

Practical - 2

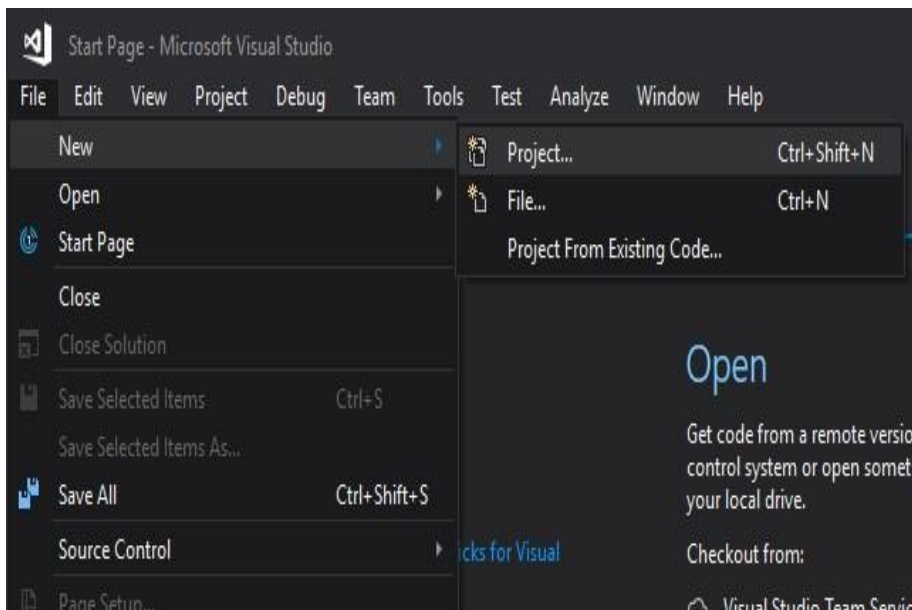
Aim: Write a program to implement a simple SOAP WebService

Requirement:

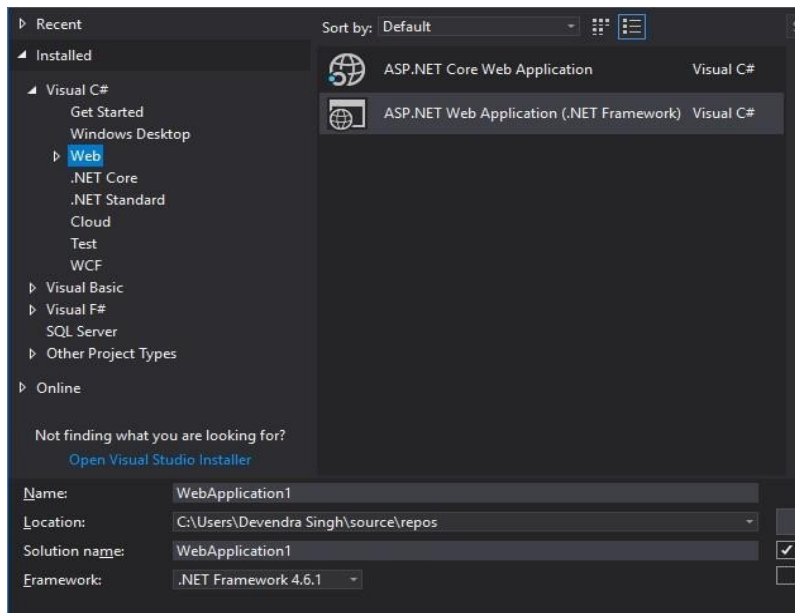
1. Visual Studio Community 2017
2. Version : 15.8 or latest

In this practical we are creating Web Service in Visual Studio and then we will consume it in NetBeans.

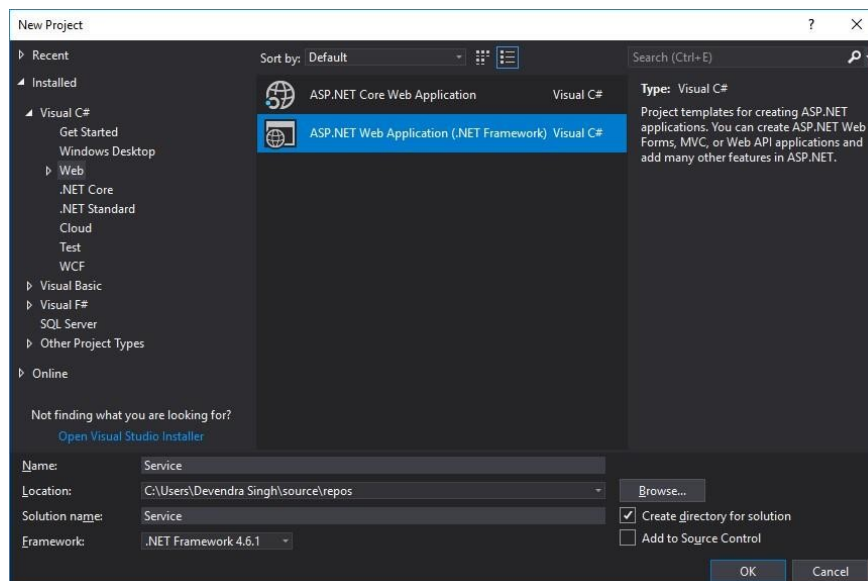
1. Open Visual Studio IDE and click on File.
File -> New -> Project



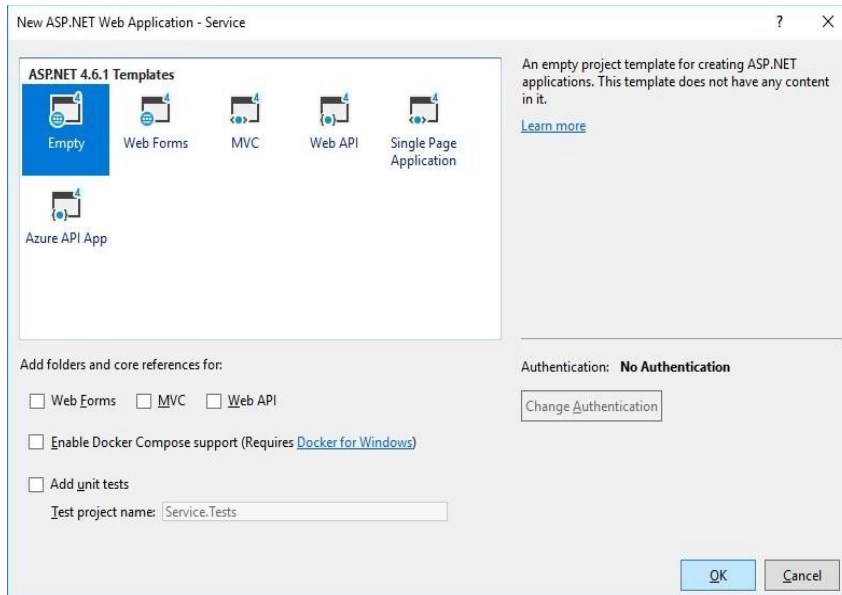
2. Click on Web.



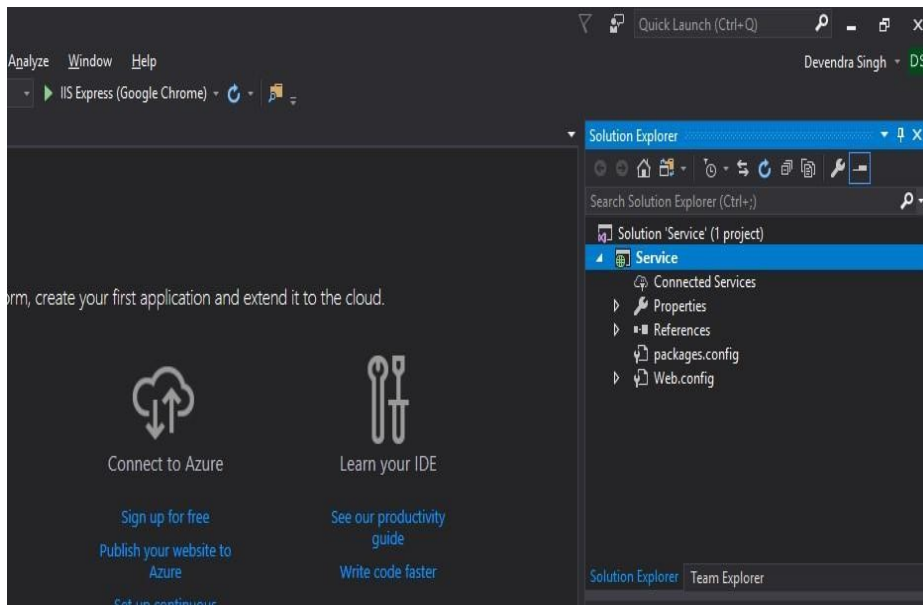
3. Select ASP.NET Web Application and give Name as Service. After that click on OK button.



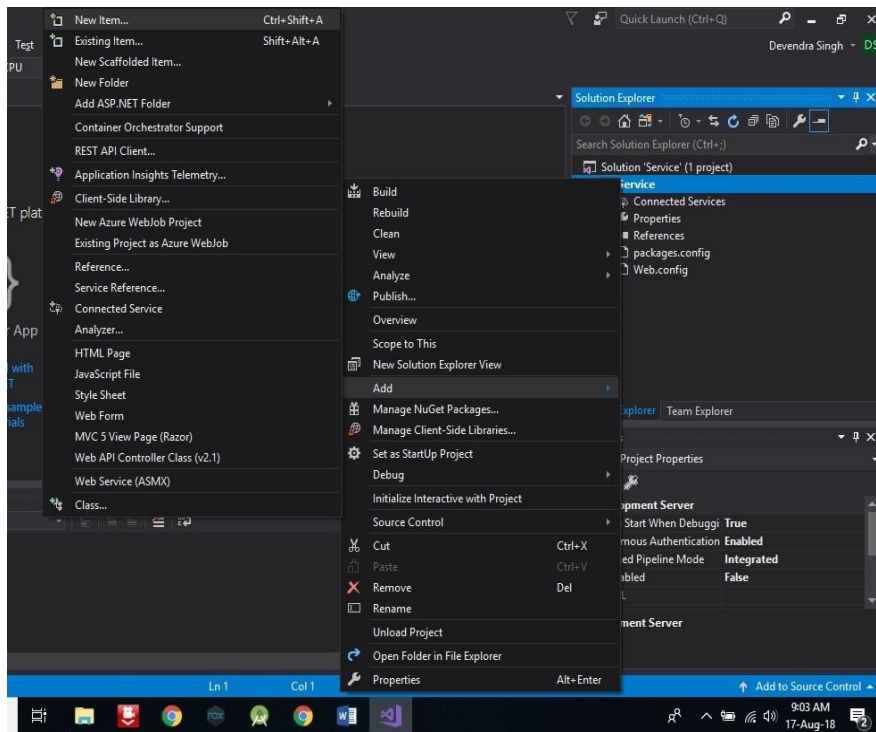
4. Select Empty and click on OK button.



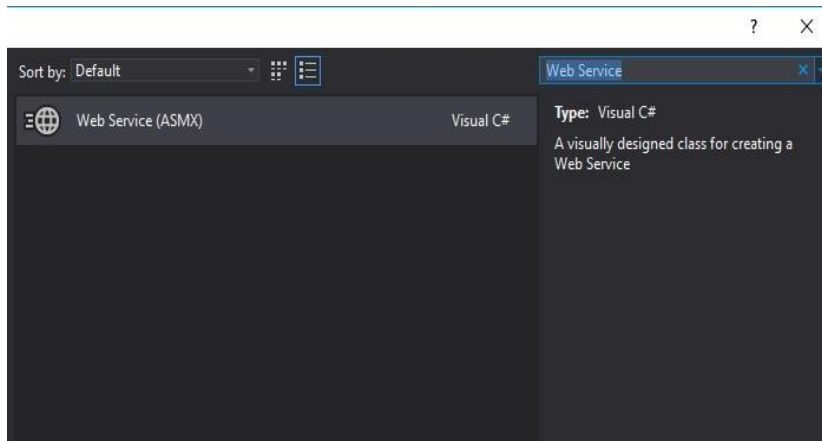
5. Now you can see, on right side in Solution Explorer Service project is created.



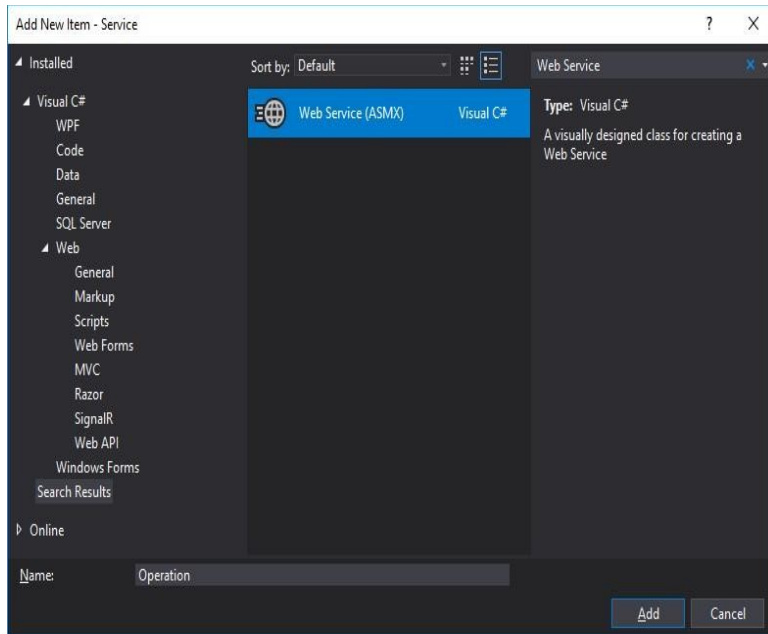
6. Right click on Service -> Add -> New Item.



7. Search for Web Service.



8. Select Web Service and give Name as Operation. After then click on Add button.



9. After click on Add button, Operation.asmx.cs file will be automatically open otherwise open it from Solution Explorer and Add the following code into Class Operation.

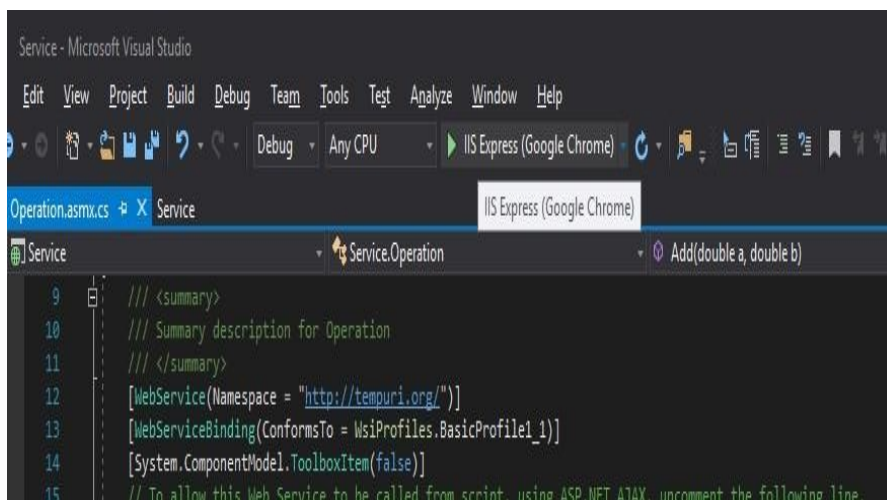
```
[WebMethod]
public double Add(double a,
double b)
{
    double sum = a
    + b;
    return sum;
}
```

```
[WebMethod]
public double Multi(double a, double b)
{
    double m = a * b;
    return m;
}
```

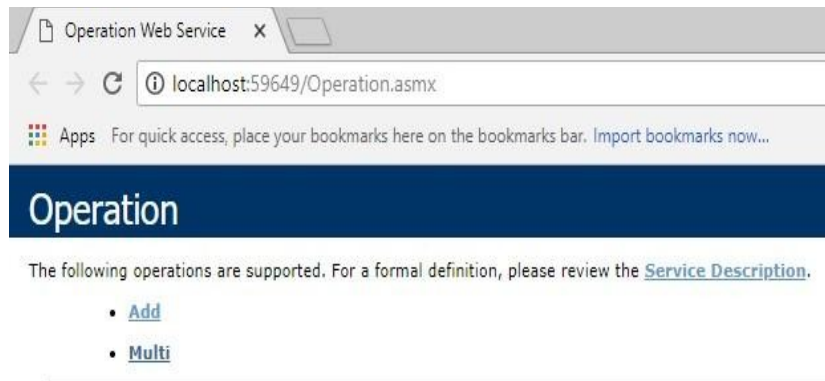
```
9  /// <summary>
10  /// Summary description for Operation
11  /// </summary>
12  [WebService(Namespace = "http://tempuri.org/")]
13  [WebServiceBinding(ConformsTo = WsiProfiles.BasicProfile1_1)]
14  [System.ComponentModel.ToolboxItem(false)]
15  // To allow this Web Service to be called from script, using ASP
16  // [System.Web.Script.Services.ScriptService]
17  public class Operation : System.Web.Services.WebService
18  {
19
20      [WebMethod]
21      public double Add(double a, double b)
22      {
23          double sum = a + b;
24          return sum;
25      }
26
27      [WebMethod]
28      public double Multi(double a, double b)
29      {
30          double sum = a * b;
31          return sum;
32      }
33  }
34
35
```

After that press Ctrl+S to save the methods. Actually we are creating two methods for Web Service. One is for addition of two numbers and second one is for multiplication of two numbers.

10. Now run the project by click on Green arrow button below the Window menu.



11. A window will open in browser and that is our web service.



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

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

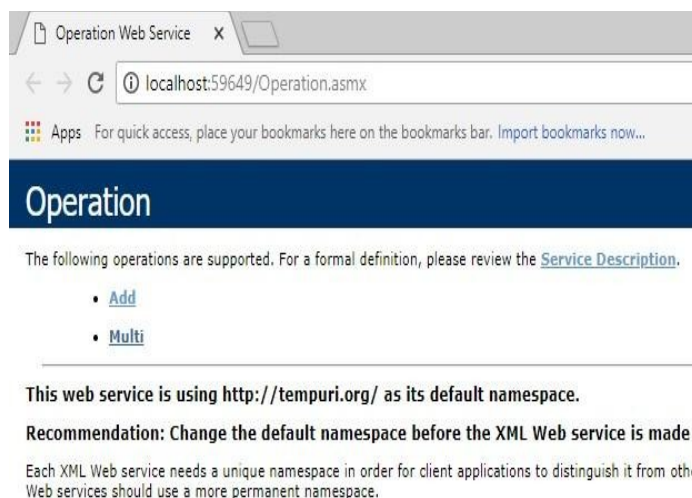
Each XML Web service needs a unique namespace in order for client applications to distinguish it from other Web services should use a more permanent namespace.

Your XML Web service should be identified by a namespace that you control. For example, you can use your they need not point to actual resources on the Web. (XML Web service namespaces are URIs.)

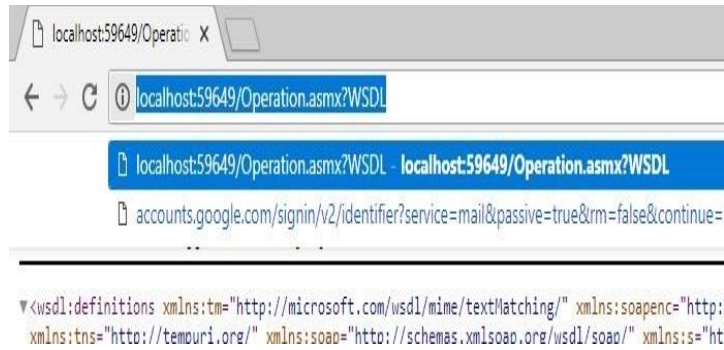
For XML Web services creating using ASP.NET, the default namespace can be changed using the `WebService` service methods. Below is a code example that sets the namespace to "<http://microsoft.com/webservices/>"

12. You can check services by click on Add or Multi option. But we don't need this.

13. Now click on Service Description option.



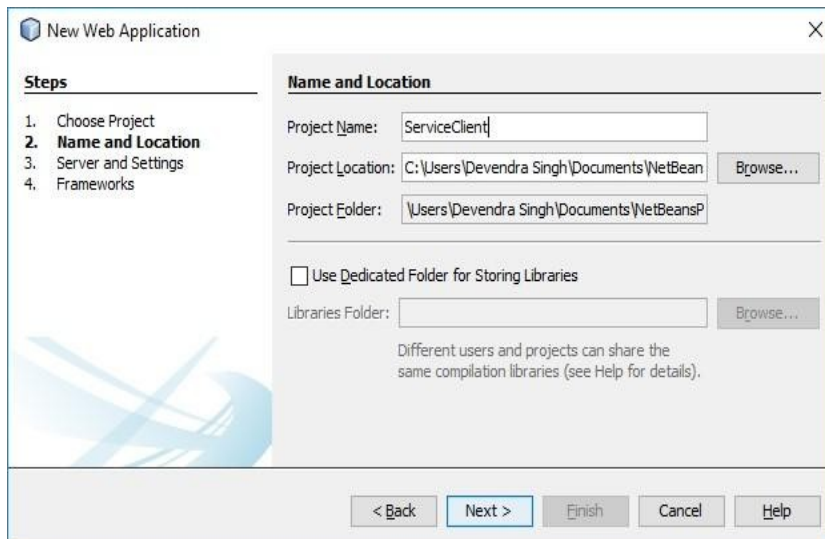
14. Now a new window will open. Select the link and copy it. We will use this link in NetBeans to consume these services.



15. Don't close Visual Studio and browser, just minimize it otherwise server will stop. But save the link anywhere, so that we can use it later.

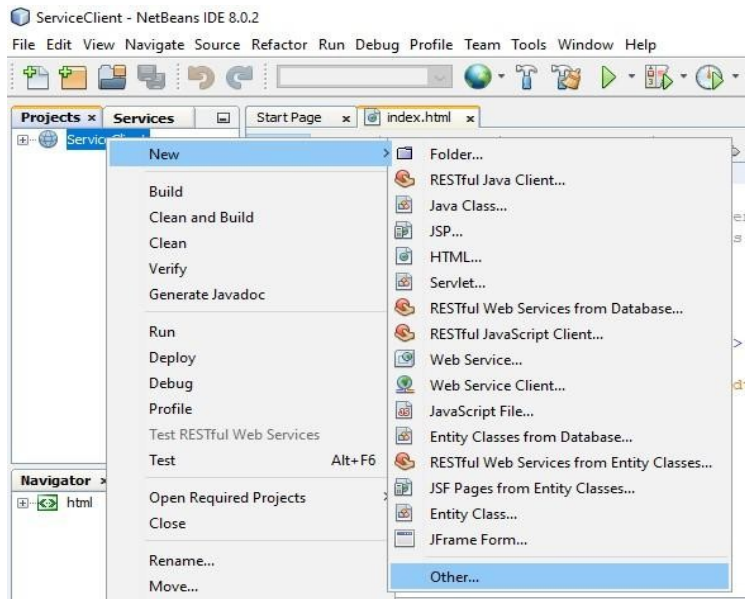
16. Now open NetBeans.

17. Create a Web Application with name ServiceClient. Next -> Finish.

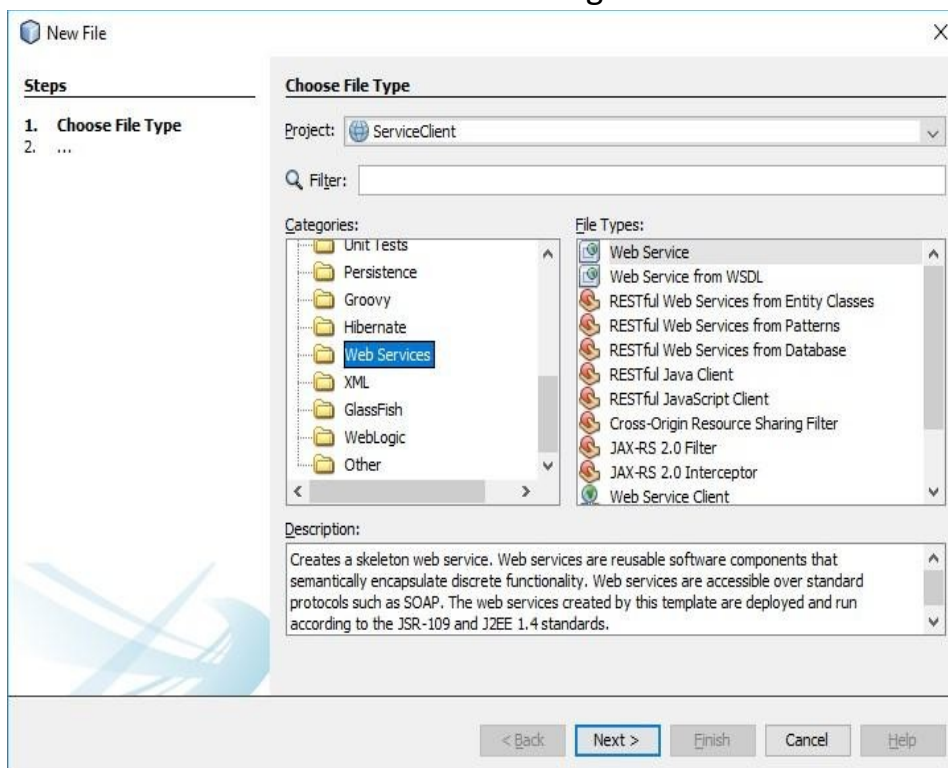


18. Now create a Web Service Client.

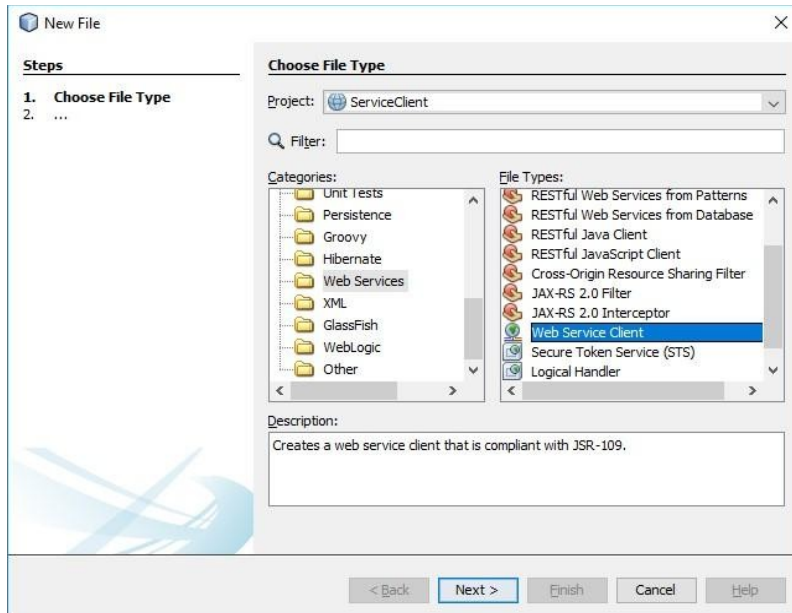
Right click on ServiceClient -> New -> Other.



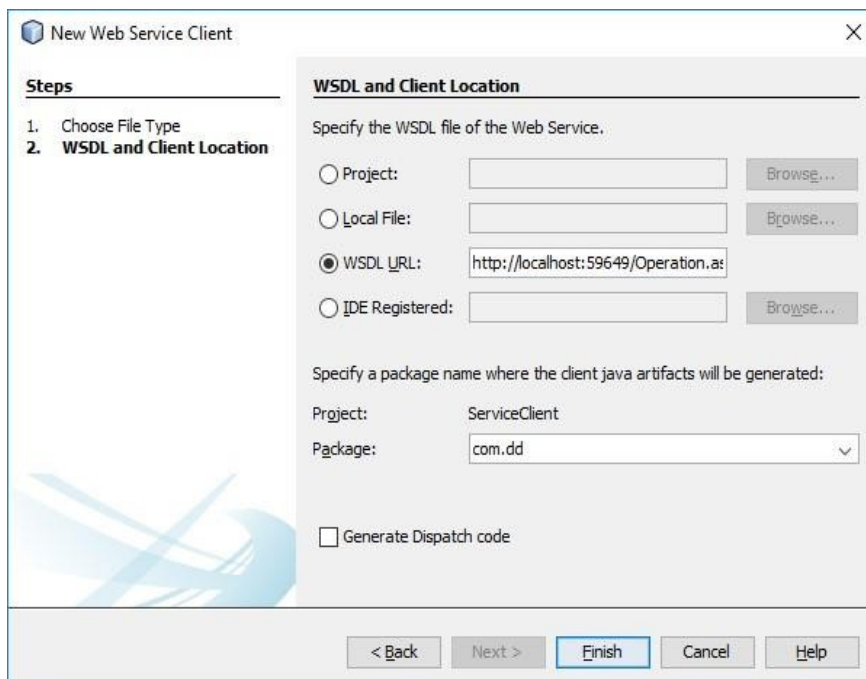
19. Now select Web Services in Categories section.

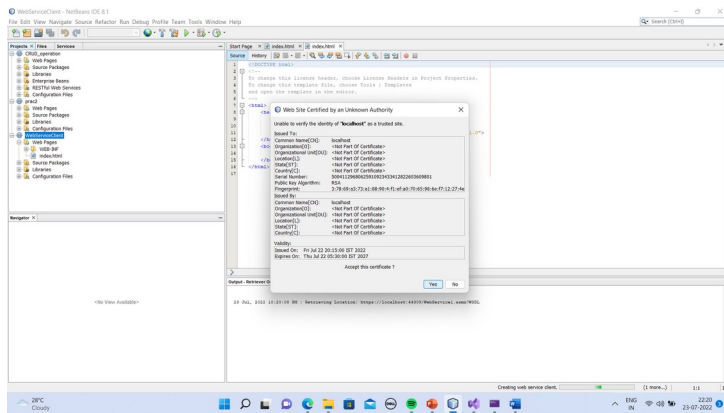


20. Select Web Service Client in File Types and Click on Next button.

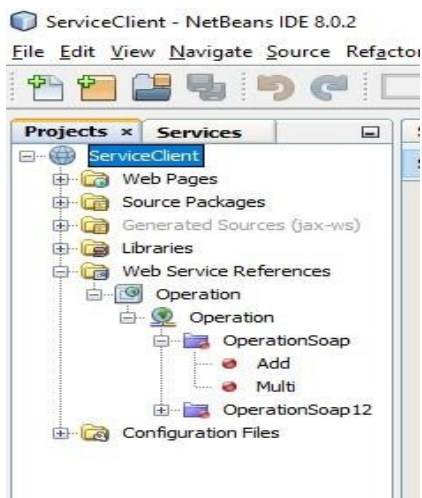


- 21.** Select WSDL URL and paste the link that you have copied from browser on run of Visual Studio enter package name com.dd. After that click on Finish button.

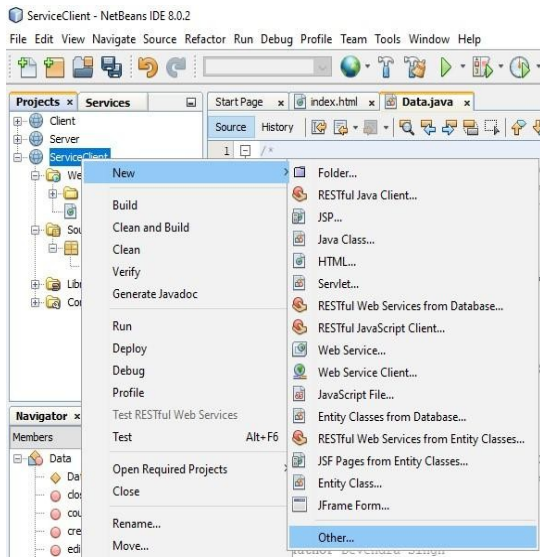




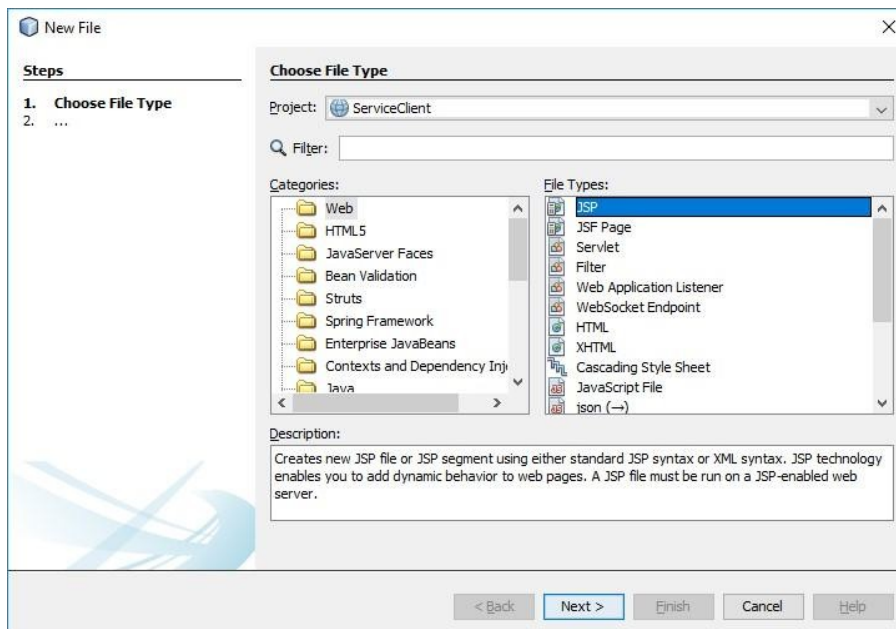
22. As you can see, we got both the service methods i.e. Add & Multi. But in this practical I'm going to use only one service method. You can do for both also.



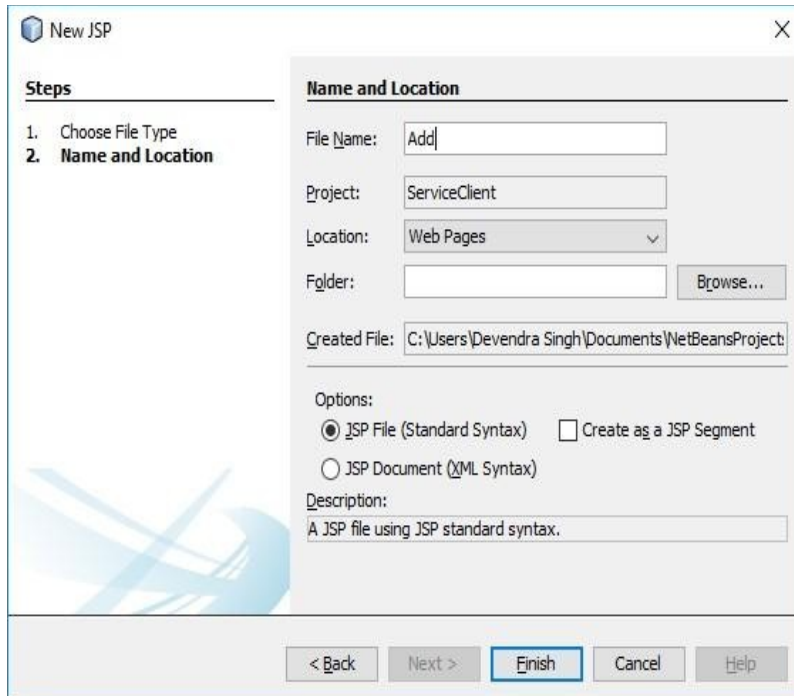
23. Now create a JSP page. Right click on ServiceClient -> New -> Other



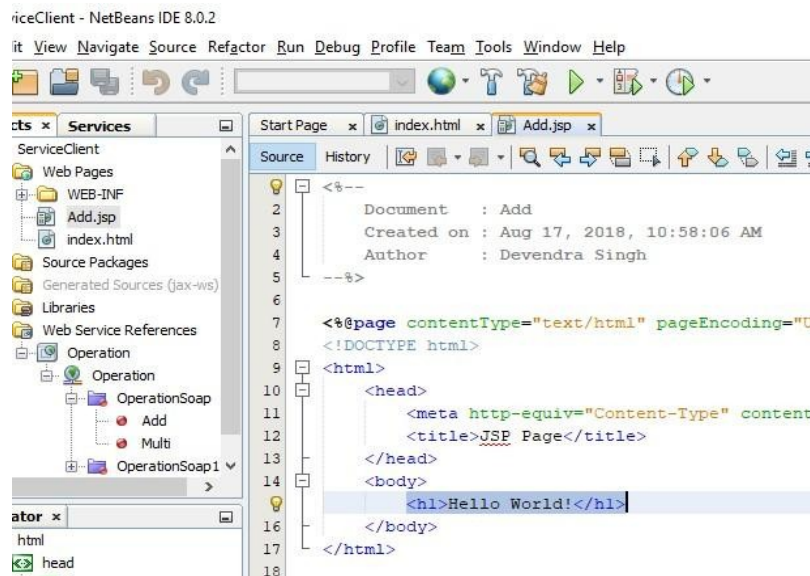
24. Select Web in Categories section -> Select JSP and click on Next button.



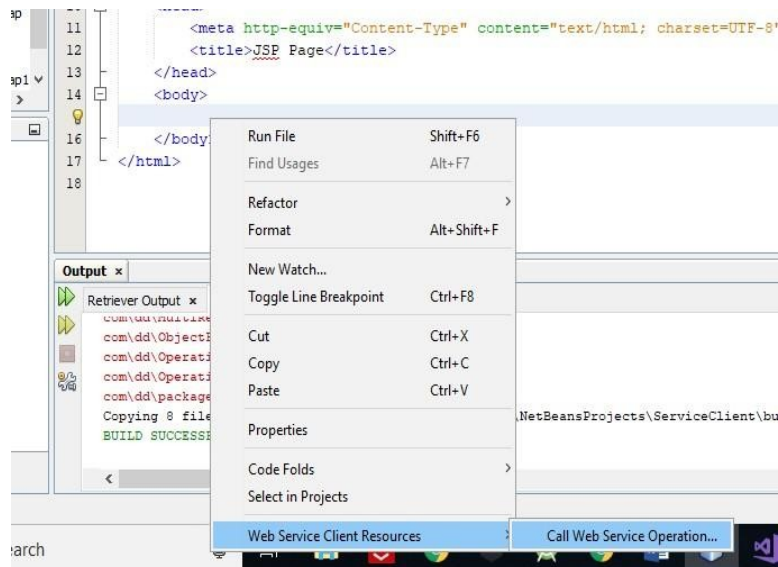
25. Enter File Name Add and click on Finish button.



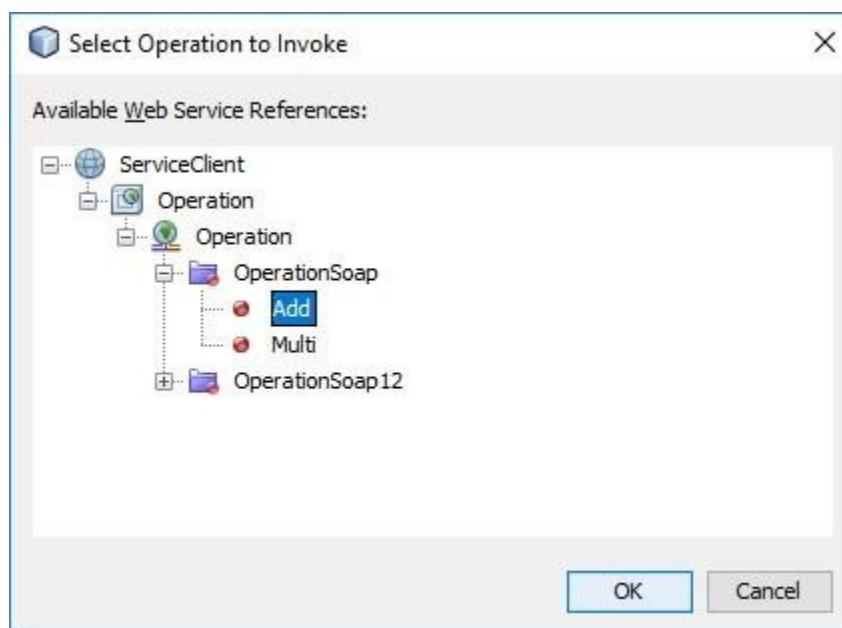
26. In Add.jsp file delete the selected part in body tag, because we don't need this.



27. Right click between body tag and select Call Web Service Operation.

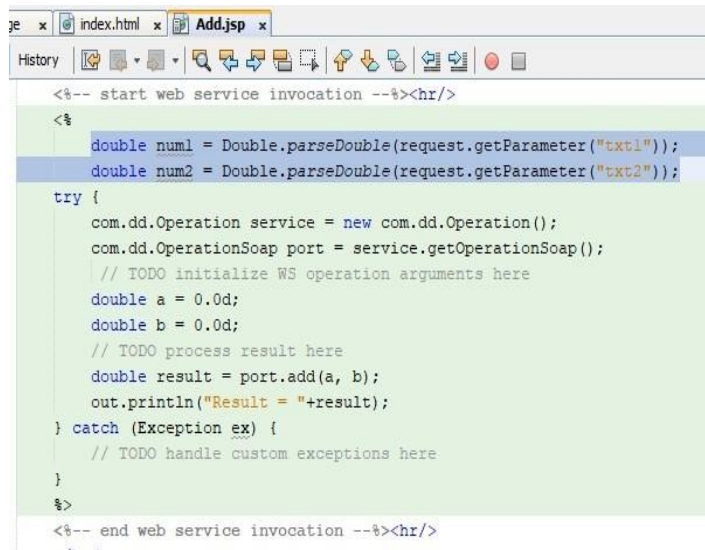


28. Expand and select Add. After select, click on OK button.



29. Now add the following code outside of try block.

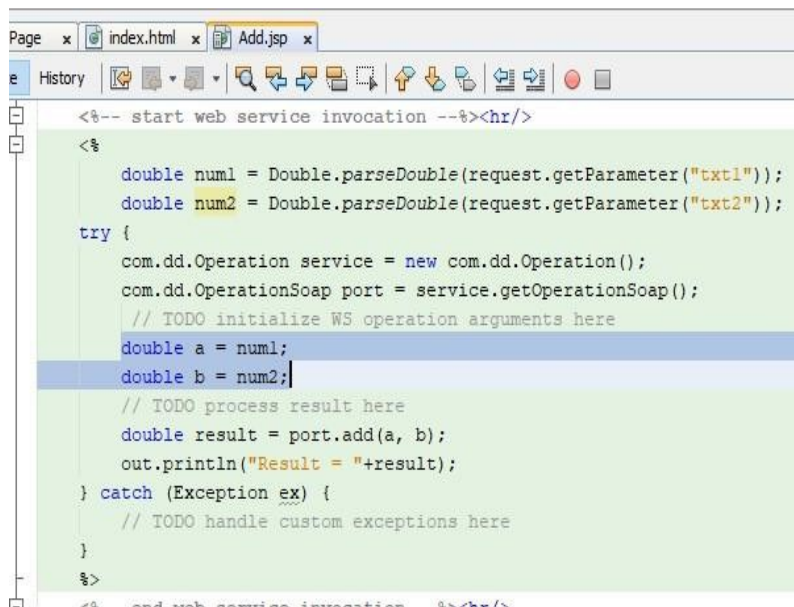
```
double num1 =
Double.parseDouble(request.getParameter("txt1"));
double num2 =
Double.parseDouble(request.getParameter("txt2"));
```

```
<%-- start web service invocation --%><hr/>
<%
    double num1 = Double.parseDouble(request.getParameter("txt1"));
    double num2 = Double.parseDouble(request.getParameter("txt2"));

    try {
        com.dd.Operation service = new com.dd.Operation();
        com.dd.OperationSoap port = service.getOperationSoap();
        // TODO initialize WS operation arguments here
        double a = 0.0d;
        double b = 0.0d;
        // TODO process result here
        double result = port.add(a, b);
        out.println("Result = "+result);
    } catch (Exception ex) {
        // TODO handle custom exceptions here
    }
%>
<%-- end web service invocation --%><hr/>
```

30. Now pass num1 & num2 to a & b variable respectively. After that press Ctrl+S to save this code.



```
<%-- start web service invocation --%><hr/>
<%
    double num1 = Double.parseDouble(request.getParameter("txt1"));
    double num2 = Double.parseDouble(request.getParameter("txt2"));

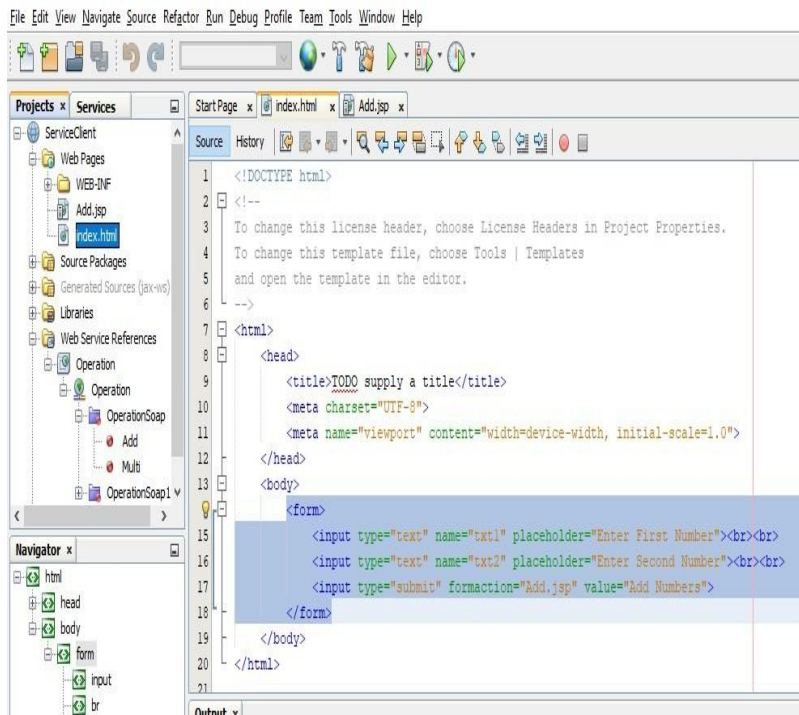
    try {
        com.dd.Operation service = new com.dd.Operation();
        com.dd.OperationSoap port = service.getOperationSoap();
        // TODO initialize WS operation arguments here
        double a = num1;
        double b = num2;
        // TODO process result here
        double result = port.add(a, b);
        out.println("Result = "+result);
    } catch (Exception ex) {
        // TODO handle custom exceptions here
    }
%>
<%-- end web service invocation --%><hr/>
```

31. Now open index.html file of ServiceClient project and replace the contents of body tag with following code. After that press Ctrl+S to save it.

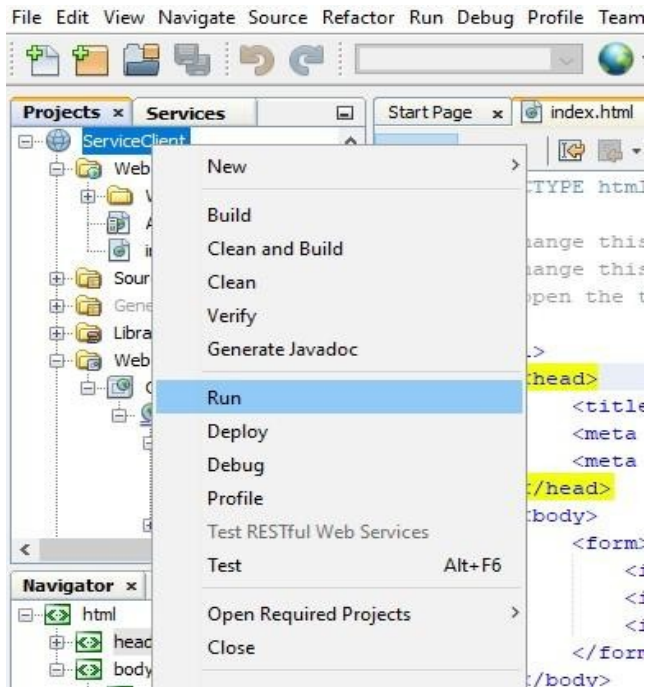
```
<form>
    <input type="text" name="txt1" placeholder="Enter First
    Number"><br><br>
```

```
<input type="text" name="txt2" placeholder="Enter Second  
Number"><br><br>
```

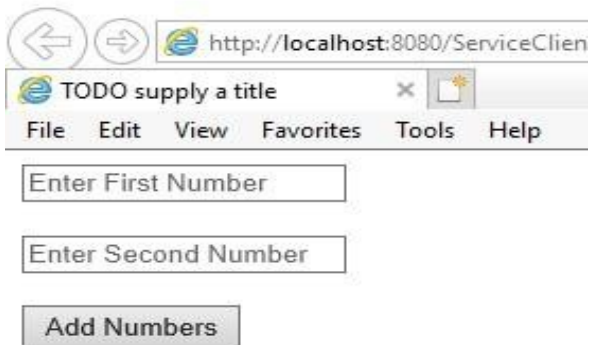
```
<input type="submit" formaction="Add.jsp" value="Add  
Numbers"> </form>
```



32. Now run the ServerClient web application.

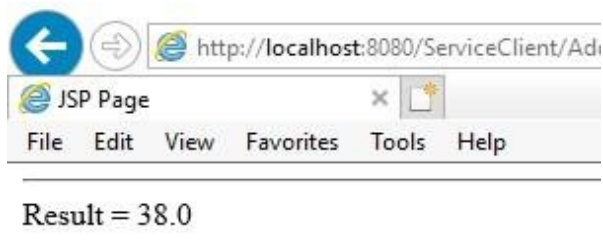
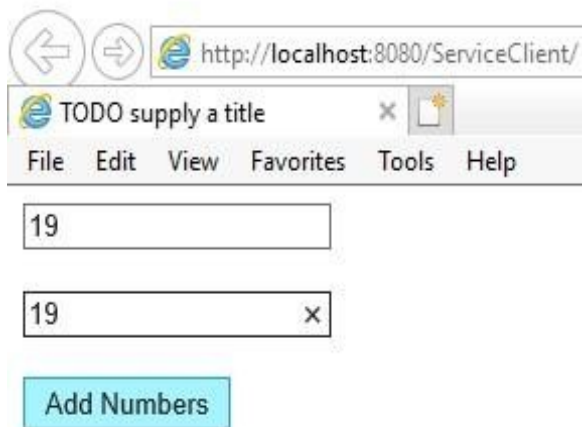


33. A window will open in browser as below.



34. Now enter two numbers and click on Add Numbers button. Wait to get result.....

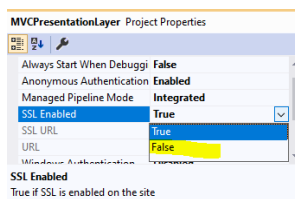
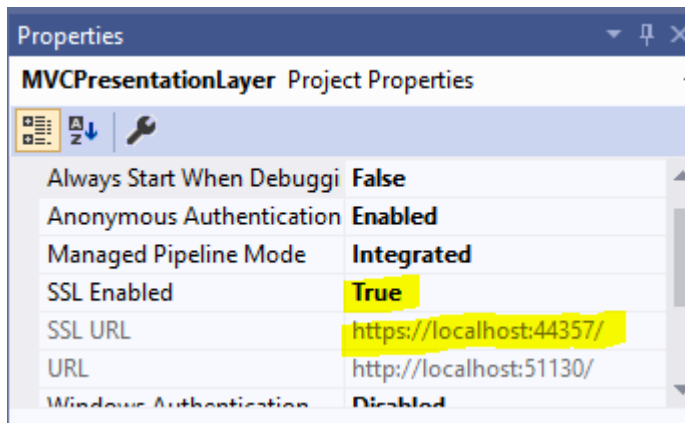
You will get result on a new page.



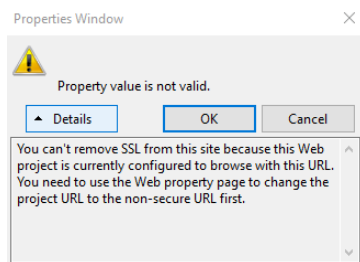
Note : In visual studio 22 if you don't get the answer follow the following steps

The Solution

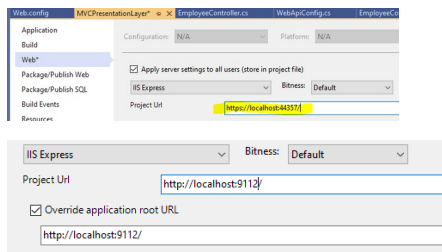
To resolve this issue, just follow below steps. We can remove SSL from web properties. If you try to set property "SSL Enabled" to false it will throw below error.



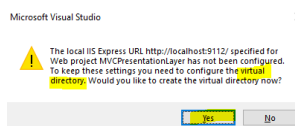
You can't remove SSL from this site because this Web project is currently configured to browse with this URL. You need to use the Web property page to change the project URL to the non-secure URL first.



For that first open web property and change "https" to "http"



It will popup a message and ask to create a virtual directory to configure the application. Click "Yes" to allow.



Once setting are saved, you can disable the SSL from project property and you are done.

MVCPresentationLayer Project Properties

Always Start When Debugging	False
Anonymous Authentication	Enabled
Managed Pipeline Mode	Integrated
SSL Enabled	False
SSL URL	
URL	http://localhost:9112/

The screenshot displays the Visual Studio IDE with the 'Project Properties' window for the 'ws1' project. The 'Web' tab is selected, showing the following configuration:

- Configuration:** N/A, **Platform:** N/A
- Start URL:** ☐ Start URL, ☐ Don't open a page. Wait for a request from an external application.
- Servers:**
 - ☒ Apply server settings to all users (store in project file)
 - IIS Express:** IIS Express, **Bitness:** Default
 - Project URL:** http://localhost:9112/ (with a 'Create Virtual Directory' button)
 - ☒ Override application root URL: http://localhost:9112/
- Debuggers:**
 - ☒ ASP.NET, ☐ Native Code, ☐ SQL Server, ☐ Silverlight
 - ☒ Enable Edit and Continue

The **Output** window at the bottom shows the following log messages:

```
The thread 0x42f8 has exited with code 0 (0x0).
The thread 0x50c4 has exited with code 0 (0x0).
The thread 0x5b4d has exited with code 0 (0x0).
The thread 0x5fac has exited with code 0 (0x0).
The thread 0x520 has exited with code 0 (0x0).
The thread 0x5540 has exited with code 0 (0x0).
The program '[23280] iisexpress.exe' has exited with code 4294967295 (0xffffffff).
```

The Solution Explorer on the right shows the project structure for 'ws1', including 'Connected Services', 'Properties', 'References', 'packages.config', 'Web.config', and 'WebService1.aspx'.