

Online C Compiler

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Programiz C Online Compiler

Interactive C Course

main.c

Run

Output

Clear

```
1 /*
2  * C program to find the sum of cos(x) series
3  */
4  #include <stdio.h>
5  #include <math.h>
6
7  void main()
8  {
9      int n, x1, i, j;
10     float x, sign, cosx, fact;
11
12     printf("Enter the number of the terms in a series\n");
13     scanf("%d", &n);
14     printf("Enter the value of x(in degrees)\n");
15     scanf("%f", &x);
16     x1 = x;
17     /* Degrees to radians */
18     x = x * (3.142 / 180.0);
19     cosx = 1;
20     sign = -1;
21     for (i = 2; i <= n; i = i + 2)
22     {
23         fact = 1;
24         for (j = 1; j <= i; j++)
```

```
/tmp/f5nk0CJG57.o
Enter the number of the terms in a series
60
Enter the value of x(in degrees)
78
Sum of the cosine series =    0.21
The value of cos(78) using library function = 0.207739
```

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15 scanf("%f", &x);
16 x1 = x;
17 /* Degrees to radians */
18 x = x * (3.142 / 180.0);
19 cosx = 1;
20 sign = -1;
21 for (i = 2; i <= n; i = i + 2)
22 {
23     fact = 1;
24     for (j = 1; j <= i; j++)
25     {
26         fact = fact * j;
27     }
28     cosx = cosx + (pow(x, i) / fact) * sign;
29     sign = sign * (-1);
30 }
31 printf("Sum of the cosine series = %.2f\n", cosx);
32 printf("The value of cos(%d) using library function = %f\n", x1,
33 cos(x));
34 }
```

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