



**23SOECE11049**

**Enterprise Computing Through .NET Framework (CE525)**

1 : Write a program to print "Hello World".

CODE :

```
namespace _23SOECE11049_BD
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Hello World!!");
        }
    }
}
```

OUTPUT:

```
C:\Windows\system32\cmd.exe
*****
** Visual Studio 2022 Developer Command Prompt v17.14.7
** Copyright (c) 2025 Microsoft Corporation
*****

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Hello World!!

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

2 : Design your profile page as given below.

CODE :

```
static void Main(string[] args)
{
    string[] profileInfo = {
        "Name: AKSHAY GOGRA",
        "DOB: 11/04/2004",
        "Address: Rajkot",
        "City: Rajkot",
        "Pincode: 360002",
        "State: Gujarat",
        "Country: India",
        "Mobile No: 987654321",
        "Email: agogra@rku.ac.in"
    };

    foreach (string line in profileInfo)
    {
        Console.WriteLine(line);
    }
}
```

OUTPUT:

```
C:\Windows\system32\cmd.exe
*****
** Visual Studio 2022 Developer Command Prompt v17.14.7
** Copyright (c) 2025 Microsoft Corporation
*****

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Name: AKSHAY GOGRA
DOB: 11/04/2004
Address: Rajkot
City: Rajkot
Pincode: 360002
State: Gujarat
Country: India
Mobile No: 987654321
Email: agogra@rku.ac.in

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

### question 3

Find out whether the given number is odd or even.

CODE :

```
static void Main(string[] args)
{
    Console.WriteLine("Enter a number: ");
    int number = Convert.ToInt32(Console.ReadLine());

    // Check if the number is even or odd
    if (number % 2 == 0)
    {
        Console.WriteLine(number + " is Even.");
    }
    else
    {
        Console.WriteLine(number + " is Odd.");
    }
}
```

```
C:\Windows\system32\cmd.exe
*****
** Visual Studio 2022 Developer Command Prompt v17.14.7
** Copyright (c) 2025 Microsoft Corporation
*****

C:\Users\Admin\source\repos\23SOECE11049_BD>csc Class1.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>Class1.exe
Enter a number: 56
56 is Even.

C:\Users\Admin\source\repos\23SOECE11049_BD>Class1.exe
Enter a number: 41
41 is Odd.

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

question 4

4 : Rearrange the given code to correct the program. The resultant program will be to input a number and print whether the given number is odd or even.

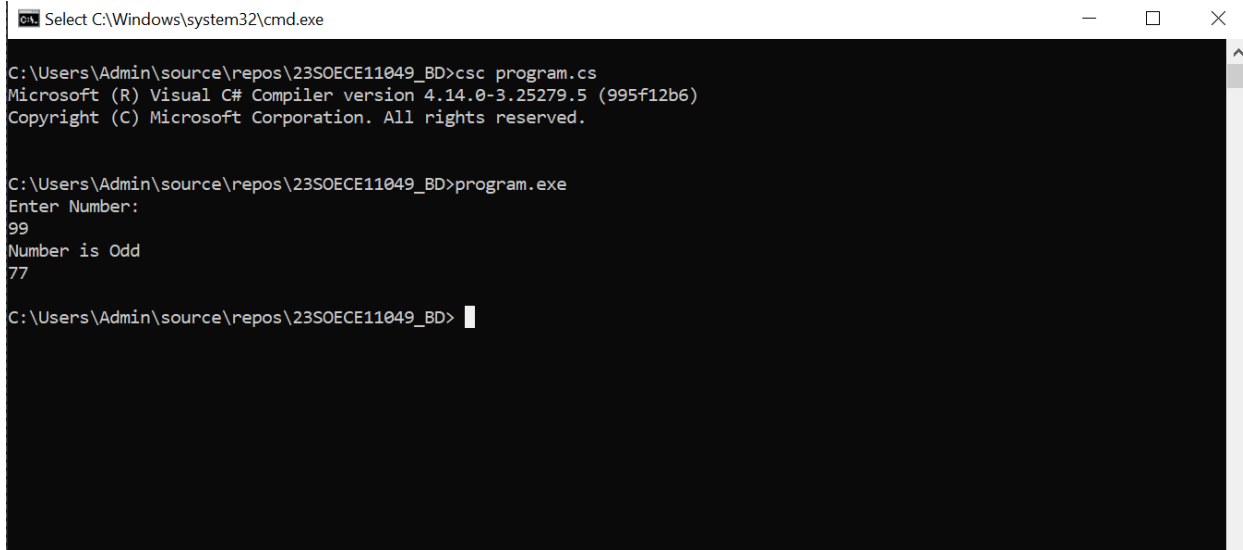
CODE :

```
static void Main(string[] args)
{
    int x;
    string str;

    Console.WriteLine("Enter Number: ");
    str = Console.ReadLine(); // Read input as string
    x = Convert.ToInt32(str); // Convert to integer

    if (x % 2 == 0)
        Console.WriteLine("Number is Even");
    else
        Console.WriteLine("Number is Odd");

    Console.Read();
}
```



```

C:\Users\Admin\source\repos\23S0ECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23S0ECE11049_BD>program.exe
Enter Number:
99
Number is Odd
77

C:\Users\Admin\source\repos\23S0ECE11049_BD>

```

question 5

5 : Write output of the program. Also write comment for each line for the following code.

CODE :

```

    static void Main(string[] args) // Main method: the entry point of the program
{
    int n, fact = 1; // Declares integer variables 'n' for input, and 'fact' initialized to 1 for factorial

    Console.WriteLine("Enter Number : "); // user to enter a number

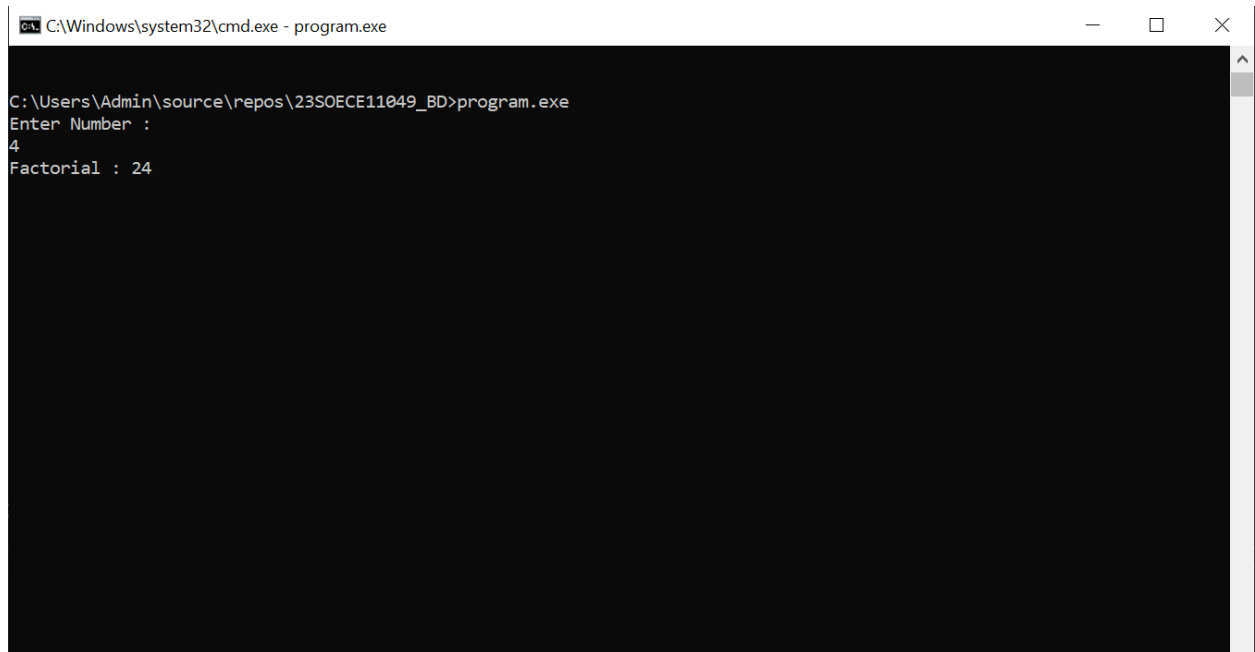
    string str = Console.ReadLine(); // Reads input from user as a string

    n = Convert.ToInt32(str); // Converts the string input to an integer and stores it in 'n'

    for (int i = 1; i <= n; i++) // For loop from 1 to n to calculate factorial
    {
        fact = fact * i; // Multiply 'fact' by 'i'
    }

    Console.WriteLine("Factorial : {0}", fact); // Displays the calculated factorial
    Console.Read(); // Waits for a key press so the console window stays open
}

```



```
C:\Windows\system32\cmd.exe - program.exe

C:\Users\Admin\source\repos\23S0ECE11049_BD>program.exe
Enter Number :
4
Factorial : 24
```

question 6

6 : Write missing statement to get the desired output.

CODE :

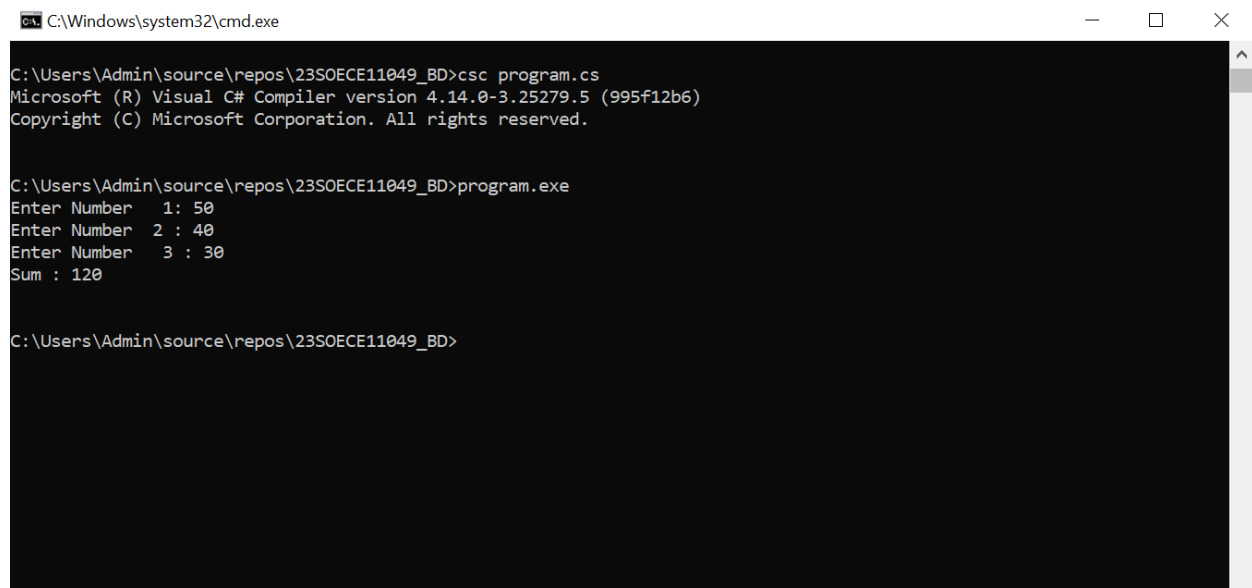
```
static void Main(string[] args)
{
    int a, b, c, result;
    Console.Write("Enter Number 1: ");
    string str = Console.ReadLine(); // Read first input
    a = Convert.ToInt32(str);

    Console.Write("Enter Number 2: ");
    str = Console.ReadLine(); // Read second input
    b = Convert.ToInt32(str);

    Console.Write("Enter Number 3: ");
    str = Console.ReadLine();
    c = Convert.ToInt32(str); // Convert third input to integer
    result = Sum(a, b, c); // Call Sum method with parameters
    Console.WriteLine("Sum : {0}", result); // Display the result
    Console.Read();
}

static int Sum(int x, int y, int z)
{
    int res;
    res = x + y + z;
```

```
    return res;
}
```



The screenshot shows a Windows command prompt window titled "C:\Windows\system32\cmd.exe". The user has navigated to the directory "C:\Users\Admin\source\repos\23SOECE11049\_BD" and compiled a program using the command "csc program.cs". The output shows the Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6) and the copyright notice for Microsoft Corporation. The user then runs the program using "program.exe". The program prompts the user to enter three numbers: 50, 40, and 30. The program then calculates the sum of these numbers, which is 120, and displays it as "Sum : 120".

```
C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter Number 1: 50
Enter Number 2 : 40
Enter Number 3 : 30
Sum : 120

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

### question 7

7 : Predict and write the output of the given code.

CODE :

```
static void Main(string[] args)
{
    int num1, res, i;

    Console.WriteLine("Enter a number");
    num1 = Convert.ToInt32(Console.ReadLine());

    i = 1;
    while (i <= 10)
    {
        res = num1 * i;
        Console.WriteLine("{0} x {1} = {2}", num1, i, res);

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

```
C:\Windows\system32\cmd.exe - program.exe
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter Number 1: 50
Enter Number 2: 40
Enter Number 3: 30
Sum: 120

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter a number
75
75 x 1 = 75
75 x 2 = 150
75 x 3 = 225
75 x 4 = 300
75 x 5 = 375
75 x 6 = 450
75 x 7 = 525
75 x 8 = 600
75 x 9 = 675
75 x 10 = 750
```

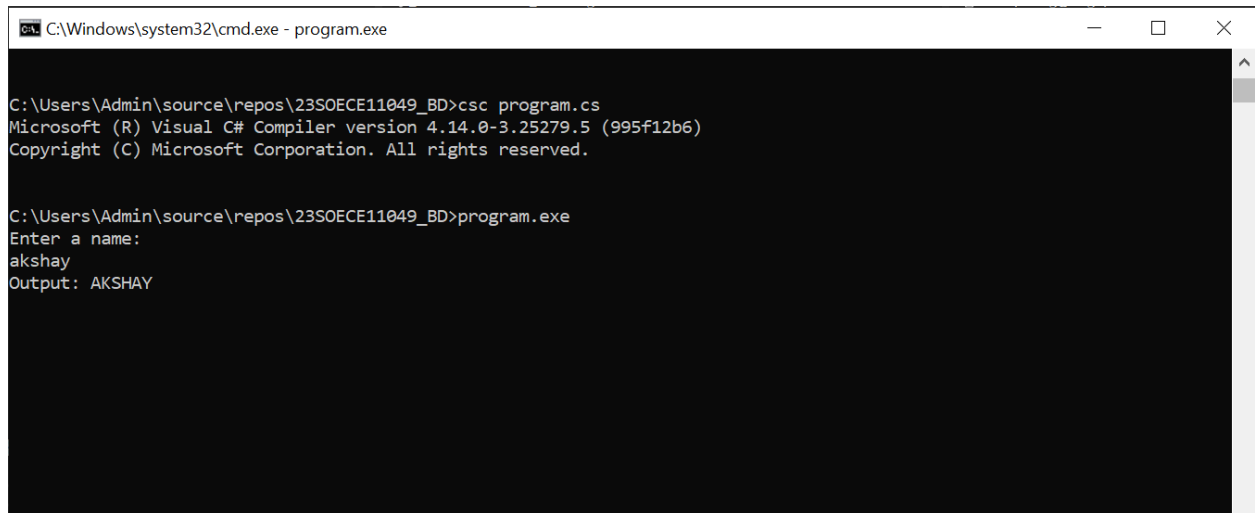
question 8

8 : Write a program to convert given name in upper characters. INPUT : John F Kennedy  
OUTPUT : JOHN F KENNEDY

CODE :

```
static void Main(string[] args)
{
    Console.WriteLine("Enter a name:");
    string name = Console.ReadLine();
    string upperName = name.ToUpper();
    Console.WriteLine("Output: " + upperName);
    Console.Read();
}
```





```
C:\Windows\system32\cmd.exe - program.exe

C:\Users\Admin\source\repos\23S0ECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23S0ECE11049_BD>program.exe
Enter a name:
akshay
Output: AKSHAY
```

question 9

9 : Write a Program to convert given name in toggle case. INPUT : JoHn F kEnNedy OUTPUT: jOhN f KeNneDY

CODE :

```
static void Main(string[] args)
{
    Console.WriteLine("Enter a name:");
    string input = Console.ReadLine();
    string result = "";
    for (int i = 0; i < input.Length; i++)
    {
        char ch = input[i];

        if (char.IsUpper(ch))
            result += char.ToLower(ch); // Upper to lower
        else if (char.IsLower(ch))
            result += char.ToUpper(ch); // Lower to upper
        else
            result += ch;
    }
    Console.WriteLine("Output: " + result);
}
```

```
C:\Windows\system32\cmd.exe

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter a name:
AkShAy
Output: aKsHaY

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

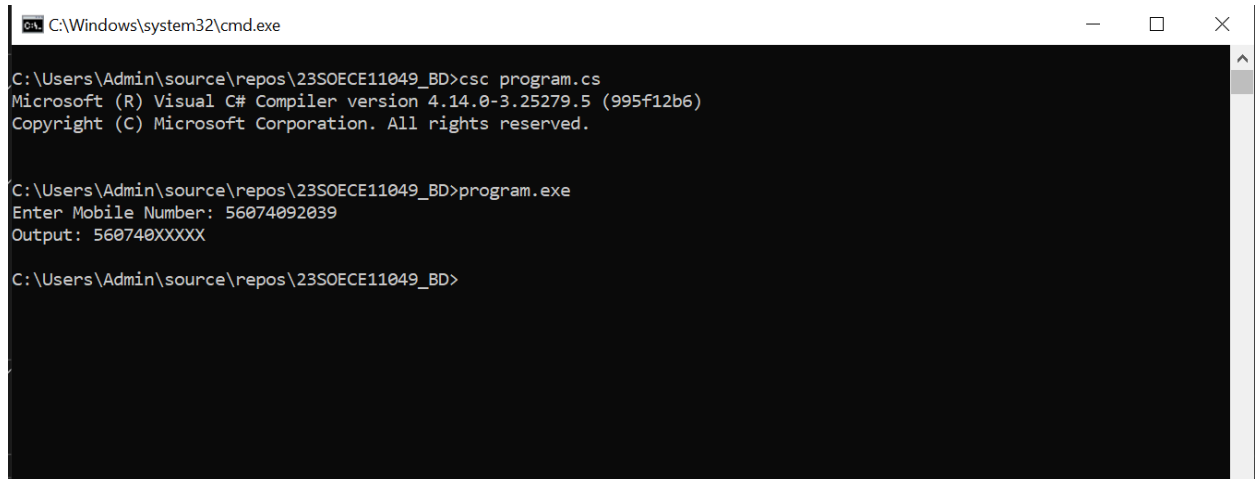
question 10

10 : Write a Program which accepts mobile no as a string from the user and converts the last 5 digits into X. INPUT : 1234567890 OUTPUT: 12345XXXXX

CODE :

```
static void Main(string[] args)
{
    Console.Write("Enter Mobile Number: ");
    string number = Console.ReadLine();
    if (number.Length >= 5)
    {
        string visible = number.Substring(0, number.Length - 5);
        // First part
        string masked = "XXXXX"; // Last 5 digits replaced

        Console.WriteLine("Output: " + visible + masked);
    }
    else
    {
        Console.WriteLine("Please enter at least 5 digits.");
    }
}
```



```
C:\Windows\system32\cmd.exe

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
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C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter Mobile Number: 56074092039
Output: 560740XXXXX

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

question 11

11 : Write a Program which accepts name and gender from the user. Here, gender may have only 1 character, M or F. Based on the gender prefix the name Mr. & Ms.

CODE :

```
static void Main(string[] args)
{
    // Ask for name
    Console.Write("Enter Name: ");
    string name = Console.ReadLine();

    // Ask for gender
    Console.Write("Enter Gender (M/F): ");
    string gender = Console.ReadLine();

    // Check and display with prefix
    if (gender == "M" || gender == "m")
    {
        Console.WriteLine("Mr. " + name);
    }
    else if (gender == "F" || gender == "f")
    {
        Console.WriteLine("Ms. " + name);
    }
    else
    {
        Console.WriteLine("Invalid gender.");
    }
}
```

```
C:\Windows\system32\cmd.exe

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
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C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter Name: akshay gogna
Enter Gender (M/F): m
Mr. akshay gogna

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter Name: jaydeep
Enter Gender (M/F): f
Ms. jaydeep

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

question 12

12 : Write a Program which accepts name from the user and prints the same. INPUT : Winston Churchill OUTPUT : Winston Churchill

CODE :

```
public static void Main(string[] args)
{
    Console.Write("Enter Name: ");
    string name = Console.ReadLine();

    Console.WriteLine("Output: " + name);
}
```

```
C:\Windows\system32\cmd.exe

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter Name: sandip parmar
Output: sandip parmar

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

question 13

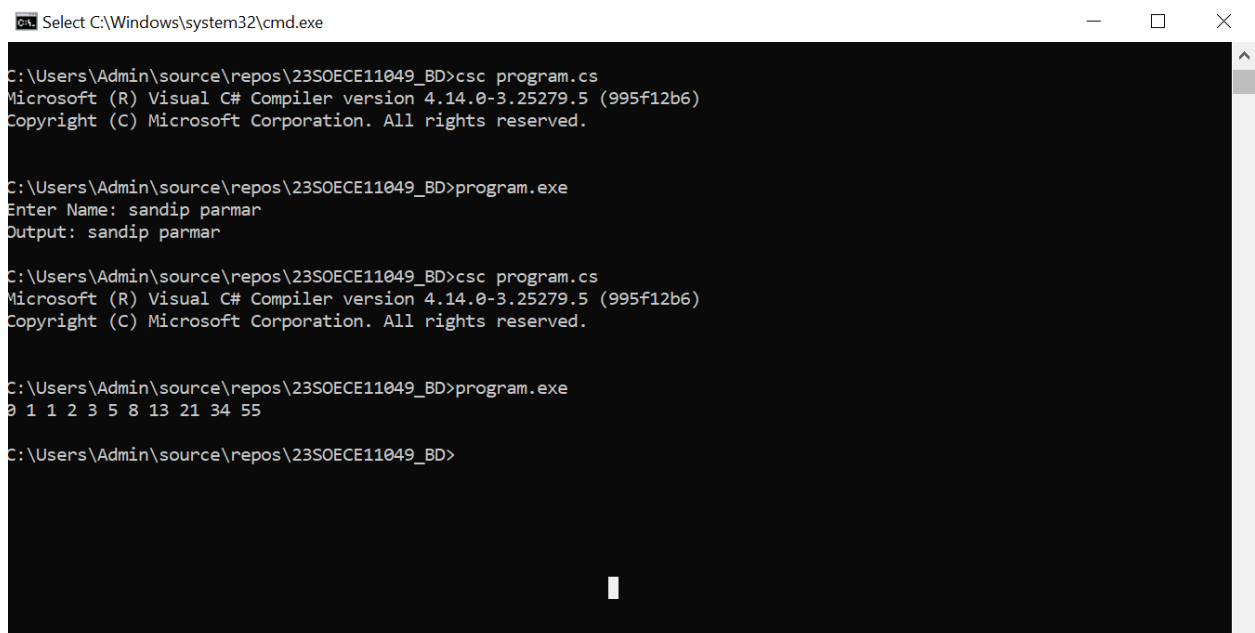
13 : Write a Program to prints the following series 0 1 1 2 3 5 8 13 21 34 55

CODE :

```
public static void Main(string[] args)
{
    int a = 0, b = 1, c;
    // Print the first two numbers
    Console.Write(a + " ");
    Console.Write(b + " ");

    // Print next 9 numbers to make 11 total
    for (int i = 1; i <= 9; i++)
    {
        c = a + b;    // Add previous two numbers
        Console.Write(c + " ");

        a = b;        // Shift values
        b = c;
    }
    Console.WriteLine();
}
```



```
Select C:\Windows\system32\cmd.exe

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter Name: sandip parmar
Output: sandip parmar

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
0 1 1 2 3 5 8 13 21 34 55

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

question 14

14 : Write a Program which accepts no from the user and print the same in words. INPUT : 98732 OUTPUT : Nine Eight Seven Three Two

CODE :

```
public static void Main(string[] args)
```

```

{
    Console.Write("Enter a number: ");
    string num = Console.ReadLine();

    for (int i = 0; i < num.Length; i++)
    {
        if (num[i] == '0') Console.Write("Zero ");
        else if (num[i] == '1') Console.Write("One ");
        else if (num[i] == '2') Console.Write("Two ");
        else if (num[i] == '3') Console.Write("Three ");
        else if (num[i] == '4') Console.Write("Four ");
        else if (num[i] == '5') Console.Write("Five ");
        else if (num[i] == '6') Console.Write("Six ");
        else if (num[i] == '7') Console.Write("Seven ");
        else if (num[i] == '8') Console.Write("Eight ");
        else if (num[i] == '9') Console.Write("Nine ");
        else Console.Write("Invalid ");
    }
    Console.WriteLine();
}

```

The screenshot shows a Windows command prompt window with the title bar "C:\Windows\system32\cmd.exe". The command prompt displays the following text:

```

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter a number: 564352899
Five Six Four Three Five Two Eight Nine Nine

C:\Users\Admin\source\repos\23SOECE11049_BD>

```

question 15

15 : Write a Program to check whether the given no is Armstrong no or not.

CODE :

```

public static void Main(string[] args)
{
    Console.Write("Enter a number: ");
    int inputNumber = Convert.ToInt32(Console.ReadLine());
}

```

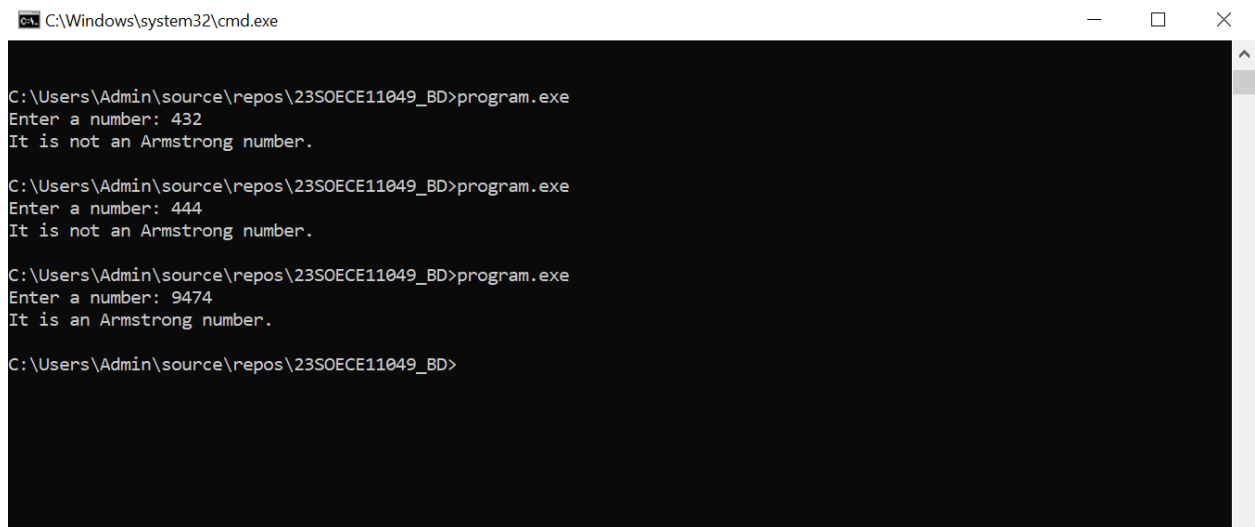
```
int originalNumber = inputNumber;
int digitCount = inputNumber.ToString().Length; // Count how many digits are in the number
```

```
int sum = 0; // This will store the sum of digits raised to power
```

```
while (inputNumber > 0)
{
    int digit = inputNumber % 10; // Get the last digit

    int power = 1;
    for (int i = 1; i <= digitCount; i++)
    {
        power = power * digit;
    }
    sum = sum + power; // Add the result

    inputNumber = inputNumber / 10; // Remove the last digit from number
}
// Check if the sum is equal to the original number
if (sum == originalNumber)
{
    Console.WriteLine("It is an Armstrong number.");
}
else
{
    Console.WriteLine("It is not an Armstrong number.");
}
}
```



The screenshot shows a Windows command prompt window titled "C:\Windows\system32\cmd.exe". The user has run a program named "program.exe" from the directory "C:\Users\Admin\source\repos\23SOECE11049\_BD". The program prompts the user to "Enter a number:" and then outputs whether the number is an Armstrong number. The first input is 432, which is not an Armstrong number. The second input is 444, which is also not an Armstrong number. The third input is 9474, which is an Armstrong number.

```
C:\Windows\system32\cmd.exe
C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter a number: 432
It is not an Armstrong number.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter a number: 444
It is not an Armstrong number.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter a number: 9474
It is an Armstrong number.

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

question 16

16 : Write a program to display a pattern like a right angle triangle using an asterisk. The pattern like :

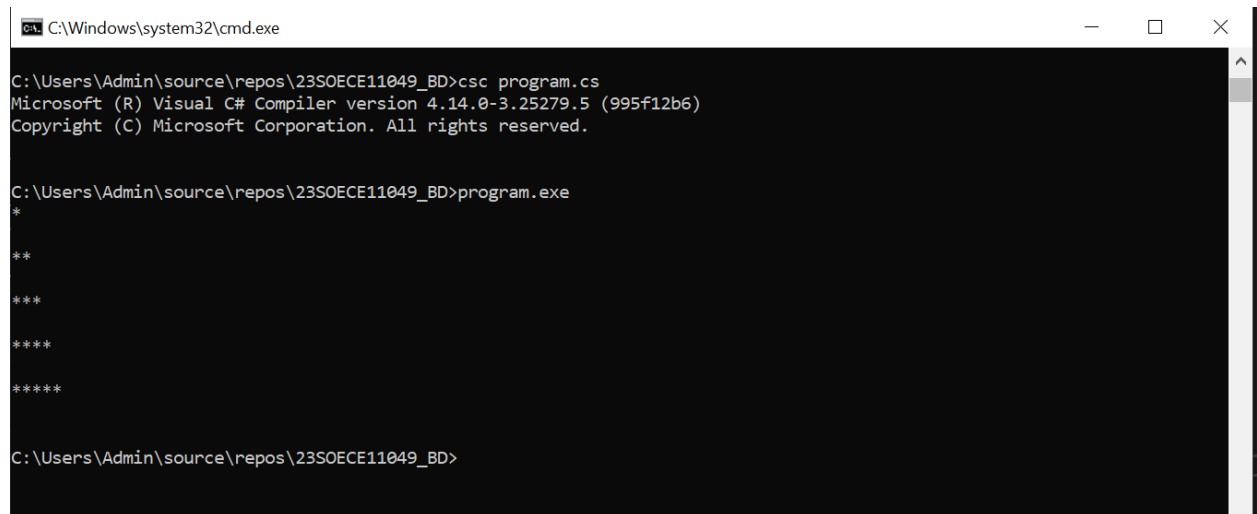
\*

\*\*

\*\*\*

\*\*\*\*

```
public static void Main(string[] args)
{
    {
        for (int i = 1; i <= 5; i++)
        {
            for (int j = 1; j <= i; j++)
            {
                Console.Write("*");
            }
            Console.WriteLine();
            Console.WriteLine();
        }
    }
}
```



```
C:\Windows\system32\cmd.exe

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
*
**
***
****
*****

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

question 17

17 : Write a Program to generate following output.

1

1 2

1 2 3

1 2 3 4

```
public static void Main(string[] args)
{
    for (int i = 1; i <= 4; i++)
```



```

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

```

```

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
1
1 2
1 2 3
1 2 3 4

C:\Users\Admin\source\repos\23SOECE11049_BD>

```

question 18

18 Write a program to make such a pattern like a right angle triangle with the number increased by 1. The pattern like :

```

1
2 3
4 5 6
7 8 9 10

```

```

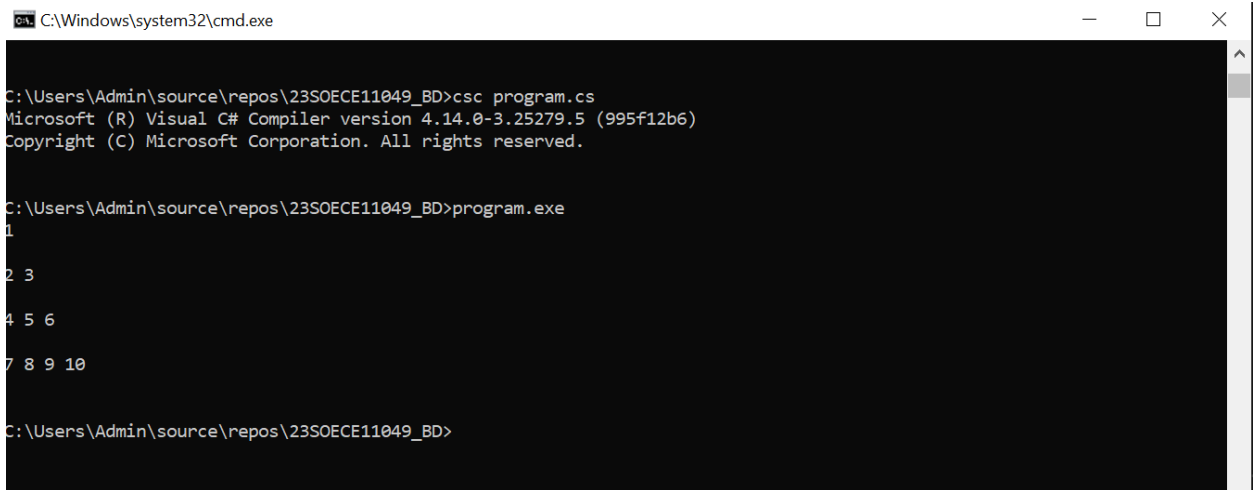
public static void Main(string[] args)
{
    int number = 1;

    for (int i = 1; i <= 4; i++)
    {
        for (int j = 1; j <= i; j++)
        {
            Console.Write(number + " ");
            number++; // Go to next number
        }

        Console.WriteLine();
        Console.WriteLine();
    }
}

```

```
}  
}
```



```
C:\Windows\system32\cmd.exe  
  
C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs  
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)  
Copyright (C) Microsoft Corporation. All rights reserved.  
  
C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe  
1  
  
2 3  
  
4 5 6  
  
7 8 9 10  
  
C:\Users\Admin\source\repos\23SOECE11049_BD>
```

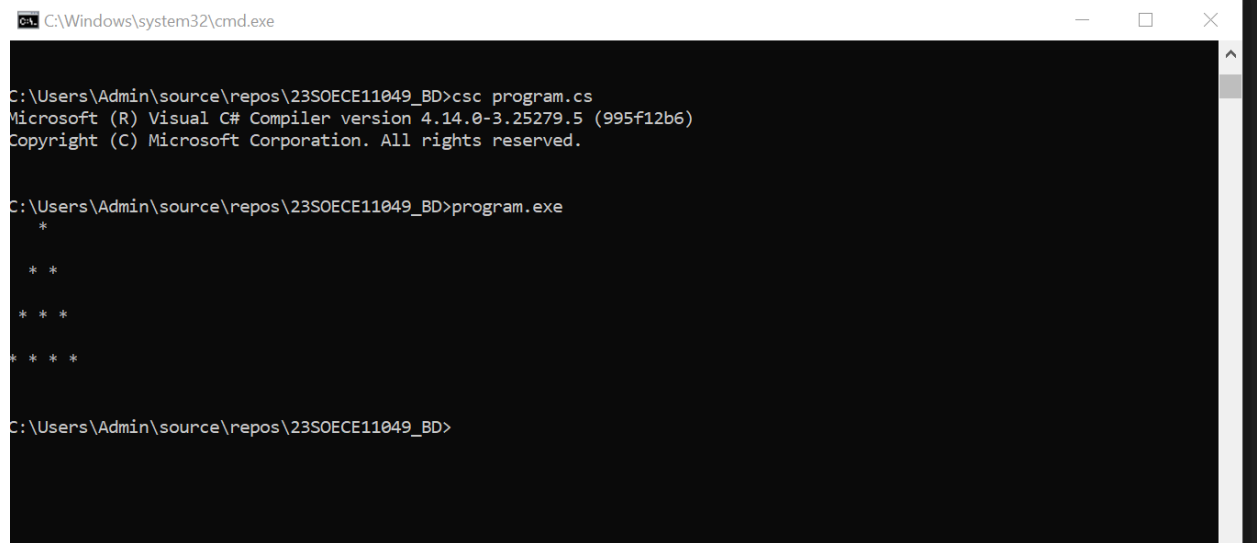
question 19

19 : Write a program to make such a pattern as a pyramid with an asterisk.

```
*  
* *  
* * *  
* * * *
```

```
public static void Main(string[] args)  
{  
    int rows = 4;  
  
    for (int i = 1; i <= rows; i++)  
    {  
        // Print spaces before stars  
        for (int s = 1; s <= rows - i; s++)  
        {  
            Console.Write(" ");  
        }  
  
        // Print stars with space after each  
        for (int j = 1; j <= i; j++)  
        {  
            Console.Write("* ");  
        }  
  
        Console.WriteLine();  
        Console.WriteLine();  
    }  
}
```

```
}
```



```
C:\Windows\system32\cmd.exe

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
*
* *
* * *
* * * *

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

question 20

20 : Write a program to make a pyramid pattern with numbers increased by 1.

```
1
2 3
4 5 6
7 8 9 10
public static void Main(string[] args)
{
    int number = 1;

    for (int i = 1; i <= 4; i++)
    {
        // Print spaces to numbers to the right
        for (int space = 1; space <= 4 - i; space++)
        {
            Console.Write(" ");
        }
        for (int j = 1; j <= i; j++)
        {
            Console.Write(number + " ");
            number++;
        }
        Console.WriteLine();
        Console.WriteLine();
    }
}
```

```
C:\Windows\system32\cmd.exe

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
1
2 3
4 5 6
7 8 9 10

C:\Users\Admin\source\repos\23SOECE11049_BD>
```

question 21

21 : Write a program to find the sum of the series  $5 + 55 + 555 + 5555 + \dots n$  terms. Test Data :  
Input the number of terms : 4 Input number : 5 Expected Output : 5 + 55 + 555 + 5555 The Sum is : 6170

CODE:

```
public static void Main(string[] args)
{
    Console.Write("Enter number of terms: ");
    int terms = Convert.ToInt32(Console.ReadLine());

    Console.Write("Enter a single digit number: ");
    int digit = Convert.ToInt32(Console.ReadLine());

    int currentNumber = 0;
    int total = 0; // Sum of all numbers

    Console.Write("Series: ");

    for (int i = 1; i <= terms; i++)
    {
        // Build the current number
        currentNumber = currentNumber * 10 + digit;

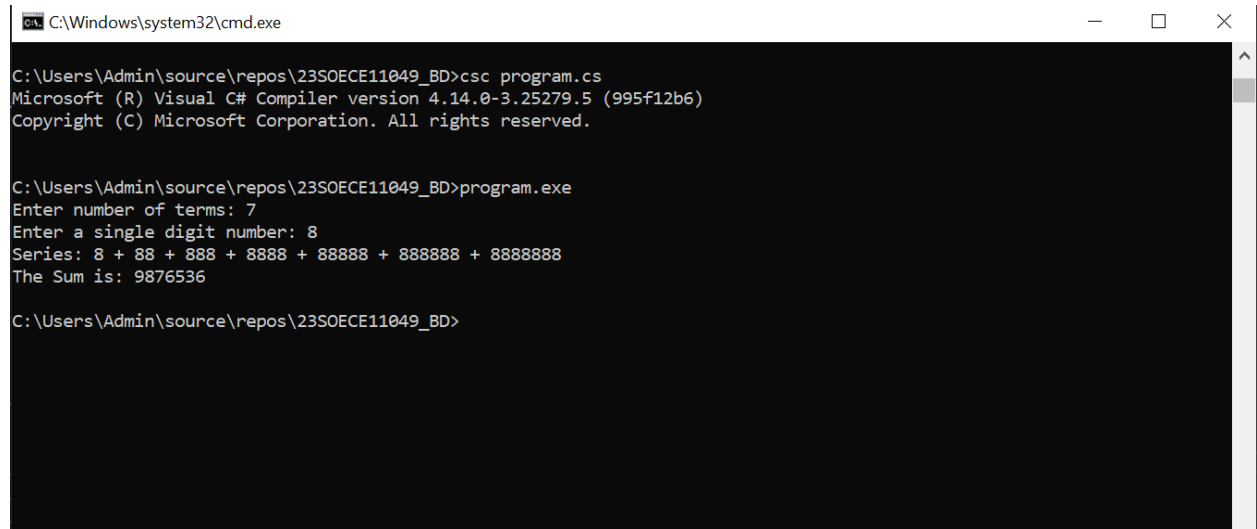
        Console.Write(currentNumber);
```

```

        // Print + sign between numbers
        if (i != terms)
            Console.Write(" + ");

        total = total + currentNumber;
    }
    Console.WriteLine();
    Console.WriteLine("The Sum is: " + total);
}

```



The screenshot shows a Windows command prompt window titled "C:\Windows\system32\cmd.exe". The user has navigated to the directory "C:\Users\Admin\source\repos\23SOECE11049\_BD" and compiled a program using the Visual C# Compiler (csc). The output shows the compiler version (4.14.0-3.25279.5) and copyright information. The user then runs the program (program.exe), which prompts for the number of terms (7) and a single digit number (8). The program outputs the series "8 + 88 + 888 + 8888 + 88888 + 888888 + 8888888" and the sum "9876536".

```

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
Enter number of terms: 7
Enter a single digit number: 8
Series: 8 + 88 + 888 + 8888 + 88888 + 888888 + 8888888
The Sum is: 9876536

C:\Users\Admin\source\repos\23SOECE11049_BD>

```

## question 22

22 : Write a program to display a pattern like a diamond.

```

*
***
*****
*****
*****
*****
*****
*****
***
*

```

```

public static void Main(string[] args)
{
    for (int i = 1; i <= 9; i++)
    {
        for (int j = 1; j <= 9; j++)
        {
            if (i <= 5)
            {

```

```

        if (j >= 6 - i && j <= 4 + i)
            Console.WriteLine("***");
        else
            Console.WriteLine(" ");
    }
    else
    {
        if (j >= i - 4 && j <= 14 - i)
            Console.WriteLine("***");
        else
            Console.WriteLine(" ");
    }
}
Console.WriteLine();
Console.WriteLine();
}
}

```

```

C:\Windows\system32\cmd.exe
Enter a single digit number: 8
Series: 8 + 88 + 888 + 8888 + 88888 + 888888 + 8888888
The Sum is: 9876536

C:\Users\Admin\source\repos\23SOECE11049_BD>csc program.cs
Microsoft (R) Visual C# Compiler version 4.14.0-3.25279.5 (995f12b6)
Copyright (C) Microsoft Corporation. All rights reserved.

C:\Users\Admin\source\repos\23SOECE11049_BD>program.exe
*

***

*****

*****

*****

*****

*****

***

*

```