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*****
9037 Sun Jan 11 20:17:00 2015
new/usr/src/head/stdlib.h
5187 missing functions in stdlib.h : mkostemp, mkostemps & mkdtemp
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
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16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23  * Copyright 2014 Garrett D'Amore <garrett@damore.org>
24  * Copyright (c) 2013 Gary Mills
25  *
26  * Copyright (c) 1989, 2010, Oracle and/or its affiliates. All rights reserved.
27  */

29 /* Copyright (c) 2013, OmniTI Computer Consulting, Inc. All rights reserved. */

31 /*      Copyright (c) 1988 AT&T */
32 /*      All Rights Reserved      */

34 #ifndef _STDLIB_H
35 #define _STDLIB_H

37 #include <iso/stdlib_iso.h>
38 #include <iso/stdlib_c99.h>

40 #if defined(__EXTENSIONS__) || defined(_XPG4)
41 #include <sys/wait.h>
42 #endif

44 /*
45  * Allow global visibility for symbols defined in
46  * C++ "std" namespace in <iso/stdlib_iso.h>.
47  */
48 #if __cplusplus >= 199711L
49 using std::div_t;
50 using std::ldiv_t;
51 using std::size_t;
52 using std::abort;
53 using std::abs;
54 using std::atexit;
55 using std::atof;
56 using std::atoi;
57 using std::atol;
58 using std::bsearch;
59 using std::calloc;
60 using std::div;
61 using std::exit;

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62 using std::free;
63 using std::getenv;
64 using std::labs;
65 using std::ldiv;
66 using std::malloc;
67 using std::mblen;
68 using std::mbstowcs;
69 using std::mbtowc;
70 using std::qsort;
71 using std::rand;
72 using std::realloc;
73 using std::srand;
74 using std::strtod;
75 using std::strtol;
76 using std::strtoul;
77 using std::system;
78 using std::wcstombs;
79 using std::wctomb;
80 #endif

82 #ifdef __cplusplus
83 extern "C" {
84 #endif

86 #ifndef _UID_T
87 #define _UID_T
88 typedef unsigned int    uid_t;          /* UID type          */
89 #endif /* !_UID_T */

91 /* large file compilation environment setup */
92 #if !defined(_LP64) && _FILE_OFFSET_BITS == 64

94 #ifdef __PRAGMA_REDEFINE_EXTNAME
95 #pragma redefine_extname    mkstemp        mkstemp64
96 #pragma redefine_extname    mkstemp64     mkstemp64
97 #pragma redefine_extname    mkostemp      mkostemp64
98 #pragma redefine_extname    mkostemp64   mkostemp64
99 #endif /* !codereview */
100 #else /* __PRAGMA_REDEFINE_EXTNAME */
101 #define mkstemp              mkstemp64
102 #define mkstemp64           mkstemp64
103 #define mkostemp            mkostemp64
104 #define mkostemp64         mkostemp64
105 #endif /* !codereview */
106 #endif /* !_PRAGMA_REDEFINE_EXTNAME */

108 #endif /* _FILE_OFFSET_BITS == 64 */

110 /* In the LP64 compilation environment, all APIs are already large file */
111 #if defined(_LP64) && defined(_LARGEFILE64_SOURCE)

113 #ifdef __PRAGMA_REDEFINE_EXTNAME
114 #pragma redefine_extname    mkstemp64      mkstemp
115 #pragma redefine_extname    mkstemp64     mkstemp64
116 #pragma redefine_extname    mkostemp64    mkostemp
117 #pragma redefine_extname    mkostemp64    mkostemp64
118 #endif /* !codereview */
119 #else /* __PRAGMA_REDEFINE_EXTNAME */
120 #define mkstemp64           mkstemp
121 #define mkstemp64         mkstemp64
122 #define mkostemp64         mkostemp
123 #define mkostemp64       mkostemp64
124 #endif /* !codereview */
125 #endif /* !_PRAGMA_REDEFINE_EXTNAME */

127 #endif /* _LP64 && _LARGEFILE64_SOURCE */

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129 #if defined(__EXTENSIONS__) || \
130     (!defined(_STRICT_STDC) && !defined(_XOPEN_OR_POSIX)) || \
131     (_POSIX_C_SOURCE - 0 >= 199506L) || defined(_REENTRANT)
132 extern int rand_r(unsigned int *);
133 #endif

135 extern void _exithandle(void);

137 #if defined(__EXTENSIONS__) || \
138     (!defined(_STRICT_STDC) && !defined(_POSIX_C_SOURCE)) || \
139     defined(_XPG4)
140 extern double drand48(void);
141 extern double erand48(unsigned short *);
142 extern long jrand48(unsigned short *);
143 extern void lcong48(unsigned short *);
144 extern long lrand48(void);
145 extern long mrand48(void);
146 extern long nrand48(unsigned short *);
147 extern unsigned short *seed48(unsigned short *);
148 extern void srand48(long);
149 extern int putenv(char *);
150 extern void setkey(const char *);
151 #endif /* defined(__EXTENSIONS__) || !defined(_STRICT_STDC) ... */

153 /*
154  * swab() has historically been in <stdlib.h> as delivered from AT&T
155  * and continues to be visible in the default compilation environment.
156  * As of Issue 4 of the X/Open Portability Guides, swab() was declared
157  * in <unistd.h>. As a result, with respect to X/Open namespace the
158  * swab() declaration in this header is only visible for the XPG3
159  * environment.
160  */
161 #if (defined(__EXTENSIONS__) || \
162     (!defined(_STRICT_STDC) && !defined(_POSIX_C_SOURCE))) && \
163     (!defined(_XOPEN_SOURCE) || (defined(_XPG3) && !defined(_XPG4)))
164 #ifndef _SSIZE_T
165 #define _SSIZE_T
166 #if defined(_LP64) || defined(_I32LPx)
167 typedef long    ssize_t;      /* size of something in bytes or -1 */
168 #else
169 typedef int     ssize_t;      /* (historical version) */
170 #endif
171 #endif /* !_SSIZE_T */

173 extern void swab(const char *, char *, ssize_t);
174 #endif /* defined(__EXTENSIONS__) || !defined(_STRICT_STDC) ... */

176 #if defined(__EXTENSIONS__) || \
177     (!defined(_XOPEN_OR_POSIX) || defined(_XPG4_2) || \
178     (defined(_LARGEFILE_SOURCE) && _FILE_OFFSET_BITS == 64))
179 extern int mkstemp(char *);
180 #if !defined(_XPG4_2) || defined(__EXTENSIONS__)
181 extern int mkstemps(char *, int);
182 #endif
183 #endif /* defined(__EXTENSIONS__) ... */

185 #if defined(_LARGEFILE64_SOURCE) && !((_FILE_OFFSET_BITS == 64) && \
186     !defined(_PRAGMA_REDEFINE_EXTNAME))
187 extern int mkstemp64(char *);
188 #if !defined(_XPG4_2) || defined(__EXTENSIONS__)
189 extern int mkstemps64(char *, int);
190 #endif
191 #endif /* _LARGEFILE64_SOURCE... */

193 #if !defined(_STRICT_SYMBOLS) || defined(_XPG7)

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194 extern int mkostemp(char *template, int flags);
195 extern int mkostemps(char *template, int slen, int flags);
196 #if defined(_LARGEFILE64_SOURCE) && !((_FILE_OFFSET_BITS == 64) && \
197     !defined(_PRAGMA_REDEFINE_EXTNAME))
198 extern int mkostemp64(char *template, int flags);
199 extern int mkostemps64(char *template, int slen, int flags);
200 #endif /* defined(_LARGEFILE64_SOURCE) || !((_FILE_OFFSET_BITS == 64) ... */
201 #endif /* !defined(_STRICT_SYMBOLS) || defined(_XPG7) */
202 #endif /* !codereview */

204 #if defined(__EXTENSIONS__) || \
205     (!defined(_STRICT_STDC) && !defined(_XOPEN_OR_POSIX)) || \
206     defined(_XPG4_2)
207 extern long a64l(const char *);
208 extern char *ecvt(double, int, int *RESTRICT_KYWD, int *RESTRICT_KYWD);
209 extern char *fcvt(double, int, int *RESTRICT_KYWD, int *RESTRICT_KYWD);
210 extern char *gcvt(double, int, char *);
211 extern int getsuopt(char **, char *const *, char **);
212 extern int grantpt(int);
213 extern char *initstate(unsigned, char *, size_t);
214 extern char *l64a(long);
215 extern char *mktemp(char *);
216 extern char *ptsname(int);
217 extern long random(void);
218 extern char *realpath(const char *RESTRICT_KYWD, char *RESTRICT_KYWD);
219 extern char *setstate(const char *);
220 extern void srandom(unsigned);
221 extern int unlockpt(int);
222 /* Marked LEGACY in SUSv2 and removed in SUSv3 */
223 #if !defined(_XPG6) || defined(__EXTENSIONS__)
224 extern int ttyslot(void);
225 extern void *valloc(size_t);
226 #endif /* !defined(_XPG6) || defined(__EXTENSIONS__) */
227 #endif /* defined(__EXTENSIONS__) || ... || defined(_XPG4_2) */

229 #if defined(__EXTENSIONS__) || \
230     (!defined(_STRICT_STDC) && !defined(_XOPEN_OR_POSIX)) || \
231     defined(_XPG6)
232 extern int posix_memalign(void **, size_t, size_t);
233 extern int posix_openpt(int);
234 extern int setenv(const char *, const char *, int);
235 extern int unsetenv(const char *);
236 #endif

238 #if defined(__EXTENSIONS__) || \
239     (!defined(_STRICT_STDC) && !defined(_XOPEN_OR_POSIX))
240 extern char *canonicalize_file_name(const char *);
241 extern int clearenv(void);
242 extern void closefrom(int);
243 extern int daemon(int, int);
244 extern int dup2(int, int);
245 extern int dup3(int, int, int);
246 extern int fdwalk(int (*)(void *, int), void *);
247 extern char *qecvt(long double, int, int *, int *);
248 extern char *qfcvt(long double, int, int *, int *);
249 extern char *qgcvt(long double, int, char *);
250 extern char *getcwd(char *, size_t);
251 extern const char *getexecname(void);

253 #ifndef __GETLOGIN_DEFINED /* Avoid duplicate in unistd.h */
254 #define __GETLOGIN_DEFINED
255 #ifndef USE_LEGACY_LOGNAME
256 #ifdef _PRAGMA_REDEFINE_EXTNAME
257 #pragma redefine extern getlogin getloginx
258 #else /* _PRAGMA_REDEFINE_EXTNAME */
259 extern char *getloginx(void);

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260 #define getlogin      getloginx
261 #endif /* __PRAGMA_REDEFINE_EXTNAME */
262 #endif /* __USE_LEGACY_LOGNAME */
263 extern char *getlogin(void);
264 #endif /* __GETLOGIN_DEFINED */

266 extern int getopt(int, char *const *, const char *);
267 extern char *optarg;
268 extern int optind, opterr, optopt;
269 extern char *getpass(const char *);
270 extern char *getpassphrase(const char *);
271 extern int getpw(uid_t, char *);
272 extern int isatty(int);
273 extern void *memalign(size_t, size_t);
274 extern char *ttyname(int);
275 extern char *mkdtemp(char *);
276 extern const char *getprogname(void);
277 extern void setprogname(const char *);

279 #if !defined(_STRICT_STDC) && defined(_LONGLONG_TYPE)
280 extern char *lltostr(long long, char *);
281 extern char *ulltostr(unsigned long long, char *);
282 #endif /* !defined(_STRICT_STDC) && defined(_LONGLONG_TYPE) */

284 #endif /* defined(__EXTENSIONS__) || !defined(_STRICT_STDC) ... */

286 #ifdef __cplusplus
287 }
288 #endif

290 #endif /* _STDLIB_H */
```