

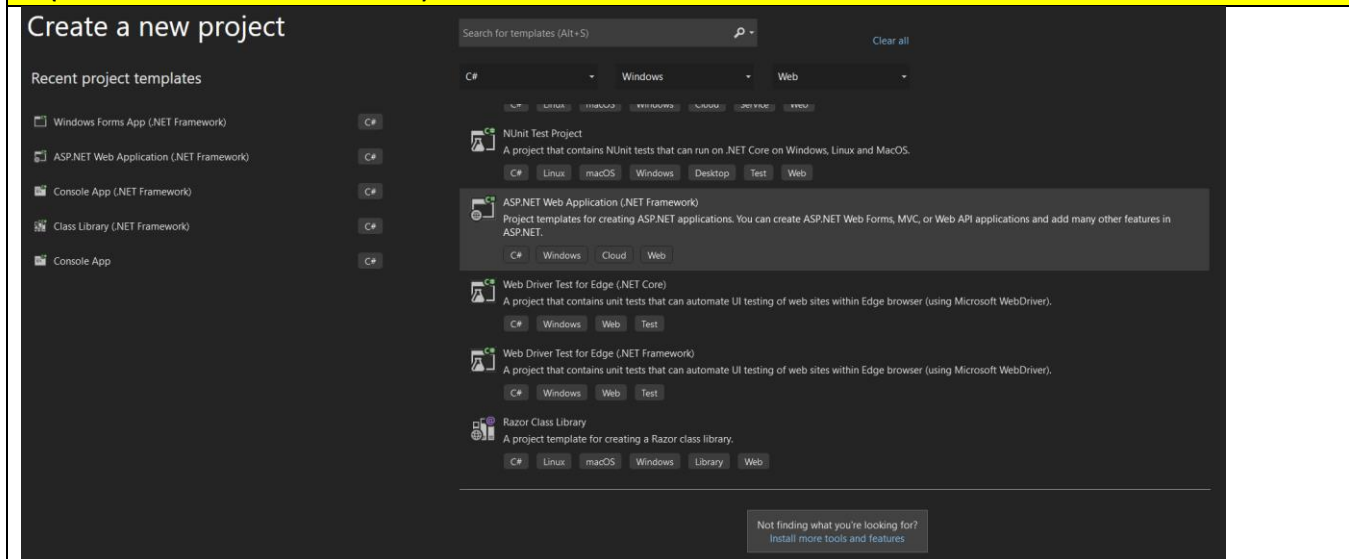
NB Healthcare Technologies Pvt Ltd

Day 21 Morning Assignment (21 – Feb- 2022)

By

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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
```

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

The following operations are supported. For a formal definition, please review the [Service Description](#).

- [Add](#)
- [Div](#)
- [Factorial](#)
- [Mul](#)

This web service is using <http://tempuri.org/> as its default namespace.

Recommendation: Change the default namespace before the XML Web service is made public.

Each XML Web service needs a unique namespace in order for client applications to distinguish it from other services on the Web. <http://tempuri.org/> is available for XML Web services that are under development, but published XML Web services should use a more permanent namespace.

Your XML Web service should be identified by a namespace that you control. For example, you can use your company's Internet domain name as part of the namespace. Although many XML Web service namespaces look like URLs, they need not point to actual resources on the Web. (XML Web service namespaces are URIs.)

For XML Web services created using ASP.NET, the default namespace can be changed using the `WebService` attribute's `Namespace` property. The `WebService` attribute is an attribute applied to the class that contains the XML Web service methods. Below is a code example that sets the namespace to "<http://microsoft.com/webservices/>".

C#

```
[WebService(Namespace="http://microsoft.com/webservices/")]
public class MyWebService {
    // implementation
}
```

Visual Basic

```
<WebService(Namespace="http://microsoft.com/webservices/")> Public Class MyWebService
    ' implementation
End Class
```

C++

```
[WebService(Namespace="http://microsoft.com/webservices/")]
public ref class MyWebService {
    // implementation
};
```

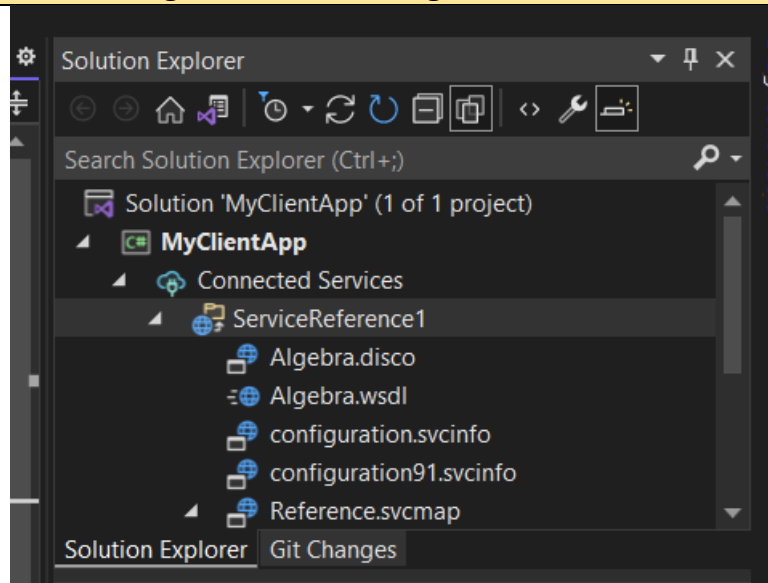
For more details on XML namespaces, see the W3C recommendation on [Namespaces in XML](#).

For more details on WSDL, see the [WSDL Specification](#).

For more details on URIs, see [RFC 2396](#).

3. Create a Console Application and consume the webservice

Consuming Web Service: Algebra



Console App : MyClientApp

Code:

```
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:

D:\NB HealthCare Training\DotNet Projects\Day 21 Morning Assignment\MyClientApp\MyClientApp\bin\Debug\MyClientApp.exe

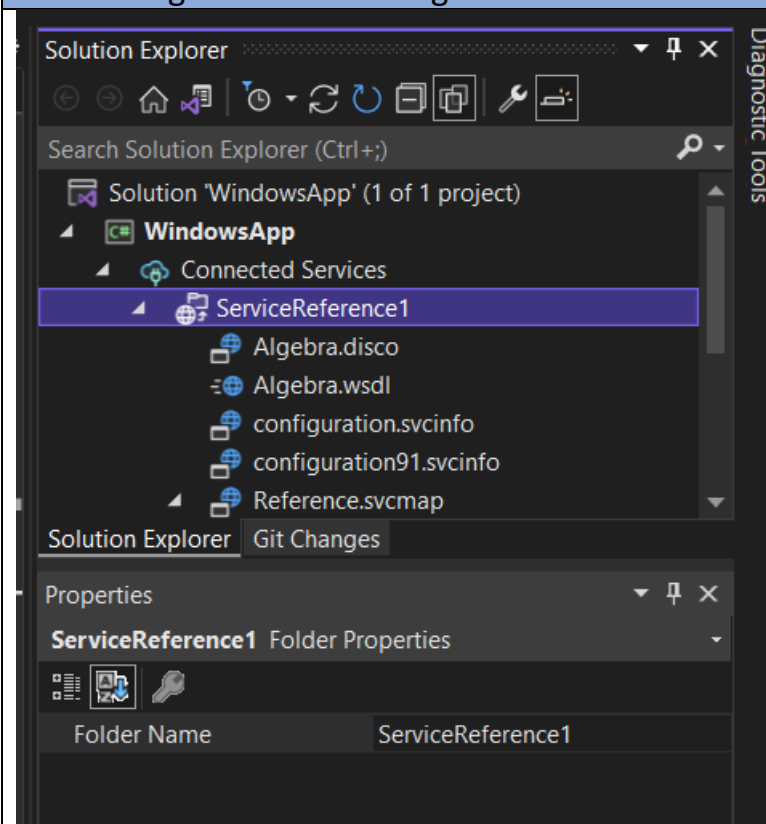
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4. Create a Windows Forms application and consume the webservice

[for finding factorial of the number]

Consuming Web Service: Algebra



Windows Forms Application

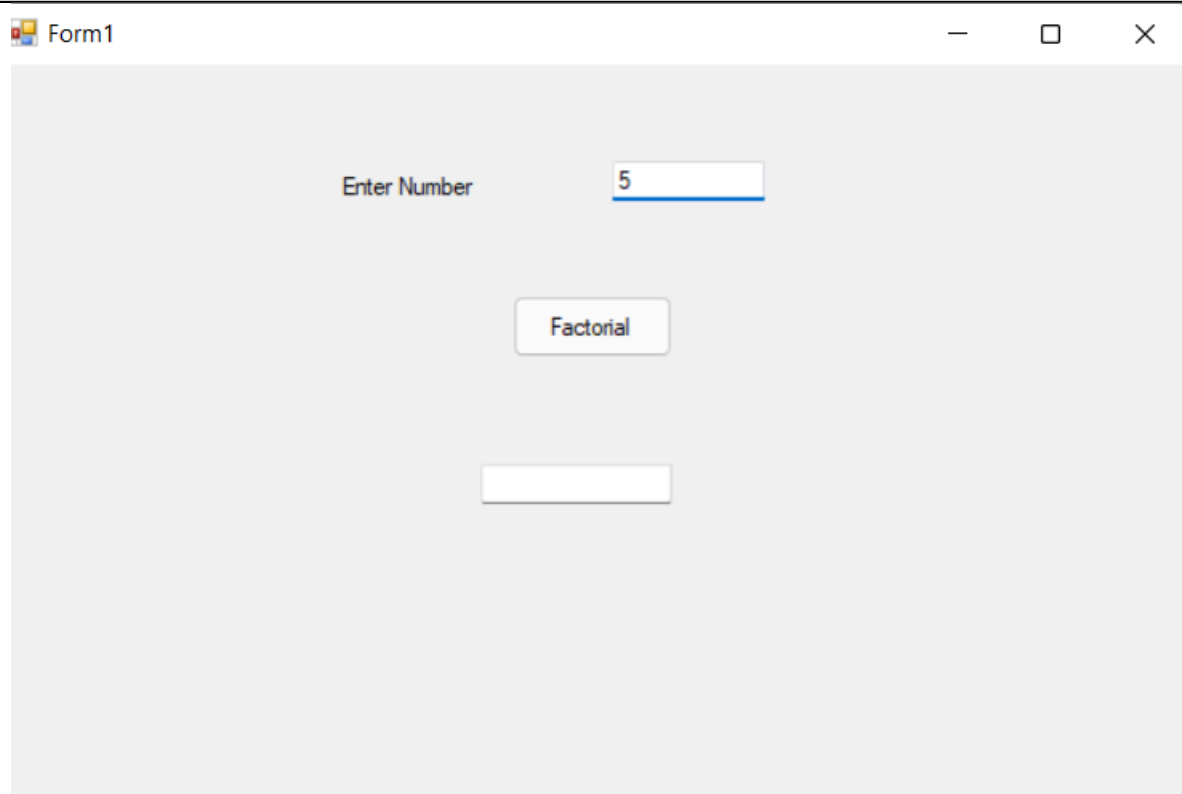
Code:

```
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 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();
        }
    }
}
```

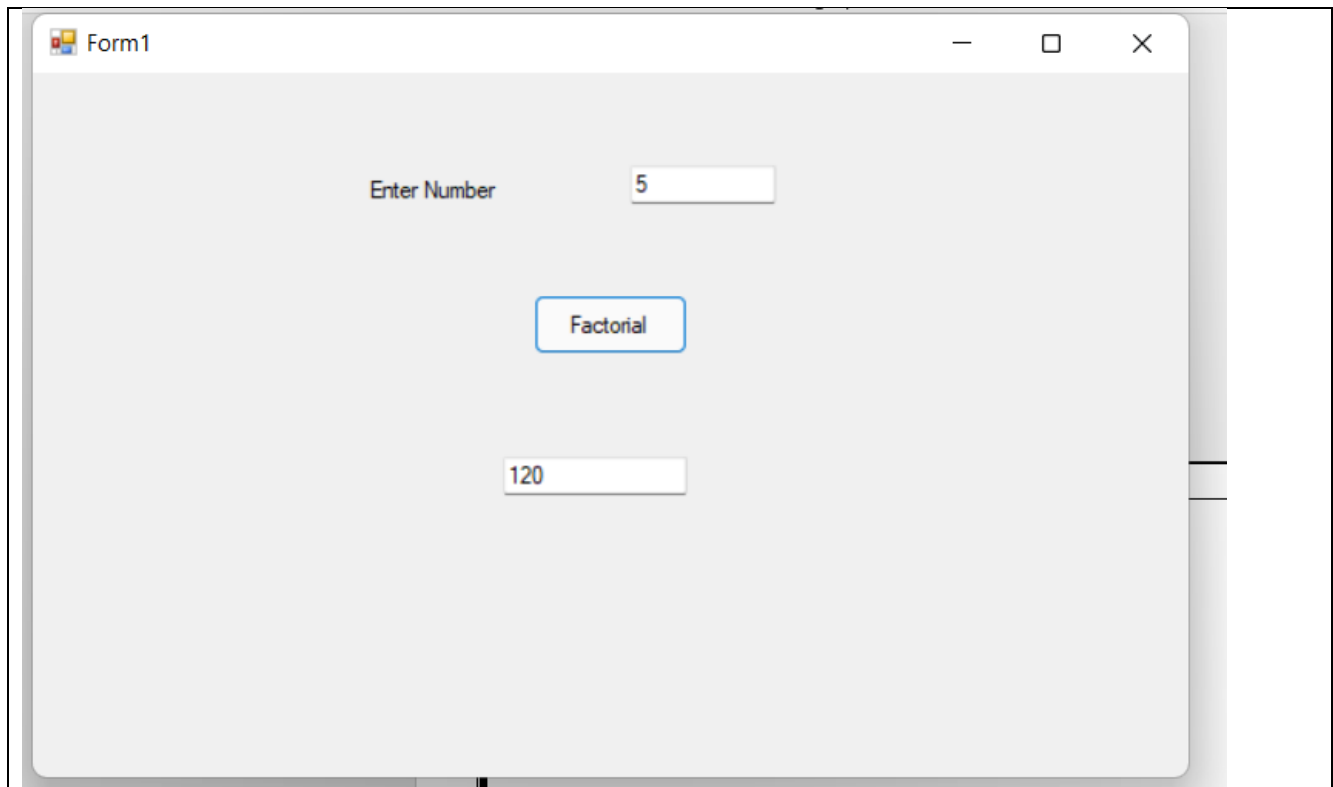
Output:



Form1

Enter Number 5

Factorial



5. Put the screen shots of webservice running

WebService Running : Algebra

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- [Factorial](#)
- [Mul](#)

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For XML Web services creating using ASP.NET, the default namespace can be changed using the WebService attribute's Namespace property. The WebService attribute is an attribute applied to the class that contains the XML Web service methods. Below is a code example that sets the namespace to "http://microsoft.com/webservices/":

```
C#
[WebService(Namespace="http://microsoft.com/webservices/")]
public class MyWebService {
    // implementation
}

Visual Basic
<WebService(Namespace="http://microsoft.com/webservices/")> Public Class MyWebService
    ' implementation
End Class

C++
[WebService(Namespace="http://microsoft.com/webservices/")]
public ref class MyWebService {
    // implementation
}
```

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