

C LIBRARY FUNCTION - COSH

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

Copyright © tutorialspoint.com

Description

The C library function **double cosh** returns the hyperbolic cosine of **x**.

Declaration

Following is the declaration for cosh function.

```
double cosh(double x)
```

Parameters

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

Return Value

This function returns hyperbolic cosine of x.

Example

The following example shows the usage of cosh function.

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

int main ()
{
    double x;

    x = 0.5;
    printf("The hyperbolic cosine of %lf is %lf\n", x, cosh(x));

    x = 1.0;
    printf("The hyperbolic cosine of %lf is %lf\n", x, cosh(x));

    x = 1.5;
    printf("The hyperbolic cosine of %lf is %lf\n", x, cosh(x));

    return(0);
}
```

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

```
The hyperbolic cosine of 0.500000 is 1.127626
The hyperbolic cosine of 1.000000 is 1.543081
The hyperbolic cosine of 1.500000 is 2.352410
Loading [Mathjax]/jax/output/HTML-CSS/jax.js
```