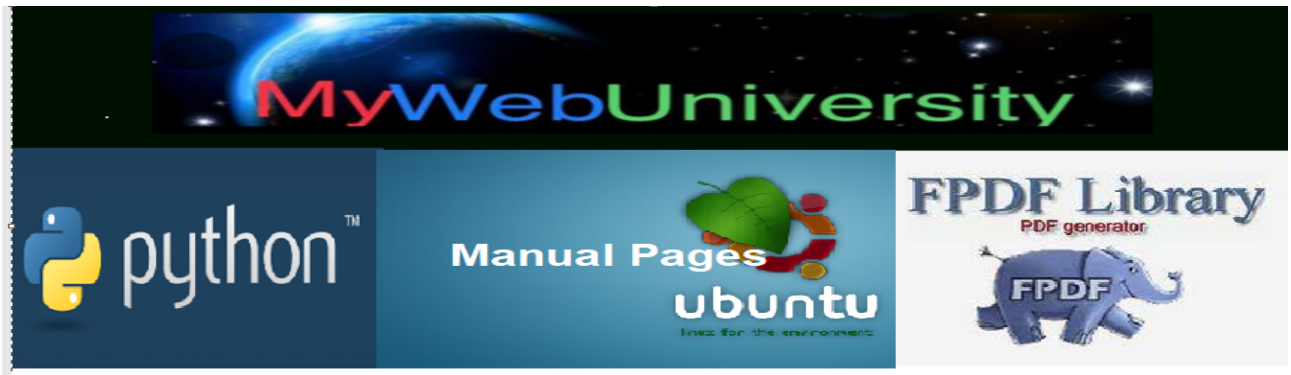

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Linux Ubuntu 26.04 Manual Pages on command 'mbrtowc.3'

$ man mbrtowc.3

mbrtowc(3) Library Functions Manual mbrtowc(3)

NAME

mbrtowc - convert a multibyte sequence to a wide character

LIBRARY

Standard C library (libc, -lc)

SYNOPSIS

#include <wchar.h>

size_t mbrtowc(size_t n;

wchar_t *restrict pwc, const char s[restrict n],

size_t n, mbstate_t *restrict ps);

DESCRIPTION

The main case for this function is when s is not NULL and pwc is not NULL. In this case, the mbrtowc() function inspects at most n bytes of the multibyte string starting at s, ex? tracts the next complete multibyte character, converts it to a wide character and stores it at *pwc. It updates the shift state *ps. If the converted wide character is not L'\0' (the null wide character), it returns the number of bytes that were consumed from s. If the con? verted wide character is L'\0', it resets the shift state *ps to the initial state and re? turns 0.

If the n bytes starting at s do not contain a complete multibyte character, mbrtowc() re? turns (size_t) -2. This can happen even if n >= MB_CUR_MAX, if the multibyte string con? tains redundant shift sequences.

If the multibyte string starting at s contains an invalid multibyte sequence before the next complete character, mbrtowc() returns (size_t) -1 and sets errno to EILSEQ. In this case,

the effects on *ps are undefined.

A different case is when s is not NULL but pwc is NULL. In this case, the mbrtowc() func?
tion behaves as above, except that it does not store the converted wide character in memory.

A third case is when s is NULL. In this case, pwc and n are ignored. If the conversion
state represented by *ps denotes an incomplete multibyte character conversion, the mbrtowc()
function returns (size_t) -1, sets errno to EILSEQ, and leaves *ps in an undefined state.

Otherwise, the mbrtowc() function puts *ps in the initial state and returns 0.

In all of the above cases, if ps is NULL, a static anonymous state known only to the mbr?
towc() function is used instead. Otherwise, *ps must be a valid mbstate_t object. An mb?
state_t object a can be initialized to the initial state by zeroing it, for example using

```
memset(&a, 0, sizeof(a));
```

RETURN VALUE

The mbrtowc() function returns the number of bytes parsed from the multibyte sequence start?
ing at s, if a non-L'\0' wide character was recognized. It returns 0, if a L'\0' wide char?
acter was recognized. It returns (size_t) -1 and sets errno to EILSEQ, if an invalid multi?
byte sequence was encountered. It returns (size_t) -2 if the consumed n bytes form a valid
partial character sequence; more subsequent data needs to be fed in.

ATTRIBUTES

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

Interface	Attribute	Value
mbrtowc()	Thread safety	MT-Unsafe race:mbrtowc/!ps

STANDARDS

C11, POSIX.1-2008.

HISTORY

POSIX.1-2001, C99.

NOTES

The behavior of mbrtowc() depends on the LC_CTYPE category of the current locale.

SEE ALSO

mbsinit(3), mbsrtowcs(3)