Day 21 Assignment
By Mary Margarette
On 21-02-2022

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 WebApplication1
{
   /// <summary>
   /// Summary description for Web1
   /// </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 Web1 : System.Web.Services.WebService
   {



      [WebMethod]
      public int Add(int a, int b)
      {
         return a+b;
      }

      [WebMethod]
      public int Mul(int c, int d)
      {
         return c*d;
      }

      [WebMethod]
      public int Div(int e, int f)
      {
```

```
        return e / f;
    }

    [WebMethod]
    public int Factorial(int n)
    {
        int fact = 1;
        for(int i = 1; i <= n; i++)
        {
            fact = fact*i;
        }
        return fact;
    }
  }
}
```

Create a Console Application and consume the webservice
Code:

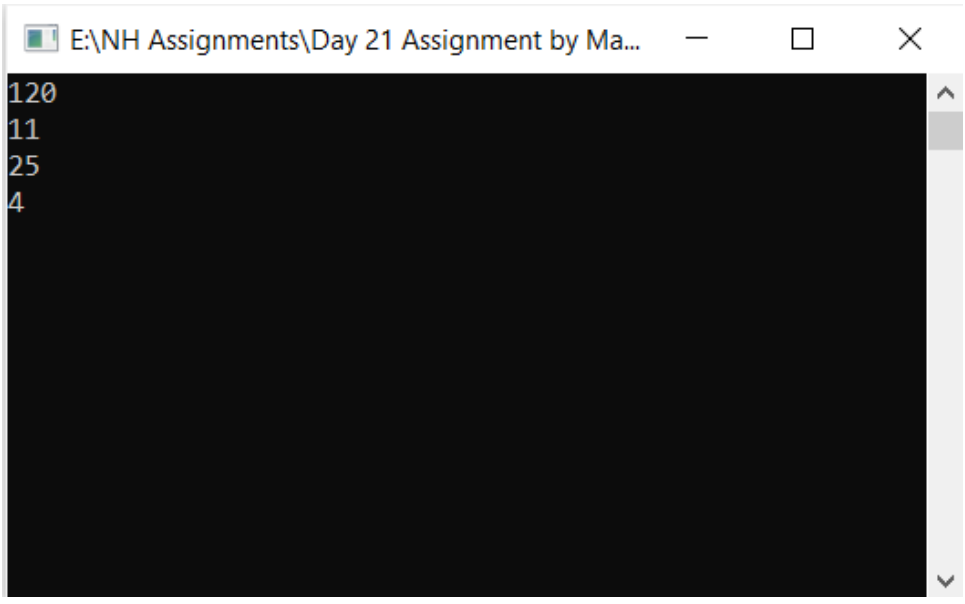
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using WebC0.ServiceReference1;

namespace WebC0
{
    0 references
    internal class Program
    {
        0 references
        static void Main(string[] args)
        {
            Web1SoapClient wb = new Web1SoapClient();
            Console.WriteLine(wb.Factorial(5));
            Console.WriteLine(wb.Add(5,6));
            Console.WriteLine(wb.Mul(5,5));
            Console.WriteLine(wb.Div(8,2));

            Console.ReadLine();

        }
    }
}
```

Output:



Create a Windows Forms application and consume the webservice[for finding factorial of the number]

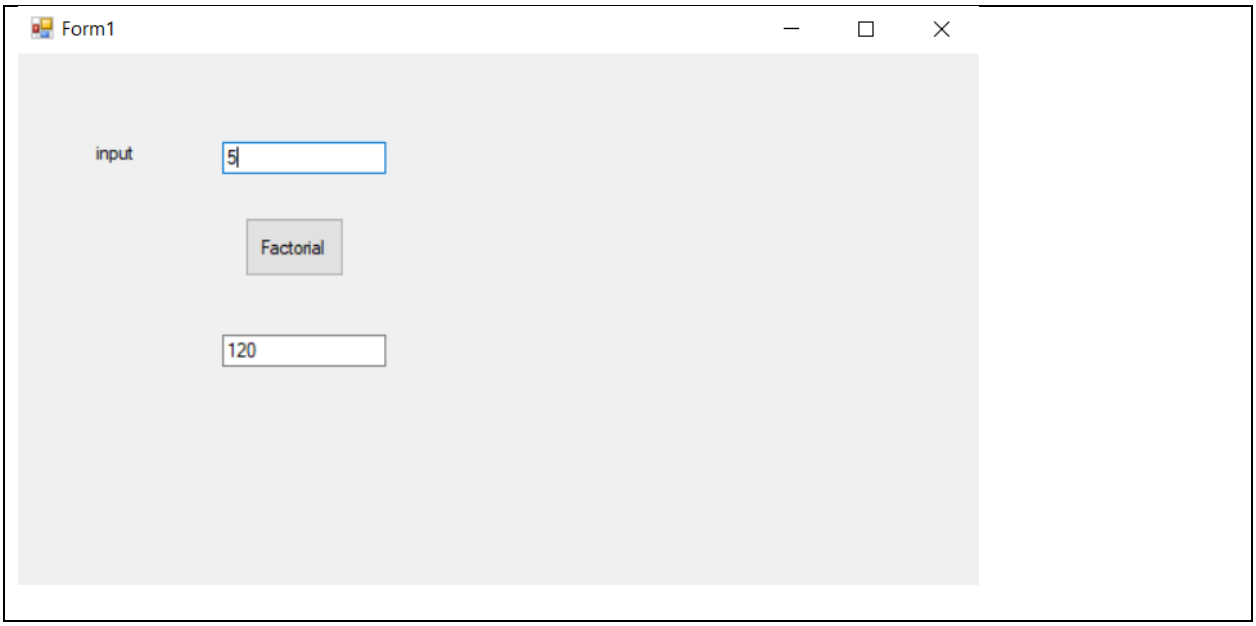
Code:

```
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;
using WebWin1.ServiceReference1;

namespace WebWin1
{
   public partial class Form1 : Form
   {
      public Form1()
      {
         InitializeComponent();
      }

      private void button1_Click(object sender, EventArgs e)
      {
         int n=Convert.ToInt32(textBox1.Text);
         Web1SoapClient obj = new Web1SoapClient();
         textBox2.Text=obj.Factorial(n).ToString();
      }
   }
}
```

Output:


Form1
input
5
Factorial
120