SIN Function in C

The C sin Function is a C Math Library Function, used to calculate the Trigonometry Sine value for the specified expression. The syntax of the sin in C Programming is

```
double sin(double number);
```

The SIN function in C will return the value between -1 and 1. Before we get into the syntax of a SIN function in C, Let us see the mathematical formula behind this Trigonometry Sine function:

sin(x) = Length of the Opposite Side / Length of the Hypotenuse

TIP: Please refer to the C ASIN Function article to calculate the Arc Sine of a specified expression.

SIN Function in C Example

The sin function in the math library allows you to calculate the trigonometric Sine for the specified values. This program, ask the user to enter his/her own value, and then it will find the sine value of the user-specified value

```
/* Example for SIN Function in C Programming */
#include <stdio.h>
#include <math.h>

int main()
{
    double sinValue, number;
    printf(" Please Enter the Value to calculate Sine : ");
    scanf("%lf", &number);

    sinValue = sin(number);

    printf("\n The Sine value of %lf = %f ", number, sinValue);
    return 0;
}
```

OUTPUT

This example allow the user to enter the value in degrees, and then we are

C SINE Function Example 2

converting the degrees to Radians. And finally, we are finding the sine value of the radian

```
/* Example for SIN Function in C Programming */
#include <stdio.h>
#include <math.h>

#define PI 3.14159
int main()
{
    double sinValue, radianVal, degreeVal;
    printf(" Please Enter an Angle in degrees : ");
    scanf("%lf", &degreeVal);

    // Convert Degree Value to Radian
    radianVal = degreeVal * (PI/180);
    sinValue = sin(radianVal);

    printf("\n The Sine value of %f = %f ", degreeVal, sinValue);
    return 0;
}

OUTPUT
```

/* Example for SIN Function in C Programming */

```
#include <stdio.h>
#include <math.h>
#define PI 3.14159
int main()
 double sinValue, radianVal, degreeVal;
 printf(" Please Enter an Angle in degrees : ");
 scanf("%lf", &degreeVal);
 // Convert Dgree Value to Radian
 radianVal = degreeVal * (PI/180);
 sinValue = sin(radianVal);
 printf("\n The Sine value of %f = %f ", degreeVal, sinValue);
 return 0;
 C:\Users\Suresh\Documents\C Programs\Untitled1.exe
                                                             X
 Please Enter an Angle in degrees : 30
                                          ©tutorialgateway.org
 The Sine value of 30.000000 = 0.500000
```

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