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 'fmod.3p' command

$ man fmod.3p

FMOD(3P) POSIX Programmer's Manual FMOD(3P)

PROLOG

This manual page is part of the POSIX Programmer's Manual. The Linux implementation of this interface may differ (consult the corresponding Linux manual page for details of Linux behavior), or the interface may not be implemented on Linux.

NAME

fmod, fmodf, fmodl ? floating-point remainder value function

SYNOPSIS

```
#include <math.h>
double fmod(double x, double y);
float fmodf(float x, float y);
long double fmodl(long double x, long double y);
```

DESCRIPTION

The functionality described on this reference page is aligned with the ISO C standard. Any conflict between the requirements described here and the ISO C standard is unintentional. This volume of POSIX.1?2017 defers to the ISO C standard.

These functions shall return the floating-point remainder of the divi? sion of x by y.

An application wishing to check for error situations should set errno to zero and call feclearexcept(FE_ALL_EXCEPT) before calling these functions. On return, if errno is non-zero or fetestexcept(FE_INVALID |

FE_DIVBYZERO | FE_OVERFLOW | FE_UNDERFLOW) is non-zero, an error has occurred.

RETURN VALUE

These functions shall return the value x-i*y, for some integer i such that, if y is non-zero, the result has the same sign as x and magnitude less than the magnitude of y.

If the correct value would cause underflow, and is not representable, a range error may occur, and fmod(), modf(), and fmodl() shall return 0.0, or (if the IEC 60559 Floating-Point option is not supported) an implementation-defined value no greater in magnitude than DBL_MIN, FLT_MIN, and LDBL_MIN, respectively.

If x or y is NaN, a NaN shall be returned, and none of the conditions below shall be considered.

If y is zero, a domain error shall occur, and a NaN shall be returned.

If x is infinite, a domain error shall occur, and a NaN shall be re? turned.

If x is ?0 and y is not zero, ?0 shall be returned.

If x is not infinite and y is ?Inf, x shall be returned.

If the correct value would cause underflow, and is representable, a range error may occur and the correct value shall be returned.

ERRORS

These functions shall fail if:

Domain Error

The x argument is infinite or y is zero.

If the integer expression (math_errhandling & MATH_ERRNO) is non-zero, then errno shall be set to [EDOM]. If the in? teger expression (math_errhandling & MATH_ERREXCEPT) is non-zero, then the invalid floating-point exception shall be raised.

These functions may fail if:

Range Error The result underflows.

If the integer expression (math_errhandling & MATH_ERRNO) is non-zero, then errno shall be set to [ERANGE]. If the

integer expression (math_errhandling & MATH_ERREXCEPT) is non-zero, then the underflow floating-point exception shall be raised.

The following sections are informative.

EXAMPLES

None.

APPLICATION USAGE

On error, the expressions (math_errhandling & MATH_ERRNO) and (math_er?rhandling & MATH_ERREXCEPT) are independent of each other, but at least one of them must be non-zero.

RATIONALE

None.

FUTURE DIRECTIONS

None.

SEE ALSO

feclearexcept(), fetestexcept(), isnan()

Section 4.20, Treatment of Error Conditions for Mathematical Functions, <math.h>

COPYRIGHT

Portions of this text are reprinted and reproduced in electronic form from IEEE Std 1003.1-2017, Standard for Information Technology -- Por?table Operating System Interface (POSIX), The Open Group Base Specifi?cations Issue 7, 2018 Edition, Copyright (C) 2018 by the Institute of Electrical and Electronics Engineers, Inc and The Open Group. In the event of any discrepancy between this version and the original IEEE and The Open Group Standard, the original IEEE and The Open Group Standard is the referee document. The original Standard can be obtained online at http://www.opengroup.org/unix/online.html .

Any typographical or formatting errors that appear in this page are most likely to have been introduced during the conversion of the source files to man page format. To report such errors, see https://www.ker?nel.org/doc/man-pages/reporting_bugs.html .