

**20 C# Programs**  
**By**  
**ANDE MANOHAR**  
**27-JAN-2022**

**Program1:**

Write a c# program for Multiplication of a Number

Code:

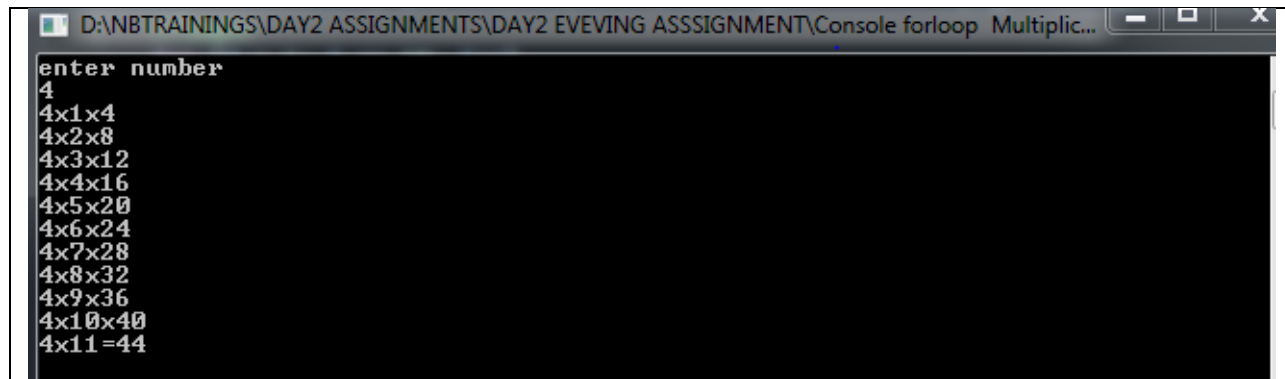
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

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:



A screenshot of a Windows console window titled "D:\NB8TRAININGS\DAY2 ASSIGNMENTS\DAY2 EVEING ASSSIGNMENT\Console forloop Multiplic...". The console displays the following text:

```
enter number
4
4x1x4
4x2x8
4x3x12
4x4x16
4x5x20
4x6x24
4x7x28
4x8x32
4x9x36
4x10x40
4x11=44
```

#### 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;

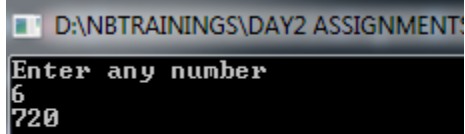
namespace Console_Facatorial
{
    internal class Program
    {
        static void Main(string[] args)
        {
            //variable declaration
            int input, product = 1, i;
            //user input
            Console.WriteLine("Enter any number");
            input = Convert.ToInt32(Console.ReadLine());

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

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

```
}
```

Output:



```
D:\ANBTRAININGS\DAY2 ASSIGNMENT
Enter any number
6
720
```

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;
            }
        }
    }
}
```

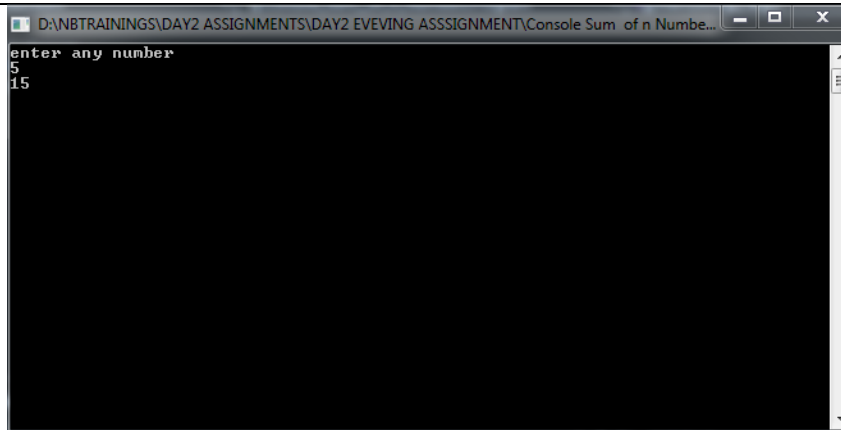
```

        //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

```

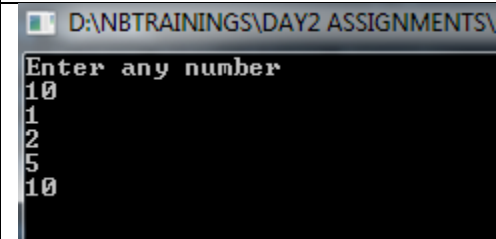
```

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

    }
}

```

Output:



```

D:\NBTRAININGS\DAY2 ASSIGNMENTS\
Enter any number
10
1
2
5
10

```

#### 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;

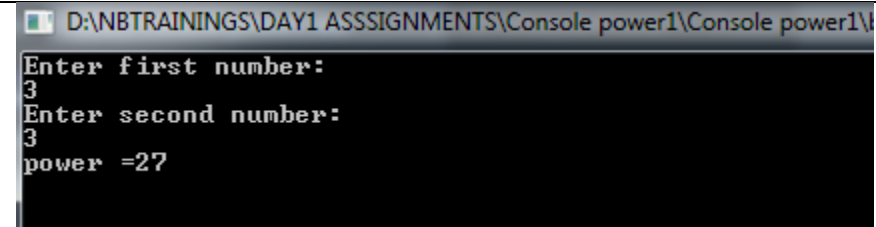
Console.WriteLine("power =" + p)

    Console.ReadLine();

}
}
}

```

Output:



```

D:\NBTRAININGS\DAY1 ASSSIGNMENTS\Console power1\Console power1\
Enter first number:
3
Enter second number:
3
power =27

```

#### 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++)

```

```

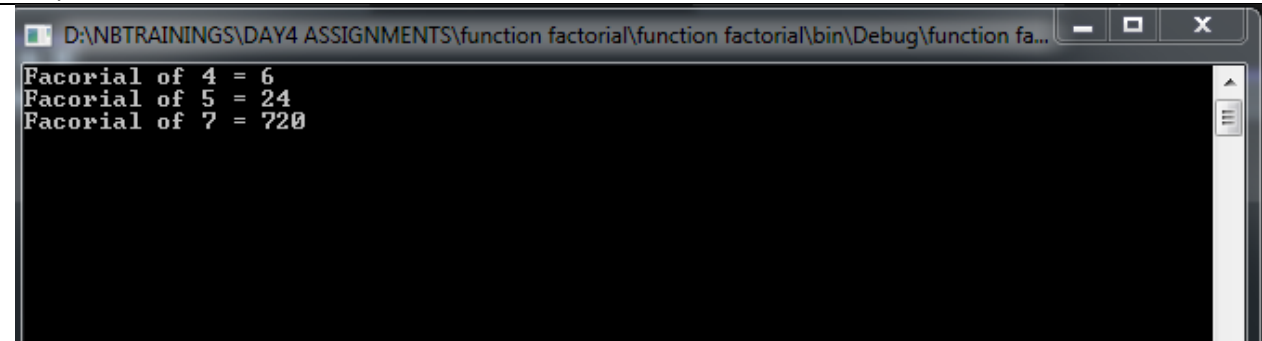
        fact *= i;
        return fact;
    }
    public static void print(int n)
    {
        Console.WriteLine("Facorial of {0} = {1}", n, Factorial(n));

    }
    static void Main(string[] args)
    {
        int n = 4, n1 = 5, n2 = 7;

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

```

Output:



The screenshot shows a Windows command prompt window with the title bar "D:\NBTRAININGS\DAY4 ASSIGNMENTS\function factorial\function factorial\bin\Debug\function fa...". The window contains the following output:

```

Facorial of 4 = 6
Facorial of 5 = 24
Facorial of 7 = 720

```

#### 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)
        {

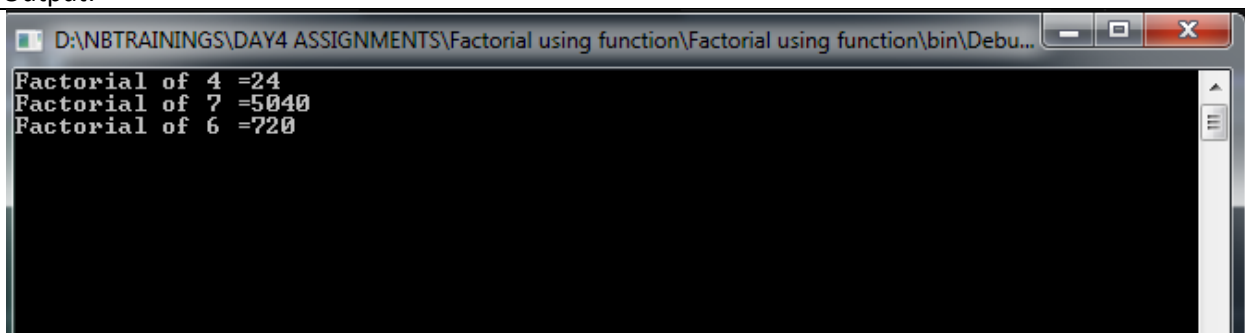
            {
                int n = 4, n1 = 7, n2 = 6;
                Print(n);
                Print(n1);
                Print(n2);
                Console.ReadLine();

            }

        }
    }
}

```

Output:



The screenshot shows a Windows command prompt window with the title bar "D:\NBTRAININGS\DAY4 ASSIGNMENTS\Factorial using function\Factorial using function\bin\Debu...". The window contains the following output:

```

Factorial of 4 =24
Factorial of 7 =5040
Factorial of 6 =720

```



#### Program 8;

Write c# program on given number is prime or not

Code:

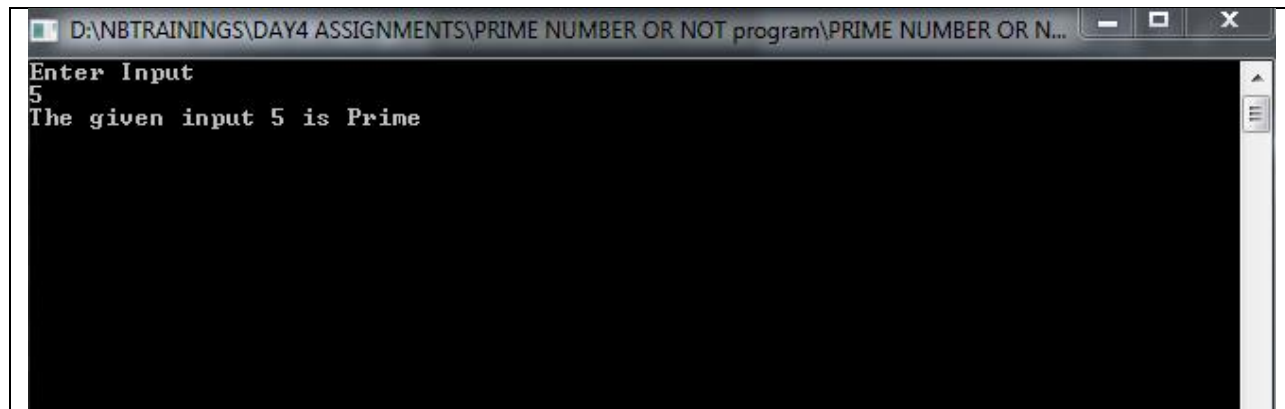
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

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:



```
D:\NBTRAININGS\DAY4 ASSIGNMENTS\PRIME NUMBER OR NOT program\PRIME NUMBER OR N...
Enter Input
5
The given input 5 is Prime
```

#### Program 9:

Write c# program on prime using function

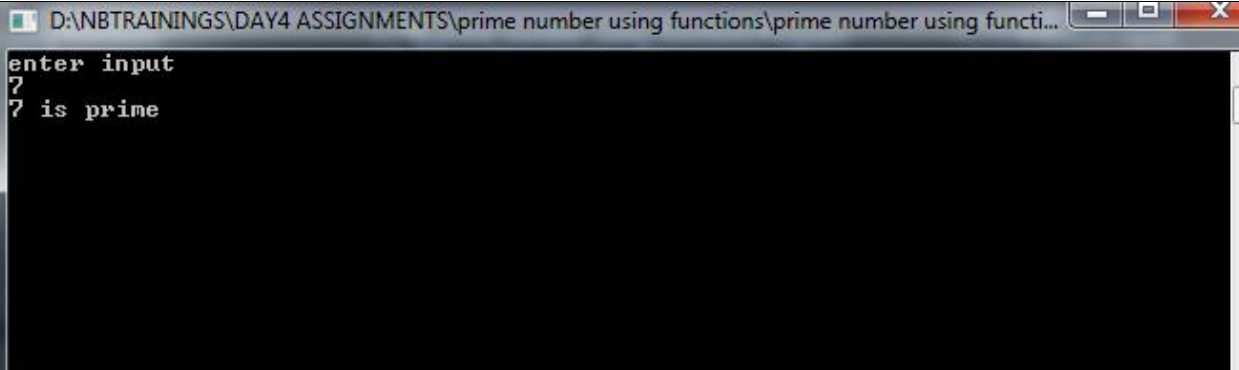
Code:

```
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:



```
D:\NBTRAININGS\DAY4 ASSIGNMENTS\prime number using functions\prime number using functi...  
enter input  
?  
? is prime
```

#### 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());
```

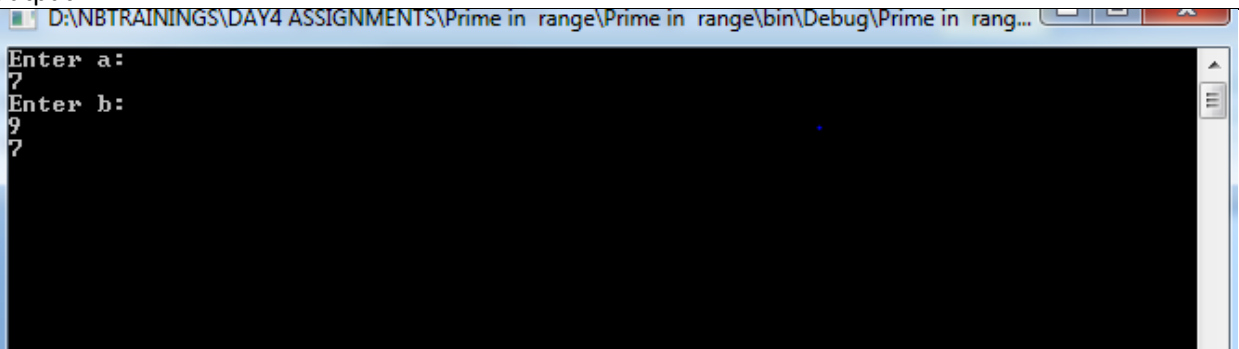
```

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

        Console.ReadLine();
    }
}

```

Output:



```

D:\NBTRAININGS\DAY4 ASSIGNMENTS\Prime in range\Prime in range\bin\Debug\Prime in rang...
Enter a:
7
Enter b:
9
7

```

#### 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:

```

D:\NBTRAININGS\DAY4 ASSIGNMENTS\Fibanocci program\Fibanocci program\bin\Debug\Fibanoc...
enter input
5
1
1
2
3
5
8

```

#### 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)
            {

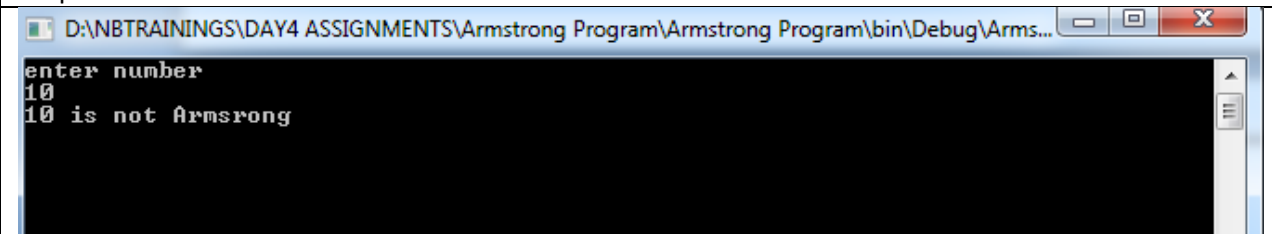
```

```

        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:



```

D:\NBTRAININGS\DAY4 ASSIGNMENTS\Armstrong Program\Armstrong Program\bin\Debug\Arms...
enter number
10
10 is not Armsrong

```

#### 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;
            }
        }
    }
}

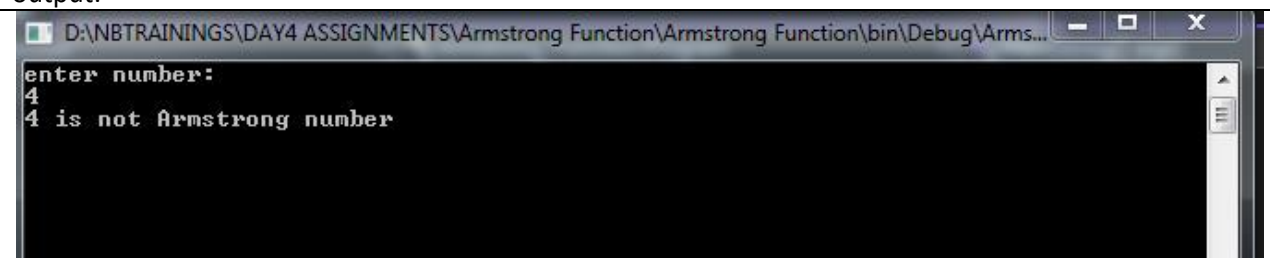
```

```

    }
    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("{0} is Armstrong number", number);
    else
        Console.WriteLine("{0} is not Armstrong number", number);
    Console.ReadLine();
}
}
}

```

output:



```

D:\NBTRAININGS\DAY4 ASSIGNMENTS\Armstrong Function\Armstrong Function\bin\Debug\Arms...
enter number:
4
4 is not Armstrong number

```

#### 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);

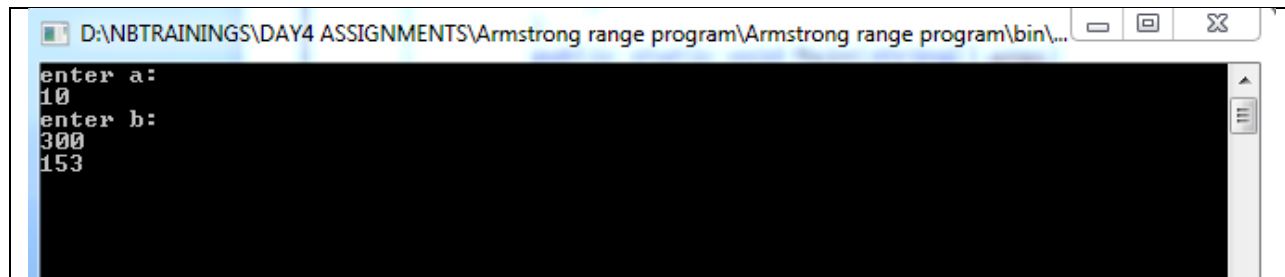
        }
        Console.ReadLine();

    }
}

```

Output:





```
enter a:
10
enter b:
300
153
```

#### Program15:

Write c# program for Digit sum

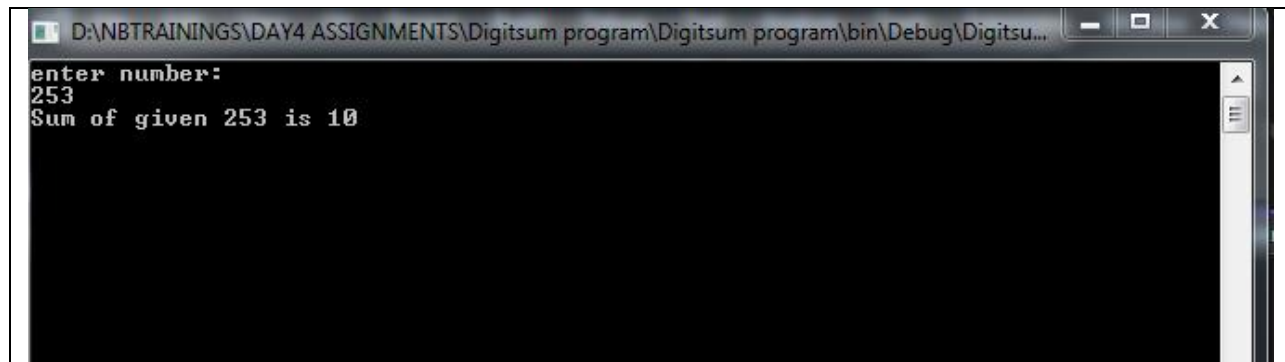
Code:

```
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:



```
D:\NBTRAININGS\DAY4 ASSIGNMENTS\Digitsum program\Digitsum program\bin\Debug\Digitsu...
enter number:
253
Sum of given 253 is 10
```

#### Program16:

Write c# program for Reverse a number

Code:

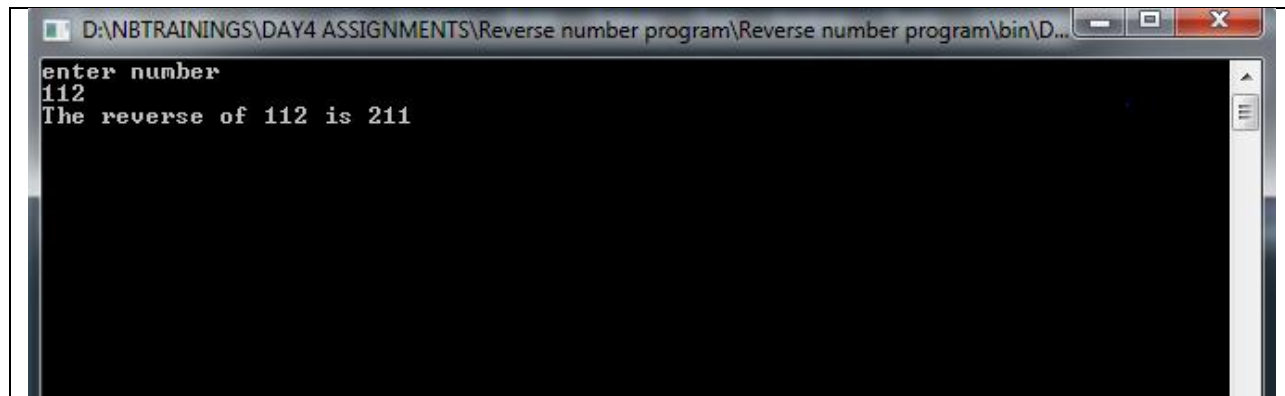
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

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:



```
enter number
112
The reverse of 112 is 211
```

#### Program17:

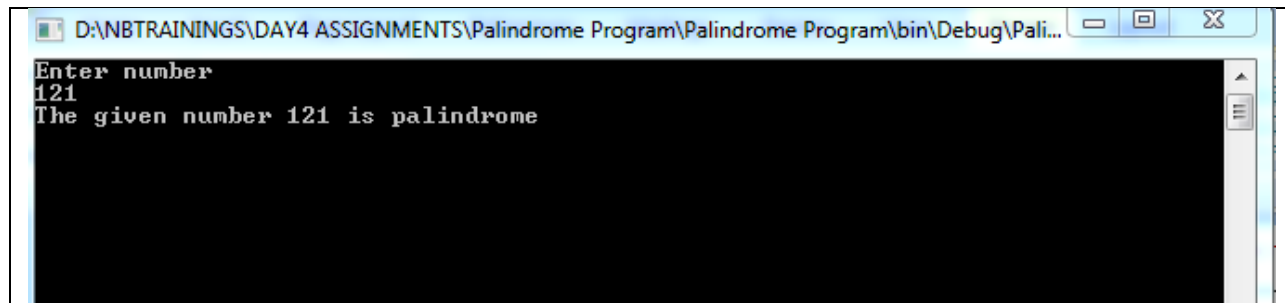
Write c# program for given number is palindrome or NOT

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:



```
Enter number
121
The given number 121 is palindrome
```

#### Program18:

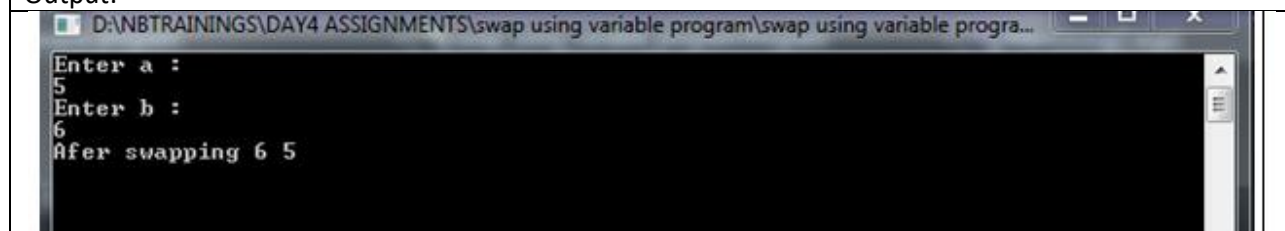
Write c# program for swapping using variable

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:



```
Enter a :
5
Enter b :
6
Afer swapping 6 5
```

#### Program 19:

Write c# program for swapping without using variable

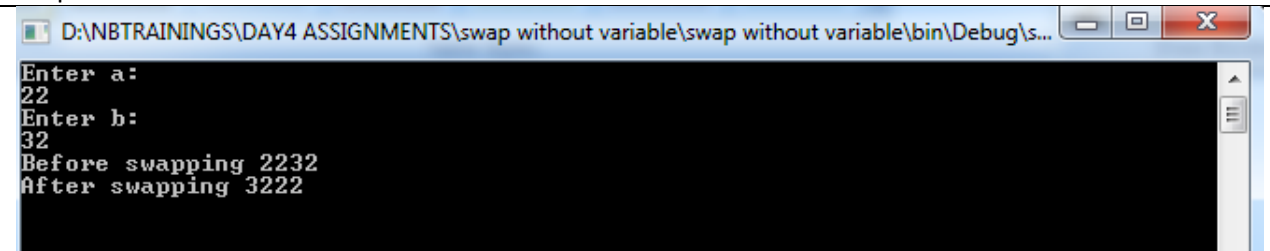
Code:

```
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:

A screenshot of a Windows console application window. The title bar shows the file path: D:\NBTRAININGS\DAY4 ASSIGNMENTS\swap without variable\swap without variable\bin\Debug\s... The console output is as follows:  
Enter a:  
22  
Enter b:  
32  
Before swapping 2232  
After swapping 3222

#### Program 20:

Write c# program to print stars\* in patterns

Code:

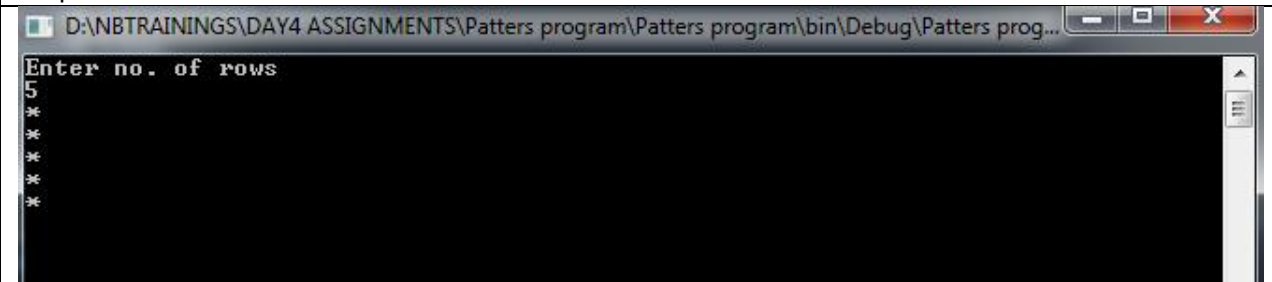
```
using System;
```

```
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:

A screenshot of a Windows console application window. The title bar shows the file path: D:\NBTRAININGS\DAY4 ASSIGNMENTS\Patters program\Patters program\bin\Debug\Patters prog... The console output displays the text "Enter no. of rows" followed by the number "5". Below the number, there are five asterisks, one on each line, representing the output of the program's loop.

```
D:\NBTRAININGS\DAY4 ASSIGNMENTS\Patters program\Patters program\bin\Debug\Patters prog...
Enter no. of rows
5
*
*
*
*
*
```