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

$ man fabs.3p

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

fabs, fabsf, fabsl ? absolute value function

SYNOPSIS

```
#include <math.h>
double fabs(double x);
float fabsf(float x);
long double fabsl(long double x);
```

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 compute the absolute value of their argument x,|x|.

RETURN VALUE

Upon successful completion, these functions shall return the absolute value of x.

If x is NaN, a NaN shall be returned.

If x is ?0, +0 shall be returned.

If x is ?Inf, +Inf shall be returned.

ERRORS

No errors are defined.

The following sections are informative.

EXAMPLES

Computing the 1-Norm of a Floating-Point Vector

This example shows the use of fabs() to compute the 1-norm of a vector defined as follows:

norm1(v) = |v[0]| + |v[1]| + ... + |v[n-1]|

where |x| denotes the absolute value of x, n denotes the vector's di? mension v[i] denotes the i-th component of v (0?i<n).

```
#include <math.h>
double
norm1(const double v[], const int n)
{
    int     i;
    double  n1_v;  /* 1-norm of v */
    n1_v = 0;
    for (i=0; i<n; i++) {
        n1_v += fabs (v[i]);
    }
    return n1_v;
}
```

APPLICATION USAGE

None.

RATIONALE

None.

FUTURE DIRECTIONS

None.

SEE ALSO

isnan()

The Base Definitions volume of POSIX.1?2017, <math.h>

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