

C LIBRARY FUNCTION - ATAN

http://www.tutorialspoint.com/c_standard_library/c_function_atan.htm

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Description

The C library function **double atan** returns the arc tangent of **x** in radians.

Declaration

Following is the declaration for atan function.

```
double atan(double x)
```

Parameters

- **x** – This is the floating point value.

Return Value

This function returns the principal arc tangent of x, in the interval $[-\pi/2, +\pi/2]$ radians.

Example

The following example shows the usage of atan function.

```
#include <stdio.h>
#include <math.h>

#define PI 3.14159265

int main ()
{
    double x, ret, val;
    x = 1.0;
    val = 180.0 / PI;

    ret = atan (x) * val;
    printf("The arc tangent of %lf is %lf degrees", x, ret);

    return(0);
}
```

Let us compile and run the above program that will produce the following result –

```
The arc tangent of 1.000000 is 15.000000 degrees
Loading [MathJax]/jax/output/HTML-CSS/fonts/TeX/fontdata.js
```