

**NAME**

**mbrlen** - get number of bytes in a character (restartable)

**LIBRARY**

Standard C Library (libc, -lc)

**SYNOPSIS**

```
#include <wchar.h>
```

*size\_t*

```
mbrlen(const char * restrict s, size_t n, mbstate_t * restrict ps);
```

**DESCRIPTION**

The **mbrlen**() function inspects at most *n* bytes pointed to by *s* to determine the number of bytes needed to complete the next multibyte character.

The *mbstate\_t* argument, *ps*, is used to keep track of the shift state. If it is NULL, **mbrlen**() uses an internal, static *mbstate\_t* object, which is initialized to the initial conversion state at program startup.

It is equivalent to:

```
mbrtowc(NULL, s, n, ps);
```

Except that when *ps* is a NULL pointer, **mbrlen**() uses its own static, internal *mbstate\_t* object to keep track of the shift state.

**RETURN VALUES**

The **mbrlen**() functions returns:

0        The next *n* or fewer bytes represent the null wide character (L'\0').

>0      The next *n* or fewer bytes represent a valid character, **mbrlen**() returns the number of bytes used to complete the multibyte character.

(*size\_t*)-2

The next *n* contribute to, but do not complete, a valid multibyte character sequence, and all *n* bytes have been processed.

(*size\_t*)-1

An encoding error has occurred. The next *n* or fewer bytes do not contribute to a valid multibyte

character.

## EXAMPLES

A function that calculates the number of characters in a multibyte character string:

```
size_t
nchars(const char *s)
{
    size_t charlen, chars;
    mbstate_t mbs;

    chars = 0;
    memset(&mbs, 0, sizeof(mbs));
    while ((charlen = mbrlen(s, MB_CUR_MAX, &mbs)) != 0 &&
        charlen != (size_t)-1 && charlen != (size_t)-2) {
        s += charlen;
        chars++;
    }

    return (chars);
}
```

## ERRORS

The **mbrlen()** function will fail if:

- [EILSEQ]           An invalid multibyte sequence was detected.
- [EINVAL]           The conversion state is invalid.

## SEE ALSO

[mblen\(3\)](#), [mbrtowc\(3\)](#), [multibyte\(3\)](#)

## STANDARDS

The **mbrlen()** function conforms to ISO/IEC 9899:1999 ("ISO C99").