Day 21(21-02-2022) Assignment
By
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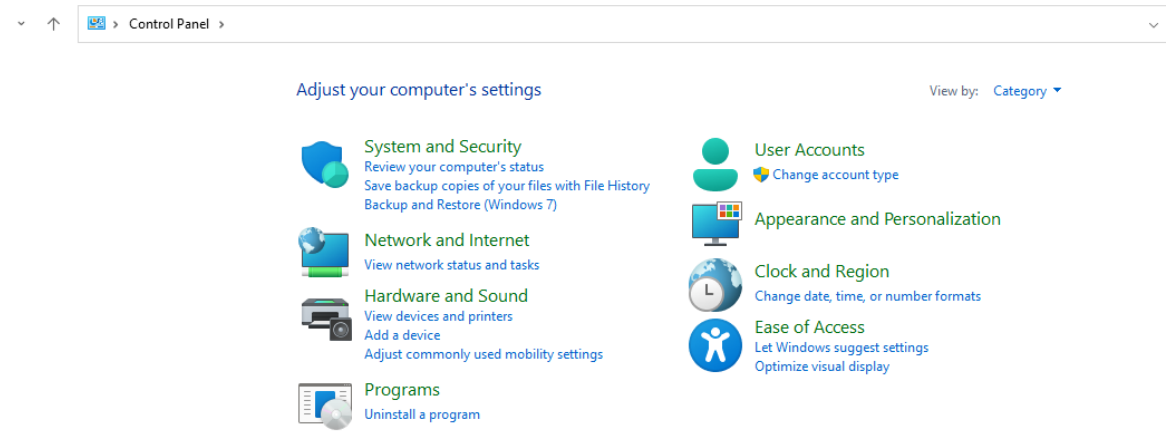
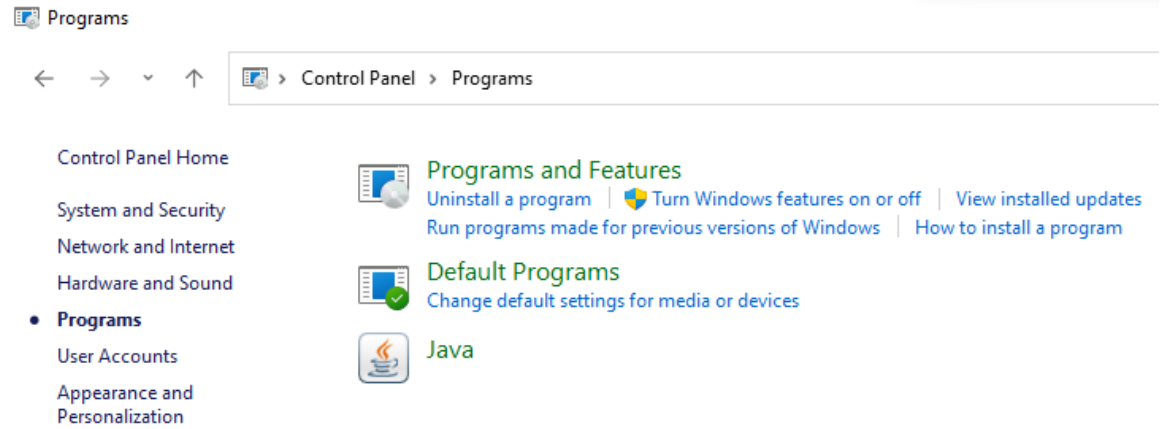
Q1. Update your Visual Studio with .Net Framework Templates add on (as discussed in the class)

1.Open Control Panel:

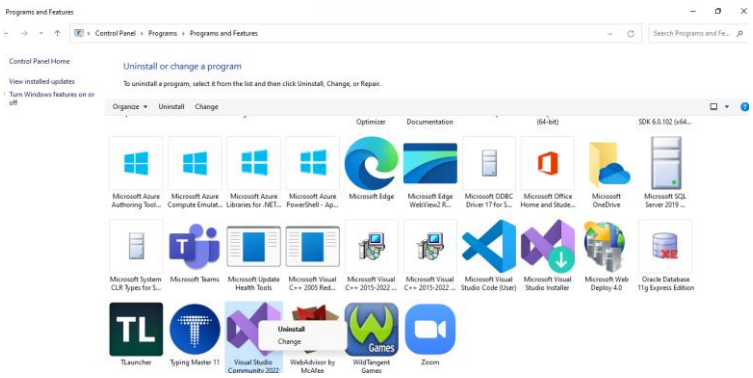
'anel



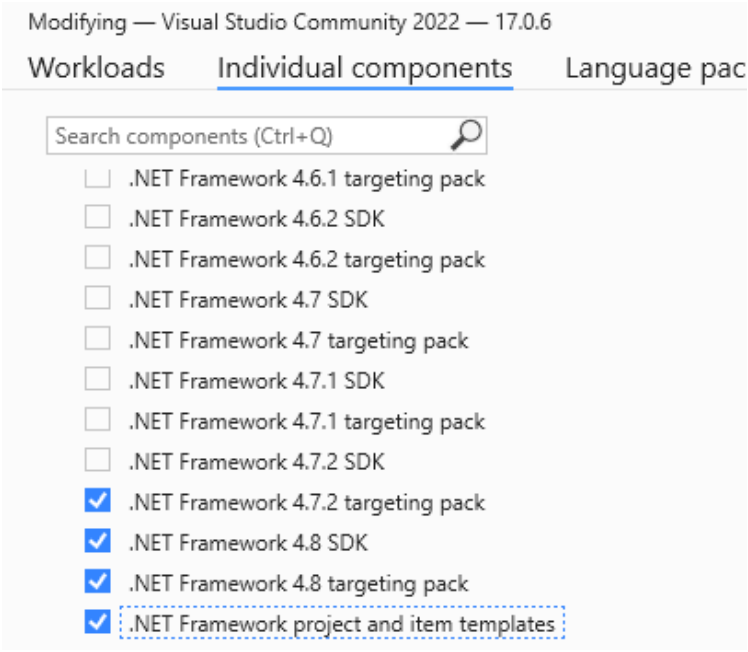
2.Click on Programs:



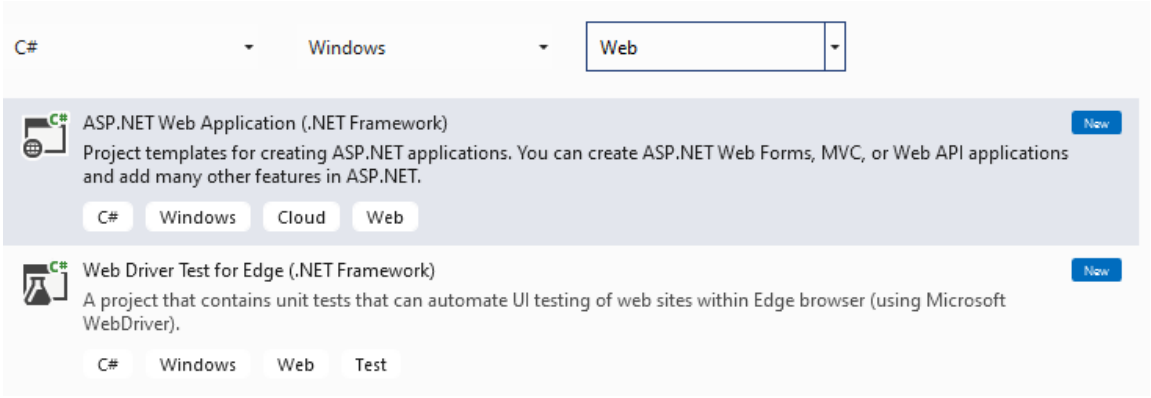
3.Right click on Visual Studio Community 2022 then click on change



4.Select .Net Framework project and item templates then click on modify



5.New templates are added



Q2. Create a web service for Mathematical Operations.

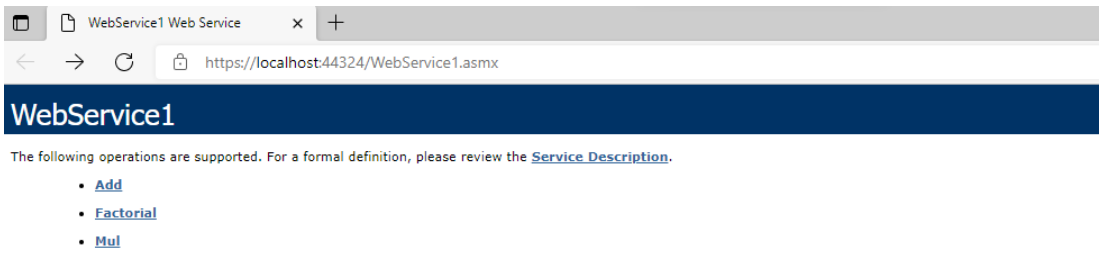
Example : Factorial, add, mul, div

Code:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.Services;

namespace MathematicsLibrary
{
    /// <summary>
    /// Summary description for WebService1
    /// </summary>
    [WebService(Namespace = "http://tempuri.org/")]
```

```
    [WebServiceBinding(ConformsTo = WsiProfiles.BasicProfile1_1)]
    [System.ComponentModel.ToolboxItem(false)]
    // To allow this Web Service to be called from script, using ASP.NET AJAX,
uncomment the following line.
    // [System.Web.Script.Services.ScriptService]
    public class WebService1 : System.Web.Services.WebService
    {
        /// <summary>
        /// This method will return factorial
        /// </summary>
        /// <param name="n">int</param>
        /// <returns>Fact(int)</returns>
        [WebMethod]
        public int Factorial(int n)
        {
            int fact = 1,i;
            for(i=1;i<=n;i++)
            {
                fact = fact * i;
            }
            return fact;

        }
        /// <summary>
        /// This method will return sum of two numbers
        /// </summary>
        /// <param name="a">int</param>
        /// <param name="b">int</param>
        /// <returns>Sum(int)</returns>
        [WebMethod]
        public int Add(int a,int b)
        {
            return a + b;
        }
        /// <summary>
        /// This method will return Product of two numbers
        /// </summary>
        /// <param name="a">int</param>
        /// <param name="b">int</param>
        /// <returns>Product(int)</returns>
        [WebMethod]
        public int Mul(int a,int b)
        {
            return a*b;
        }

    }
}
```

Output:

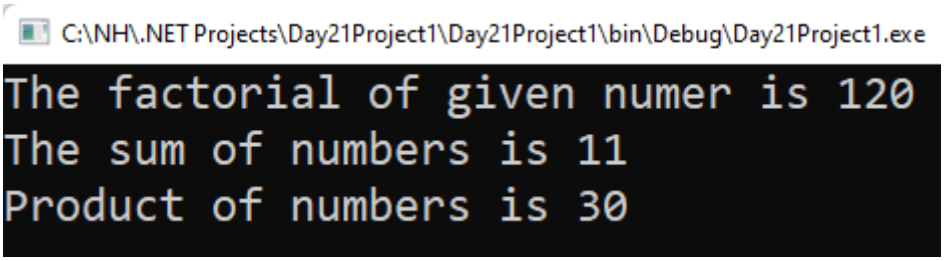


Q3. Create a Console Application and consume the webservice

Code:

```
using Day21Project1.ServiceReference1;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Day21Project1
{

/**************************************************************************
     * Author:Sudha Kumari Sugasani
     * Purpose:Example program to create webservice for Mathematical Operations
     *
**************************************************************************/
    internal class Program
    {
        static void Main(string[] args)
        {
            WebService1SoapClient obj = new WebService1SoapClient();
            Console.WriteLine($"The factorial of given numer is
{obj.Factorial(5)}");
            Console.WriteLine($"The sum of numbers is {obj.Add(5,6)}");
            Console.WriteLine($"Product of numbers is {obj.Mul(5,6)}");
            Console.ReadLine();

        }
    }
}
```

Output:



Q4. Create a Windows Forms application and consume the webservice

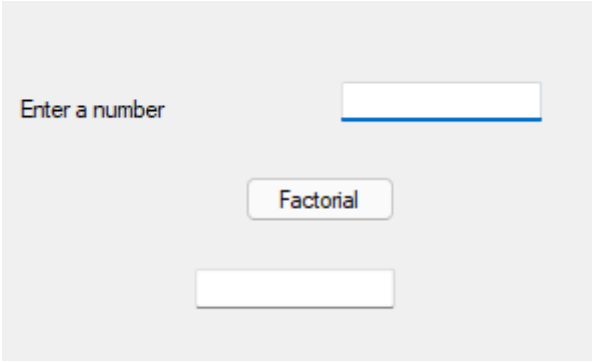
[for finding factorial of the number]

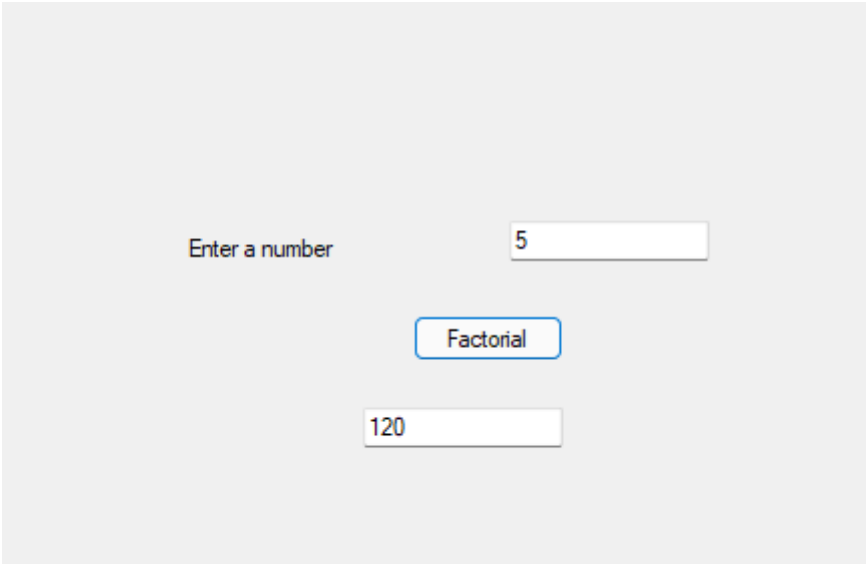
Code:

```
using Day21Project2.ServiceReference1;
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace Day21Project2
{
```

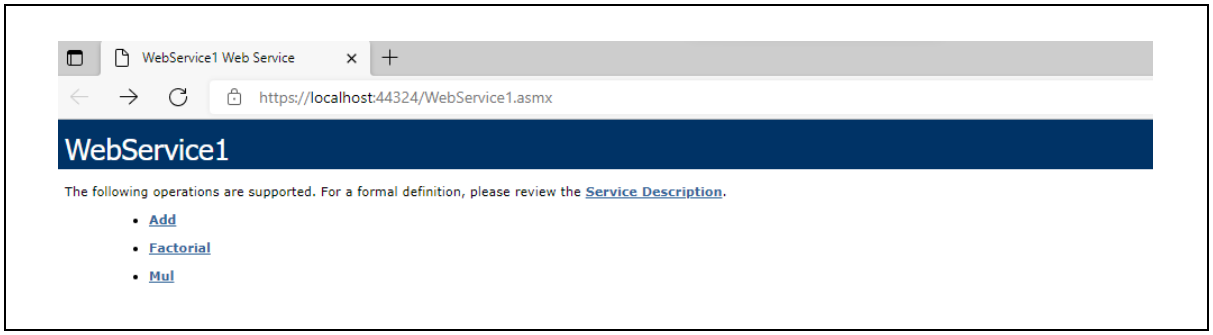
```
/*****************************************************************************
     * Author:Sudha Kumari Sugasani
     * Purpose:Example program for windows application and consume the web
service

*****************************************************************************
/
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void button1_Click(object sender, EventArgs e)
        {
            int n = Convert.ToInt32(textBox1.Text);
            WebService1SoapClient obj = new WebService1SoapClient();
            textBox2.Text = obj.Factorial(n).ToString();
        }
    }
}
```

Output:





Q5. Put the screen shots of webservice running


WebService1 Web Service
https://localhost:44324/WebService1.asmx
WebService1
The following operations are supported. For a formal definition, please review the Service Description.
Add
Factorial
Mul