AIM:

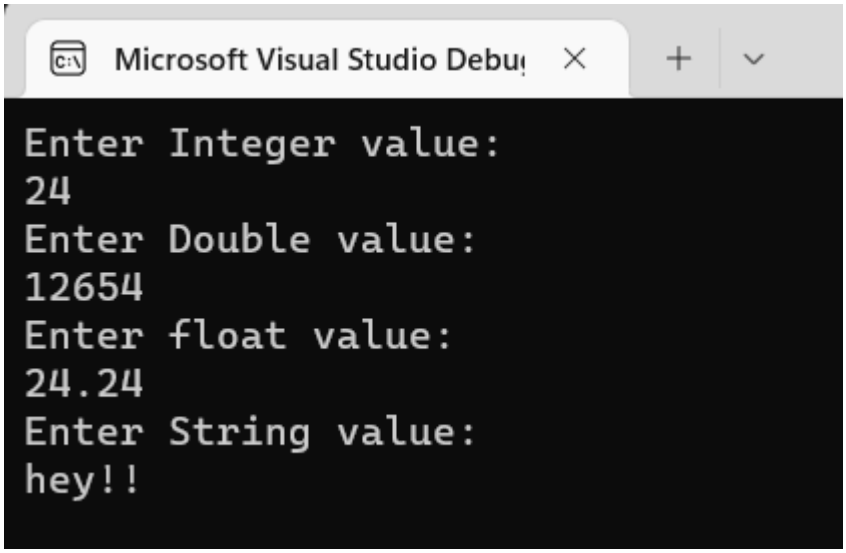
1. Write a program to get integer, double, character and string values from the user and display it on the screen.

   Program:-

   using System;

```
namespace P1
{
   class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Enter Integer value:");
         int a=int.Parse(Console.ReadLine());
         Console.WriteLine("Enter Double value:");
         double b = double.Parse(Console.ReadLine());
         Console.WriteLine("Enter float value:");
         float c= float.Parse(Console.ReadLine());
         Console.WriteLine("Enter String value:");
         string d = (Console.ReadLine());
      }
   }
}
```

Output:-



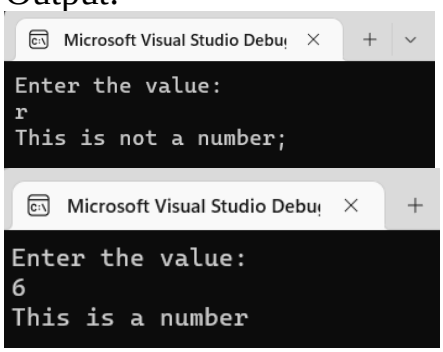
AIM:

2. Write a program to check whether the entered value is numeric or not. [Note: use try and catch.]

Program:-

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace ADT_Prac_2
{
    class P_2_2
   {
       static void Main(string[] args)
       {
          int val;
          Console.WriteLine("Enter the value:");
          try
          {
             val=Convert.ToInt32(Console.ReadLine());
             Console.WriteLine("This is a number");
          }
          catch(Exception ex)
          {
             Console.WriteLine("This is not a number;");
          }
       }
    }
 }
```

Output:-



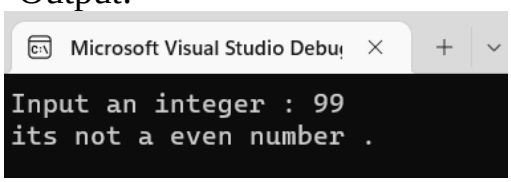
AIM:

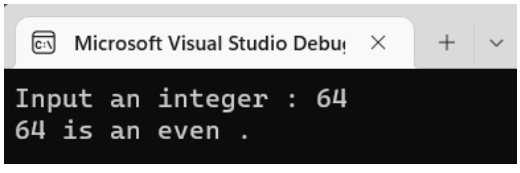
3. Write a program to accept a number from the user and throw an exception if the number is not an even number.

   Program:-

```
using System;
public class Exercise2
{
   public static void Main()
   {
      int num1, rem1;

      Console.Write("Input an integer : ");
      num1 = Convert.ToInt32(Console.ReadLine());
      try
      {
         rem1 = num1 % 2;
         if (rem1 == 0){
            Console.WriteLine("{0} is an even .\n", num1);
          }Else{
Throw new Exception("number is even");
      }
      catch (Exception e)
      {
         Console.WriteLine("its not an even number.\n", num1);
      }
   }
       }
```

Output:-





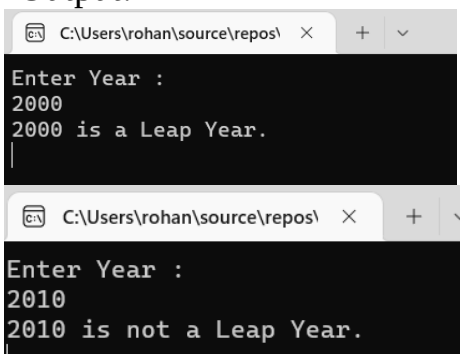
AIM:

4. Write a program to find whether the given year is leap year or not. (Leap year is evenly divisible by 4, but if it is evenly divisible by 100 then it is not a leap year, but if it is evenly divisible by 400, then it is a leap year)

Program:-

```
using System;
namespace CheckLeapYear
{
   class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Enter Year : ");
         int Year = int.Parse(Console.ReadLine());
 if (((Year % 4 == 0) && (Year % 100 != 0)) || (Year % 400 == 0))
Console.WriteLine("{0} is a Leap Year.", Year);
         else Console.WriteLine("{0} is not a Leap Year.", Year);
         Console.ReadLine();
      }}}
```

Output:-



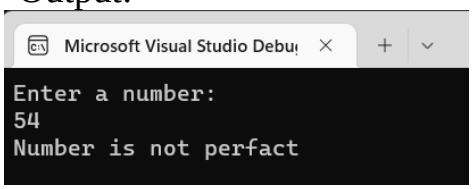
AIM:

5. Write a program to check whether the given number is perfect or not. A number is perfect if the sum of its divisor is the same as the number itself.

Program:-

```
using System;
namespace practical_2
{class P_2_5
   {static void Main(string[] args)
{int val, mod, sum = 0, mul = 1, temp;
        Console.WriteLine("Enter a number:");
        val = Convert.ToInt32(Console.ReadLine());
        temp = val;
        while (temp != 0)
        {mod = temp % 10;
           sum = sum + mod;
           mul = mul * mod;
           temp = temp / 10;}
if (mul == sum)
        {Console.WriteLine("Number is perfact");}
        else
        {Console.WriteLine("Number is not perfact");    }}}}
```

Output:-



AIM:

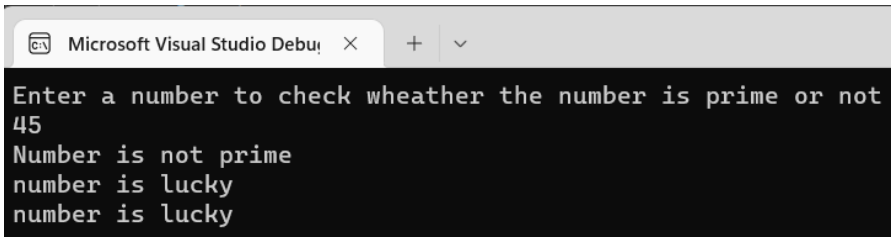
6. Write a program to check whether the given number is lucky or not. (A number is lucky if the number is itself a prime and the sum of digit of a number is also prime)

Program:-

```
using System;

namespace Practical_2
{
   internal class P_2_6
   {
   static void Main(string[] args)
   {
      int val, flag = 0, mod, sum = 0;
      Console.WriteLine("Enter a number to check wheather the number is prime or
not");
      val = Convert.ToInt32(Console.ReadLine());
      for (int i = 2; i <= Math.Sqrt(val); i++)
      {
         if (val % i == 0)
         {
            Console.WriteLine("Number is not prime");
            break;
         }

         else
         {
            flag = 1;
         }
      }

      if (flag == 1)
      {
         while (val != 0)
         {
               mod = val % 10;
               sum = sum + mod;
               val = val / 10;

         }
            for (int i = 2; i <= Math.Sqrt(sum); i++)
            {
               if(val% i==0)
                  {
```

```
                    Console.WriteLine("number is lucky");
                }
                else
                {
                    Console.WriteLine("number is not lucky");
                }
            }
        }
    }
}
}
```

Output:-



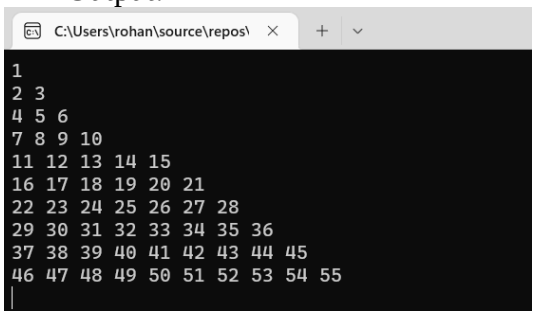
AIM:-

7. Write a program to generate Floyd's Triangle.

Program:-

```
using System;
namespace floydtriangle
{
   class Program
   {
      static void Main(string[] args)
      {

         int i, j, k = 1;
         for (i = 1; i <= 10; i++)
         {
            for (j = 1; j < i + 1; j++)
            {
               Console.Write(k++ + " ");
            }

            Console.Write("\n");
         }
         Console.ReadLine();
      }
   }
}
```

Output:-



AIM:

8. Write a program to replace a substring of given length with new substring. (Input: starting index and length of substring)

Program:-

```
using System;

namespace MyApplication
{
   class M
   {
      static void Main(string[] args)
      {
         Console.WriteLine("enter the string");
         string real = Console.ReadLine();
         Console.WriteLine("enter the string which you want to replace");
         string p = Console.ReadLine();
         Console.WriteLine("new string is");
         string f = Console.ReadLine();
         string final = real.Replace(p, f);
         Console.WriteLine(final);
         Console.ReadKey();
      }}}
```

Output:-