C++ Math cos()

The function is used to find the cosine of an angle expressed in terms of radian.

Syntax

Consider a radian 'x'. Syntax would be:

```
float cos(float x);
float cos(double x);
float cos(long double x);
double cos(integral x);
```

> Note: If the value passed is an integer type, then it is cast to double.

Parameter

x: Value specified in terms of radian.

Return value

It returns the cosine of an angle in the range of[-1,1].

Example 1

Let's see a simple example when the value of x is positive.

```
#include <iostream>
```



```
std;
```

```
int main()
{
   double degree=60;
   double d=60*3.14/180;
   cout<<"Cosine of an angle is : "<<cos(d);
   return 0;
}
```

Output:

```
Cosine of an angle is : 0.50046
```

In this example, cos() function calculates the cosine of an angle when the degree is equal to 60.

Example 2

Let's see a simple example when the value of x is negative.

```
#include <iostream>
#include<math.h>
using namespace std;
int main()
{
  double degree= -90;
  double radian=degree*3.14/180;
  cout<<"Cosine of an angle is :"<<cos(radian);
  return 0;
}
```

Output:

```
Cosine of an angle is :0.000796327
```

In this example, cos() function finds the cosine of an angle when the value is negative but it remains the same as cos(-x) =cos(x).

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