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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'floorl.3' command

$ man floorl.3

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

NAME

floor, floorf, floorl - largest integral value not greater than argu?

ment

SYNOPSIS

```
#include <math.h>

double floor(double x);

float floorf(float x);

long double floorl(long double x);
```

Link with -lm.

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

floorf(), floorl():

```
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

    || /* Since glibc 2.19: */ _DEFAULT_SOURCE

    || /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

DESCRIPTION

These functions return the largest integral value that is not greater

than x.

For example, floor(0.5) is 0.0, and floor(-0.5) is -1.0.

RETURN VALUE

These functions return the floor of x.

If x is integral, +0, -0, NaN, or an infinity, x itself is returned.

ERRORS

No errors occur. POSIX.1-2001 documents a range error for overflows, but see NOTES.

ATTRIBUTES

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

Interface	Attribute	Value
floor(), floorf(), floorl()	Thread safety	MT-Safe

CONFORMING TO

C99, POSIX.1-2001, POSIX.1-2008.

The variant returning double also conforms to SVr4, 4.3BSD, C89.

NOTES

SUSv2 and POSIX.1-2001 contain text about overflow (which might set er? rno to ERANGE, or raise an FE_OVERFLOW exception). In practice, the result cannot overflow on any current machine, so this error-handling stuff is just nonsense. (More precisely, overflow can happen only when the maximum value of the exponent is smaller than the number of man? tissa bits. For the IEEE-754 standard 32-bit and 64-bit floating-point numbers the maximum value of the exponent is 128 (respectively, 1024), and the number of mantissa bits is 24 (respectively, 53).)

SEE ALSO

ceil(3), lrint(3), nearbyint(3), rint(3), round(3), trunc(3)

COLOPHON

This page is part of release 5.10 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at https://www.kernel.org/doc/man-pages/.