Rocky Enterprise Linux 9.2 Manual Pages on command 'isalpha.3'

C:\>man isalpha.3

ISALPHA(3) Linux Programmer's Manual ISALPHA(3)

NAME

isalnum, isalpha, isascii, isblank, iscntrl, isdigit, isgraph, islower, isprint, ispunct, isspace, isupper, isxdigit, isalnum_l, isalpha_l, isascii_l, isblank_l, iscntrl_l, isdigit_l, isgraph_l, islower_l, isprint_l, ispunct_l, isspace_l, isup? per_l, isxdigit_l - character classification functions

SYNOPSIS

```
#include <ctype.h>

int isalnum(int c);

int isalpha(int c);

int iscntrl(int c);

int isdigit(int c);

int isgraph(int c);

int islower(int c);

int isprint(int c);

int ispunct(int c);

int isspace(int c);

int isupper(int c);

int isxdigit(int c);

int isascii(int c);

int isblank(int c);

int isalnum_l(int c, locale_t locale);
```

```
int isalpha_l(int c, locale_t locale);
int isblank_l(int c, locale_t locale);
int iscntrl_l(int c, locale_t locale);
int isdigit_l(int c, locale_t locale);
int isgraph_l(int c, locale_t locale);
int islower_l(int c, locale_t locale);
int isprint_l(int c, locale_t locale);
int ispunct_l(int c, locale_t locale);
int isspace_l(int c, locale_t locale);
int isupper_l(int c, locale_t locale);
int isxdigit_l(int c, locale_t locale);
int isascii_l(int c, locale_t locale);
```

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

isascii():

```
_XOPEN_SOURCE
    || /* Glibc since 2.19: */ _DEFAULT_SOURCE
    || /* Glibc versions <= 2.19: */ _SVID_SOURCE
```

isblank():

```
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
```

isalnum_l(), isalpha_l(), isblank_l(), iscntrl_l(), isdigit_l(), isgraph_l(), is?
lower_l(), isprint_l(), ispunct_l(), isspace_l(), isupper_l(), isxdigit_l():

Since glibc 2.10:

```
_XOPEN_SOURCE >= 700
```

Before glibc 2.10:

```
_GNU_SOURCE
```

isascii_l():

Since glibc 2.10:

```
_XOPEN_SOURCE >= 700 && (_SVID_SOURCE || _BSD_SOURCE)
```

Before glibc 2.10:

```
_GNU_SOURCE
```

DESCRIPTION

These functions check whether c, which must have the value of an unsigned char or EOF, falls into a certain character class according to the specified locale. The

functions without the "_l" suffix perform the check based on the current locale.

The functions with the "_l" suffix perform the check based on the locale specified by the locale object locale. The behavior of these functions is undefined if lo? cale is the special locale object LC_GLOBAL_LOCALE (see duplocale(3)) or is not a valid locale object handle.

The list below explains the operation of the functions without the "_l" suffix; the functions with the "_l" suffix differ only in using the locale object locale in? stead of the current locale.

isalnum()

checks for an alphanumeric character; it is equivalent to (isalpha(c) || is? digit(c)).

isalpha()

checks for an alphabetic character; in the standard "C" locale, it is equiv? alent to (isupper(c) || islower(c)). In some locales, there may be addi? tional characters for which isalpha() is true?letters which are neither up? percase nor lowercase.

isascii()

checks whether c is a 7-bit unsigned char value that fits into the ASCII character set.

isblank()

checks for a blank character; that is, a space or a tab.

iscntrl()

checks for a control character.

isdigit()

checks for a digit (0 through 9).

isgraph()

checks for any printable character except space.

islower()

checks for a lowercase character.

isprint()

checks for any printable character including space.

ispunct()

checks for any printable character which is not a space or an alphanumeric

character.

isspace()

checks for white-space characters. In the "C" and "POSIX" locales, these are: space, form-feed ('\f'), newline ('\n'), carriage return ('\r'), hori? zontal tab ('\t'), and vertical tab ('\v').

isupper()

checks for an uppercase letter.

isxdigit()

checks for hexadecimal digits, that is, one of 0 1 2 3 4 5 6 7 8 9 a b c d e f A B C D E F.

RETURN VALUE

The values returned are nonzero if the character c falls into the tested class, and zero if not.

VERSIONS

isalnum_l(), isalpha_l(), isblank_l(), iscntrl_l(), isdigit_l(), isgraph_l(), is? lower_l(), isprint_l(), ispunct_l(), isspace_l(), isupper_l(), isxdigit_l(), and isascii_l() are available since glibc 2.3.

ATTRIBUTES

For an explanation of the terms used in this section, see attributes(7).

Interface	Attribute	Value
isalnum(), isalpha(), isascii(), isblank(), iscntrl(), isdigit(), isgraph(), islower(), isprint(), ispunct(), isspace(), isupper(), isxdigit()	Thread safety	MT-Safe

CONFORMING TO

C89 specifies isalnum(), isalpha(), iscntrl(), isdigit(), isgraph(), islower(), is? print(), ispunct(), isspace(), isupper(), and isxdigit(), but not isascii() and is? blank(). POSIX.1-2001 also specifies those functions, and also isascii() (as an XSI extension) and isblank(). C99 specifies all of the preceding functions, except

isascii().

POSIX.1-2008 marks isascii() as obsolete, noting that it cannot be used portably in a localized application.

POSIX.1-2008 specifies isalnum_l(), isalpha_l(), isblank_l(), iscntrl_l(), is?digit_l(), isgraph_l(), islower_l(), isprint_l(), ispunct_l(), isspace_l(), isup?per_l(), and isxdigit_l().

isascii_l() is a GNU extension.

NOTES

The standards require that the argument c for these functions is either EOF or a value that is representable in the type unsigned char. If the argument c is of type char, it must be cast to unsigned char, as in the following example:

```
char c;
...
res = toupper((unsigned char) c);
```

This is necessary because char may be the equivalent of signed char, in which case a byte where the top bit is set would be sign extended when converting to int, yielding a value that is outside the range of unsigned char.

The details of what characters belong to which class depend on the locale. For ex?ample, isupper() will not recognize an A-umlaut (?) as an uppercase letter in the default C locale.

SEE ALSO

iswalnum(3), iswalpha(3), iswblank(3), iswcntrl(3), iswdigit(3), iswgraph(3), iswlower(3), iswprint(3), iswpunct(3), iswspace(3), iswupper(3), iswxdigit(3), newlocale(3), setlocale(3), toascii(3), tolower(3), toupper(3), uselocale(3), ascii(7), locale(7)

COLOPHON

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