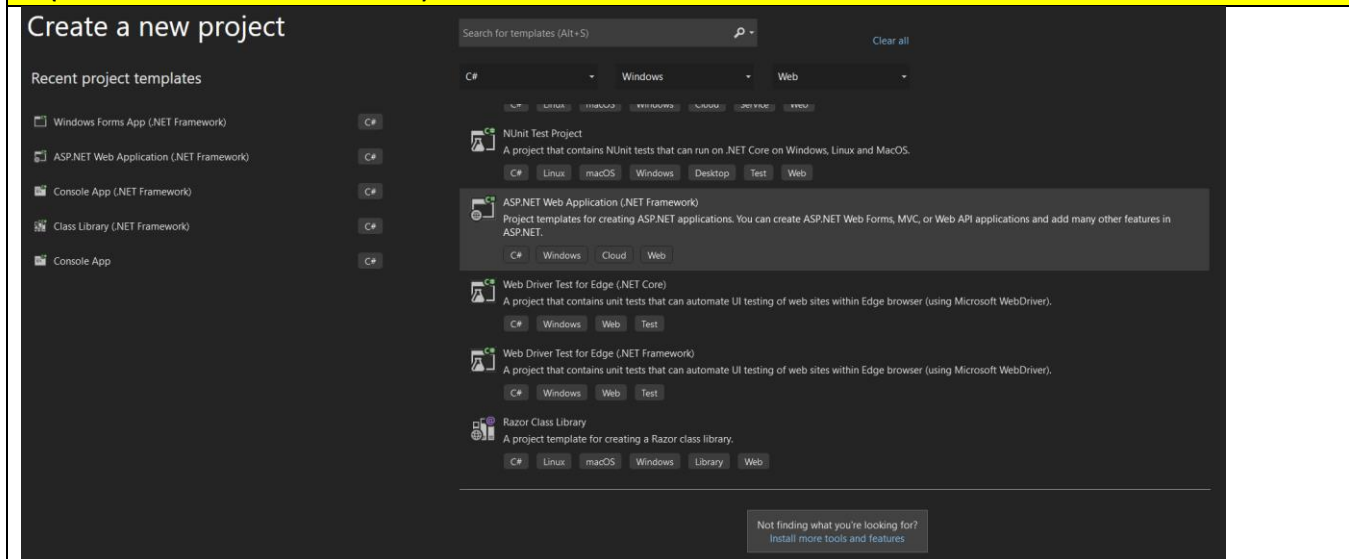## NB Healthcare Technologies Pvt Ltd

Day 21 Morning Assignment (21 – Feb- 2022)
By
Vamsi Krishna Mandapati

1. Update your Visual Studio with .Net Framework Templates add on
   (as discussed in the class)

2. Create a web service for Mathematical Operations.

   Example : Factorial, add, mul, div

MyMathematicsWebService : Code

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

namespace MyMathematicsWebService
{
    /// <summary>
    /// Summary description for Algebra
    /// </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
```

```csharp
AJAX, uncomment the following line.
    // [System.Web.Script.Services.ScriptService]
    public class Algebra : System.Web.Services.WebService
    {

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

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

        [WebMethod]
        public int Mul(int a, int b)
        {
            return a * b;
        }

        [WebMethod]
        public int Div(int a, int b)
        {
            return a / b;
        }

    }
}
```

MyMathematicsWebService Running

3. Create a Console Application and consume the webservice

Consuming Web Service: Algebra
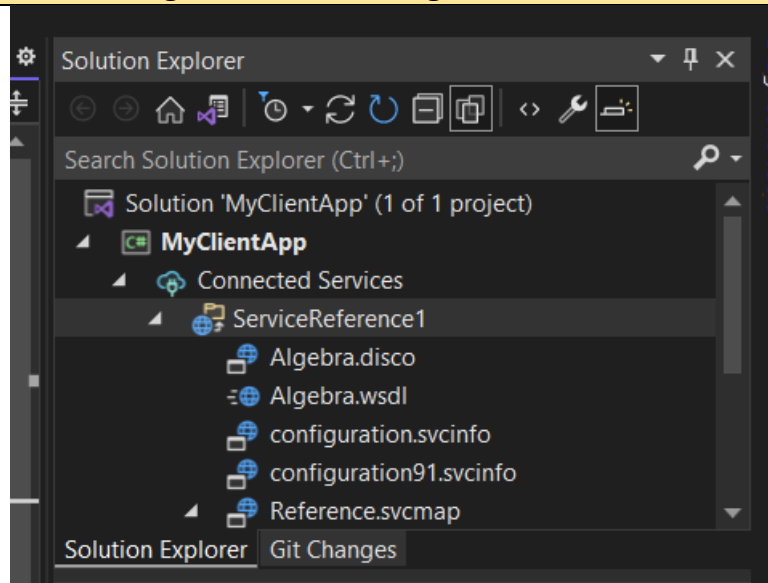
Console App : MyClientApp

Code:

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

namespace MyClientApp
{
    internal class Program
    {
        static void Main(string[] args)
        {
            AlgebraSoapClient obj = new AlgebraSoapClient();

            Console.WriteLine(obj.Factorial(5));
            Console.WriteLine(obj.Div(12,6));


            Console.ReadLine();
        }
    }
}
```
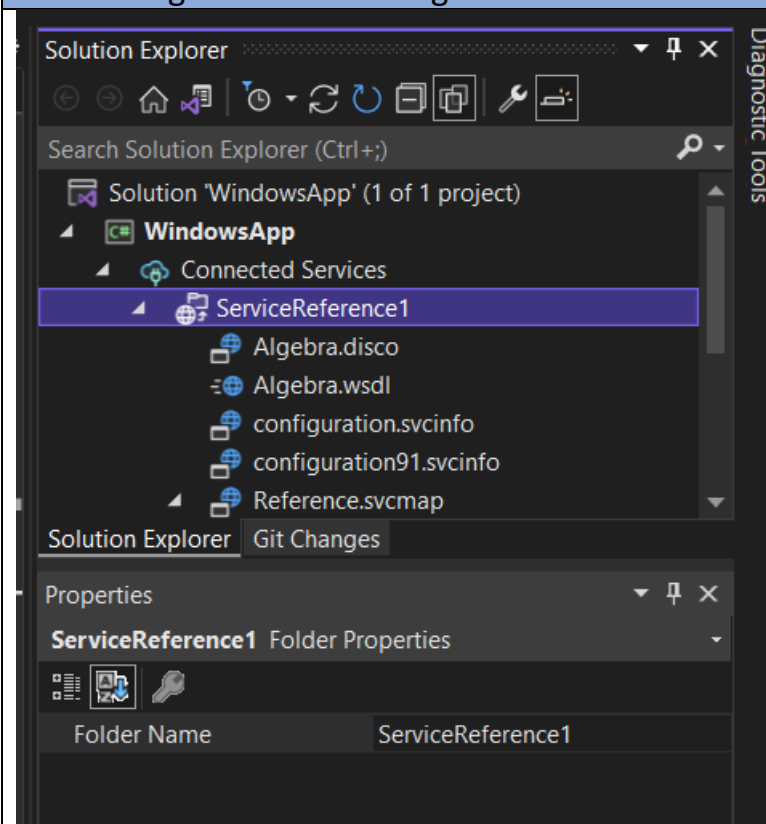
Output:

```
120
2
```

4. Create a Windows Forms application and consume the webservice

[for finding factorial of the number]

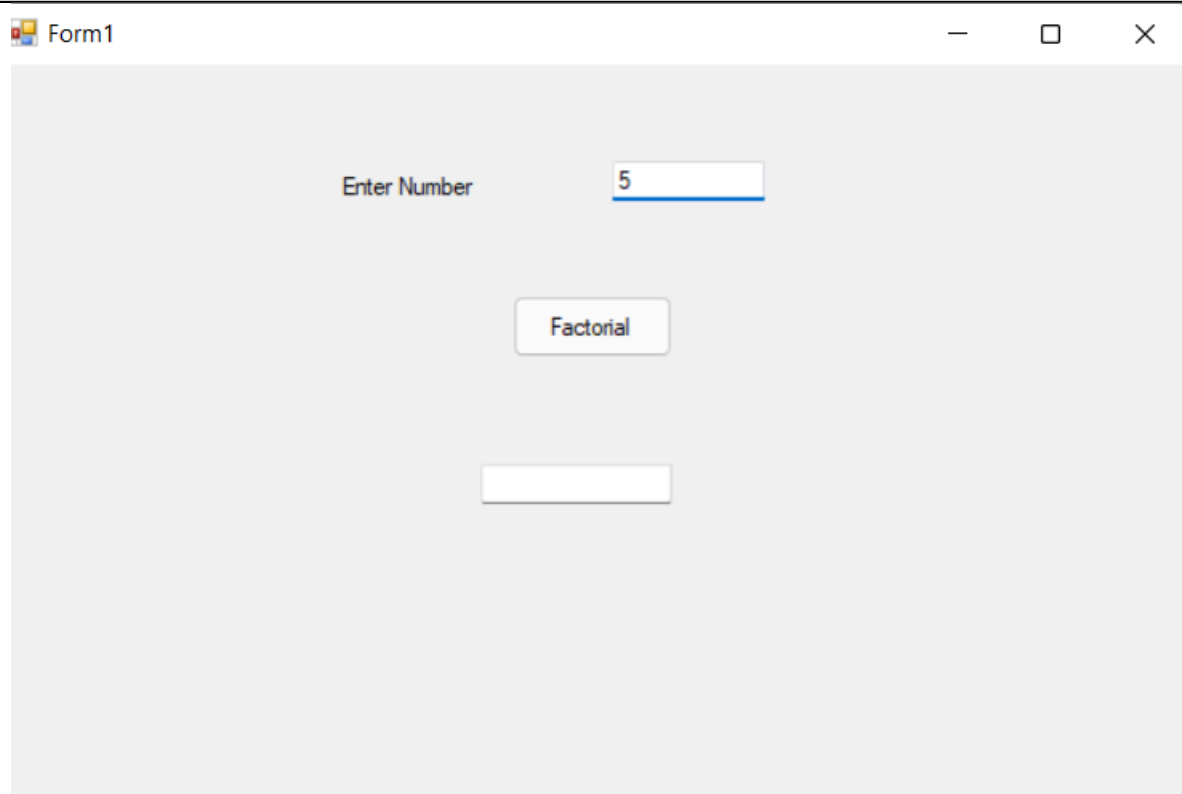### Consuming Web Service: Algebra

Windows Forms Application

Code:

```csharp
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 WindowsApp.ServiceReference1;
```

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

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


        }
    }
}
```
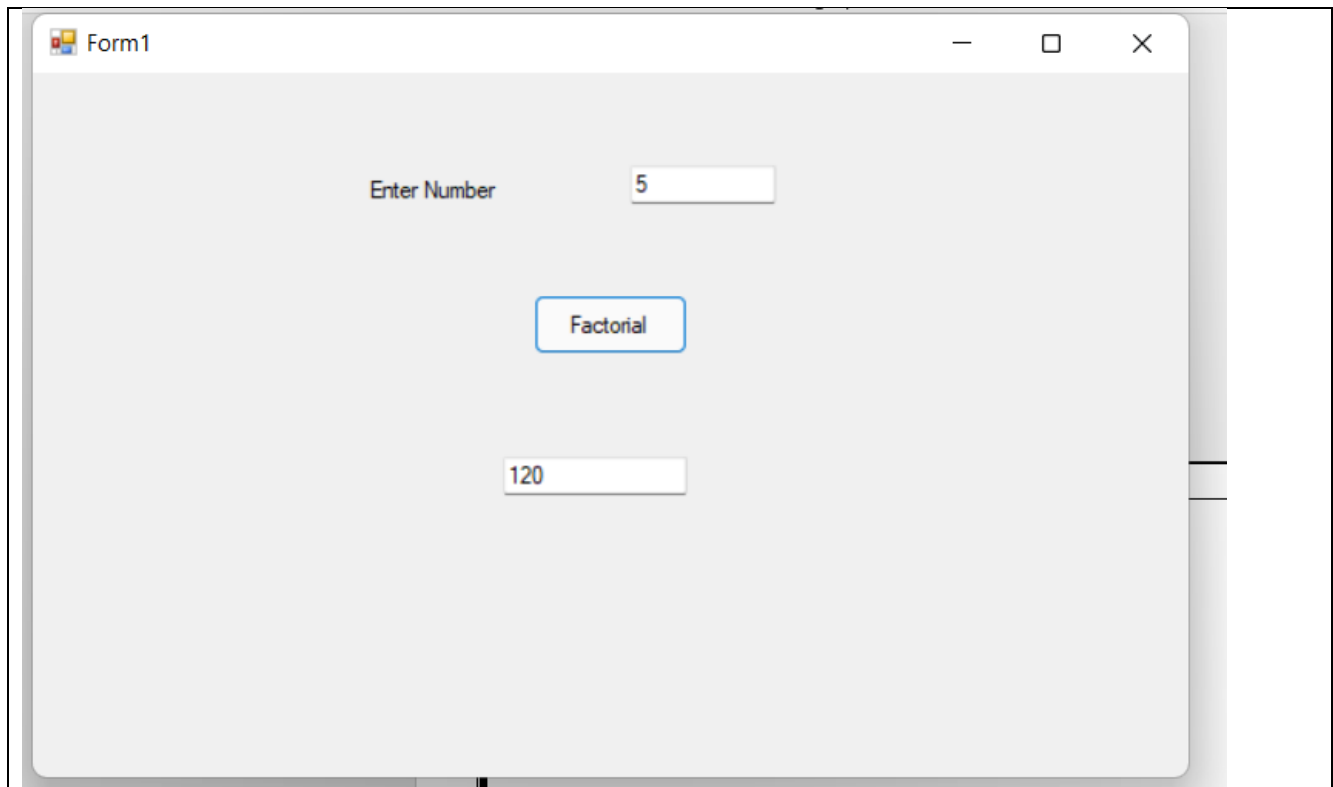
Output:

WebService Running : Algebra