

# C Programs

**// C program to find the area of the circle using function**

```
#include <math.h>
#include <stdio.h>
#define PI 3.142
double findArea(int r) { return PI * r * r; }
int main()
{
    printf("Area is %f", findArea(5));
    return 0;
}
```

**// Factorial program in c using for loop**

```
#include<stdio.h>
int main(){
    int i,f=1,num;
    printf("Enter a number: ");
    scanf("%d",&num);
    for(i=1;i<=num;i++)
        f=f*i;
    printf("Factorial of %d is: %d",num,f);
    return 0;
}
```

**// Factorial program in c using function**

```
#include<stdio.h>
int findFactorial(int);
int main(){
    int i,factorial,num;
    printf("Enter a number: ");
    scanf("%d",&num);
    factorial = findFactorial(num);
    printf("Factorial of %d is: %d",num,factorial);
    return 0;
}
int findFactorial(int num){
    int i,f=1;
    for(i=1;i<=num;i++)
        f=f*i;
    return f;
}
```

**//Program to find maximum and minimum between two numbers using functions**

```
#include <stdio.h>
int max(int num1, int num2);
```

```

int min(int num1, int num2);
int main()
{
int num1, num2, maximum, minimum;
printf("Enter any two numbers: ");
scanf("%d%d", &num1, &num2);
maximum = max(num1, num2); // Call maximum function
minimum = min(num1, num2); // Call minimum function
printf("\nMaximum = %d\n", maximum);
printf("Minimum = %d", minimum);
return 0;
}

```

### **//Program to find diameter, circumference and area using functions**

```

#include <stdio.h>
#include <math.h>
double getDiameter(double radius);
double getCircumference(double radius);
double getArea(double radius);
int main()
{
float radius, dia, circ, area;
printf("Enter radius of circle: ");
scanf("%f", &radius);
dia = getDiameter(radius); // Call getDiameter function
circ = getCircumference(radius); // Call getCircumference function
area = getArea(radius); // Call getArea function
printf("Diameter of the circle = %.2f units\n", dia);
printf("Circumference of the circle = %.2f units\n", circ);
printf("Area of the circle = %.2f sq. units", area);
return 0;
}

```

### **//Program to check even or odd**

```

#include <stdio.h>
int isEven(int num)
{
return !(num & 1);
}
int main()
{
int num;
printf("Enter any number: ");
scanf("%d", &num);
{
printf("The number is even.");
}
else

```

```

{
printf("The number is odd.");
}
return 0;
}

```

### **//C Program to Find Largest Element in an Array**

```

#include <stdio.h>
int main() {
int n;
double arr[100];
printf("Enter the number of elements (1 to 100): ");
scanf("%d", &n);
for (int i = 0; i < n; ++i) {
printf("Enter number%d: ", i + 1);
scanf("%lf", &arr[i]);
}
for (int i = 1; i < n; ++i) {
if (arr[0] < arr[i]) {
arr[0] = arr[i];
}
}
printf("Largest element = %.2lf", arr[0]);
return 0;
}

```

### **//Program to check prime, armstrong and perfect numbers using functions**

```

#include <stdio.h>
#include <math.h>
/* Function declarations */
int isPrime(int num);
int isArmstrong(int num);
int isPerfect(int num);
int main()
{
int num;
printf("Enter any number: ");
scanf("%d", &num);
if(isPrime(num))
{
printf("%d is Prime number.\n", num);
}
else
{
printf("%d is not Prime number.\n", num);
}
if(isArmstrong(num))
{

```

```

printf("%d is Armstrong number.\n", num);
}
else
{
printf("%d is not Armstrong number.\n", num);
}
if(isPerfect(num))
{
printf("%d is Perfect number.\n", num);
}
else
{
printf("%d is not Perfect number.\n", num);
}
return 0;
}

```

#### **// C Program to find the largest number in the array.**

```

#include <stdio.h>
int main()
{
int arr[10] = { 135, 165, 1, 16, 511, 65, 654, 654, 169, 4 };
printf("Largest Number in the Array: %d",
getMax(arr, 10));
return 0;
}

```

#### **// Program to find the average of n numbers using arrays**

```

#include <stdio.h>
int main() {
int marks[10], i, n, sum = 0;
double average;
printf("Enter number of elements: ");
scanf("%d", &n);
for(i=0; i < n; ++i) {
printf("Enter number%d: ",i+1);
scanf("%d", &marks[i]);
sum += marks[i];
}
average = (double) sum / n;
printf("Average = %.2lf", average);
return 0;
}

```

#### **// Program to print reverse array in C**

```

#include <stdio.h>
int main() {
int array[10] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 0};

```

```
int loop;  
for(loop = 9; loop >= 0; loop--)  
printf("%d ", array[loop]);  
return 0;  
}
```

### **//Program to check Palindrome**

```
#include <stdio.h>  
int main() {  
    int n, reversed = 0, remainder, original;  
    printf("Enter an integer: ");  
    scanf("%d", &n);  
    original = n;  
    while (n != 0) {  
        remainder = n % 10;  
        reversed = reversed * 10 + remainder;  
        n /= 10;  
    }  
    if (original == reversed)  
        printf("%d is a palindrome.", original);  
    else  
        printf("%d is not a palindrome.", original);  
  
    return 0;  
}
```