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**C# Programs**

**C# Program to Check Whether a Given Number is Even or Odd**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter number you want..!");

int num=int.Parse(Console.ReadLine());

if(num % 2 == 0){

Console.WriteLine("Even");

}

else{

Console.WriteLine("Odd");

}

}

}

**C# Program to Print Odd Numbers in a Given Range**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter the start of the range:");

int start = int.Parse(Console.ReadLine());

Console.WriteLine("Enter the end of the range:");

int end = int.Parse(Console.ReadLine());

for (int i = start; i <= end; i++)

{

if (i % 2 != 0)

{

Console.Write(i + " ");

}

}

}

}

**C# Program to Check Whether a Number is Positive or Not**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter number you want..!");

int num=int.Parse(Console.ReadLine());

if(num > 0){

Console.WriteLine("Positive");

}

else{

Console.WriteLine("Negative");

}

}

}

**C# Program to Find the Largest of Two Numbers**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter number you want..!");

int num1=int.Parse(Console.ReadLine());

int num2=int.Parse(Console.ReadLine());

if(num1 > num2){

Console.WriteLine("Num1 is greater");

}

else if(num1 < num2){

Console.WriteLine("Num2 is greater");

}

else{

Console.WriteLine("Both Numbers are equal");

}

}

}

**C# Program to Swap Two Numbers**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter numbers you want..!");

int num1=int.Parse(Console.ReadLine());

int num2=int.Parse(Console.ReadLine());

Console.WriteLine("Numbers Before Swapping are");

Console.WriteLine("num1="+num1);

Console.WriteLine("num2="+num2);

int temp = num1;

num1 = num2;

num2 = temp;

Console.WriteLine("Numbers After Swapping are");

Console.WriteLine("num1="+num1);

Console.WriteLine("num2="+num2);

}

}

**C# Program to Check if a Number is Divisible by 2**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter number you want..!");

int num=int.Parse(Console.ReadLine());

if(num % 2 == 0){

Console.WriteLine("Divisible by 2");

}

else{

Console.WriteLine("Not divisible by 2");

}

}

}

**C# Program to Find the Sum of All the Multiples of 3 and 5**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter number you want..!");

int num=int.Parse(Console.ReadLine());

int sum=0;

for(int i=1; i<=num; i++){

if(i % 3 == 0 && i % 5 == 0){

sum = sum + i;

}

}

Console.WriteLine(sum);

}

}

**C# Program to Find Sum of Digits of a Number**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter a number:");

int number = int.Parse(Console.ReadLine());

int sum = 0;

while (number > 0)

{

sum += number % 10;

number /= 10;

}

Console.WriteLine("The sum of the digits is: " + sum);

}

}

**C# Program to Reverse a Number**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter a number:");

int number = int.Parse(Console.ReadLine());

int reversed = 0;

while (number > 0)

{

int digit = number % 10;

reversed = reversed \* 10 + digit;

number /= 10;

}

Console.WriteLine("The reversed number is: " + reversed);

}

}

**C# Program to Reverse a Number and Check if it is a Palindrome**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter a number:");

int number = int.Parse(Console.ReadLine());

int reversed = 0;

int orignal = number;

while (number > 0)

{

int digit = number % 10;

reversed = reversed \* 10 + digit;

number /= 10;

}

if (reversed == orignal){

Console.WriteLine("Number is palindrome");

}else{

Console.WriteLine("Number is not palindrome");

}

}

}

**C# Program to Find the Sum of Two Binary Numbers**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter the first binary number:");

string binary1 = Console.ReadLine();

Console.WriteLine("Enter the second binary number:");

string binary2 = Console.ReadLine();

int num1 = Convert.ToInt32(binary1, 2);

int num2 = Convert.ToInt32(binary2, 2);

int sum = num1 + num2;

string binarySum = Convert.ToString(sum, 2);

Console.WriteLine("The sum of the two binary numbers is: " + binarySum);

}

}

**C# Program to Multiply Two Binary Numbers**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter the first binary number:");

string binary1 = Console.ReadLine();

Console.WriteLine("Enter the second binary number:");

string binary2 = Console.ReadLine();

int num1 = Convert.ToInt32(binary1, 2);

int num2 = Convert.ToInt32(binary2, 2);

int mul = num1 \* num2;

string binaryMul = Convert.ToString(mul, 2);

Console.WriteLine("The multiplication of the two binary numbers is: " + binaryMul);

}

}

**C# Program to Calculate the Sum, Multiplication, Division and Subtraction of Two Numbers(use switch case)**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter the first number:");

double num1 = double.Parse(Console.ReadLine());

Console.WriteLine("Enter the second number:");

double num2 = double.Parse(Console.ReadLine());

Console.WriteLine("Choose an operation:");

Console.WriteLine("1. Sum");

Console.WriteLine("2. Multiplication");

Console.WriteLine("3. Division");

Console.WriteLine("4. Subtraction");

int choice = int.Parse(Console.ReadLine());

double result;

switch (choice)

{

case 1:

result = num1 + num2;

Console.WriteLine("The sum is: " + result);

break;

case 2:

result = num1 \* num2;

Console.WriteLine("The multiplication result is: " + result);

break;

case 3:

if (num2 != 0)

{

result = num1 / num2;

Console.WriteLine("The division result is: " + result);

}

else

{

Console.WriteLine("Error: Division by zero.");

}

break;

case 4:

result = num1 - num2;

Console.WriteLine("The subtraction result is: " + result);

break;

default:

Console.WriteLine("Invalid choice.");

break;

}

}

}

**C# Program to Generate Fibonacci Series**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter the number of terms for the Fibonacci series:");

int terms = int.Parse(Console.ReadLine());

if (terms <= 0)

{

Console.WriteLine("Please enter a positive integer.");

return;

}

int first = 0;

int second = 1;

Console.WriteLine("Fibonacci Series:");

for (int i = 0; i < terms; i++)

{

Console.Write(first + " ");

int next = first + second;

first = second;

second = next;

}

}

}

**C# Program to Print the Factorial of a Given Number**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter a number:");

int number = int.Parse(Console.ReadLine());

if (number < 0)

{

Console.WriteLine("Factorial is not defined for negative numbers.");

return;

}

long factorial = 1;

for (int i = 1; i <= number; i++)

{

factorial \*= i;

}

Console.WriteLine("The factorial of " + number + " is: " + factorial);

}

}

**C# Program to Print All the Prime Numbers between 1 to 100**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Prime numbers between 1 and 100:");

for (int num = 2; num <= 100; num++)

{

bool isPrime = true;

for (int i = 2; i <= num / 2; i++)

{

if (num % i == 0)

{

isPrime = false;

break;

}

}

if (isPrime)

{

Console.Write(num + " ");

}

}

}

}

**C# Program to Find the Largest Prime Factor of a Number**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter a number:");

int number = int.Parse(Console.ReadLine());

if (number <= 1)

{

Console.WriteLine("Please enter a number greater than 1.");

return;

}

int largestPrimeFactor = number;

int factor = 2;

while (factor \* factor <= number)

{

if (number % factor == 0)

{

largestPrimeFactor = factor;

while (number % factor == 0)

{

number /= factor;

}

}

factor++;

}

if (number > 1)

{

largestPrimeFactor = number;

}

Console.WriteLine("The largest prime factor is: " + largestPrimeFactor);

}

}

**C# Program to Check Whether a Given Number is Perfect Number**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter a number:");

int number = int.Parse(Console.ReadLine());

if (number <= 0)

{

Console.WriteLine("Please enter a positive integer.");

return;

}

int sum = 0;

for (int i = 1; i <= number / 2; i++)

{

if (number % i == 0)

{

sum += i;

}

}

if (sum == number)

{

Console.WriteLine(number + " is a perfect number.");

}

else

{

Console.WriteLine(number + " is not a perfect number.");

}

}

}

**C# Program to Check Armstrong Number**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter a number:");

int number = int.Parse(Console.ReadLine());

int originalNumber = number;

int sum = 0;

int numberOfDigits = number.ToString().Length;

while (number > 0)

{

int digit = number % 10;

sum += (int)Math.Pow(digit, numberOfDigits);

number /= 10;

}

if (sum == originalNumber)

{

Console.WriteLine(originalNumber + " is an Armstrong number.");

}

else

{

Console.WriteLine(originalNumber + " is not an Armstrong number.");

}

}

}

**C# Program to Print Armstrong Number between 1 to 1000**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Armstrong numbers between 1 and 1000:");

for (int number = 1; number <= 1000; number++)

{

int sum = 0;

int temp = number;

int digits = (int)Math.Log10(number) + 1;

while (temp > 0)

{

int digit = temp % 10;

sum += (int)Math.Pow(digit, digits);

temp /= 10;

}

if (sum == number)

{

Console.WriteLine(number);

}

}

}

}

**C# Program to Generate the Sum of N Numbers**

using System;

class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter a number:");

int N = int.Parse(Console.ReadLine());

int sum = 0;

for (int i = 1; i <= N; i++)

{

sum += i;

}

Console.WriteLine("Sum: " + sum);

}

}

**C# Program to Find the Sum of First 50 Natural Numbers using For Loop**

using System;

class Program

{

static void Main(string[] args)

{

int sum = 0;

for (int i = 1; i <= 50; i++)

{

sum += i;

}

Console.WriteLine("The sum of the first 50 natural numbers is: " + sum);

}

}