```c
// C - Program for calculation of cos(x).

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

//Function for factorial => fac(n).
int fac(int n)
{
if (n==0){
    return 1;
}
else{
    return n*fac(n-1);
}
}

//Expansion of cos(x)

int main(){
    //Variables and their initialization.
    float d, x, sum = 0.0; int n,i;

    //Inputs
    printf("Enter the value of x in degree : ");
    scanf("%f", &d);
    printf("Enter the no. of terms : ");
    scanf("%d", &n);

    //Degree to radian conversion.
    x = (3.14*d)/180;

    //Calculation using for loop.
    for (i=0; i<=n; i++){
         sum += (pow(-1, i)*pow(x, 2*i))/fac(2*i);
    }

    //Output
    printf("Value of cos(%f) using above defined program = %f\n", d,
sum);
    printf("Value of cos(%f) using pre-defined function = %f", d,
cos(x));
}

```