WEB ENGINEERING (SE 319)

LAB 4

Name: Syed Measum Hassan

SECTION: SE (B)

Roll Number: 20B-058-SE
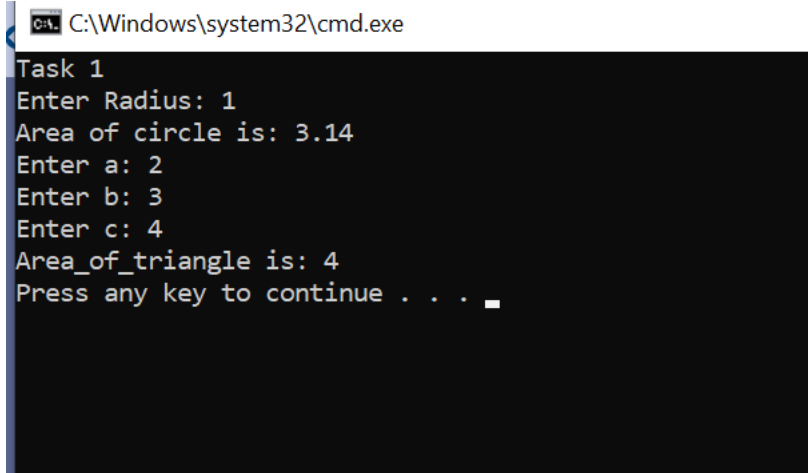
Seat Number: ST-20097

LAB TASK1:

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

namespace measumlab4
{
    class Program
    {
        static void Main(string[] args)
        {

            Console.WriteLine("Task 1");
            Console.Write("Enter Radius: ");
            int r = Convert.ToInt32(Console.ReadLine());
            double pi = 3.14;
            double area = pi * r * r;
            Console.WriteLine("Area of circle is: " + area);

            Console.Write("Enter a: ");
            int a = Convert.ToInt32(Console.ReadLine());
            Console.Write("Enter b: ");
            int b = Convert.ToInt32(Console.ReadLine());
            Console.Write("Enter c: ");
            int c = Convert.ToInt32(Console.ReadLine());
            double area_of_triangle = (a + b + c) / 2;
            Console.WriteLine("Area_of_triangle is: " + area_of_triangle);
        }
    }
}
```

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

Task 1
Enter Radius: 1
Area of circle is: 3.14
Enter a: 2
Enter b: 3
Enter c: 4
Area_of_triangle is: 4
Press any key to continue . . .
```

LAB TASK2:

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

namespace measumlab4
{
    class Program
    {
        static void Main(string[] args)
        {

            Console.WriteLine("Task 2");
            Console.Write("Enter  num1 : ");
            int num1 = Convert.ToInt32(Console.ReadLine());

            Console.Write("Enter num2: ");
            int num2 = Convert.ToInt32(Console.ReadLine());

            Console.WriteLine("{0} + {1} = {2}", num1, num2, num1 + num2);
            Console.WriteLine("{0} - {1} = {2}", num1, num2, num1 - num2);
            Console.WriteLine("{0} x {1} = {2}", num1, num2, num1 * num2);
            Console.WriteLine("{0} / {1} = {2}", num1, num2, num1 / num2);
            Console.WriteLine("{0} mod {1} = {2}", num1, num2, num1 % num2);

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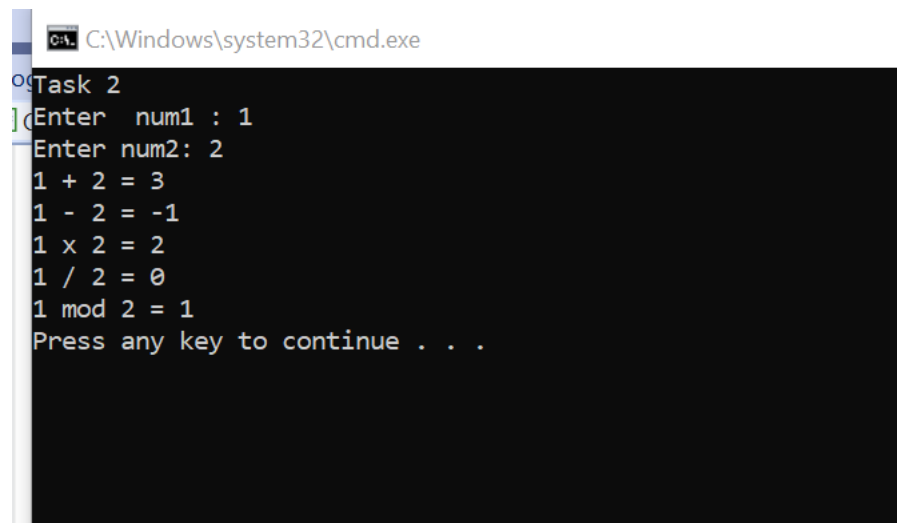
C:\Windows\system32\cmd.exe

```
Task 2
Enter  num1 : 1
Enter num2: 2
1 + 2 = 3
1 - 2 = -1
1 x 2 = 2
1 / 2 = 0
1 mod 2 = 1
Press any key to continue . . .
```

LAB TASK3:

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

namespace measumlab4
{
    class Program
    {
        static void Main(string[] args)
        {

            Console.WriteLine("Task 3");
            int i = 0;
            Console.Write("Enter a: ");
            int a = Convert.ToInt32(Console.ReadLine());
            Console.Write("Enter b: ");
            int b = Convert.ToInt32(Console.ReadLine());


            Console.WriteLine("Even Numbers :");
            for (i = a; i <= b; i++)
            {
                if (i % 2 == 0)
                {
                    Console.Write(i + " ");
                }
            }

            Console.WriteLine("\nOdd Numbers :");
            for (i = a; i <= b; i++)
            {
                if (i % 2 != 0)
                {
                    Console.Write(i + " ");
                }
            }

            Console.WriteLine();

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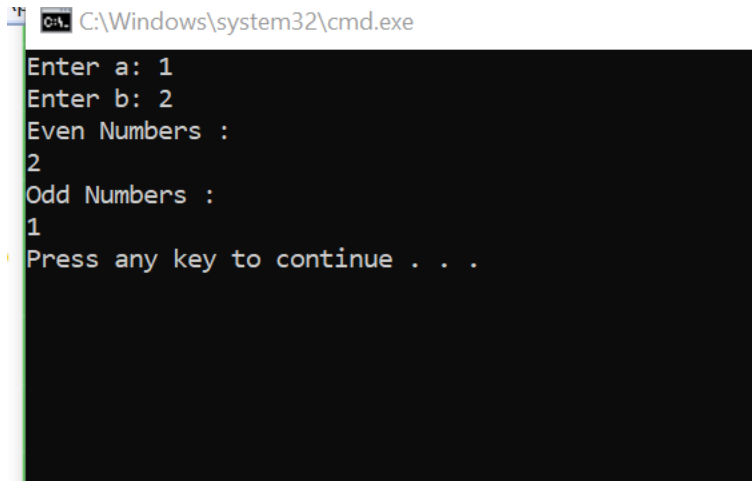
C:\Windows\system32\cmd.exe

```
Enter a: 1
Enter b: 2
Even Numbers :
2
Odd Numbers :
1
Press any key to continue . . .
```

LAB TASK4 :

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

namespace measumlab4
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Task 4");
            Console.Write("Input  A String : ");
            string str1 = "";
            string str = Console.ReadLine();

            int i, l;

            l = str.Length - 1;
            for (i = l; i >= 0; i--)
            {

                str1 = str1 + str[i];


            }
            Console.WriteLine("The string in Reverse  Order Is : {0}", str1);
            Console.Write("\n");
```

C:\Windows\system32\cmd.exe

```
Input  A String : measum
The string in Reverse  Order Is : musaem
```
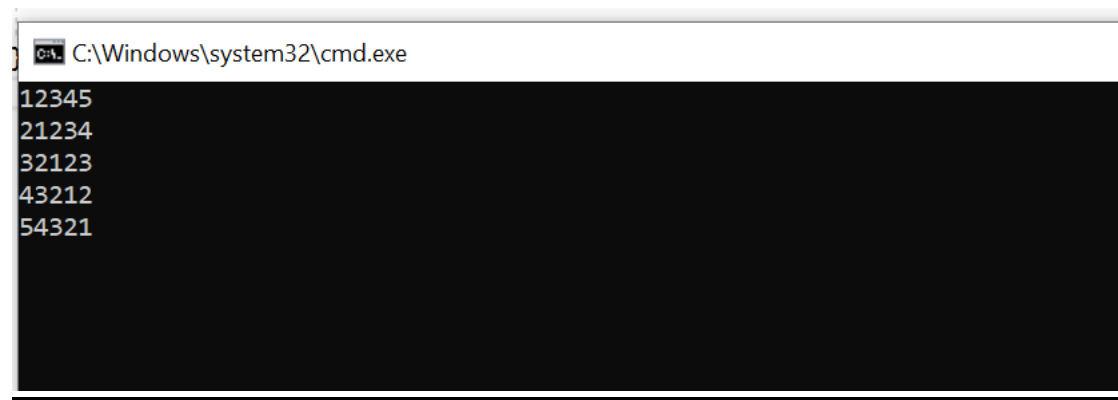
LAB TASK5 :

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

namespace measumlab4
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Task 5");
            Console.WriteLine("Enter item: ");
            int search = Convert.ToInt32(Console.ReadLine());
            int[] arr = { 4, 2, 1, 3  };
            for (int i = 0; i < arr.Length; i++)
            {
                if (arr[i] == search)
                {
                    Console.WriteLine("Found");
                    break;
                }
                else
                {
                    Console.WriteLine("NotFound");


                }
            }
        }
    }
}
```

LAB TASK 6:

```csharp
using System;

namespace measumlab4
{
    class Program
    {
        static void Main(string[] args)
        {

            Console.WriteLine("Task 6");
            int i, j, k;
            for (i = 1; i <= 5; i++)
            {
                for (j = 1; j <= 5; j++)
                {
                    if (j >= i)
                    {
                        k = j - i + 1;
                        Console.Write(k);
                    }
                    else
                    {
                        k = i - j + 1;
                        Console.Write(k);
                    }
                }
                Console.WriteLine();
            }
            Console.ReadLine();


        }
    }
}
```

C:\Windows\system32\cmd.exe

```
12345
21234
32123
43212
54321
```

LAB TASK 8:

```csharp
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace
{
    class Program
    {Circle circle= new Circle();
 circle.AreaCalculation();
```

```csharp
Console.WriteLine("------------------------------");
```

```csharp
Triangle triangle = new Triangle();
triangle.AreaCalculation();
    }
class Circle
    {
        public void AreaCalculation()
        {
            Console.Write("> Enter the Radius of the Circle: ");
            double Radius = Convert.ToDouble(Console.ReadLine());
            double Area = Math.PI * Radius * Radius;
            Console.WriteLine("Area of circle: " + Area);
        }
    }
    class Triangle
    {
        public void AreaCalculation()
        {
            // taking input from the users
            Console.Write("> Enter the length of side 1: ");
            double side1 = Convert.ToDouble(Console.ReadLine());
            Console.Write("> Enter the length of side 2: ");
            double side2 = Convert.ToDouble(Console.ReadLine());
            Console.Write("> Enter the length of side 3: ");
            double side3 = Convert.ToDouble(Console.ReadLine());
```

LAB TASK 7:

```csharp
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace task7
{
    class Program
    {
        static void Main(string[] args)
        {
            int[,] arr = new int[4, 4];
            int sum = 0;
            for (int i = 0; i < 4; i++)
            {
                for (int j = 0; j < 4; j++)
                {
                    arr[i, j] = i + j;
                }
            }
            for (int i = 0; i < 4; i++)
            {
                for (int j = 0; j < 4; j++)
                {
                    Console.Write(arr[i, j] + " ");
                }
                Console.WriteLine();
            }
            for (int i = 0; i < 4; i++)
            {
                for (int j = 0; j < 4; j++)
                {
                    if (i == j)
                    {
                        sum = sum + arr[i, j];
                    }
                }
            }
            Console.WriteLine("Sum of diagonals is " + sum);
            Console.ReadLine();
```