

# Day 21 Assignment

By  
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2. 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;

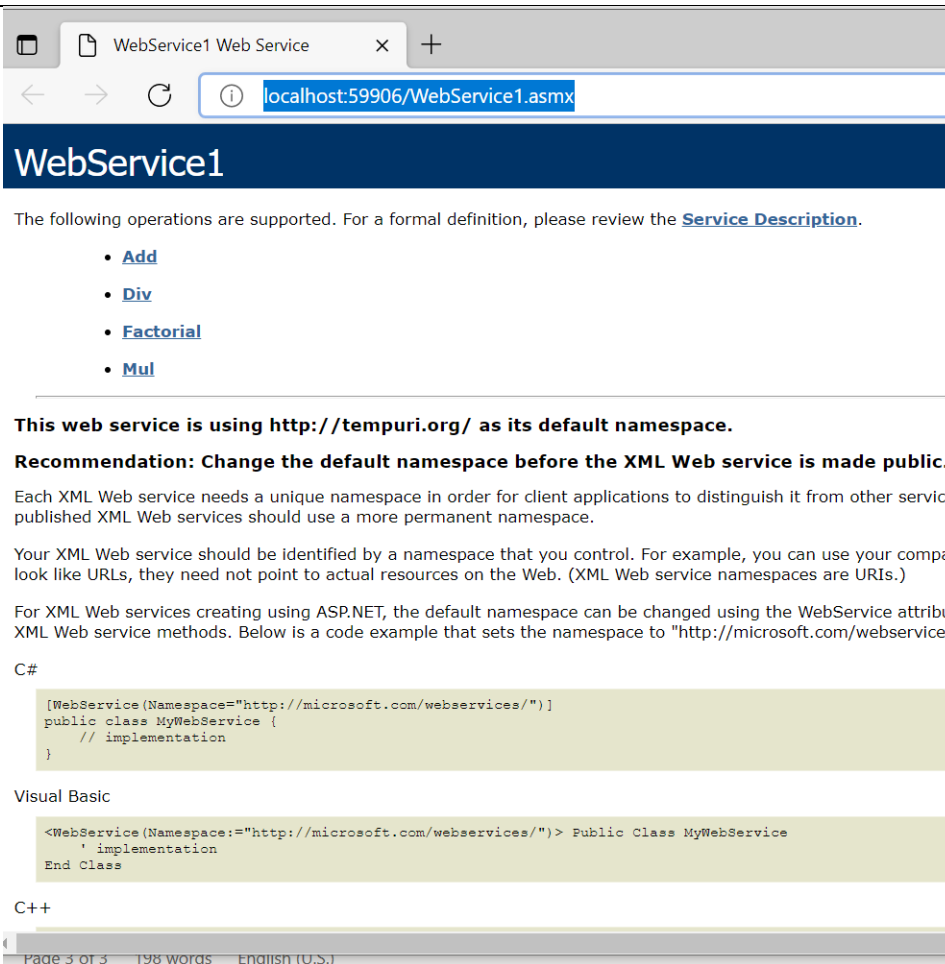
namespace WebApplication1
{
    /// <summary>
    /// Summary description for WebService1
    /// </summary>
    [WebService(Namespace = "http://tempuri.org/")]
    [WebServiceBinding(ConformsTo = WsiProfiles.BasicProfile1_1)]
    [System.ComponentModel.ToolboxItem(false)]
    // To allow this Web Service 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
    {

        [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 Factorial(int a)
        {
            int i, fact = 1;
            for( i=1;i<=a;i++)
            {
                fact=fact*i;
            }
        }
    }
}
```

```

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

```



WebService1

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; 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 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 on 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++**

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### 3. Create a Console Application and consume the webservice

#### Code:

```

using Mathematics.ServiceReference1;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

```

```

namespace Mathematics
{
    internal class Program
    {
        static void Main(string[] args)
        {
            WebService1SoapClient web = new WebService1SoapClient();
            Console.WriteLine(web.Add(2,3));
            Console.WriteLine(web.Mul(3,4));
            Console.WriteLine(web.Div(5,5));
            Console.WriteLine(web.Factorial(6));
            Console.ReadLine();
        }
    }
}

```

Result:

```

5
12
1
720

```

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

Code:

```

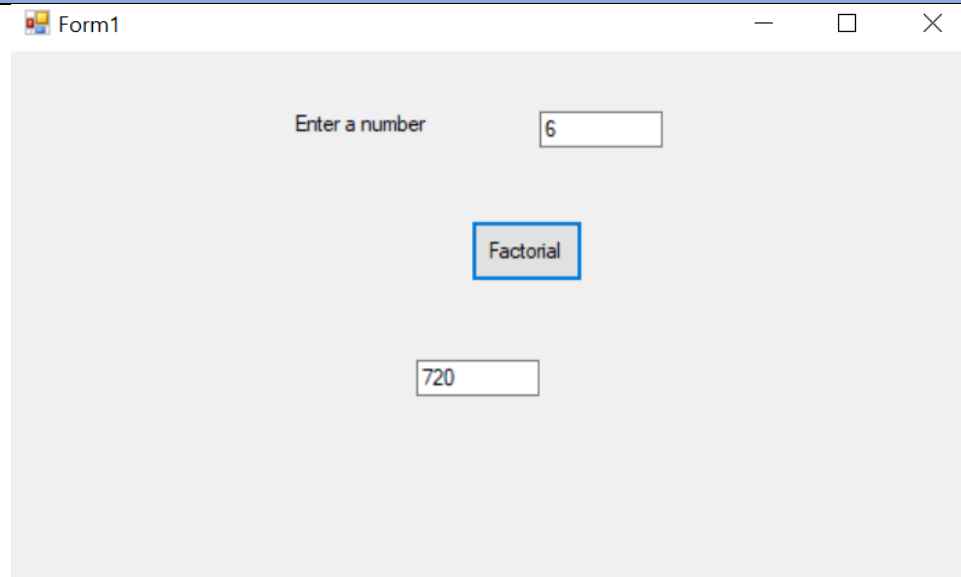
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;
using WinForms.ServiceReference1;

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

```

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

Result:



The screenshot shows a Windows application window titled "Form1". Inside the window, there is a light gray rectangular area containing the following elements: a label "Enter a number" followed by a text input box containing the value "6"; a blue button labeled "Factorial"; and another text input box below the button containing the value "720".

5. Put the screen shots of webservice running

WebService1 Web Service

localhost:59906/WebService1.asmx

# WebService1

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

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

---

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End Class
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C++