<h1 style="text-align:center">Assignments to be done in this session</h1>

Accept input from user and display results on console. Make use of loops, switch case wherever required.

1. Create a structure Book which contains the following members:
`bookId, title, price, bookType`

Type of the book should an enumerated data type with values as `Magazine, Novel, ReferenceBook, Miscellaneous.` Write a console based application to do the following tasks.

    a. Accept the details of the book

    b. Display the details of the book. The type of book should be displayed as a string e.g.: `Magazine`

Note: Use methods for accepting and displaying details.

1. Write a Simple console Application Calculator with the help of Visual Studio .NET IDE which will perform following operations on two numbers:
    a. Addition.
    b. Subtraction.
    c. Multiplication.
    d. Division

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

namespace ConsoleApp1
{
    class Program
    {
        static void Main(string[] args)
        {
            //This is a instructions
            /*
             *
             */
            int a, b, c, lar;
            Console.WriteLine("Enter the three numbers");
            a = Convert.ToInt32(Console.ReadLine());
            b = Convert.ToInt32(Console.ReadLine());
            c = Convert.ToInt32(Console.ReadLine());
            if (a > b)
            {
                if (a > c)
                {
                    lar = a;
                }
                else
                {
                    lar = c;
                }
            }
```
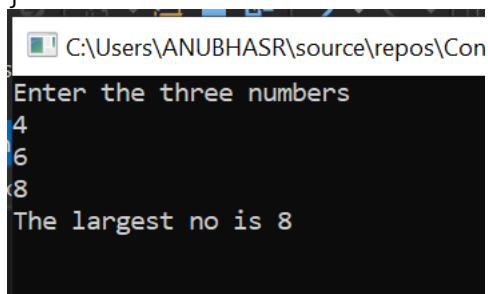
```
            else
            {
                if (b > c)
                {
                    lar = b;
                }
                else
                {
                    lar = c;
                }
            }

            Console.WriteLine("The largest no is " + lar);
            Console.ReadLine();

        }
    }
}
```

```
Enter the three numbers
4
6
8
The largest no is 8
```

2. Accept average marks of five students. Display the highest marks obtained.

```
using System;

namespace Task_1_q_2
{
    class Program
    {
        static void Main(string[] args)
        {
            //2.Accept average marks of five students. Display the highest marks
obtained.
            int a, b, c, d, e, hig;
            Console.WriteLine("Enter Average marks of 5 students");
            a = Convert.ToInt32(Console.ReadLine());
            b = Convert.ToInt32(Console.ReadLine());
            c = Convert.ToInt32(Console.ReadLine());
            d = Convert.ToInt32(Console.ReadLine());
            e = Convert.ToInt32(Console.ReadLine());
            if (a > b && a > c && a > d && a > e)
            {
                hig = a;
                Console.WriteLine("Highest is a: "+hig);
            }
            else if(b > a && b > c && b > d && b > e)
            {
                hig = b;
                Console.WriteLine("Highest is b: " + hig);
            }
            else if (c > a && c > b && c > d && c > e)
```

```csharp
        {
            hig = c;
            Console.WriteLine("Highest is c: " + hig);
        }
        else if (d > a && d > b && d > c && d > e)
        {
            hig = d;
            Console.WriteLine("Highest is d: " + hig);
        }
        else if (e > a && e > b && e > c && e > d)
        {
            hig = e;
            Console.WriteLine("Highest is e: " + hig);
        }
        //Console.WriteLine("The highest number is :"+hig);
        Console.ReadLine();
        }
    }
}
```
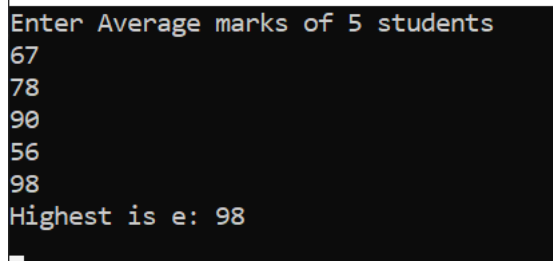
```
Enter Average marks of 5 students
67
78
90
56
98
Highest is e: 98
```

3. Write a static method to accept `param` array of integers. The method should find the sum of all the integers passed and display the result. Write a client program to call the method.

```csharp
using System;

namespace Task1_q_3
{
    class Program
    {
        public static int sum(params int[] list)
        {
            int sum1 = 0;
            for (int i = 0; i < list.Length; i++)
            {
                sum1 = sum1 + list[i];
            }
            return sum1;
            //Console.WriteLine();
        }
        static void Main(string[] args)
        {
            int total;

            //Can also give input this way
            //UseParams(1, 2, 3, 4);

            // Or give input this way
            int[] inputArray = { 5, 6, 7, 8, 9 };
            total = sum(inputArray);
```

```
            Console.WriteLine("The sum is:" + total);
            Console.ReadLine();
        }
    }
}
```

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The sum is:35

4. Write a method to swap two integers. The client code should call the method and print the swapped value.

```csharp
using System;

namespace Task_1_q_4
{
    class Program
    {
        public static void swap(int a,int b)
        {
            int temp;
            temp = a;
            a = b;
            b = temp;
            Console.WriteLine($"The swapped value is a={a} b={b}");
        }
        static void Main(string[] args)
        {
            int x, y;
            x = Convert.ToInt32(Console.ReadLine());
            y = Convert.ToInt32(Console.ReadLine());
            swap(x, y);
        }
    }
}
```

Microsoft Visual Studio Debug Console

```
4
7
The swapped value is a=7 b=4

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5652) exited with code 0.
To automatically close the console when debugg
le when debugging stops.
Press any key to close this window . . .
```

5. Write a single method that calculates the area and circumference of the circle. The area and circumference should be displayed through the client code

```csharp
using System;
```

```csharp
namespace Task_1_q_5
{
    class Program
    {
        public static double areaCircumference(double r,ref double area,ref double
circumference)
        {
            //double area,circumference;

            area = 3.14 * r * r;
            circumference = 2 * 3.14 * r;


            //double[] array = new double[2];
            //array[0] = 3.14 * r * r;
            //array[1] = 2 * 3.14 * r;
            //return array;
        }
        static void Main(string[] args)
        {


            double area=0, circumference=0;
            //double r = Convert.ToDouble(Console.ReadLine());
            areaCircumference(r, ref area, ref circumference);

            //int[] array = areaCircumference(r);

            Console.WriteLine($"Area = {area}, circumference = {circumference}");
            //Console.WriteLine("Area:"+array[0]);

            Console.ReadLine();
        }
    }
}
```
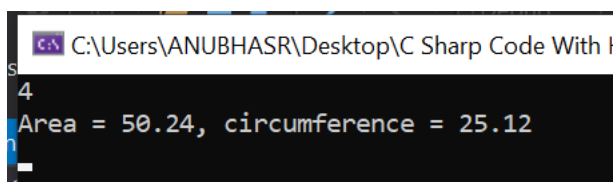
```
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4
Area = 50.24, circumference = 25.12
```