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

$ man ilogb.3

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

NAME

ilogb, ilogbf, ilogbl - get integer exponent of a floating-point value

SYNOPSIS

```
#include <math.h>

int ilogb(double x);

int ilogbf(float x);

int ilogbl(long double x);
```

Link with -lm.

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

ilogb():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

|| _XOPEN_SOURCE >= 500

|| /* Since glibc 2.19: */ _DEFAULT_SOURCE

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

ilogbf(), ilogbl():

_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 exponent part of their argument as a signed integer. When no error occurs, these functions are equivalent to the corresponding logb(3) functions, cast to int.

RETURN VALUE

On success, these functions return the exponent of x, as a signed inte?

ger.

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

FP_ILOGB0.

If x is a NaN, then a domain error occurs, and the functions return

FP_ILOGBNAN.

If x is negative infinity or positive infinity, then a domain error oc?

curs, and the functions return INT_MAX.

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:

Domain error: x is 0 or a NaN

An invalid floating-point exception (FE_INVALID) is raised, and

errno is set to EDOM (but see BUGS).

Domain error: x is an infinity

An invalid floating-point exception (FE_INVALID) is raised, and

errno is set to EDOM (but see BUGS).

ATTRIBUTES

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

tributes(7).

??

?Interface ? Attribute ? Value ?

??

?ilogb(), ilogbf(), ilogbl() ? Thread safety ? MT-Safe ?

??

CONFORMING TO

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

BUGS

Before version 2.16, the following bugs existed in the glibc implemen?

tation of these functions:

* The domain error case where x is 0 or a NaN did not cause errno to

be set or (on some architectures) raise a floating-point exception.

* The domain error case where x is an infinity did not cause errno to be set or raise a floating-point exception.

SEE ALSO

log(3), logb(3), significand(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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