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

$ man logbf.3

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

NAME

    logb, logbf, logbl - get exponent of a floating-point value

SYNOPSIS

    #include <math.h>

    double logb(double x);

    float logbf(float x);

    long double logbl(long double x);

    Link with -lm.

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

    logb():

      _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

        || _XOPEN_SOURCE >= 500

        || /* Since glibc 2.19: */ _DEFAULT_SOURCE

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

    logbf(), logbl():

      _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

        || /* Since glibc 2.19: */ _DEFAULT_SOURCE

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

DESCRIPTION

These functions extract the exponent from the internal floating-point

representation of x and return it as a floating-point value. The inte?

ger constant FLT_RADIX, defined in <float.h>, indicates the radix used

for the system's floating-point representation.   If FLT_RADIX is 2,

logb(x) is equal to floor(log2(x)), except that it is probably faster.

If x is subnormal, logb() returns the exponent x would have if it were

normalized.

RETURN VALUE

On success, these functions return the exponent of x.

If x is a NaN, a NaN is returned.

If x is zero, then a pole error occurs, and the functions return

-HUGE_VAL, -HUGE_VALF, or -HUGE_VALL, respectively.

If x is negative infinity or positive infinity, then positive infinity

is returned.

ERRORS

See math_error(7) for information on how to determine whether an error

has occurred when calling these functions.

The following errors can occur:

Pole error: x is 0

A divide-by-zero floating-point exception (FE_DIVBYZERO) is

raised.

These functions do not set errno.

ATTRIBUTES

For an explanation of the terms used in this section, see at?

tributes(7).

???

?Interface   ? Attribute   ? Value   ?

???

?logb(), logbf(), logbl() ? Thread safety ? MT-Safe ?

???

CONFORMING TO

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

SEE ALSO

ilogb(3), log(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/.

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