Day-4 Morning Assignment
(27-01-2022)
20 C# Programs

By
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1) Print multipulication Table of given number by using C# program.

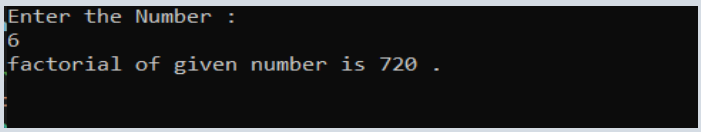
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

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

            //read the read  from user
            Console.WriteLine("Enter the Number :");
            input = Convert.ToInt32(Console.ReadLine());

            //logical and print output
            for (i = 1; i <= 10; i++)
            {
                Console.WriteLine("{0} x {1} = {2}", input, i, input * i);
            }

            Console.ReadLine();



        }
    }
}
```

```
Enter the Number :
7
7 x 1 = 7
7 x 2 = 14
7 x 3 = 21
7 x 4 = 28
7 x 5 = 35
7 x 6 = 42
7 x 7 = 49
7 x 8 = 56
7 x 9 = 63
7 x 10 = 70
```

2) Print factorial of a given number by using C#

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

namespace practisce_programs
{
    internal class Program
    {
        static void Main(string[] args)
        {
            //variable declaration
            int i , factorial = 1 , input;

            //read the read  from user
            Console.WriteLine("Enter the Number :");
            input = Convert.ToInt32(Console.ReadLine());

            //logical and print output
            for (i = 1; i <= input; i++)
                factorial = factorial*i;

            Console.WriteLine("factorial of given number is {0} .",factorial);


            Console.ReadLine();

        }
    }
}
```

Output:

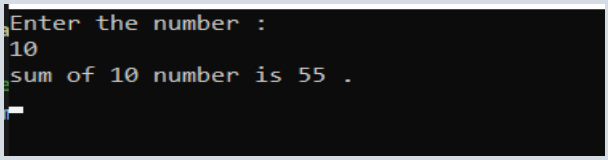


3) Print Sum of n natural numbers by using C#.

Code:

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

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

            //read the input from user
            Console.WriteLine("Enter the number :");
            input = Convert.ToInt32(Console.ReadLine());


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

            //print output
            Console.WriteLine("sum of {0} number is {1} .", input, sum);

            Console.ReadLine();

        }
    }
}
```

Output:

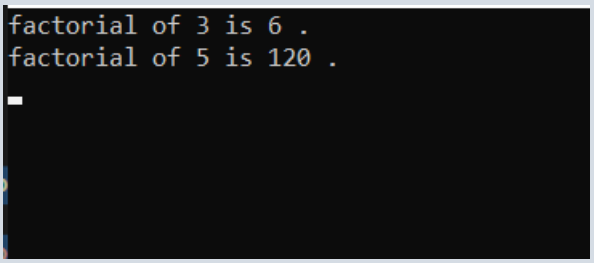


4) Print factorial using functions of c# code.

Code:

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

namespace practisce_programs
{
    internal class Program
    {
        public static void printOutput(int a)
        {
            Console.WriteLine("factorial of {0} is {1} .", a, Factorial(a));
//function call
        }
        public static int Factorial(int a) //function name of parameters
        {
            //locigal and function defination
            int i, fact = 1;
            for (i = 1; i <= a; i++ )
                fact = fact * i;
            return fact;

        }
        static void Main(string[] args)
        {
            //varible declaraton
                int a = 3, a1 = 5;

            // print output from return of function
            printOutput(a);
            printOutput(a1);


             Console.ReadLine();

        }
    }
}
```

Output:



5) Print factorial of number using recursion of C# code.

Code:

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

namespace practisce_programs
{
    internal class Program
    {
        public static void printOutput(int a)
        {
            Console.WriteLine("factorial of {0} is {1} .", a, Factorial(a)); //function
call
        }
        public static int Factorial(int a) //function name of parameters
        {
            //locigal and function defination

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


        }
        static void Main(string[] args)
        {
            //varible declaraton
                int a = 3, a1 = 5;

            // print output from return of function
            printOutput(a);
            printOutput(a1);


             Console.ReadLine();

        }
    }
}
```

Output:

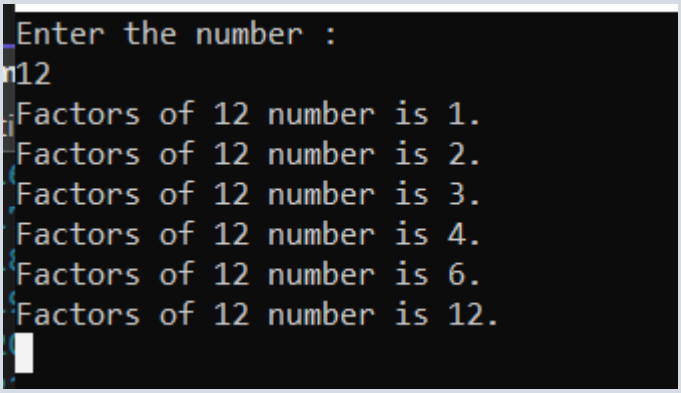
```
factorial of 3 is 6 .
factorial of 5 is 120 .
```

6) Print Factors of given number by using C# code.

Code:

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

namespace practisce_programs
{
    internal class Program
    {

        static void Main(string[] args)
        {
            //varible declaraton
            int i,  input ;

            // read the input from user
            Console.WriteLine("Enter the number :");
            input = Convert.ToInt32(Console.ReadLine());

            for (i = 1; i <= input; i++)
            {
                if
                (input % i == 0)
                Console.WriteLine("Factors of {0} number is {1}.", input, i);
            }
            Console.ReadLine();

        }

    }
}
```

Output:

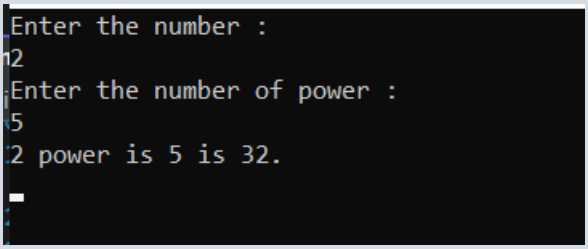


7) Print Power of given numbers [A power B] .

Code:

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

namespace practisce_programs
{
    internal class Program
    {

        static void Main(string[] args)
        {
            //varible declaraton
            int  a ,b, i, power=1;

            // read the input from user
            Console.WriteLine("Enter the number :");
            a = Convert.ToInt32(Console.ReadLine());

            Console.WriteLine("Enter the number of power :");
            b = Convert.ToInt32(Console.ReadLine());


            for (i = 1; i <= b; i++)
                power = power * a;

                    // print output
                    Console.WriteLine("{0} power is {1} is {2}.",a,b, power);

            Console.ReadLine();

        }


    }
}
```

Output:

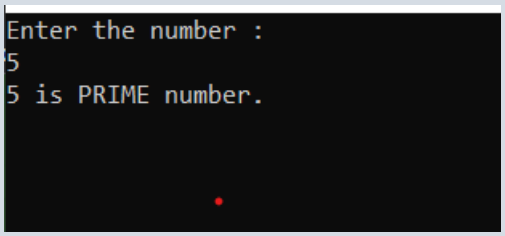


8) Find the PRIME number or NOT of given number .

Code:

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

namespace practisce_programs
{
    internal class Program
    {

        static void Main(string[] args)
        {
            //varible declaraton
            int i, input ;

            // read the input from user
            Console.WriteLine("Enter the number :");
            input = Convert.ToInt32(Console.ReadLine());


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

            if
              (i == input) // print output
                    Console.WriteLine("{0} is PRIME number.", input);

            else
                Console.WriteLine("{0} is NOT a PRIME number.", input);


               Console.ReadLine();

        }

    }
}
```

Output:

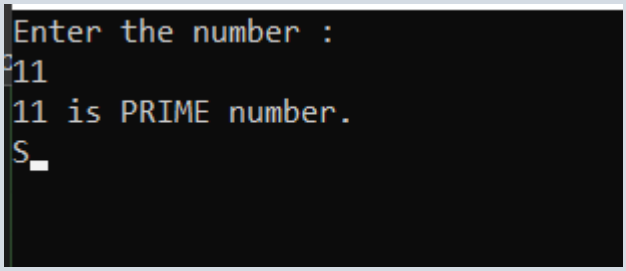


9) Check the PRIME number or NOT by using Function.

Code:

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

/// </summary>
namespace practisce_programs
{
    internal class Program
    {
        public static bool IsPrimenumber(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)
        {
            //varible declaraton
            int i, input ;

            // read the input from user

            Console.WriteLine("Enter the number :");
            input = Convert.ToInt32(Console.ReadLine());

            if
                (IsPrimenumber(input))  // function call

                    Console.WriteLine("{0} is PRIME number.", input);   // print output

            else
                     Console.WriteLine("{0} is NOT a PRIME number.", input);


               Console.ReadLine();

        }

    }
}
```

Output:

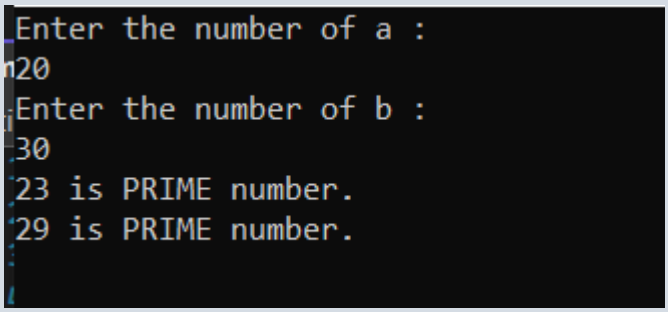


10) Check the prime number in Range

Code:

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

/// </summary>
namespace practisce_programs
{
    //: PRIME NUMBERS in RANGE of your numbbers
    internal class Program
    {
        public static bool IsPrimenumber(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)
        {
            //varible declaraton
            int i, a ,b ;

            // read the input from user

            Console.WriteLine("Enter the number of a :");
            a = Convert.ToInt32(Console.ReadLine());

            Console.WriteLine("Enter the number of b :");
            b = Convert.ToInt32(Console.ReadLine());

            for(i =a;i<=b;i++)
            if
                (IsPrimenumber(i))  // function call

                    Console.WriteLine("{0} is PRIME number.", i);   // print output

               Console.ReadLine();

        }

    }
}
```

Output:

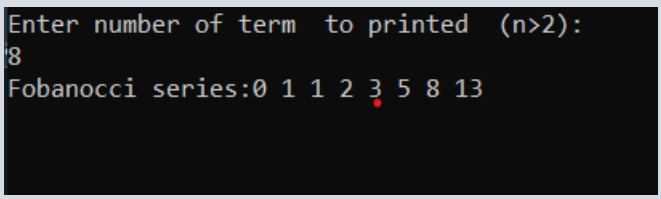


11) To read a Number (n) and print n Fibonacci Series,

Code:

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

/// </summary>
namespace practisce_programs
{
    //: To read a number(n) and print n fibonacci terms.
    internal class Program
    {
        static void Main(string[] args)
        {
            //varible declaraton
            int i, n, a = 0, b = 1, c;

            // read the input from user

            Console.WriteLine("Enter number of term  to printed  (n>2):");
            n = Convert.ToInt32(Console.ReadLine());

            Console.Write("Fobanocci series:0 1");

            // Logical
            for (i = 1; i <= n - 2; i++)
            {
                c = a + b;
                a = b;
                b = c;
                Console.Write(" {0}",c);  //print output
            }

               Console.ReadLine();

        }

    }
}
```

Output:

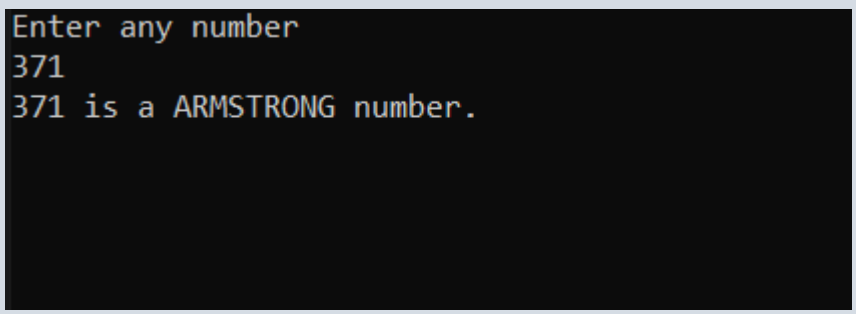


12) To read a number and check it is ARMSTRONG Number.

Code:

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

/// </summary>
namespace practisce_programs
{
    // To read a number and check it is ARMSTRONG Number.
    internal class Program
    {
        static void Main(string[] args)
        {
            //varible declaraton
            int i, n, m, rem, result=0;

            // read the input from user

            Console.WriteLine("Enter any number ");
            n = Convert.ToInt32(Console.ReadLine());

            //Logic
            m = n;
                while(m>0)
            {
                rem = m % 10;
                m = m / 10;
                result = result + rem * rem * rem;
            }

             //  print output
            if (result == n)
                Console.WriteLine("{0} is a ARMSTRONG number. ", n);

            else
                Console.WriteLine("{0} is a NOT ARMSTRONG number. ", n);

               Console.ReadLine();

        }

    }
}
```

Output:

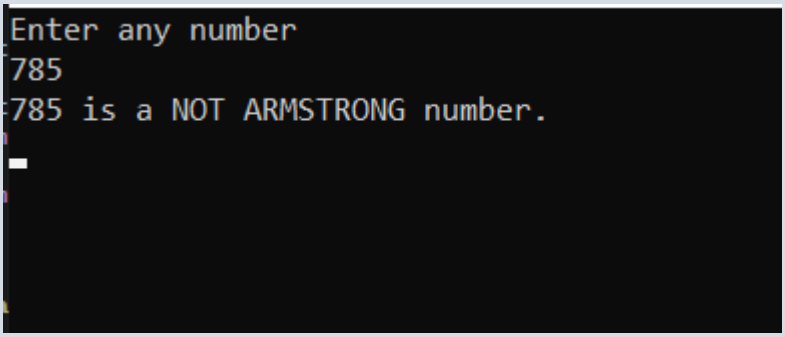


13) CheckK the ARMSTRONG NUMBER Using FUNCTION.

Code:

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

/// </summary>
namespace practisce_programs
{
    // To read a number and check it is ARMSTRONG Number ( using FUNCTION)
    internal class Program
    {
        public static bool IsArmstrong(int n)
        {

            int m, rem, result = 0;
            m = n;

            while (m > 0)
            {
                rem = m % 10;
                m = m / 10;
                result = result + rem * rem * rem;
            }
            if (result == n)
                return true;
            else
                return false;
        }

        static void Main(string[] args)
        {
        //varible declaraton
        int n;

            // read the input from user

            Console.WriteLine("Enter any number ");
            n = Convert.ToInt32(Console.ReadLine());


            if (IsArmstrong(n))
                Console.WriteLine("{0} is a ARMSTRONG number. ", n);  //print output

            else
                Console.WriteLine("{0} is a NOT ARMSTRONG number. ", n);

               Console.ReadLine();

        }

    }
}
```

Output:



14) To read a number of range and check it is ARMSTRONG Number(using FUNCTION).

Code:

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

/// </summary>
namespace practisce_programs
{
    // To read a number of RANGE and check it is ARMSTRONG Number ( using FUNCTION)
    internal class Program
    {
        public static bool IsArmstrong(int n)
        {

            int m, rem, result = 0;
            m = n;

            while (m > 0)
            {
                rem = m % 10;
                m = m / 10;
                result = result + rem * rem * rem;
            }
            if (result == n)
                return true;
            else
                return false;
        }

        static void Main(string[] args)
        {
        //varible declaraton
        int i,a,b;

            // read the input from user

            Console.WriteLine("Enter the first number ");
            a = Convert.ToInt32(Console.ReadLine());

            Console.WriteLine("Enter the second number  ");
            b = Convert.ToInt32(Console.ReadLine());

            for (i = a; i <= b; i++)
            {

                if (IsArmstrong(i))
                    Console.WriteLine("{0} is a ARMSTRONG number. ", i);  //print output

            }

               Console.ReadLine();
        }

    }
}
```

Output:

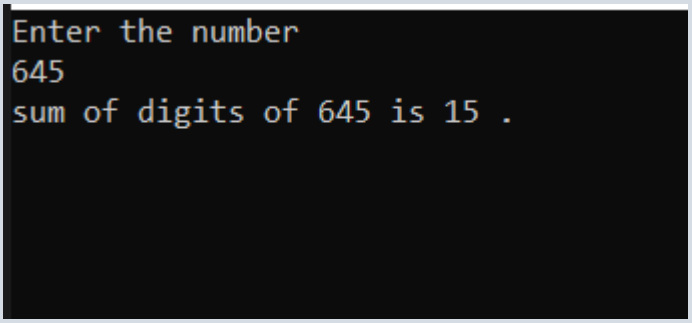
```
Enter the first number
1
Enter the second number
1000
1 is a ARMSTRONG number.
153 is a ARMSTRONG number.
370 is a ARMSTRONG number.
371 is a ARMSTRONG number.
407 is a ARMSTRONG number.
```

15) To Read number from user and print sum of digits.

Code:

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

/// </summary>
namespace practice_programs
{
    // To read a number from user and print sum of digits.
    internal class Program
    {
        static void Main(string[] args)
        {
            //varible declaraton
            int i,m, n, rem, sum = 0; ;

            // read the input from user

            Console.WriteLine("Enter the number ");
            n = Convert.ToInt32(Console.ReadLine());
            //logical
            m = n;
            while(m>0)
            {
                rem = m % 10;
                m = m / 10;
                sum = sum + rem;
            }
            // print output
            Console.WriteLine("sum of digits of {0} is {1} .", n, sum);
            Console.ReadLine();
        }

    }
}
```

Output:

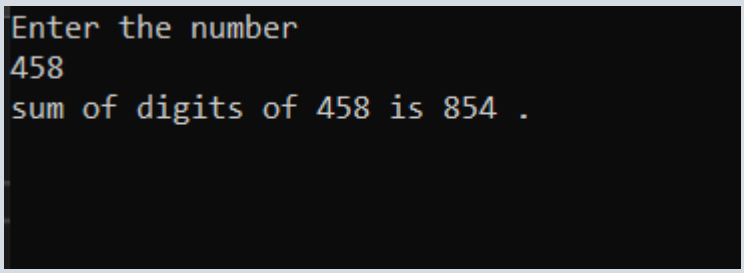


16) To read a number from user and print REVERSE of given number.

Code:

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

/// </summary>
namespace practice_programs
{
    // To read a number from user and print REVERSE of given number .
    internal class Program
    {
        static void Main(string[] args)
        {
            //varible declaraton
            int i,m, n, rem, rev = 0;

            // read the input from user

            Console.WriteLine("Enter the number ");
            n = Convert.ToInt32(Console.ReadLine());
            //logical
            m = n;
            while(m>0)
            {
                rem = m % 10;
                m = m / 10;
                rev =rev*10+rem;
            }
            // print output
            Console.WriteLine("sum of digits of {0} is {1} .", n, rev);
            Console.ReadLine();
        }

    }
}
```

Output:

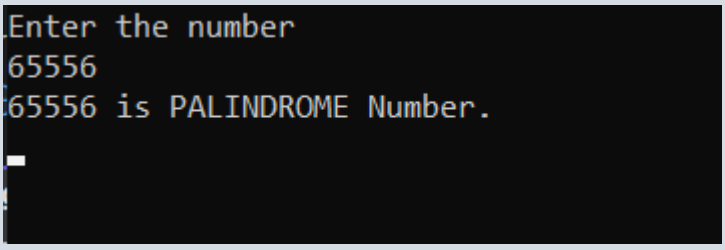


17) To read a number from user and check if it's a PALINDROME Number

Code:

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

/// </summary>
namespace practice_programs
{
    // To read a number from user and check if it's a PALINDROME Number .
    internal class Program
    {
        static void Main(string[] args)
        {
            //varible declaraton
            int i,m, n, rem, rev = 0;

            // read the input from user

            Console.WriteLine("Enter the number ");
            n = Convert.ToInt32(Console.ReadLine());
            //logical
            m = n;
            while(m>0)
            {
                rem = m % 10;
                m = m / 10;
                rev =rev*10+rem;
            }
            // print output
            if (n == rev)
                Console.WriteLine("{0} is PALINDROME Number.",n);
            else
                Console.WriteLine("{0} is NOT PALINDROME Number.", n);
            Console.ReadLine();
        }

    }
}
```

Output:

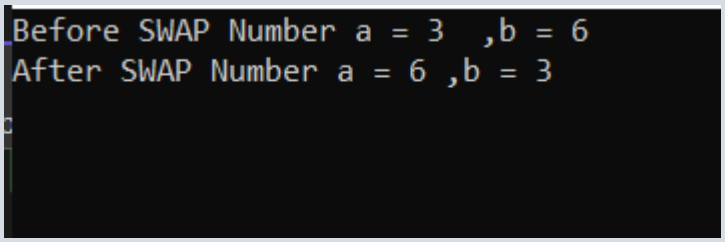


18) To SWAP Data of two variables by using third variable.

Code:

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

/// </summary>
namespace practice_programs
{
    // To SWAP data of two variables by using third Variable.
    internal class Program
    {
        static void Main(string[] args)
        {
            //varible declaraton
            int a = 3, b = 6, t;

            Console.WriteLine("Before SWAP Number a = {0}  ,b = {1} ", a, b);

            //logical
            t = a;
            a = b;
            b = t;

            // print output
            Console.WriteLine("After SWAP Number a = {0} ,b = {1}", a, b);

            Console.ReadLine();
        }

    }
}
```

Output:

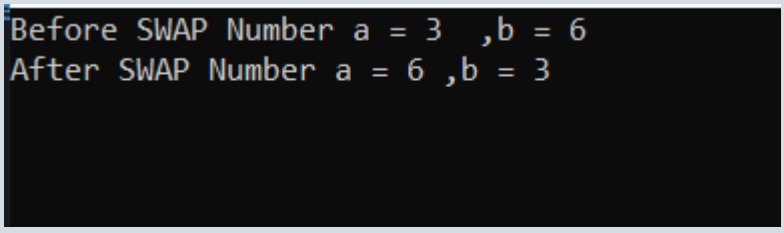


19) To SWAP data two variables by using without third variable.

Code:

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

/// </summary>
namespace practice_programs
{
    // To SWAP data of two variables by without using third Variable.
    internal class Program
    {
        static void Main(string[] args)
        {
            //varible declaraton
            int a = 3, b = 6, t;

            Console.WriteLine("Before SWAP Number a = {0}  ,b = {1} ", a, b);

            //logical
            a = a + b;
            b = a - b;
            a = a - b;

            // print output
            Console.WriteLine("After SWAP Number a = {0} ,b = {1}", a, b);

            Console.ReadLine();
        }

    }
}
```

Output:



20) To Print Stars (*) Pattern in given format.

Code:

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

/// </summary>
namespace practice_programs
{
    // To Print Stars(*) in pattern given format.
    internal class Program
    {
        static void Main(string[] args)
        {
            //varible declaraton
            int n, i, j;

            Console.WriteLine("Enter no of rows to printed :");
            n = Convert.ToInt32(Console.ReadLine());

            //logical
           for (i=1;i<=n;i++)
           {
                for (j = 1; j <= i; j++)
                {

                    Console.Write("* ");
                }
                Console.WriteLine();
            }
            Console.ReadLine();
        }

    }
}
```

Output: