C library function - tanh()

Description

The C library function **double tanh(double x)** returns the hyperbolic tangent of **x**.

Declaration

Following is the declaration for tanh() function.

```
double tanh(double x)
```

Parameters

- ▫ **x** − This is the floating point value.

Return Value

This function returns hyperbolic tangent of x.

Example

The following example shows the usage of tanh() function.

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

int main () {
   double x, ret;
   x = 0.5;

   ret = tanh(x);
   printf("The hyperbolic 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 hyperbolic tangent of 0.500000 is 0.462117 degrees
```