PRACTICAL NO.01

Working with basic C# and ASP .NET

a. Create an application that obtains four int values from the user and displays the product.

Code:

```csharp
//Name:
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)
        {
            int prod = 1;
            for(int i = 1; i < 5; i++)
            {
                Console.WriteLine("Enter Number " + i);
                int num = Convert.ToInt32(Console.ReadLine());
                prod = prod * num;
            }
            Console.WriteLine("The product of given numbers is : " + prod);
            Console.Read();
        }
    }
}
```

Output:

```
Enter Number 1
1
Enter Number 2
5
Enter Number 3
2
Enter Number 4
4
The product of given numbers is : 40
|
```

b. Create an application to demonstrate string operations.

Code:

```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)
        {
            String str1 = "Ram";
            String str2 = "Laxman";
            Console.WriteLine("Concatination : "+(str1+str2));
            Console.WriteLine("Length of string 1 : "+str1.Length);
            Console.WriteLine("String in Uppercase : "+str1.ToUpper());
```

```
        Console.WriteLine("String in Lowercase : "+str1.ToLower());
        Console.WriteLine("Comparing Strings : " + str1.Equals(str2));
        Console.Read();
    }
  }
}
```

Output:

```
Concatination : RamLaxman
Length of string 1 : 3
String in Uppercase : RAM
String in Lowercase : ram
Comparing Strings : False
|
```

c. Create an application that receives the (Student Id, Student Name, Course Name, Date of Birth) information from a set of students. The application should also display the information of all the students once the data entered.
Code:

```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)
        {
            int[] stud_id = new int[5];
            string[] stud_name = new string[10];
            string[] course_name = new string[10];
            string[] stud_DOB = new string[10];
            Console.WriteLine("Enter the number of students");
            int n = Convert.ToInt32(Console.ReadLine());
            for (int i = 0; i < n; i++)
            {
                Console.WriteLine("Enter the Stud_id: ");
                int id = Convert.ToInt32(Console.ReadLine());
                Console.WriteLine("Enter the Stud_name : ");
                string name = Console.ReadLine();
                Console.WriteLine("Enter the course_name:");
                string course = Console.ReadLine();
                Console.WriteLine("Enter the Date of Birth : ");
                string dob =Console.ReadLine();
                stud_id[i] = id;
                stud_name[i] = name; course_name[i] = course;
                stud_DOB[i] = dob;
                Console.WriteLine("--------------------");
            }
            for (int i = 0; i < n; i++)
            {
                Console.WriteLine("Stud_id:" + stud_id[i]);
                Console.WriteLine("Stud_name:" + stud_name[i]);
                Console.WriteLine("Course name:" + course_name[i]);
                Console.WriteLine("Stud_DOB:" + stud_DOB[i]);
            }
            Console.Read();
```

```
        }
    }
}
```

Output:

```
Enter the number of students       Enter the Stud_id:
3                                  103
Enter the Stud_id:                 Enter the Stud_name :
101                                Virat
Enter the Stud_name :              Enter the course_name:
Ram                                BMS
Enter the course_name:             Enter the Date of Birth :
IT                                 18/08/2003
Enter the Date of Birth :          ---------------------
21/05/2004                         Stud_id:101
---------------------              Stud_name:Ram
Enter the Stud_id:                 Course name:IT
102                                Stud_DOB:21/05/2004
Enter the Stud_name :              Stud_id:102
Sita                               Stud_name:Sita
Enter the course_name:             Course name:CS
CS                                 Stud_DOB:29/02/2004
Enter the Date of Birth :          Stud_id:103
29/02/2004                         Stud_name:Virat
---------------------              Course name:BMS
                                   Stud_DOB:18/08/2003
```

d. Create an application to demonstrate following operations
i. Generate Fibonacci series.
Code:

```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)
        {
            int n1 = 0;
            int n2 = 1;
            int sum = n1 + n2;
            int lim = 20;
            Console.WriteLine("Fibonacci series: ");
            Console.WriteLine(n1);
            while (sum < lim)
            {
                Console.WriteLine(sum);
                sum = n1 + n2;
                n1 = n2;
                n2 = sum;
            }
            Console.Read();
        }
    }
}
```

Output:

```
Fibonacci series:
0
1
1
2
3
5
8
13
```

ii. Test for prime numbers.
Code:
```
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)
        {
            Console.WriteLine("Enter number: ");
            int num = Convert.ToInt32(Console.ReadLine());
            int status = 0;
            int i = 2;
            while (i < num / 2)
            {
                if (num % i == 0)
                {
                    status = 1;
                    break;
                }
                i++;
            }
            if (status == 1)
            {
                Console.WriteLine("The number is Composite");
            }
            else
            {
                Console.WriteLine("The number is prime");
            }
            Console.Read();
        }
    }
}
```

Output:

```
Enter number:
58
The number is Composite
```

```
Enter number:
3
The number is prime
```

iii. Test for vowels.
Code:

```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)
        {
            Console.WriteLine("Enter character: "); String num = Console.ReadLine();
            int status = 0;
            string[] vovels = { "a", "e", "i", "o", "u" }; foreach (var character in vovels)
            {
                if (character == num)
                {
                    status = 1;
                    break;
                }
            }
            if (status == 1)
            {
                Console.WriteLine("The character is Vowel");
            }
            else
            {
                Console.WriteLine("The character is Consonent");
            }
            Console.Read();
        }
    }
}
```

Output:

```
Enter character:
i
The character is Vowel
```

iv. Use of foreach loop with arrays
Code:

```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)
        {
            string[] city = { "Venurla", "Kankavli", "Sawantwadi", "Kudal" };
            foreach (var name in city)
```

```
        {
            Console.WriteLine(name);
        }
        Console.Read();
    }
  }
}
```

Output:

```
Venurla
Kankavli
Sawantwadi
Kudal
```

v. Reverse a number and find sum of digits of a number.
Code:

```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)
        {
            Console.WriteLine("Enter number: ");
            int num = Convert.ToInt32(Console.ReadLine());
            int rev = 0;
            int sum = 0;
            int rem;
            while (num > 0)
            {
                rem = num % 10;
                rev = rev * 10 + rem;
                sum = sum + rem;
                num = num / 10;
            }
            Console.WriteLine("reversed number : " + rev);
            Console.WriteLine("Sum of digits : " + sum);
            Console.Read();
        }
    }
}
```

Output:

```
Enter number:
123
reversed number : 321
Sum of digits : 6
```