 str.cath80 1064
 str.cath80Size 1064
 str.cati128 1076

str.cati128Size 1077
str.cati16 1071
str.cati16Size 1072
str.cati32 1073
str.cati32Size 1073
str.cati64 1075
str.cati64Size 1075
str.cati8 1068
str.cati8Size 1070
str.catl 1066
str.catq 1061
str.catr32 1091
str.catr64 1092
str.catr80 1093
str.cats 1051
str.catsSize 1052
str.catsub 1043
str.catsub4 1044
str.catsub5 1044
str.cattb 1064
str.catu128 1087
str.catu128Size 1087
str.catu16 1081
str.catu16Size 1082
str.catu32 1083
str.catu32Size 1083
str.catu64 1085
str.catu64Size 1085
str.catu8 1079
str.catu8Size 1080
str.catw 1056
str.catz 1042
str.charInStr 1010
str.chpos 994
str.chpos2 994
str.chpos3 994
str.columnize3 1023
str.columnize4 1023
str.cpy 965
str.cpyz 966
str.delete 974
str.delete3 974
str.delete4 974
str.delLeadingSpaces 975– 976
str.delLeadingSpaces1 976
str.delTrailingSpaces 977
str.delTrailingSpaces1 977
str.delTrailingSpaces2 977
str.deTab2 1027
str.deTab3a 1028
str.deTab3b 1028
str.deTab4 1029
str.enTab2 1031
str.enTab3a 1032
str.enTab3b 1032
str.enTab4 1033
str.eq 980
str.findInCset 1003
str.findInCset2 1003
str.findInCset3 1003
str.first 968
str.first2 968
str.first3 968
str.free (memory/string module) 679
str.ge 983
str.getField3 1013
str.getField4 1013
str.getref 679
str.gt 982
str.ichpos 995
str.ichpos2 995
str.ichpos3 995
str.ieq 983
str.ige 985
str.igt 985
str.iindex 989
str.iindex3 990
str.ile 985
str.ilt 984
str.index 988
str.index2 988
str.index3 988
str.ine 984
str.init 963
str.insert 972
str.insert3 972
str.insert4 973
str.irchpos 997
str.irchpos2 998
str.irchpos3 998
str.irindex 992
str.irindex2 992
str.irindex3 993
str.isInHeap (memory/string module) 679
str.last 969
str.last2 969

str.last3 970
 str.le 982
 str.length 964
 str.lower 1036
 str.lower1 1036
 str.lower2 1036
 str.lt 981
 str.ne 981
 str.newref (memory/string module) 679
 str.prefix 986
 str.prefix3 987
 str.put 1095
 str.rbrk 1000
 str.rbrk2 1000
 str.rbrk3 1000
 str.rchpos 996
 str.rchpos2 996
 str.rchpos3 997
 str.realloc (memory/string module) 679
 str.reverse 1037
 str.reverse1 1037
 str.reverse2 1037
 str.rfindInCset 1004
 str.rfindInCset2 1004
 str.rfindInCset3 1005
 str.rindex 991
 str.rindex2 991
 str.rindex3 991
 str.rmv1stChar1 1014
 str.rmv1stChar2 1015
 str.rmv1stWord2rmv1stWord2 (strings
 module) 1019
 str.rmv1stWord3 1020
 str.rmvLastChar1 1015
 str.rmvLastChar2 1016
 str.rmvLastWord2 1020
 str.rmvLastWord3 1021
 str.rmvTrailingSpaces1 979
 str.rmvTrailingSpaces2 980
 str.rskipInCset 1001
 str.rskipInCset2 1001
 str.rskipInCset3 1002
 str.rspan 999
 str.rspan2 999
 str.rspan3 999
 str.skipInCset 1000
 str.skipInCset2 1000
 str.skipInCset3 1001
 str.span 999
 str.span2 999
 str.span3 999
 str.spread2 1025
 str.spread3 1025
 str.strvar 963
 str.substr 967
 str.talloc (memory/string module) 679
 str.tokenCnt1 1005
 str.tokenCnt2 1006
 str.tokenInStr 1009
 str.tokenInStr2 1009
 str.tokenize 1006
 str.tokenize3 1006
 str.tokenize4 1008
 str.translate 1039
 str.translate3 1039
 str.translate4 1039
 str.trim 978
 str.trim1 978
 str.trim2 978
 str.truncate 971
 str.truncate2 971
 str.truncate3 971
 str.upper 1034
 str.upper1 1034
 str.upper2 1035
 str.wordInStr 1010
 String allocation macros and functions 963
 String assignment 964
 String comparison functions 980
 String concatenation functions 1040
 String concatenation functions 1048
 String conversion functions 1033
 String deletion 972
 String extraction functions (pattern match-
 ing module) 726
 String formatting routines 1021
 String insertion and deletion 972
 String length calculations 964
 String matching functions 724
 String memory allocation 678
 String parsing functions 1005
 String Searching Functions 986
 String value concatenation functions 1047
 StringIndexError (exceptions module) 305
 StringOverflow (exceptions module) 305
 Strings 961

strings.hhf 961
 strToAdrs (socket module) 762
 strToFlt (conversions module) 245
 strToh128 (conversions module) 155
 strToh16 (conversions module) 152
 strToh32 (conversions module) 153
 strToh64 (conversions module) 154
 strToh8 (conversions module) 151
 strToi128 (conversions module) 191
 strToi16 (conversions module) 188
 strToi32 (conversions module) 189
 strToi64 (conversions module) 190
 strToi8 (conversions module) 187
 strTou128 (conversions module) 228
 strTou16 (conversions module) 224
 strTou32 (conversions module) 225
 strTou64 (conversions module) 226
 strTou8 (conversions module) 223
 subBlob (blobs module) 44
 subDays (date module) 288
 subDays (date/time module) 299
 subHours (time class module) 1130
 subHours (time module) 1120
 subl (math module) 632
 subMins (time class module) 1130
 subMins (time module) 1120
 subMonths (date/time module) 288, 299
 subq (math routine) 624
 subSecs (time class module) 1130
 subSecs (time module) 1120
 subset (character sets) 253
 substr (strings module) 967
 Substring functions 966
 subYears (date/time module) 288, 299
 superset (character sets) 254
 supportsAppend_c (stl) 957– 958
 supportsCompare_c (stl) 956– 958
 supportsCursor_c (stl) 956– 957, 959
 supportsElementSwap_c (stl) 956– 957,
 959
 supportsForEach_c (stl) 956– 957, 959
 supportsInsert_c (stl) 956– 958
 supportsObjSwap_c (stl) 956– 957, 959
 supportsOutput_c (stl) 956– 958
 supportsPrepend_c (stl) 956– 958
 supportsRemove_c (stl) 956– 958
 supportsrForEach_c (stl) 956– 957
 supportsrForeach_c (stl) 959

supportsSearch_c (stl) 956– 957, 959
 supportsSwap_c (stl) 957
 switch macro 1097
 Synchronous remote procedures 745
 system (os module) 681
 System icons (HOWL) 506
 System time 1122
T
 Tab pages (HOWL) 597
 Tabbed forms 545
 Table (stl) 960
 Table class 1099
 tableNode_t 1099
 Tables 1099
 tables.hhf 1099
 table_t.create 1099– 1100
 table_t.destroy 1099– 1100
 table_t.getNode 1099, 1102
 table_t.item 1099
 table_t.lookup 1099, 1101
 malloc (memory module) 674
 _tan (math module) 644
 tan (math module) 644
 tan32 (math module) 644
 tan64 (math module) 644
 tan80 (math module) 644
 tbSize (conversions module) 94
 tbToBuf (conversions module) 105
 tbToStr (conversions module) 126
 Templates (stl) 954
 TenToX (math module) 659
 _tenToX (math module) 659
 tenToX32 (math module) 659
 tenToX64 (math module) 659
 tenToX80 (math module) 659
 Text (HOWL) 592
 Text editor widgets (HOWL) 516
 Thread local storage 1105
 thread.create 1103
 thread.createCriticalSection 1109
 thread.createEvent 1107
 thread.createSemaphore 1110
 thread.createTLS 1105
 thread.deleteCriticalSection 1109
 thread.deleteEvent 1107
 thread.deleteSemaphore 1111
 thread.enterCriticalSection 1109
 thread.getCurrentThreadHandle 1105

thread.getTLS 1106
 thread.leaveCriticalSection 1110
 thread.releaseSemaphore 1112
 thread.setEvent 1107
 thread.setTLS 1106
 thread.waitForEvent 1108
 thread.waitSemaphore 1111
 Threads 1103
 threads.hhf 1103
 Three-state check boxes 500
 Time arithmetic 1119
 Time conversions 1116
 Time delay functions 681
 Time functions 1113
 Time string conversions 1123
 time.addHours 1121
 time.addMins 1121
 time.addSecs 1121
 time.a_toString 1123
 time.curTime 1122, 1130
 time.durationToSecs 1116
 time.fromSecs 1117
 time.fromUnixTime 1118
 time.fromWinFileTime 1119
 time._isValid 1115
 time.isValid 1115
 time.pack 1116
 time.secsBetweenTimes 1119
 time.setFormat 1123
 time.subHours 1120
 time.subMins 1120
 time.subSecs 1120
 time.timerec 1113
 time._toSecs 1117
 time.toSecs 1117
 time.toString 1123
 time.toUnixTime 1117
 time.toWinFileTime 1118
 time.unpack 1116
 time.utcTime 1122, 1130
 time.validate 1114
 TimeOverflow (exceptions module) 309
 Timer functions 1133
 Timer procedures and methods 1134
 Timer widgets (HOWL) 519
 timer.hhf 1133
 timerec (date/time module) 1113
 Timers (HOWL) 601
 timer_t 1133
 timer_t.Accumulated 1134
 timer_t.checkPoint 1135
 timer_t.create 1134
 timer_t.DateStarted 1134
 timer_t.DateStopped 1134
 timer_t.msStarted 1134
 timer_t.msStopped 1134
 timer_t.restart 1135
 timer_t.Running 1134
 timer_t.start 1135
 timer_t.stop 1135
 timer_t.TimeStarted 1134
 timer_t.TimeStopped 1134
 TimeStarted (timer class) 1134
 TimeStopped (timer class) 1134
 today (date/time module) 289, 299
 toJulian (date/time module) 283, 298
 tokenCnt1 (strings module) 1005
 tokenCnt2 (strings module) 1006
 tokenInStr (strings module) 1009
 tokenInStr2 (strings module) 1009
 tokenize (strings module) 1006
 tokenize3 (strings module) 1006
 tokenize4 (strings module) 1008
 toLower (chars module) 65
 toNativePath1 (filesys module) 460
 toNativePath2 (filesys module) 460
 TooManyCmdLnParms (exceptions module) 306
 toSecs (time class module) 1129
 _toSecs (time module) 1117
 toSecs (time module) 1117
 toString (date/time module) 291, 299
 toString (time class module) 1131
 toString (time module) 1123
 toUnixPath (filesys module) 457
 toUnixPath2 (filesys module) 458
 toUnixTime (time module) 1117
 toUpper (chars module) 65
 toWin32Path1 (filesys module) 459
 toWin32Path2 (filesys module) 459
 toWinFileTime (time module) 1118
 Track bar widgets (HOWL) 516
 Track bars (HOWL) 577
 Trait constants 957
 traits (stl classes) 955
 Transcendental arithmetic operations 640

- translate (strings module) 1039
- translate3 (strings module) 1039
- translate4 (strings module) 1039
- transpose (arrays module) 20
- trim (strings module) 978
- trim1 (strings module) 978
- trim2 (strings module) 978
- truncate (strings module) 971
- truncate2 (strings module) 971
- truncate3 (strings module) 971
- _twoToX (math module) 658
- twoToX (math module) 658
- twoToX32 (math module) 658
- twoToX64 (math module) 658
- twoToX80 (math module) 658
- typeName field in stl classes 960

- U**
- u128Size (conversions module) 196
- u128ToBuf (conversions module) 202
- u128ToStr (conversions module) 216
- _u16Size (conversions module) 193
- u16Size (conversions module) 194
- u16ToBuf (conversions module) 199
- u16ToStr (conversions module) 208
- _u32Size (conversions module) 193
- u32Size (conversions module) 195
- u32ToBuf (conversions module) 200
- u32ToStr (conversions module) 211
- u64Size (conversions module) 195
- u64ToBuf (conversions module) 201
- u64ToStr (conversions module) 214
- _u8Size (conversions module) 193
- u8Size (conversions module) 193
- u8ToBuf (conversions module) 197
- u8ToStr (conversions module) 204
- Underscore control 84
- unionChar (character sets) 271
- unionStr (character sets) 273
- unionStr2 (character sets) 274
- UnknownException (exception) 305, 308
- unpack (date/time module) 283
- unpack (time module) 1116
- Unsigned integer concatenation functions 1078
- Unsigned integer conversions 192
- Unsigned integer numeric output (socket module) 788
- up (console module) 74

- V**
- v (args module) 10
- validate (date/time module) 282, 298
- validate (time class module) 1129
- validate (time module) 1114
- ValueOutOfRange (exceptions module) 305
- Variable length hexadecimal numeric to buffer conversions 108
- Vector (stl) 960
- Views (HOWL) 597
- visible (HOWL) 525

- W**
- wabsEditBox_t 535
- waitForEvent (threads module) 1108
- waitSemaphore (threads module) 1111
- wBase_t 521, 523
- wBitmap 510
- wBitmap_t 548
- wButton_t 530
- wCheckable_t 532
- wCheckBox 501
- wCheckBox3 502
- wCheckBox3LT 502
- wCheckBox3LT_t 559
- wCheckBox3_t 558
- wCheckBoxLT 502
- wCheckBoxLT_t 560
- wCheckBox_t 557
- wClickable_t 529
- wComboBox 502
- wComboBox_t 574
- wContainer_t 539
- wcursor (blobs module) 41

wDragListBox 503
 wDragListBox_t 573
 wEditBox 504
 wEditBox_t 566
 wEllipse 505
 wEllipse_t 550
 wFilledFrame_t 534
 wFont_t 592
 wForm 486, 495– 496
 wForm_t 541
 wGroupBox 506
 wGroupBox_t 547
 wIcon 506
 wIcon_t 591
 widgetProc 493
 WidthTooBig (exceptions module) 306
 Window objects (HOWL) 599
 window_t 599
 wLabel 507
 wLabel_t 594
 wListBox 508
 wListBox_t 570
 wMainMenu 497
 wMenuItem 498
 wMenuItem_t 543
 wMenuSeparator 498
 wMenu_t 543
 wordInStr (strings module) 1010
 wPasswdBox 508
 wPasswdBox_t 567
 wPie 509
 wPie_t 551
 wPolygon 509
 wPolygon_t 553
 wProgressBar 511
 wProgressBar_t 576
 wPushButton 493, 495, 511
 wPushButton_t 561
 wRadioButton 511
 wRadioButtonLT 512
 wRadioButtonLT_t 562
 wRadioButton_t 561
 wRadioSet 512
 wRadioSetButton 513
 wRadioSetButtonLT 513
 wRadioSetButtonLT_t 565
 wRadioSetButton_t 564
 wRadioSet_t 563

wRectangle 514
 wRectangle_t 555
 write (blobs module) 55
 write (file class module) 317
 write (file I/O module) 354
 write (socket module) 778
 write (stderr module) 804
 write (stdout module) 886
 writeAt (blobs module) 57
 Writing your own pattern matching routines 729
 wRoundRect 514
 wRoundRect_t 556
 wScrollBar 515
 wScrollBar_t 578
 wSize (conversions module) 93
 WSorEOS (patterns module) 728
 WSthenEOS (patterns module) 728
 wSubMenu 498
 wSurface_t 533
 wTab 499
 wTabPage_t 597
 wTabs_t 545
 wTextEdit 516
 wTextEdit_t 568
 wTimer 519
 wTimer_t 601
 wToBuf (conversions module) 102
 wToStr (conversions module) 119
 wTrackBar 516
 wTrackBar_t 583
 wType (HOWL) 521, 524
 wUpDown 517– 518
 wUpDown_t 587, 589
 wView_t 599
 wVisual_t 526

X

xchgNodes (lists module) 620
 xorl (math module) 638
 xorq (math routine) 629

Y

_YtoX (math module) 661
 ytoX (math module) 661
 YtoX32 (math module) 661
 YtoX64 (math module) 661
 YtoX80 (math module) 661

Z

zalloc (memory module) 672

- zcmp (zstrings module) *1139*
- zeroOrMoreChar (patterns module) *716*
- zeroOrMoreCset (patterns module) *712*
- zeroOrMoreiChar (patterns module) *721*
- zeroOrMorePat (patterns module) *710*
- zeroOrMoreWS (patterns module) *727*
- zeroOrOneChar (patterns module) *716*
- zeroOrOneCset (patterns module) *711*
- zeroOrOneiChar (patterns module) *720*
- zeroOrOnePat (patterns module) *710*
- Zero-terminated strings *1137*
- zstr.cat *1140*
- zstr.cpy *1140*
- zstr.len *1138*
- zstr.zcmp *1139*
- zstring.hhf *1137*