20 C# Programs

By

VARUN SAI KUMAR CHEGONI

27-Jan-2022

NB Training

Program1:

Write a C# Program to Print Multiplication of a Number

Code:

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

namespace CProgram1
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("program to Print Multiplication of a Number by Varun");
         Console.WriteLine();

         // Variable Declaration
         int input, i;

         // User Input
         Console.WriteLine("enter number");
         input = Convert.ToInt32(Console.ReadLine());

         for (i = 1; i <= 10; i++) // Logic
         {
            Console.WriteLine(input + "x" + i + "x" + input * i); // Output

         }
         Console.ReadLine();
      }
   }
}
```

Output:

```
D:\NB_Training\Training_Assignments\DotNET_Assignments\Day4_Morning(27 Jan)\c to c# programs\
program to Print Multiplication of a Number by Varun

enter number
6
6x1x6
6x2x12
6x3x18
6x4x24
6x5x30
6x6x36
6x7x42
6x8x48
6x9x54
6x10x60
```

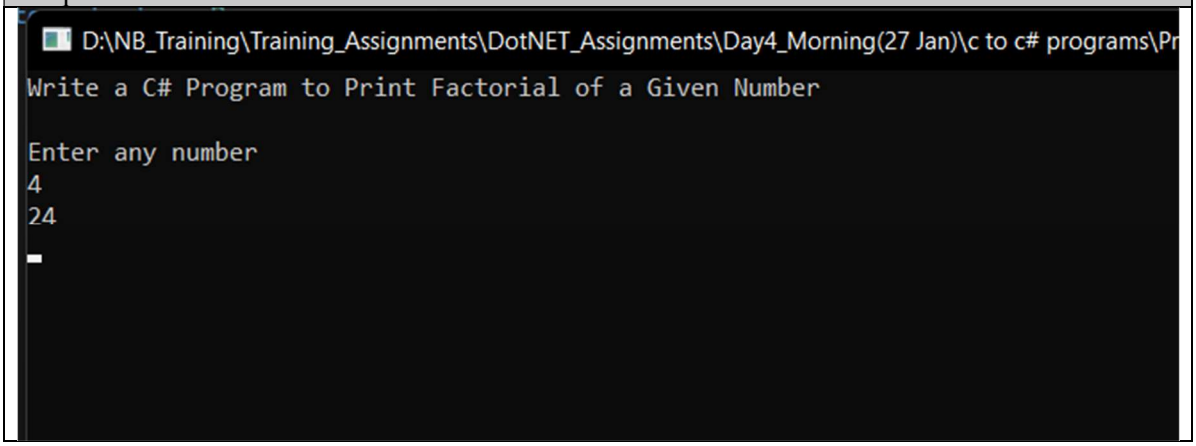
Program 2:

Write a C# Program to Print Factorial of a Given Number

Code:

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

namespace Program2
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write a C# Program to Print Factorial of a Given Number");
         Console.WriteLine();

         int input, product = 1, i; // Variable Declaration

         // User Input
         Console.WriteLine("Enter any number");
         input = Convert.ToInt32(Console.ReadLine());

         for (i = 1; i <= input; i++)
         {
            product = product * i; // Logic

         }
          // Print Output
         Console.WriteLine(product);
         Console.ReadLine();

      }
   }
}
```

Output:



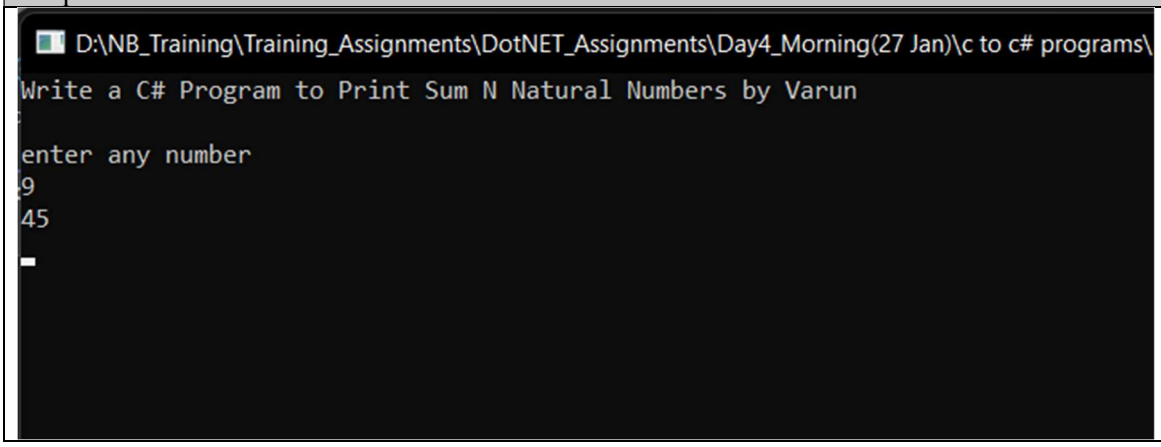
Program 3:

Write a C# Program to Print Sum N Natural Numbers

Code:

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

namespace Project3
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write a C# Program to Print Sum N Natural Numbers by Varun");
         Console.WriteLine();

         int input, sum = 0, i; // Variable Declaration

         // User input
         Console.WriteLine("enter any number");
         input = Convert.ToInt32(Console.ReadLine());

         for (i = 1; i <= input; i++)
         {
            sum = sum + i; // Logic
         }

         Console.WriteLine(sum); // Print Output
         Console.ReadLine();
      }
   }
}
```

Output:



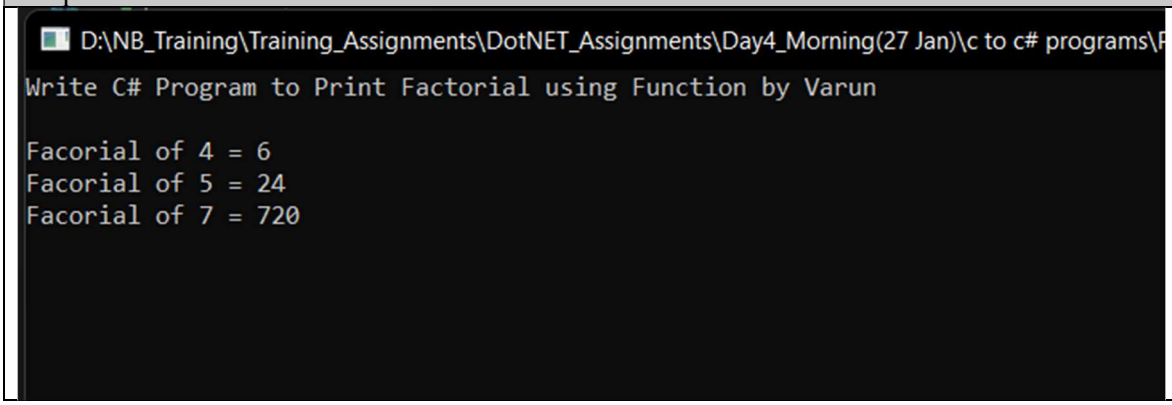
Program 4:

Write C# Program to Print Factorial using Function

Code:

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

namespace Program4
{
   internal class Program
   {
      public static int Factorial(int n)
      {
         int fact = 1;
         for (int i = 1; i < n; i++)
            fact *= i;
         return fact;
      }
      public static void print(int n)
      {
         Console.WriteLine("Facorial of {0} = {1}", n, Factorial(n));
      }
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Factorial using Function by Varun");
         Console.WriteLine();

         int n = 4, n1 = 5, n2 = 7;
         print(n);
         print(n1);
         print(n2);
         Console.ReadLine();
      }
   }
}
```

Output:



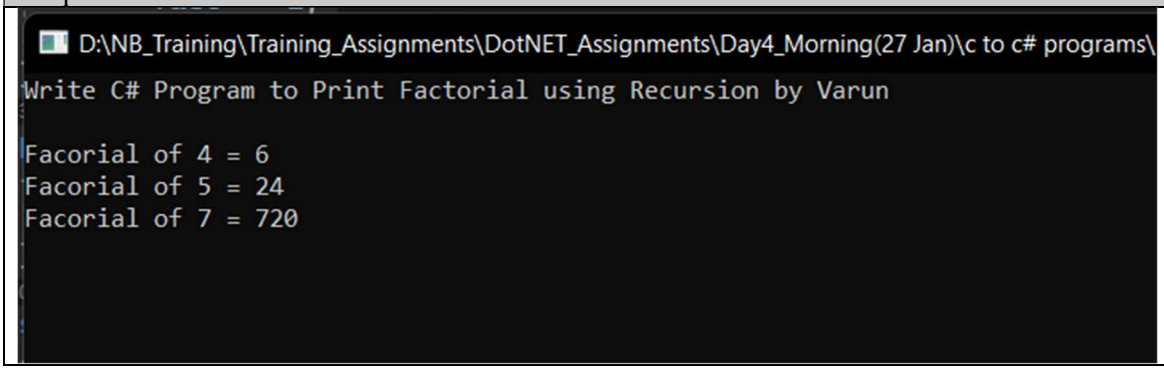
Program 5:

Write C# Program to Print Factorial using Recursion

Code:

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

namespace Program5
{
   internal class Program
   {
      public static int Factorial(int n)
      {
         int fact = 1;
         for (int i = 1; i < n; i++)
            fact *= i;
         return fact;
      }
      public static void print(int n)
      {
         Console.WriteLine("Facorial of {0} = {1}", n, Factorial(n));
      }
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Factorial using Recursion by Varun");
         Console.WriteLine();

         int n = 4, n1 = 5, n2 = 7;
         print(n);
         print(n1);
         print(n2);
         Console.ReadLine();
      }
   }
}
```

Output:



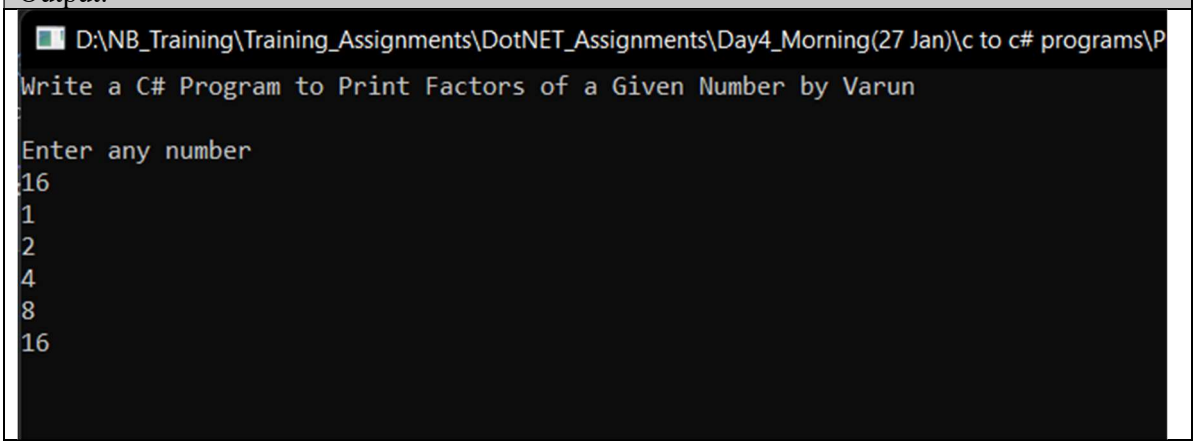
Program 6:

Write a C# Program to Print Factors of a Given Number

Code:

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

namespace Program6
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write a C# Program to Print Factors of a Given Number by Varun");
         Console.WriteLine();

         int input, i; // Variable Declaration
         Console.WriteLine("Enter any number"); // User Input
         input = Convert.ToInt32(Console.ReadLine());

         for (i = 1; i <= input; i++)
         {
            if (input % i == 0) // Logic
               Console.WriteLine(i); // Output
         }
         Console.ReadLine();

      }
   }
}
```

Output:



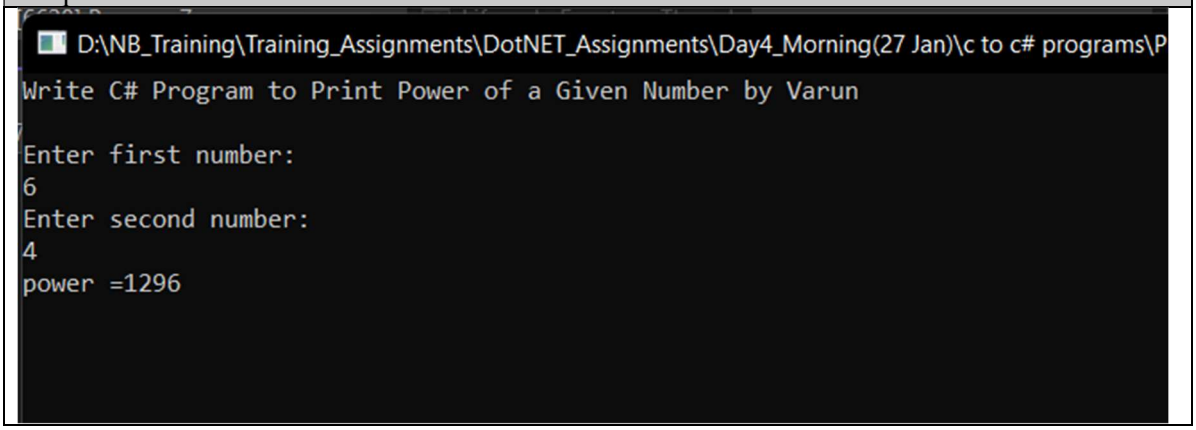
Program 7:

Write C# Program to Print Power of a Given Number

Code:

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

namespace Program7
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Power of a Given Number by Varun");
         Console.WriteLine();

         // Variable Declaration
         int b, ex;
         int p = 1;

         // User input
         Console.WriteLine("Enter first number:");
         b = Convert.ToInt32(Console.ReadLine());

         Console.WriteLine("Enter second number:");
         ex = Convert.ToInt32(Console.ReadLine());

         for (int i = 1; i <= ex; i++)
            p = p * b; // Logic

         Console.WriteLine("power =" + p); // output
         Console.ReadLine();

      }
   }
}
```

Output:



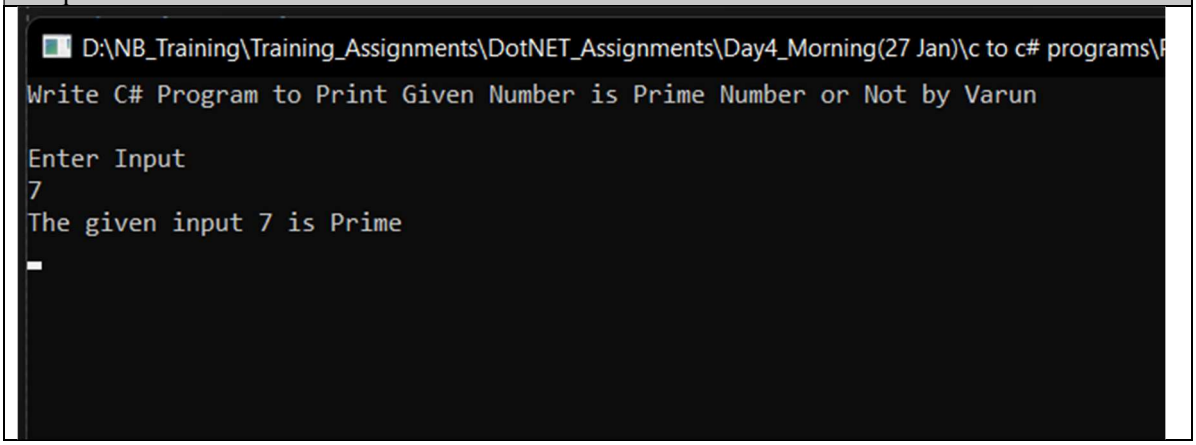
Program 8:

Write C# Program on Given Number is Prime Number or Not

Code:

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

namespace Program8
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Given Number is Prime Number or Not by Varun");
         Console.WriteLine();

         // Variable Declaration
         int input, i, count = 0;

         //input
         Console.WriteLine("Enter Input");
         input = Convert.ToInt32(Console.ReadLine());

         for (i =2; i<=input; i++)
         {
            if (input % i == 0)
               break;
         }

         if (i == input)
            Console.WriteLine("The given input {0} is Prime", input);
         else
            Console.WriteLine("The given input {0} is not a prime", input);

         Console.ReadLine();
      }
   }
}
```

Output:



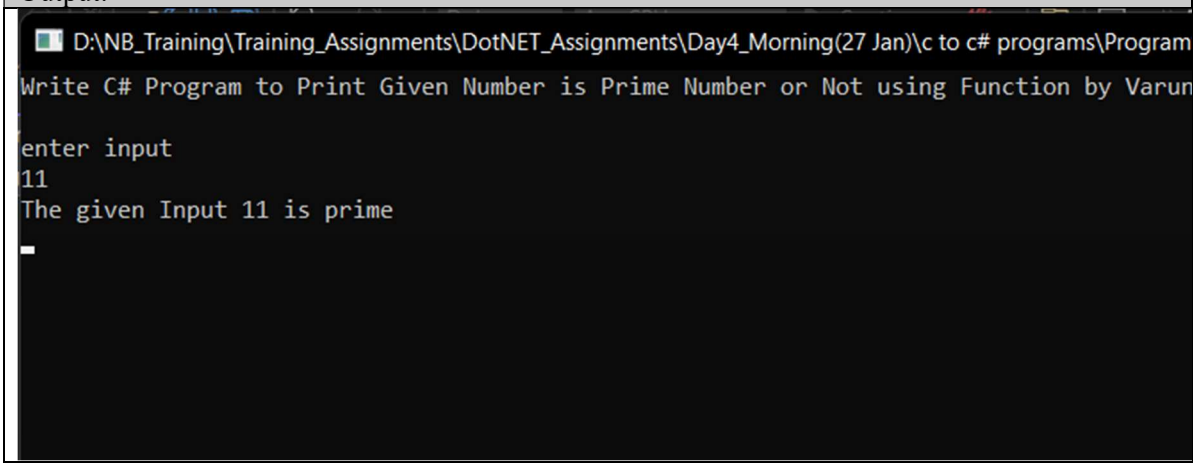
Program 9:

Write C# Program on Prime Number using Function

Code:

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

namespace Program9
{
   internal class Program
   {
      public static void Prime(int input)
      {
         int i;
         for (i = 2; i< input; i++)
         {
            if (input % i == 0)
               break;
         }
         if (i == input)
            Console.WriteLine("The given Input {0} is prime", input);
         else
            Console.WriteLine("The given Input {0} is no a prime", input);
      }
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Given Number is Prime Number or Not using Function by
Varun");
         Console.WriteLine();

         {
            Console.WriteLine("enter input");// User Input
            Prime(Convert.ToInt32(Console.ReadLine()));
            Console.ReadLine();
         }

      }
   }
}
```

Output:



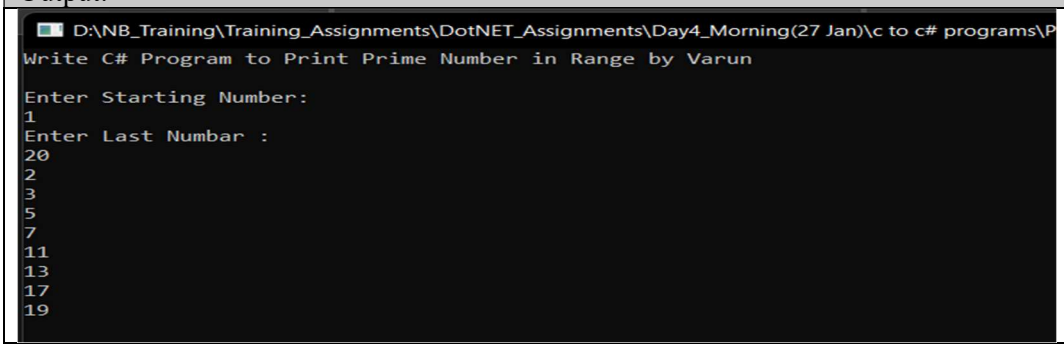
Program 10:

Write C# Program of Prime Number in Range

Code:

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

namespace Program10
{
   internal class Program
   {
      public static bool Prime(int input)

      {
         int i;
         for (i=2; i<input; i++)
         {
            if (input % i == 0)
               break;
         }
         if (i == input)
            return true;
         else
            return false;
      }
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Prime Number in Range by Varun");
         Console.WriteLine();

         int i, a, b; // Variable Declaration
         Console.WriteLine("Enter Starting Number: "); // User Input
         a = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Enter Last Numbar : "); // User Input
         b = Convert.ToInt32(Console.ReadLine());
         for (i = a; i <= b; i++)
         {
            if (Prime(i)) // Logic
               Console.WriteLine(i); // Output
         }
         Console.ReadLine();
      }
   }
}
```

Output:



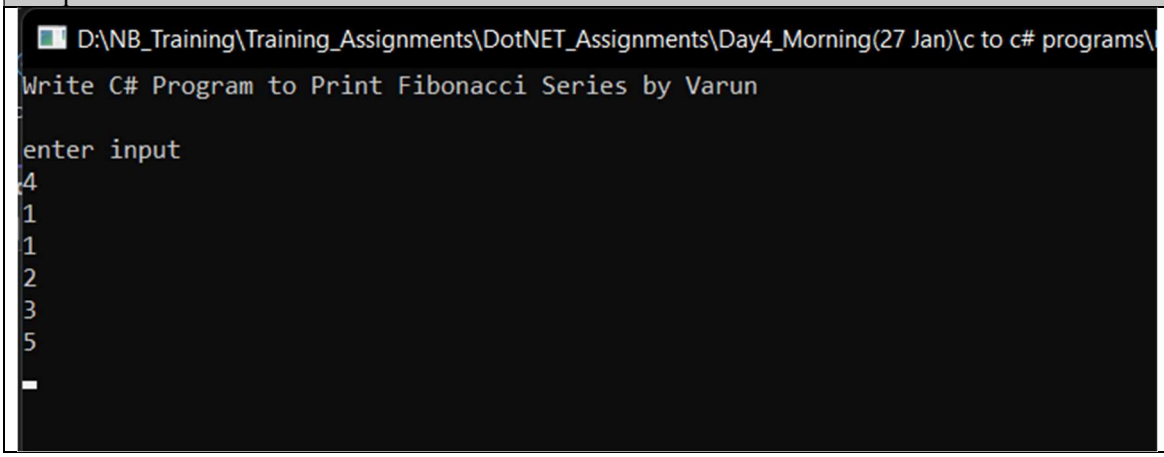
Program 11:

Write C# Program of Fibonacci Series

Code:

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

namespace Program11
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Fibonacci Series by Varun");
         Console.WriteLine();
         // Variable Declaration
         int input;
         int next = 0;
         int prev = 0;

         Console.WriteLine("enter input");
         input = Convert.ToInt32((Console.ReadLine())); // User Input

         for (int i = 0; i<= input; i++)
         {
            if (next == 0)
            {
               next = 1;
            }
            else
            {
               int temp = next;
               next = next + prev;
               prev = temp; // Logic
            }
            Console.WriteLine(next); // Output
         }
         Console.ReadLine();
      }
   }
}
```

Output:



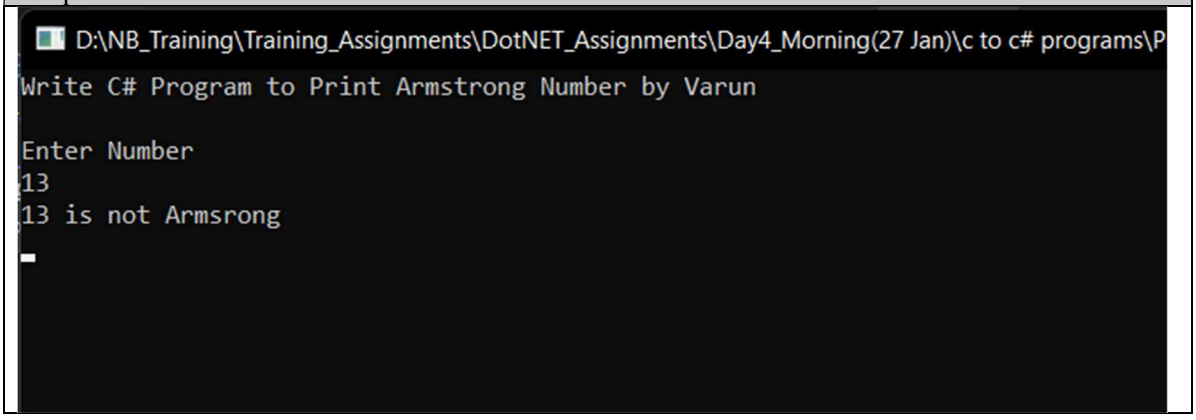
Program 12:

Write C# Program of Armstrong Number

Code:

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

namespace Program12
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Armstrong Number by Varun");
         Console.WriteLine();

         int number, rem, sum = 0, temp; // Variable Declaration
         Console.WriteLine("Enter Number"); //User input
         number = Convert.ToInt32(Console.ReadLine());
         temp = number;
         while (number > 0)
         {
            rem = number % 10;
            sum = sum + (rem*rem*rem);
            number = number / 10; // Logic
         }
         if (temp == sum)
         {
            Console.WriteLine("{0} is Armstrong", temp); // Output
         }
         else
         {
            Console.WriteLine("{0} is not Armsrong", temp); // Output
         }
         Console.ReadLine();
      }
   }
}
```

Output:



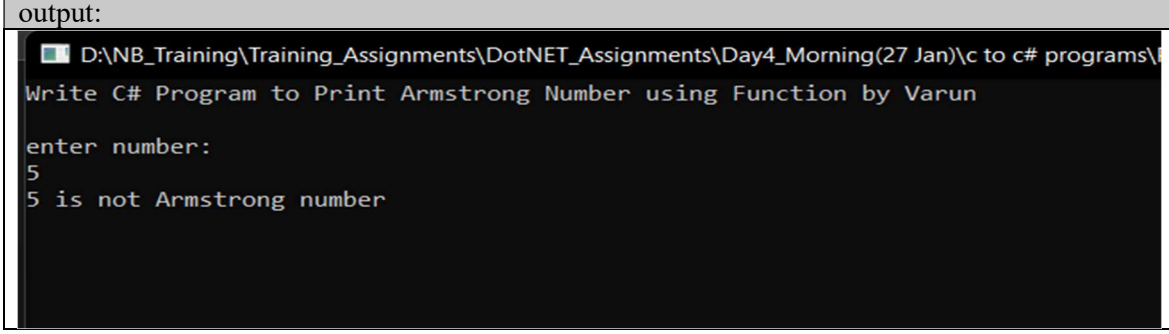
Program 13:

Write C# Program of Armstrong Number using Function

Code:

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

namespace Program13
{
   internal class Program
   {
      public static bool Arm(int n)
      {
         int temp, sum = 0, rem;
         temp = n;
         while (n>0)
         {
            rem = n % 10;
            sum = sum + (rem * rem * rem);
            n = n / 10;
         }
         if (temp == sum)
         {
            return true;
         }
         else
         {
            return false;
         }
      }
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Armstrong Number using Function by Varun");
         Console.WriteLine();

         int n;
         Console.WriteLine("enter number:");
         n = Convert.ToInt32(Console.ReadLine());
         if (Arm(n) == true)
            Console.WriteLine("{o} is Armstrong number", n);
         else
            Console.WriteLine("{0} is not Armstrong number", n);
         Console.ReadLine();
      }
   }
}
```

output:



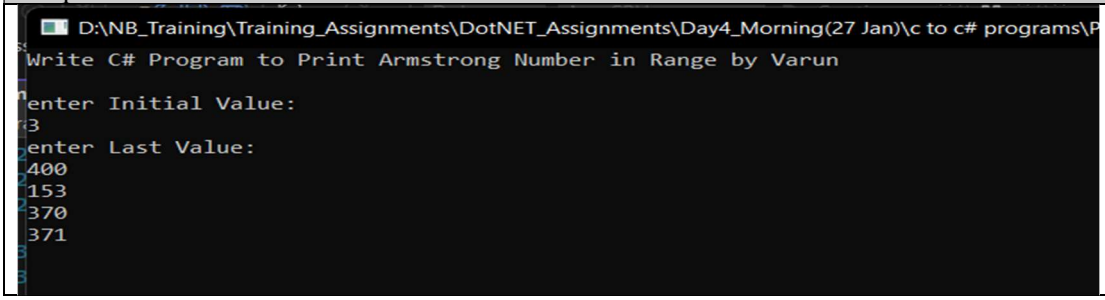
Program 14:

Write C# Program for Armstrong Number in Range

Code:

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

namespace Program14
{
   internal class Program
   {
      public static bool Arm(int number)
      {
         int temp, sum = 0, rem;
         temp = number;
         while (number > 0)
         {
            rem = number % 10;
            sum = sum + (rem * rem * rem);
            number = number / 10;
         }
         if (temp == sum)
         {
            return true;
         }
         else
         {
            return false;
         }
      }
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Armstrong Number in Range by Varun");
         Console.WriteLine();
         int a, b; // Variable Declaration
         Console.WriteLine("enter Initial Value:"); // User Input
         a = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("enter Last Value:"); // User Input
         b = Convert.ToInt32(Console.ReadLine());
         for (int i = a; i <= b; i++)
         {
            if (Arm(i))
               Console.WriteLine(i); // Output
         }
         Console.ReadLine();
      }
   }
}
```

Output:



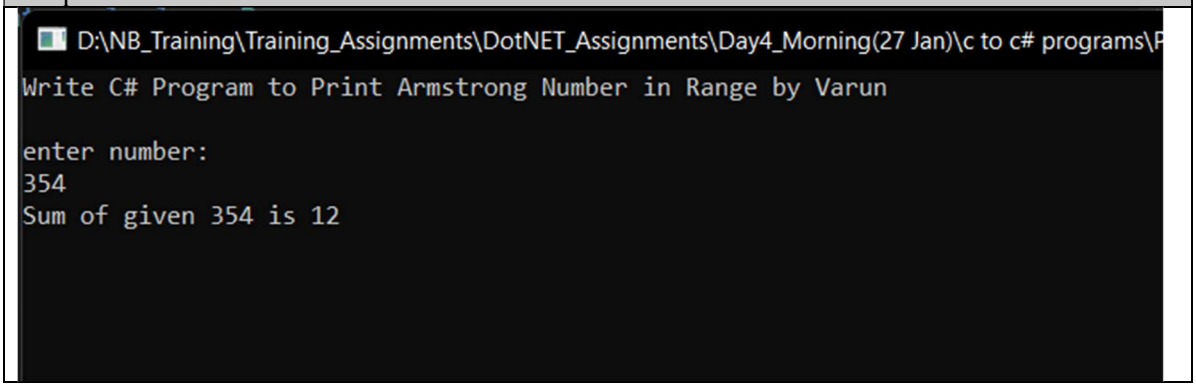
Program 15:

Write C# Program for Sum of a Digits of Given Number

Code:

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

namespace Program15
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Sum of Digit by Varun");
         Console.WriteLine();

         int rem, sum = 0, n; // Variable Declaration
         Console.WriteLine("enter number:"); // User Input
         n = Convert.ToInt32(Console.ReadLine());
         int temp = n;
         while (n > 0)
         {
            rem = n % 10;
            sum = sum + rem;
            n = n / 10; // Logic
         }
         Console.WriteLine("Sum of given {0} is {1}", temp, sum); // Print Output
         Console.ReadLine();
      }
   }
}
```

Output:



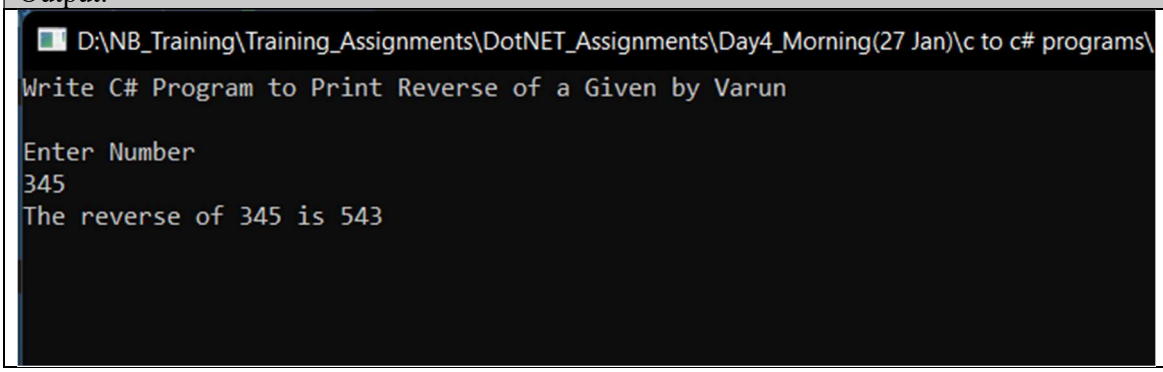
Program 16:

Write C# Program for Reverse a Given Number

Code:

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

namespace Program16
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Reverse of a Given by Varun");
         Console.WriteLine();

         int n, temp, rem, rev = 0; // Variable Declaration
         Console.WriteLine("Enter Number"); // User Input
         n = Convert.ToInt32(Console.ReadLine());
         temp = n;
         while (n>0)
         {
            rem = n % 10;
            rev = (rev * 10) + rem;
            n = n / 10; // Logic
         }
         Console.WriteLine("The reverse of {0} is {1}", temp, rev); // Print Output
         Console.ReadLine();
      }
   }
}
```

Output:



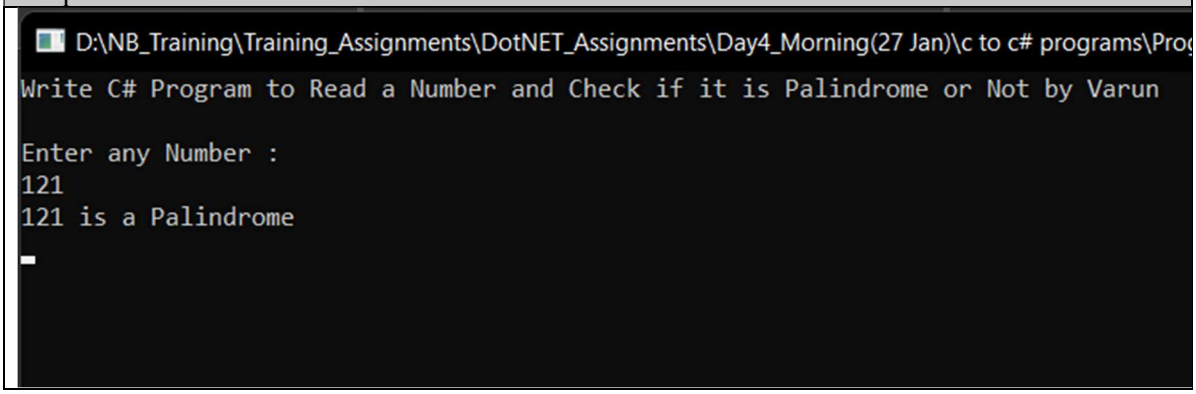
Program 17:

Write C# Program to Find the Given Number is Palindrome or Not

Code:

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

namespace Program17
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Read a Number and Check if it is Palindrome or Not by
Varun");
         Console.WriteLine();

         int input, m, rem, rev = 0; // Variable Declaration

         Console.WriteLine("Enter any Number : ");
         input = Convert.ToInt32(Console.ReadLine());
         // Logic
         m = input;
         while (m > 0)
         {
            rem = m % 10;
            m = m/10;
            rev = rev * 10 + rem;
         }
         if (input == rev)
            Console.WriteLine("{0} is a Palindrome", input);
         else
            Console.WriteLine("{0} is not a Palindrome", input);
         Console.ReadLine();
      }
   }
}
```

Output:



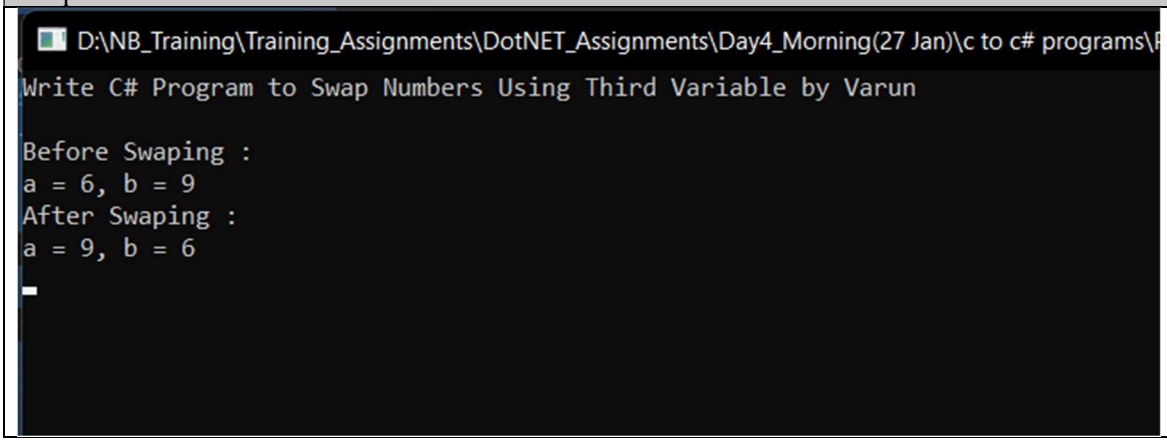
Program 18:

Write C# Program to Swap Numbers Using Third Variable.

Code:

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

namespace Program18
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Swap Numbers Using Third Variable by Varun");
         Console.WriteLine();

         int a = 6, b = 9,t;// Variable Declaration

         Console.WriteLine("Before Swaping :");
         Console.WriteLine("a = {0}, b = {1}", a, b);
         t= a;
         a= b;
         b= t; // Logic

         Console.WriteLine("After Swaping :");
         Console.WriteLine("a = {0}, b = {1}", a, b); // Output
         Console.ReadLine();
      }
   }
}
```

Output:



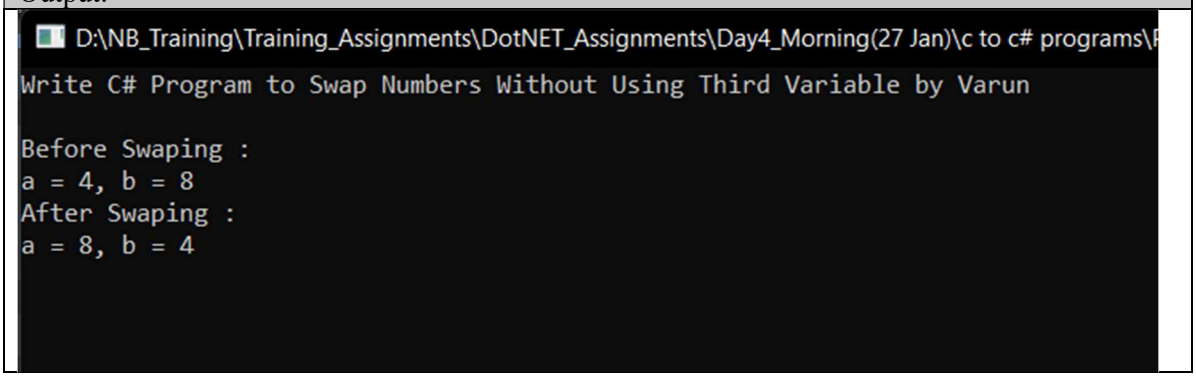
Program 19:

Write C# Program to Swap Numbers Without Using Third Variable.

Code:

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

namespace Program19
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Swap Numbers Without Using Third Variable by Varun");
         Console.WriteLine();

         int a = 4, b = 8;// Variable Declaration

         Console.WriteLine("Before Swaping :");
         Console.WriteLine("a = {0}, b = {1}", a, b);
         a= a + b;
         b= a - b;
         a= a - b; // Logic

         Console.WriteLine("After Swaping :");
         Console.WriteLine("a = {0}, b = {1}", a, b); // Output
         Console.ReadLine();
      }
   }
}
```

Output:



Program20:

Write C# Program to Print Stars in Given Format.

Code:

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

namespace Program20
{
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Write C# Program to Print Stars in Given Format by Varun");
         Console.WriteLine();

         int r, i, j; // Variable Declaration

         Console.WriteLine("Enter the Number of Rows to Print Star :"); // User Input
         r = Convert.ToInt32(Console.ReadLine());

         //Logic
         for (i = 0; i <= r; i++)
         {
            for (j = 1, j <= i, j++)
            {
               Console.WriteLine("*");
            }
         }
         Console.ReadLine();
      }
   }
}
```

Output: