Full credit is given to the above companies including the OS that this PDF file was generated!

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

$ man roundf.3

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

NAME

round, roundf, roundl - round to nearest integer, away from zero

SYNOPSIS

#include <math.h>

double round(double x);

float roundf(float x);

long double roundl(long double x);

Link with -lm.

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

round(), roundf(), roundl():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

DESCRIPTION

These functions round x to the nearest integer, but round halfway cases away from zero (regardless of the current rounding direction, see fenv(3)), instead of to the nearest even integer like rint(3).

For example, round(0.5) is 1.0, and round(-0.5) is -1.0.

RETURN VALUE

These functions return the rounded integer value.

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

ERRORS

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

VERSIONS

These functions first appeared in glibc in version 2.1.

ATTRIBUTES

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

Interface	Attribute	Value
round(), roundf(), roundl()	Thread safety	MT-Safe

CONFORMING TO

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

NOTES

POSIX.1-2001 contains text about overflow (which might set errno 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 max? imum value of the exponent is smaller than the number of mantissa 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 num? ber of mantissa bits is 24 (respectively, 53).)

If you want to store the rounded value in an integer type, you probably want to use one of the functions described in lround(3) instead.

SEE ALSO

ceil(3), floor(3), lround(3), nearbyint(3), rint(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/.