C library function - cosh()

Description

The C library function **double cosh(double x)** returns the hypebolic 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
```