ASSIGNMENT NO-01

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

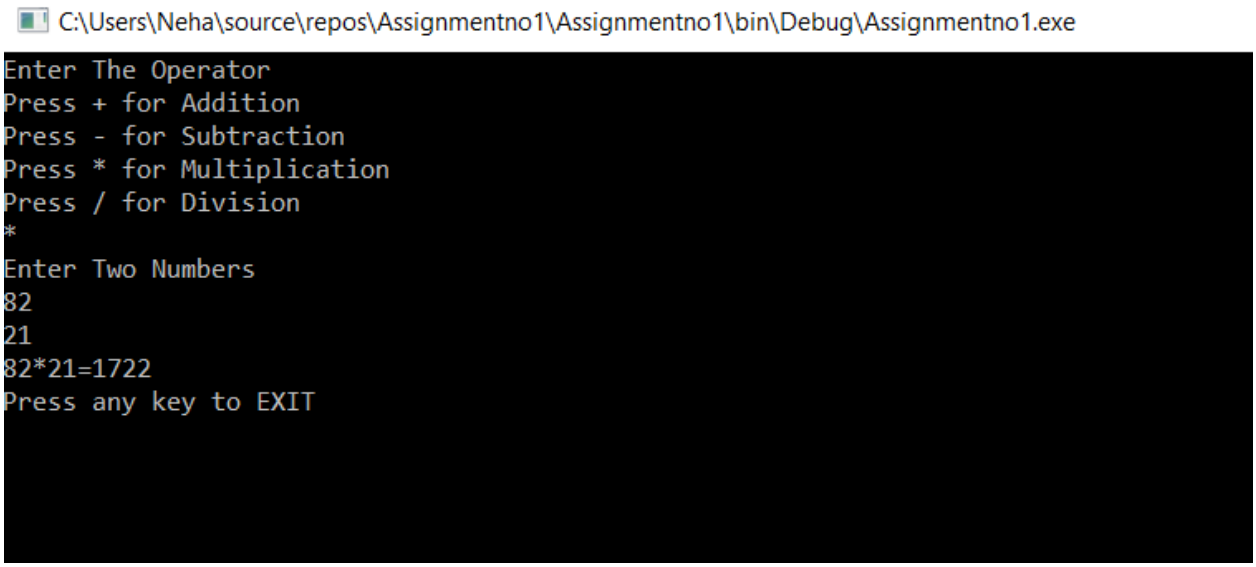
Accept input from the user and display results on the console. Make use of loops, switch cases wherever required.

Program:

```
using System;

namespace Assignmentno1
{
   class Program
   {
      static void Main(string[] args)
      {
         char num;
         double num1, num2;
         while (true)
         {
            Console.WriteLine("Enter The Operator");
            Console.WriteLine("Press + for Addition");
            Console.WriteLine("Press - for Subtraction");
            Console.WriteLine("Press * for Multiplication");
            Console.WriteLine("Press / for Division");

            num = Console.ReadLine()[0];
            Console.WriteLine("Enter Two Numbers");

            num1 = Convert.ToDouble(Console.ReadLine());
```

```
            num2 = Convert.ToDouble(Console.ReadLine());
            switch (num)
            {
               case '+':
                  Console.WriteLine("{0}+{1}={2}", num1, num2, (num1 + num2));
                  break;
               case '-':
                  Console.WriteLine("{0}-{1}={2}", num1, num2, (num1 - num2));
                  break;
               case '*':
                  Console.WriteLine("{0}*{1}={2}", num1, num2, (num1 * num2));
                  break;
               case '/':
                  if (num2 == 0.0)
                     Console.WriteLine("Divide By Zero");
                  else
                     Console.WriteLine("{0}/{1}={2}", num1, num2, (num1 /
num2));
                  break;

               default:
                  Console.WriteLine("{0) is an Invalid Input", num);
                  break;
            }
            Console.WriteLine("Press any key to EXIT");
            Console.ReadLine();
         }
      }
   }
}
```

Output:



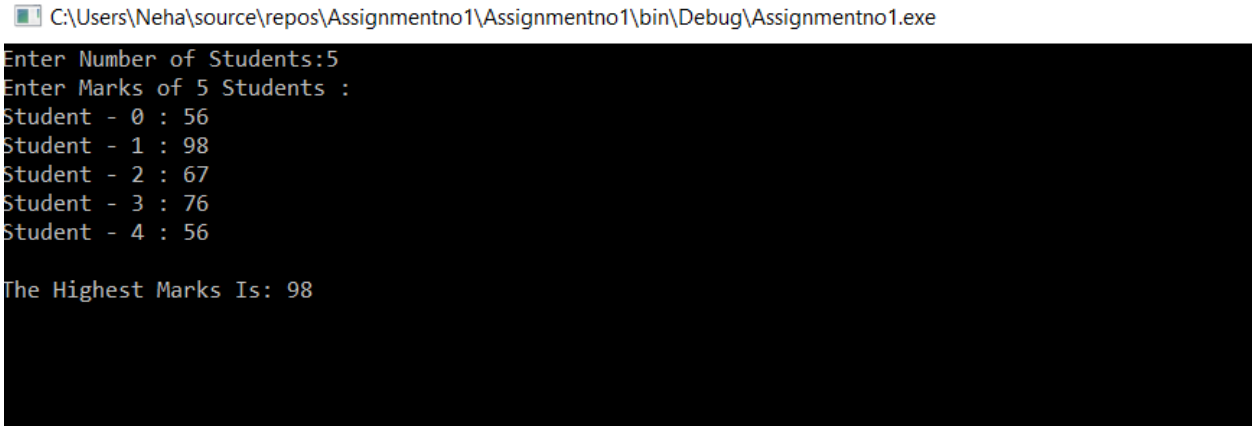
2. Accept average marks of five students. Display the highest marks obtained.

Program:

```
using System;

namespace Assignmentno1
{
   class Highestmarks
   {

      public static void Main()
      {
         int i, n;
         int[] a = new int[100];
         int max = 0;
         Console.Write("Enter Number of Students:");
         n = Convert.ToInt32(Console.ReadLine());
         Console.Write("Enter Marks of {0} Students :\n", n);
         for (i = 0; i < n; i++)
         {
            Console.Write("Student - {0} : ", i);
            a[i] = Convert.ToInt32(Console.ReadLine());
```

```
            if (a[i] > max)
            {
                max = a[i];
            }
        }

        Console.Write("\nThe Highest Marks Is: {0} ", max);
        Console.ReadKey();
    }
  }

}
```

Output:



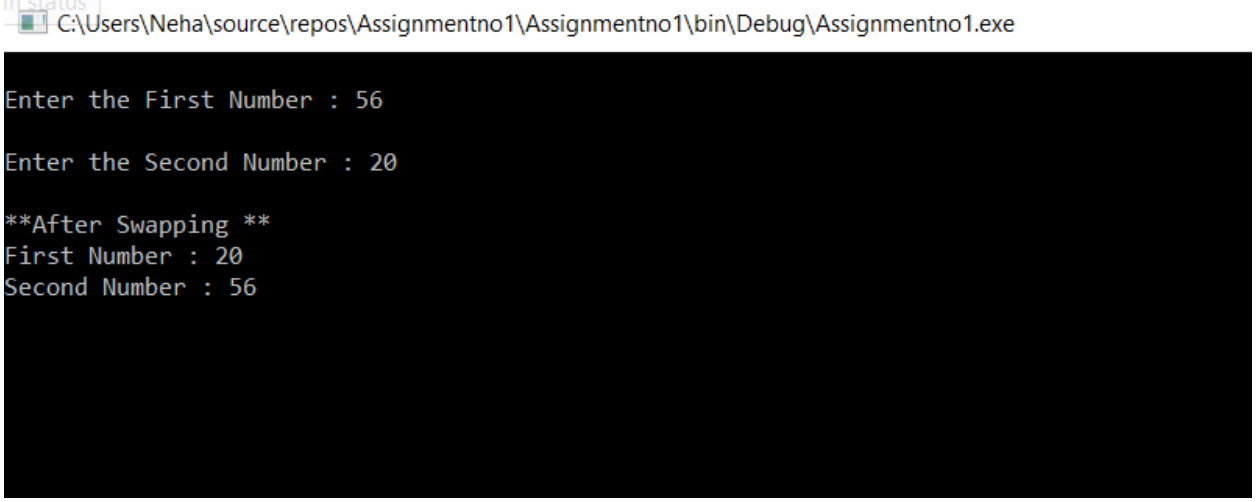
3. Write a static method to accept `param` array of integers. The method should find the sum of all the integers passed and display the result. Write a client program to call the method.

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

Program:

```
using System;

namespace Assignmentno1
{
   public class Program
   {
      public static void Main(string[] args)
      {
         int number1, number2, temp;
         Console.Write("\nEnter the First Number : ");
         number1 = int.Parse(Console.ReadLine());
         Console.Write("\nEnter the Second Number : ");
         number2 = int.Parse(Console.ReadLine());
         temp = number1;
         number1 = number2;
         number2 = temp;
         Console.Write("\n**After Swapping **");
         Console.Write("\nFirst Number : " + number1);
         Console.Write("\nSecond Number : " + number2);
         Console.Read();
      }}}
```

Output:

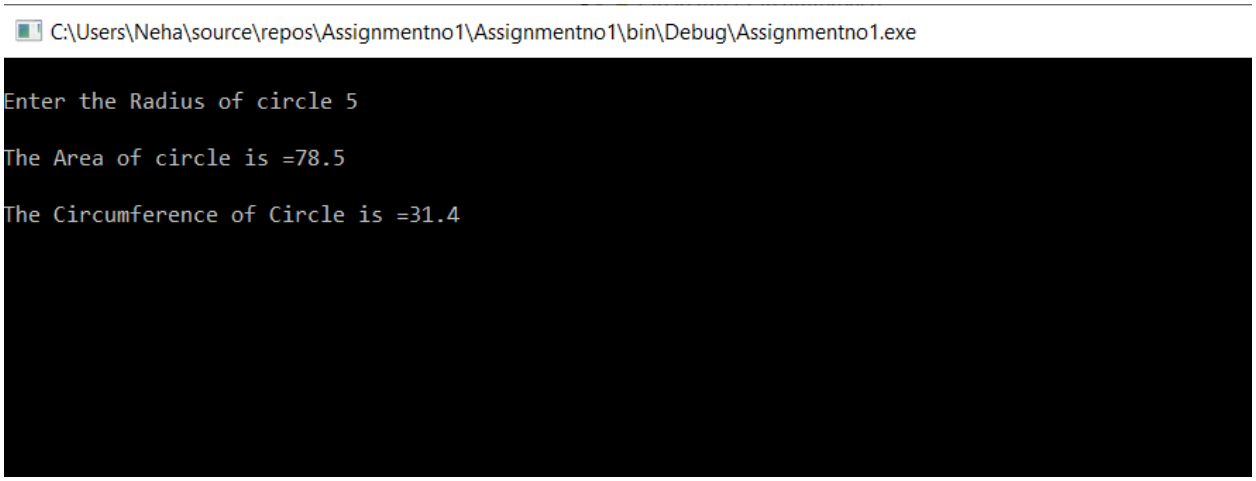


5.Write a single method that calculates the area and circumference of the circle. The area and circumference should be displayed through the client code

Program:

```
using System;

namespace Assignmentno1
{
   class Area_Circumference

   {
      public static void Main(String[] args)
      {
         double AREA, Circumference;
         const double PI = 3.14;



         Console.Write("\nEnter the Radius of circle ");
         double r = Convert.ToDouble(Console.ReadLine());
         AREA = PI * r * r;
         Circumference = 2 * PI * r;
         Console.WriteLine("\nThe Area of circle is =" + AREA);
         Console.WriteLine("\nThe Circumference of Circle is =" + Circumference);
         Console.ReadKey();
      }
   }
}
```

Output:



6.1. Create a structure Book which contains the following members:

bookId, title, price, bookType

Type of the book should be 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

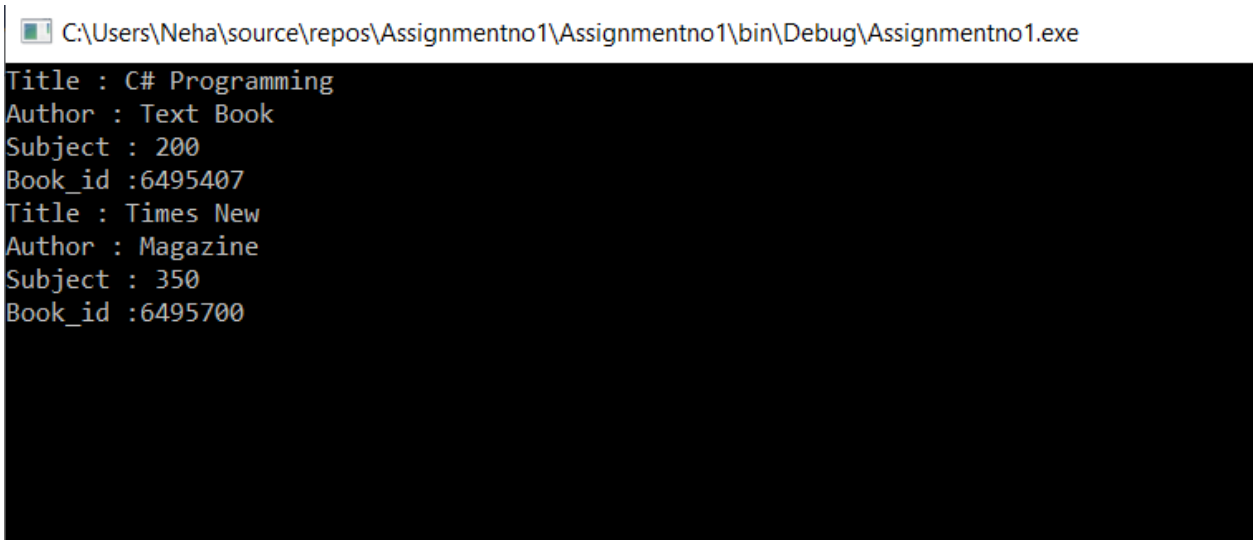
Program:

```
using System;

namespace Assignmentno1

{

   class lastque

   {

      class strurucure
```

```
{
   struct Books
   {
      private string title;
      private string type;
      private int price;
      private int book_id;

      public void getValues(string t, string a, int p, int id)
      {
         title = t;
         type = a;
         price = p;
         book_id = id;
      }
      public void display()
      {
         Console.WriteLine("Title : {0}", title);
         Console.WriteLine("Author : {0}", type);
         Console.WriteLine("Subject : {0}", price);
         Console.WriteLine("Book_id :{0}", book_id);
```

```
            }
        };
        public static void Main(string[] args)
        {
            Books Book1 = new Books();
            Books Book2 = new Books();
            Book1.getValues("C# Programming",
            "Text Book", 200, 6495407);
            Book2.getValues("Times New",
            "Magazine", 350, 6495700);
            Book1.display();
             Book2.display();
           Console.ReadKey();
        }
    }
  }
}
```

Output: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Title : C# Programming
Author : Text Book
Subject : 200
Book_id :6495407
Title : Times New
Author : Magazine
Subject : 350
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