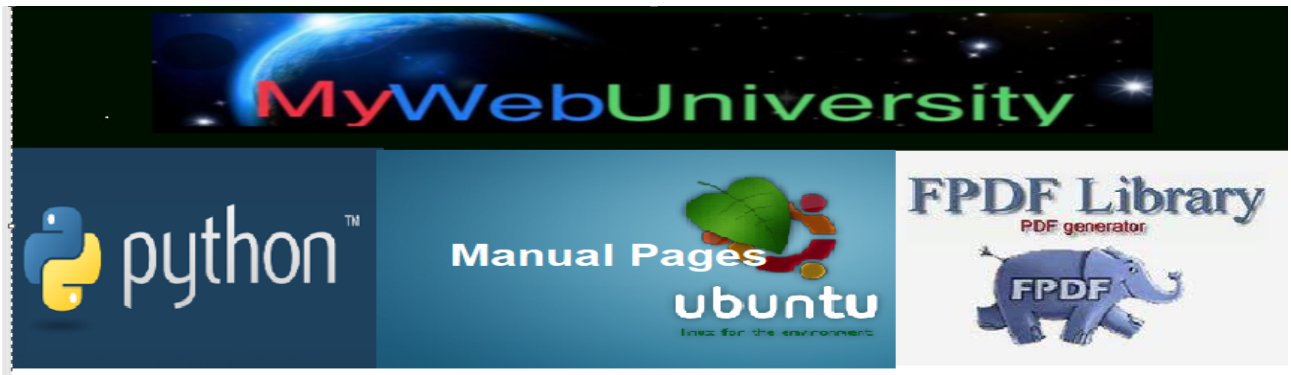

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Linux Ubuntu 26.04 Manual Pages on command 'tan.3'

$ man tan.3

tan(3) Library Functions Manual tan(3)

NAME

tan, tanf, tanl - tangent function

LIBRARY

Math library (libm, -lm)

SYNOPSIS

```
#include <math.h>

double tan(double x);

float tanf(float x);

long double tanl(long double x);
```

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

tanf(), tanl():

```
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
    || /* Since glibc 2.19: */ _DEFAULT_SOURCE
    || /* glibc <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

DESCRIPTION

These functions return the tangent of x, where x is given in radians.

RETURN VALUE

On success, these functions return the tangent of x.

If x is a NaN, a NaN is returned.

If x is positive infinity or negative infinity, a domain error occurs, and a NaN is re?

turned.

If the correct result would overflow, a range error occurs, and the functions return

HUGE_VAL, HUGE_VALF, or HUGE_VALL, respectively, with the mathematically correct sign.

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 an infinity

errno is set to EDOM (but see BUGS). An invalid floating-point exception (FE_IN? VALID) is raised.

Range error: result overflow

An overflow floating-point exception (FE_OVERFLOW) is raised.

ATTRIBUTES

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

Interface	Attribute	Value
tan(), tanf(), tanl()	Thread safety	MT-Safe

STANDARDS

C11, POSIX.1-2008.

HISTORY

C99, POSIX.1-2001.

The variant returning double also conforms to SVr4, 4.3BSD, C89.

BUGS

Before glibc 2.10, the glibc implementation did not set errno to EDOM when a domain error occurred.

SEE ALSO

acos(3), asin(3), atan(3), atan2(3), cos(3), ctan(3), sin(3)