20 C# Programs
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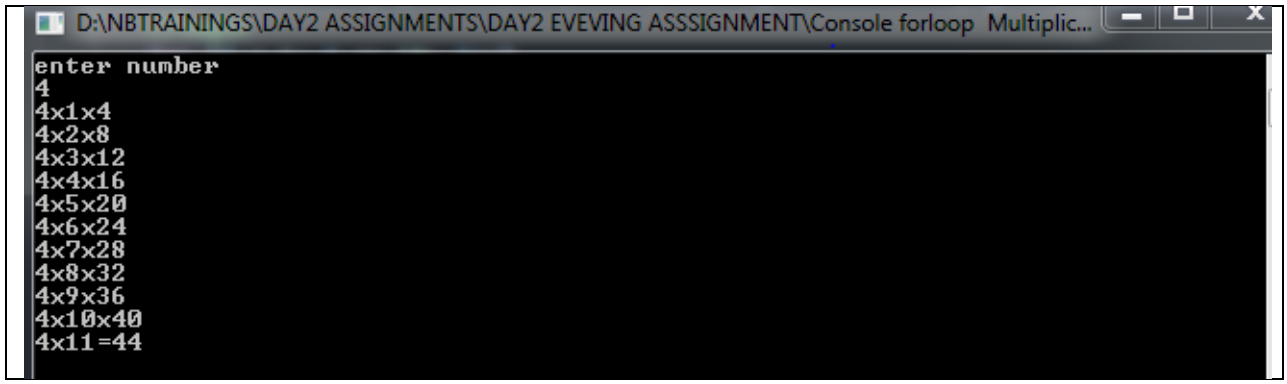
Program1:

Write a c# program for Multiplication of a Number

Code:

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

namespace Console_Multiplication_Table
{
   internal class Program
   {
      static void Main(string[] args)
      {
         //variable declaration
         int input, i;
         Console.WriteLine("enter number");
         input = Convert.ToInt32(Console.ReadLine());

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

         }
         for (i = 1; i <= 10; i++) ;
         {
            Console.WriteLine("{0}x{1}={2}", input, i, input * i);
         }
         Console.ReadLine();
      }
   }
}
```

Output:

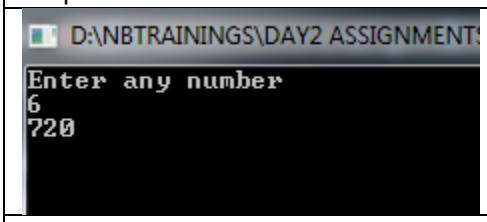


program 2:
Write a c program to print factorial of a given number
Code:

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

namespace Console_Facatorial
{
   internal class Program
   {
      static void Main(string[] args)
      {
         //variable declaration
         int input, product = 1, i;
         //user input
         Console.WriteLine("Enter any number");
         input = Convert.ToInt32(Console.ReadLine());

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

         }

         //output
         Console.WriteLine(product);
         Console.ReadLine();

      }
```

```
    }
```

Output:



program 3:

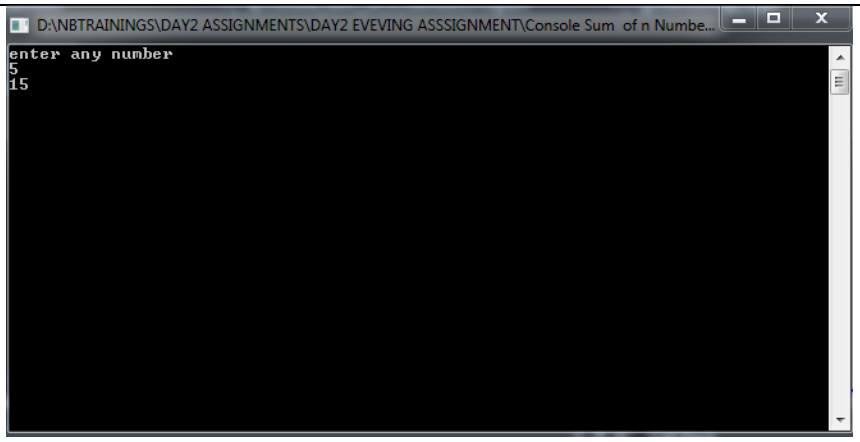
Write a c program to print sum N natural numbers

Code:

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

namespace Console_Sum__of_n_Numbers
{
    internal class Program
    {
        static void Main(string[] args)
        {
            //variable declaration
            int input, sum = 0, i;

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

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

            }
```

```
            //print output
            Console.WriteLine(sum);
            Console.ReadLine();


        }
    }
}
```

Output:

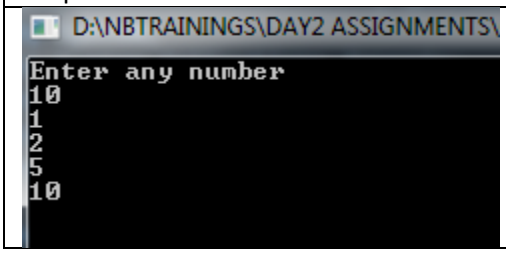


program 4:
Write a c program to print factors of a given number
Code:

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

namespace Console_Factors_App
{
    internal class Program
    {
        static void Main(string[] args)
        {
            //variable declarartion
            int input, i;
            Console.WriteLine("Enter any number");
            input = Convert.ToInt32(Console.ReadLine());


            //logic
```

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


    }
  }
}
```

Output:

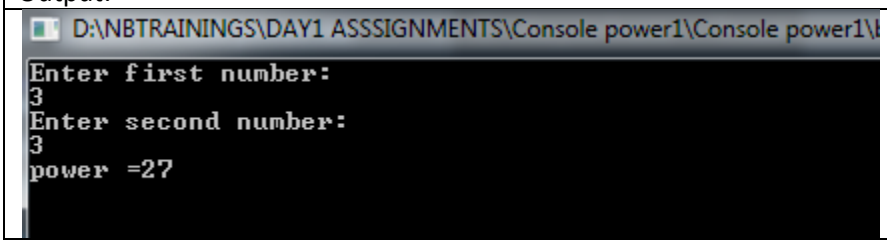


Program 5:
Write c# program to print power of a given number
Code:

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

namespace Console_power1
{
  internal class Program
  {
    static void Main(string[] args)
    {
      int fn, sn, sum = 0;
```

```
            int p = 1;

            fn = 60;

            Console.WriteLine("Enter first number:");
            fn = Convert.ToInt32(Console.ReadLine());


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

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

                p = p * fn;

            Console.WriteLine("power =" + p)


                Console.ReadLine();

        }
    }
}
```

Output:



Program 6:

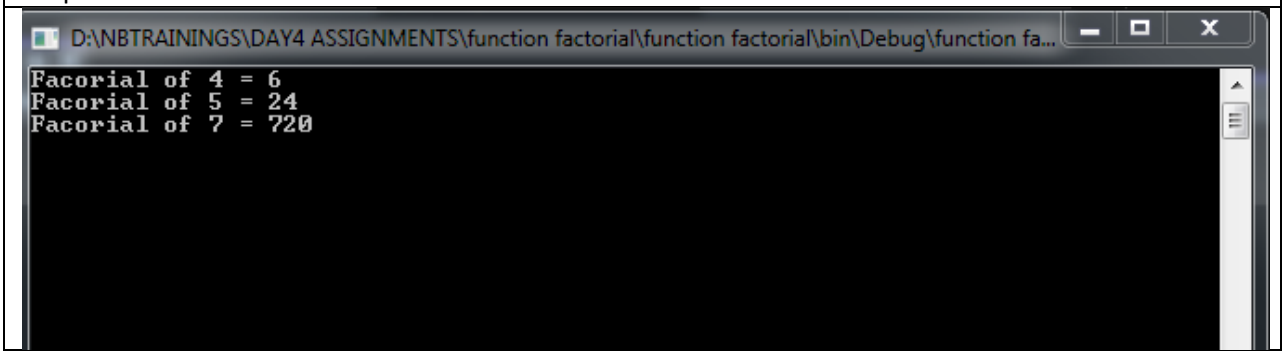
Write c# program to print factorial using function

Code:

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

namespace function_factorial
{
    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)
    {
        int n = 4, n1 = 5, n2 = 7;

        print(n);
        print(n1);
        print(n2);
        Console.ReadLine();
    }




  }
}
```

Output:

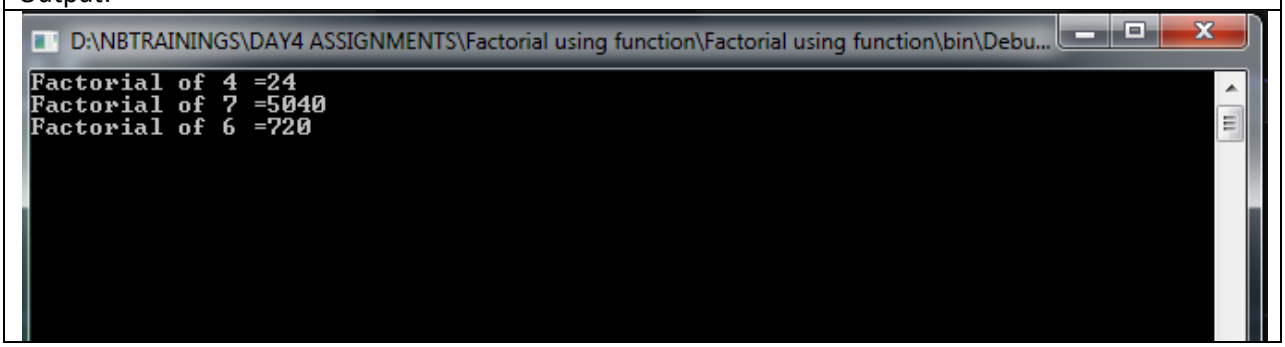


Program 7:
Write c# program for Factorial using functions
Code:

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

```
using System.Threading.Tasks;

namespace Factorial_using_function
{
   internal class Program
   {
      public static int Factorial(int n)

      {

         if (n == 0)
            return 1;
         else
            return n * Factorial(n - 1);


      }
      public static void Print(int n)
      {
         Console.WriteLine("Factorial of {0} ={1}", n, Factorial(n));


      }
      static void Main(string[] args)
      {


         {
            int n = 4, n1 = 7, n2 = 6;
            Print(n);
            Print(n1);
            Print(n2);
            Console.ReadLine();

         }

      }
   }

}
```

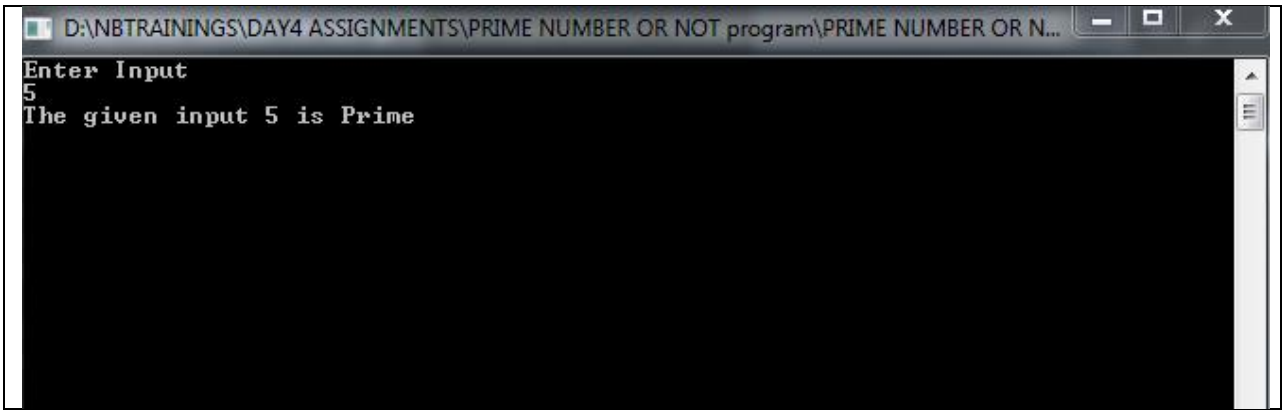
Output:



Program 8;
Write c# program on given number is prime or not
Code:

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

namespace PRIME_NUMBER_OR_NOT_program
{
   internal class Program
   {
      static void Main(string[] args)
      {
         //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:

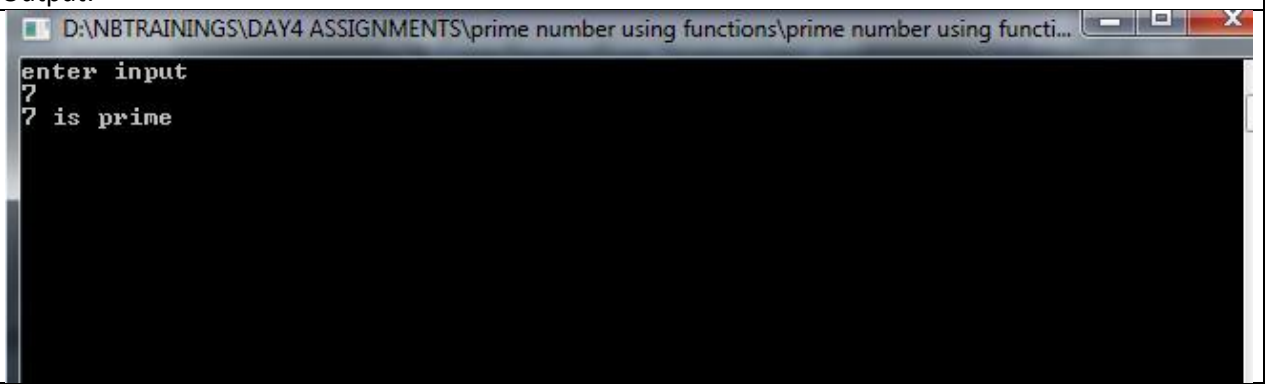


Program 9:
Write c# program on prime using function
Code:

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

namespace prime_number_using_functions
{
   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("{0} is prime", input);
         else
            Console.WriteLine("{0} is no a prime", input);

      }
      static void Main(string[] args)
      {
         Console.WriteLine("enter input");
         Prime(Convert.ToInt32(Console.ReadLine()));
         Console.ReadLine();

         }
      }
```

```
}
```

Output:



Program 10:

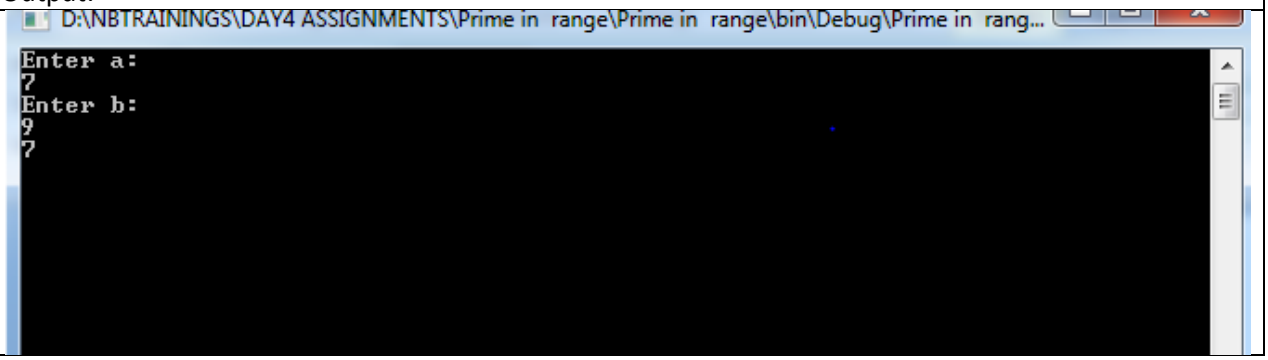
Write c# program of prime in range

Code:

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

namespace Prime_in__range
{
    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)
        {
            int i, a, b;
            Console.WriteLine("Enter a:");
            a = Convert.ToInt32(Console.ReadLine());
```

```
        Console.WriteLine("Enter b:");
        b = Convert.ToInt32(Console.ReadLine());
        for (i = a; i <= b; i++)
        {
            if (Prime(i))
                Console.WriteLine(i);
        }

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

Output:



Program 11:

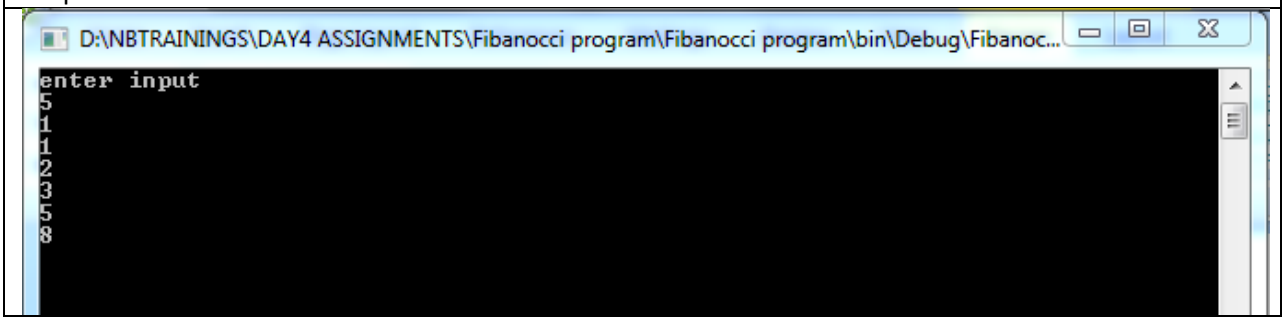
Write c# program of Fibonacci series

Code:

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

namespace Fibanocci_program
{
    internal class Program
    {
        static void Main(string[] args)
        {
            int input;
            Console.WriteLine("enter input");
            input = Convert.ToInt32((Console.ReadLine()));
            int next = 0;
            int prev = 0;
            for (int i = 0; i<= input; i++)
            {
                if (next == 0)
```

```
            {
                next = 1;
            }
            else
            {
                int temp = next;
                next = next + prev;
                prev = temp;
            }
            Console.WriteLine(next);

        }
        Console.ReadLine();

    }
  }
}
```

Output:

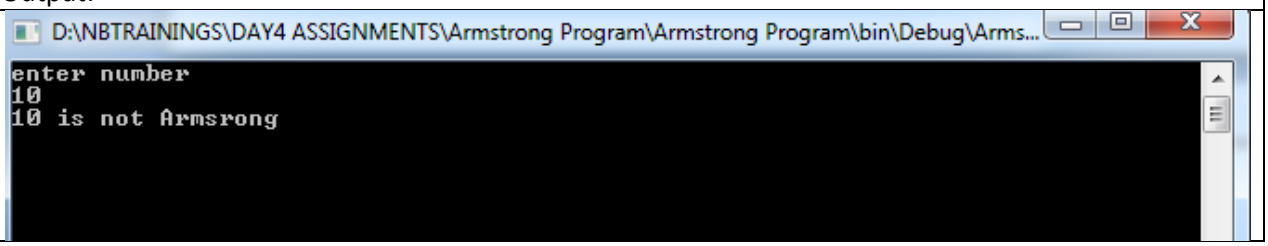


Program 12:
Write c# program of Armstrong
Code:

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

namespace Armstrong_Program
{
   internal class Program
   {
      static void Main(string[] args)
      {
         int number, rem, sum = 0, temp;
         Console.WriteLine("enter number");
         number = Convert.ToInt32(Console.ReadLine());
        temp = number;
         while (number > 0)
         {
```

```
            rem = number % 10;
            sum = sum + (rem*rem*rem);
            number = number / 10;
        }
        if (temp == sum)
        {
            Console.WriteLine("{0} is Armstrong", temp);
        }
        else
        {
            Console.WriteLine("{0} is not Armsrong",temp);
        }
        Console.ReadLine();
    }


  }
}
```

Output:



Program 13:

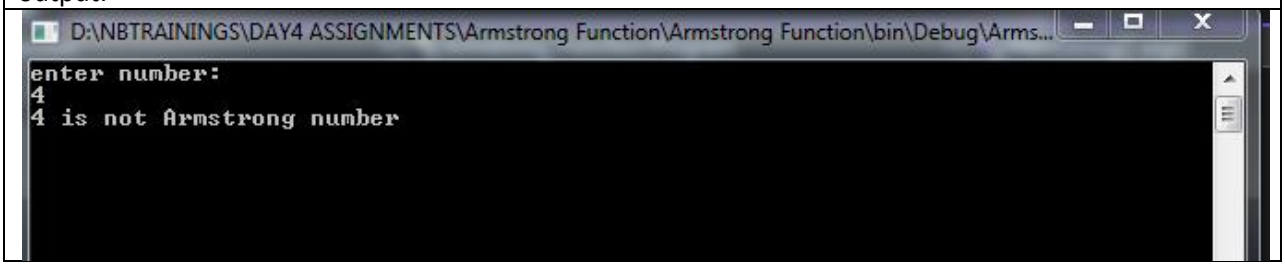
Write c# program of Armstrong function

Code:

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

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


    }
  }
}
```

output:

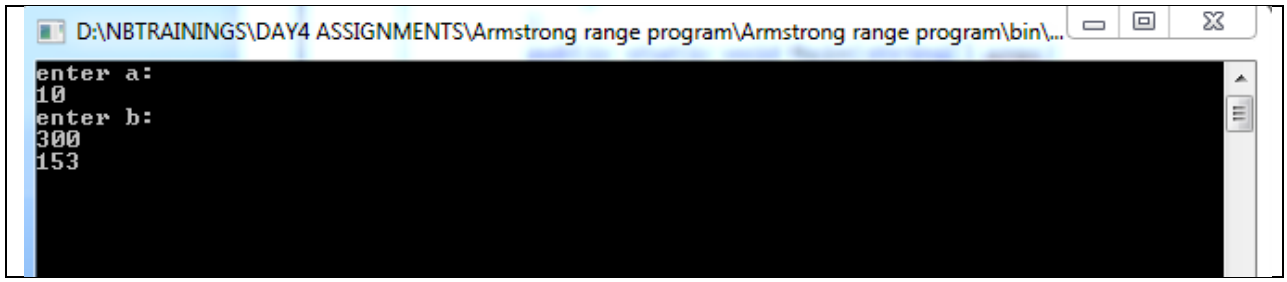


Program14:
Write c# program for Armstrong in Range
Code:

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

namespace Armstrong_range_program
{
```

```
    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;

            }
        }
        public static void Main(string[] args)
        {
            int a, b;
            Console.WriteLine("enter a:");
            a = Convert.ToInt32(Console.ReadLine());
            Console.WriteLine("enter b:");
            b = Convert.ToInt32(Console.ReadLine());
            for (int i = a; i <= b; i++)
            {
                if (Arm(i))
                    Console.WriteLine(i);

            }
            Console.ReadLine();




        }
    }
}
```

Output:



Program15:
Write c# program for Digit sum
Code:

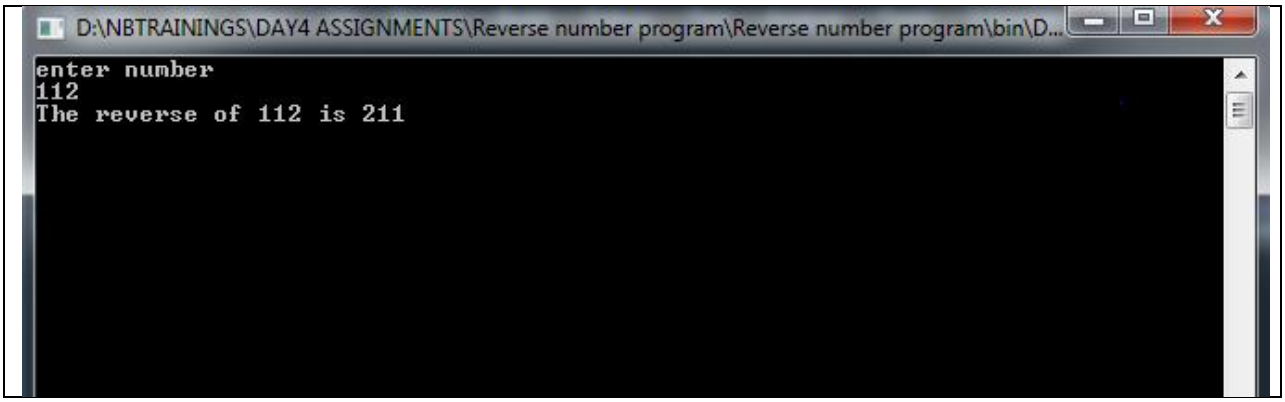
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Digitsum_program
{
   internal class Program
   {
      static void Main(string[] args)
      {
         int rem, sum = 0, number;
         Console.WriteLine("enter number:");
         number = Convert.ToInt32(Console.ReadLine());
         int temp = number;
         while (number > 0)
         {
            rem = number % 10;
            sum = sum + rem;
            number = number / 10;
         }
         Console.WriteLine("Sum of given {0} is {1}", temp, sum);

         Console.ReadLine();


      }
   }
}
```

Output:

Program16:
Write c# program for Reverse a number
Code:

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

namespace Reverse_number_program
{
   internal class Program
   {
      static void Main(string[] args)
      {
         int n, temp, rem, rev = 0;
         Console.WriteLine("enter number");
         n = Convert.ToInt32(Console.ReadLine());
         temp = n;
         while(n>0)
         {
            rem = n % 10;
            rev = (rev * 10) + rem;
            n = n / 10;

         }

           Console.WriteLine("The reverse of {0} is {1}", temp, rev);

         Console.ReadLine();

      }
   }
}
```

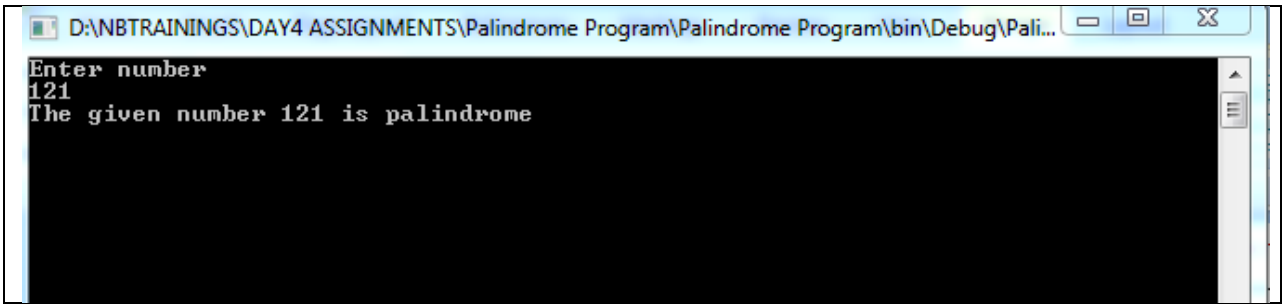
Output:



Program17:
Write c# program for given number is palindrome or NOT
Code:

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

namespace Palindrome_Program
{
   internal class Program
   {
      static void Main(string[] args)
      {
         int n, temp, rem, rev = 0;
         Console.WriteLine("Enter number");
         n = Convert.ToInt32(Console.ReadLine());
         temp = n;
         while (n>0)
         {
            rem = n % 10;
            rev = (rev * 10) + rem;
            n = n / 10;

         }
         if (temp == rev)
            Console.WriteLine("The given number {0} is palindrome", temp);
         else
            Console.WriteLine("The given number {0} is not a palindrome", temp);
         Console.ReadLine();


      }
   }
}
```

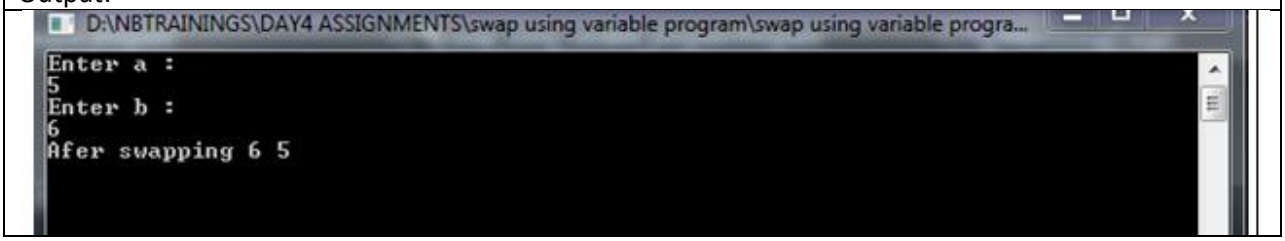
Output:



Program18:
Write c# program for swapping using variable
Code:

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

namespace swap_using_variable_program
{
   internal class Program
   {
      static void Main(string[] args)
      {
         int temp, a, b;
         Console.WriteLine("Enter a :");
         a = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Enter b :");
         b = Convert.ToInt32(Console.ReadLine());
         temp = a;
         a = b;
         b = temp;
         Console.WriteLine("Afer swapping {0} {1}", a, b);
         Console.ReadLine();
      }
   }
}
```

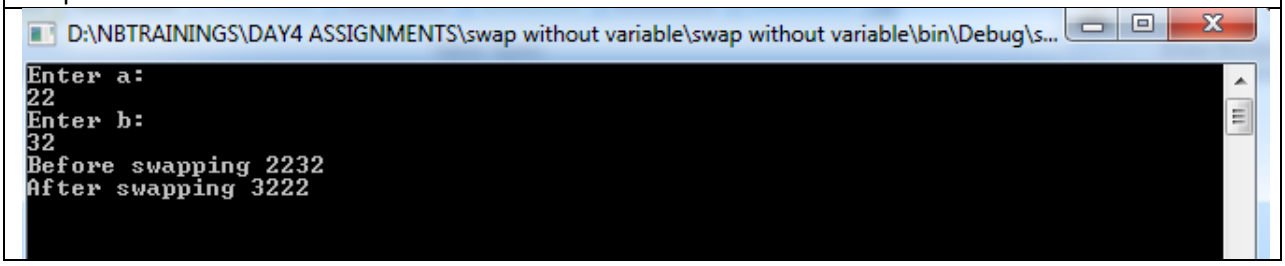
Output:



Program 19:
Write c# program for swapping without using variable
Code:

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

namespace swap_without_variable
{
   internal class Program
   {
      static void Main(string[] args)
      {
         int a, b;
         Console.WriteLine("Enter a:");
         a = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Enter b:");
         b = Convert.ToInt32(Console.ReadLine());
         Console.WriteLine("Before swapping {0}{1}" , a,b);
         a = a + b;
         b = a - b;
         a = a - b;
         Console.WriteLine("After swapping {0}{1}", a, b);
         Console.ReadLine();









      }
   }
}
```

Output:



Program 20:
Write c# program to print stars* in patterns
Code:

```
using System;
```

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

namespace Patters_program
{
   internal class Program
   {
      static void Main(string[] args)
      {
         int n, i, j;
         Console.WriteLine("Enter no. of rows");
         n = Convert.ToInt16(Console.ReadLine());
         for(i=1;i<=n;i++)
         {
            Console.WriteLine("*");
         }
         Console.ReadLine();



      }
   }
```

Output: