RUTUJA PIMPALGAONKAR

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);
  }
}
```