

PRACTICAL-3

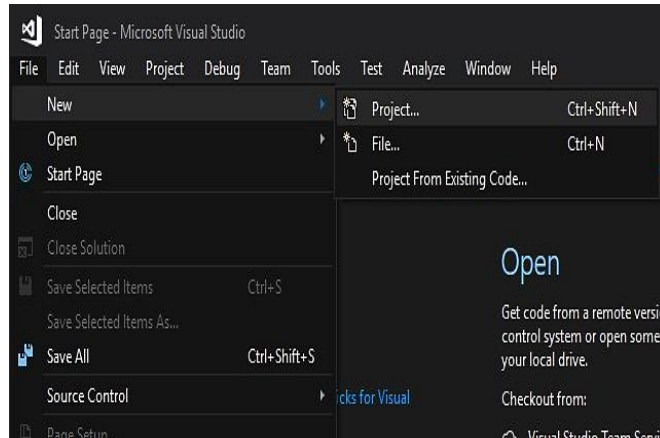
Aim: Develop client which consumes web services developed in different platform.

Requirement: Visual Studio Community 2017 (Version : 15.8 or latest)

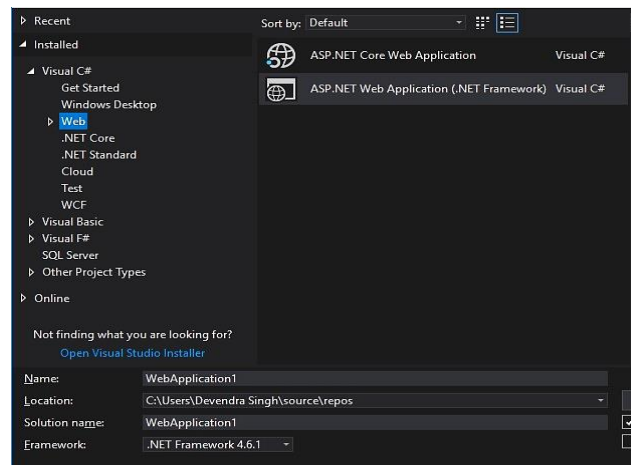
In this practical we are creating Web Service in Visual Studio and then we will consume it in NetBeans.

1. Open Visual Studio IDE and click on File.

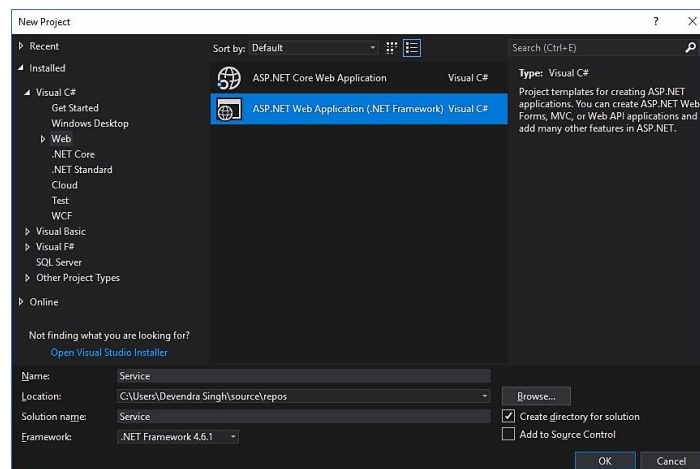
File -> New -> Project



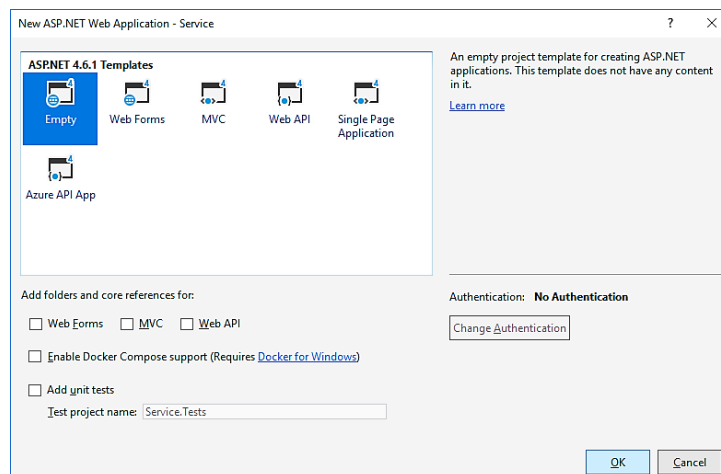
2. Click on Web.



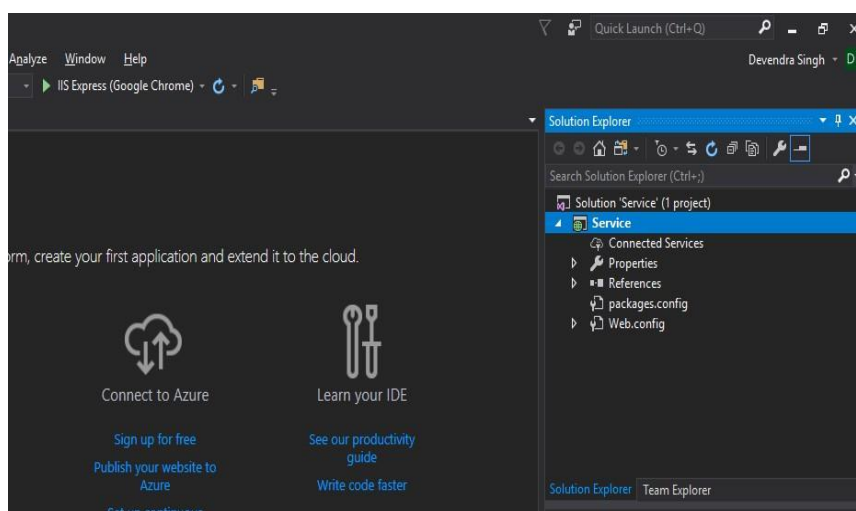
Select ASP.NET Web Application and give Name as Service. After that click on OK button.



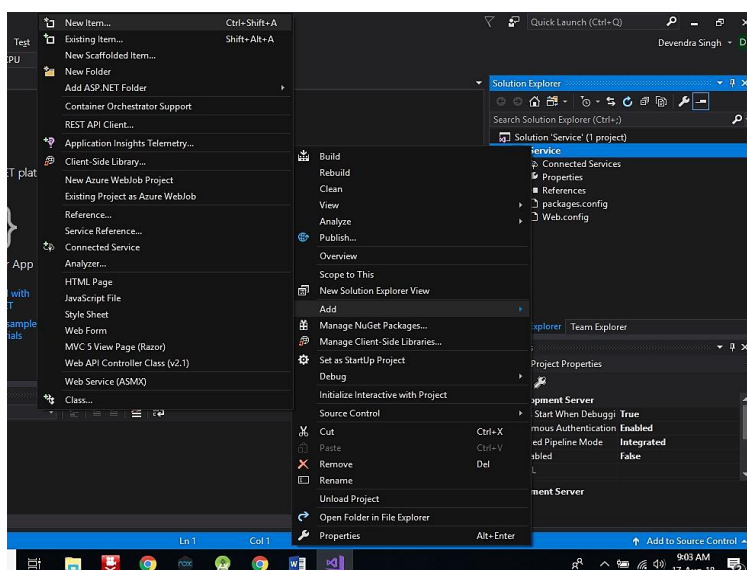
3. Select Empty and click on OK button.



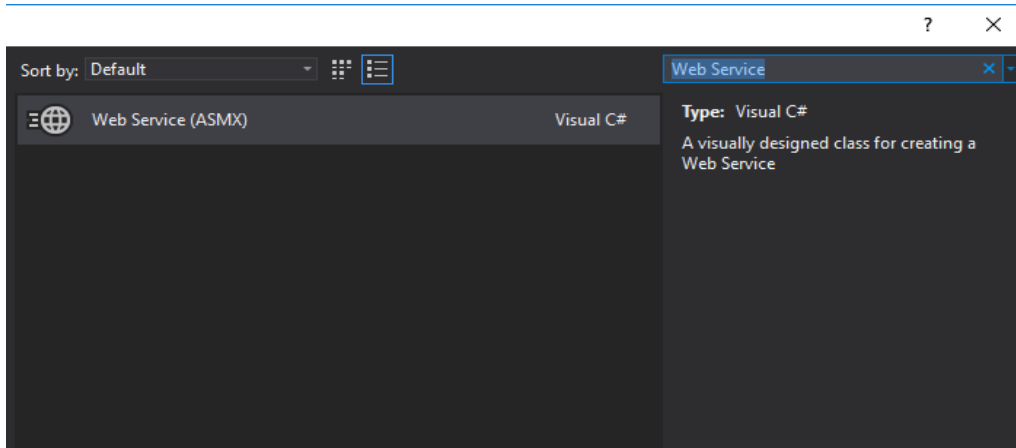
4. Now you can see, on right side in Solution Explorer Service project is created.



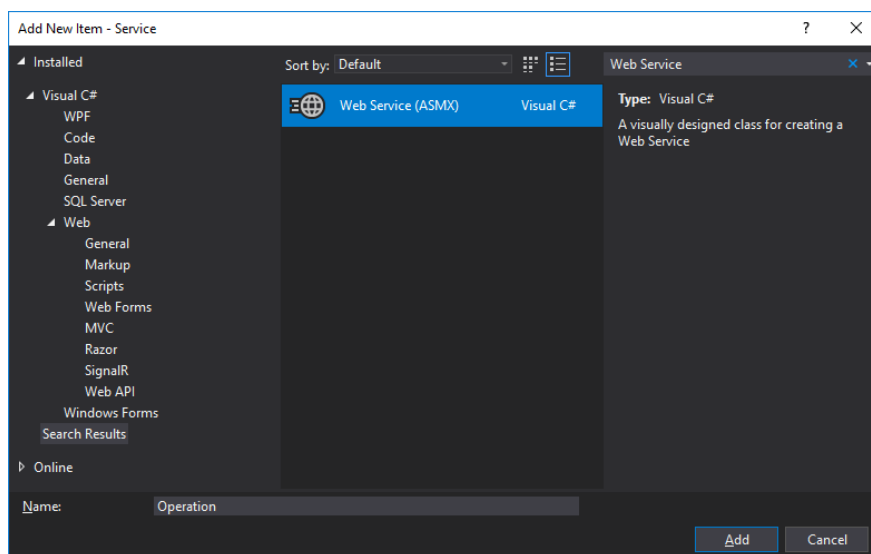
5. Right click on Service -> Add -> New Item.



6. Search for Web Service



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



8. 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 Multi = a*b;
    return Multi
}
```

```

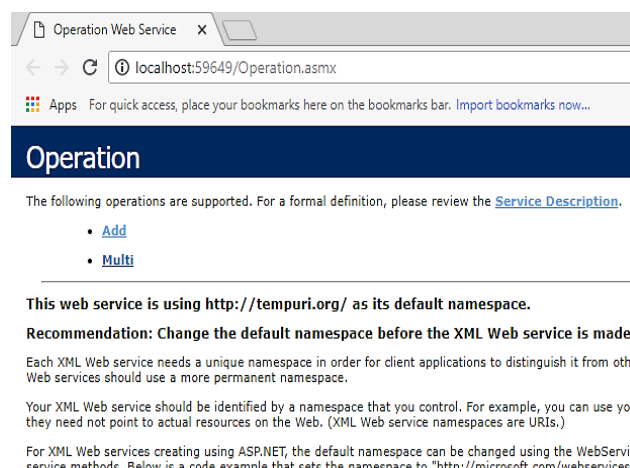
17 public class WebService1 : System.Web.Services.WebService
18 {
19
20     [WebMethod]
21     public double Add(double a, double b)
22     {
23         double sum = a + b;
24         return sum;
25     }
26
27     [WebMethod]
28     public double Multi(double a, double b)
29     {
30         double multiplication = a * b;
31         return multiplication;
32     }
33 }
34

```

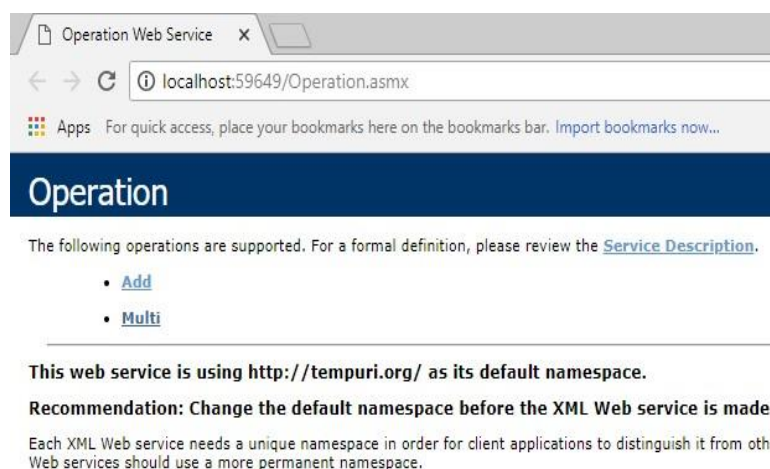
After that press **Ctrl+S** to save the methods. Actually we are creating two methods for Web Service. One is for addition of two numbers and second one is for multiplication of two numbers.

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

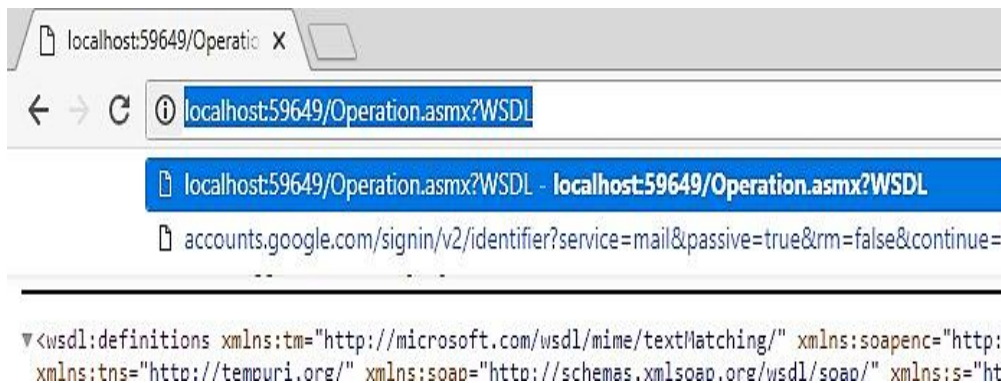
10. A window will open in browser and that is our web service.



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



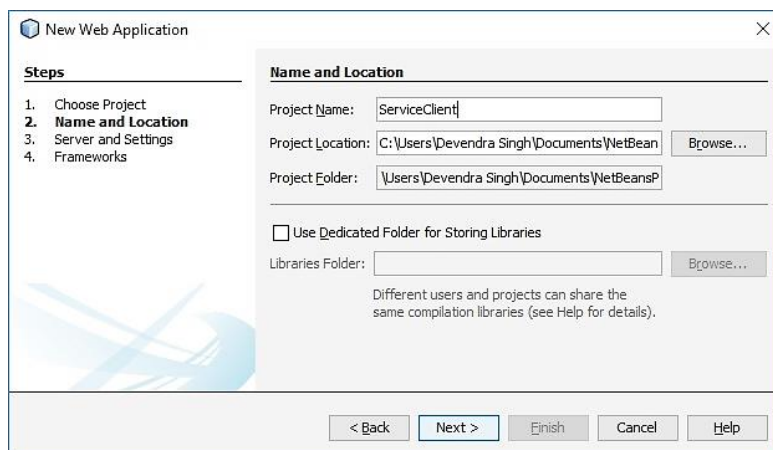
12. Now a new window will open. Select the link and copy it. We will use this link in NetBeans to consume these services.



13. 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.

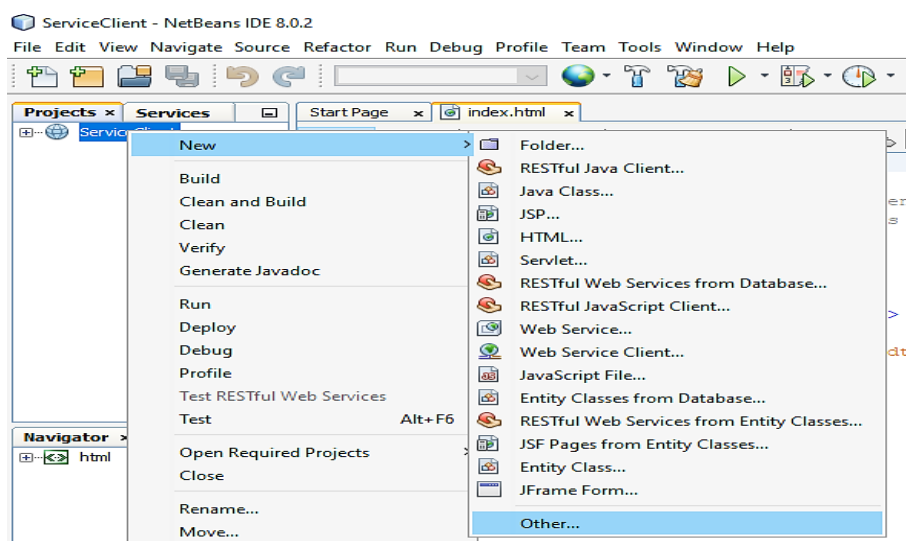
14. Now open NetBeans.

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

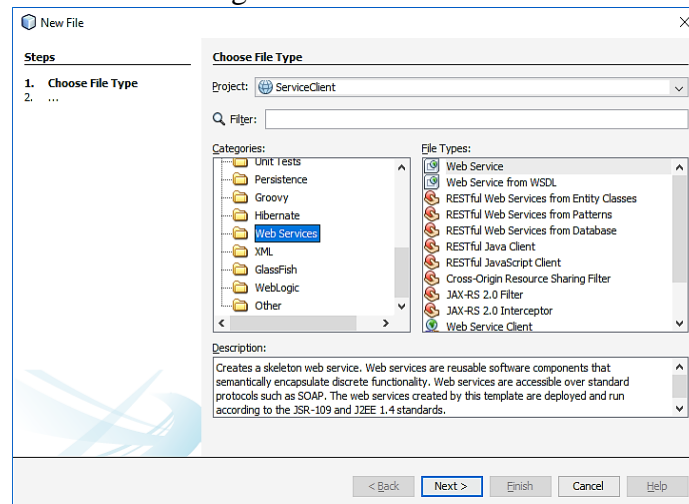


16. Now create a Web Service Client.

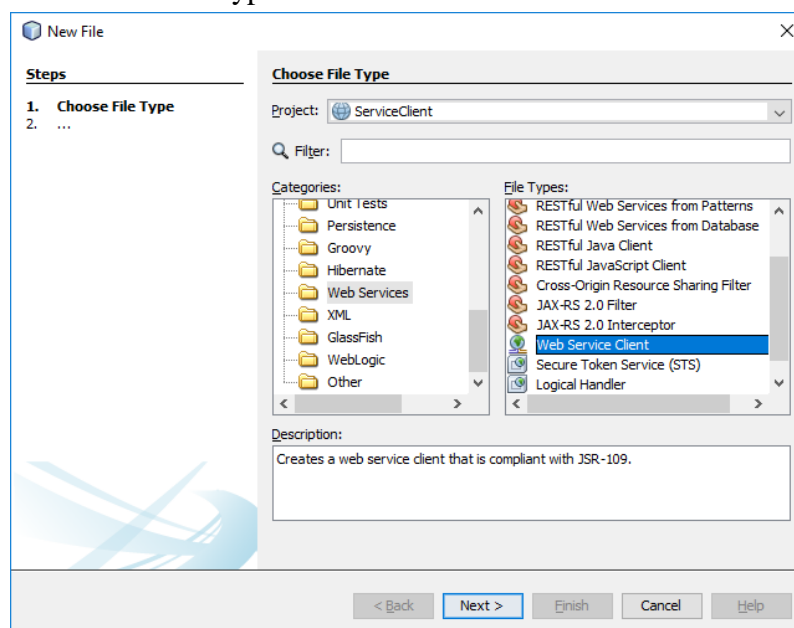
Right click on ServiceClient -> New -> others.



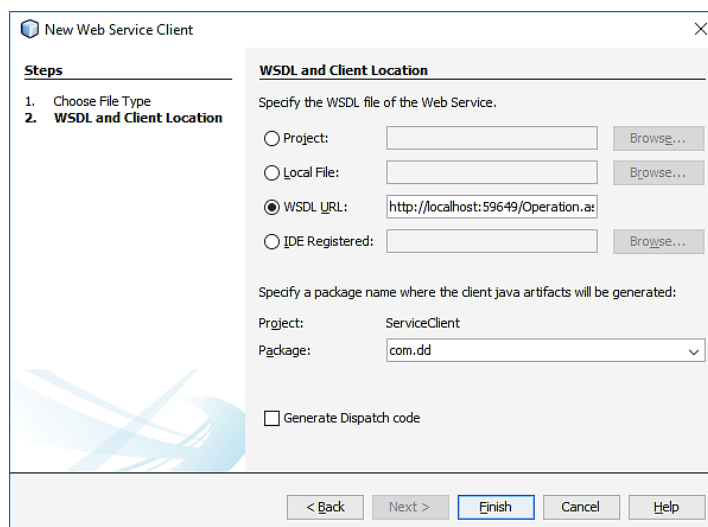
17. Other Now select Web Services in Categories section



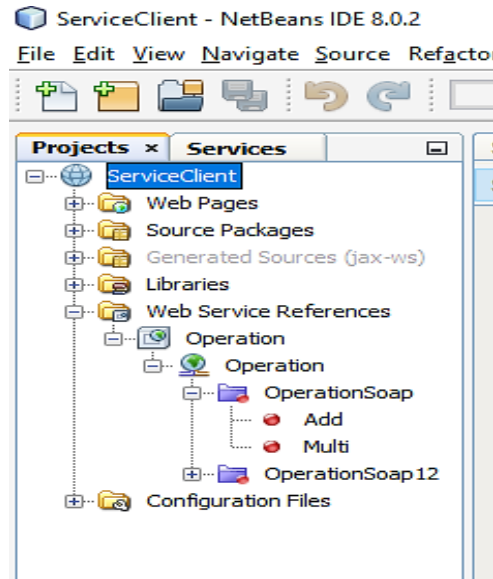
18. Select Web Service Client in File Types and Click on Next button.



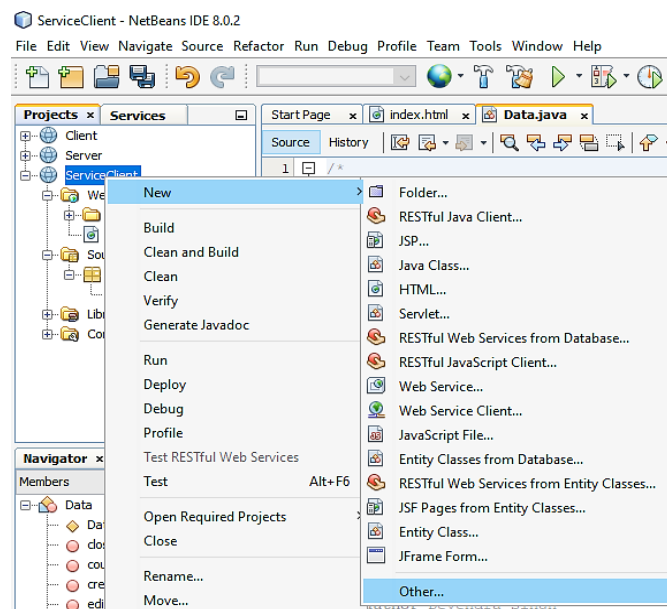
19. Select WSDL URL and paste the link that you have copied from browser onrun of Visual Studio enter package name com.dd. After that click on Finish button



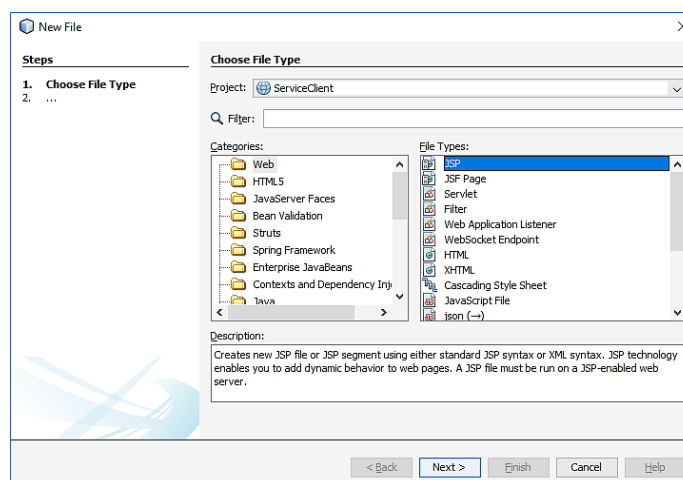
20. As you can see, we got both the service methods i.e. Add & Multi. But in this practical I'm going to use only one service method. You can do for both also.



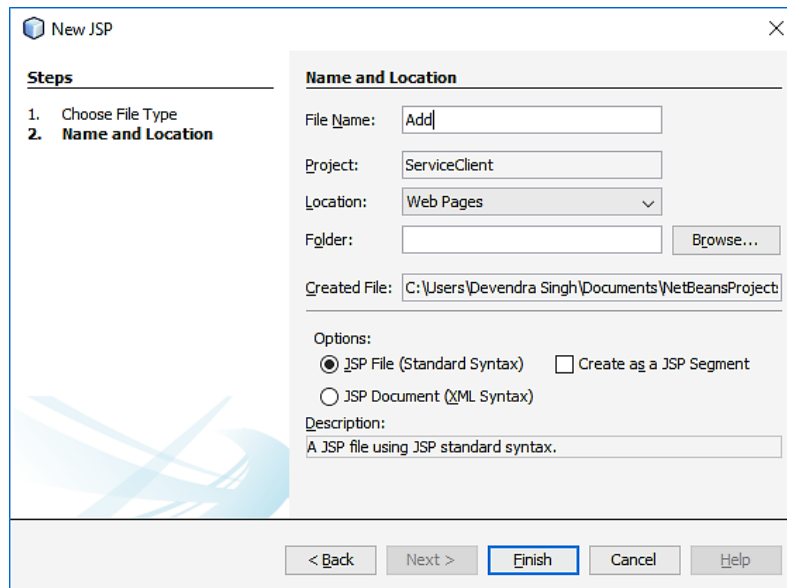
21. Now create a JSP page. **Right click on ServiceClient -> New -> Other**



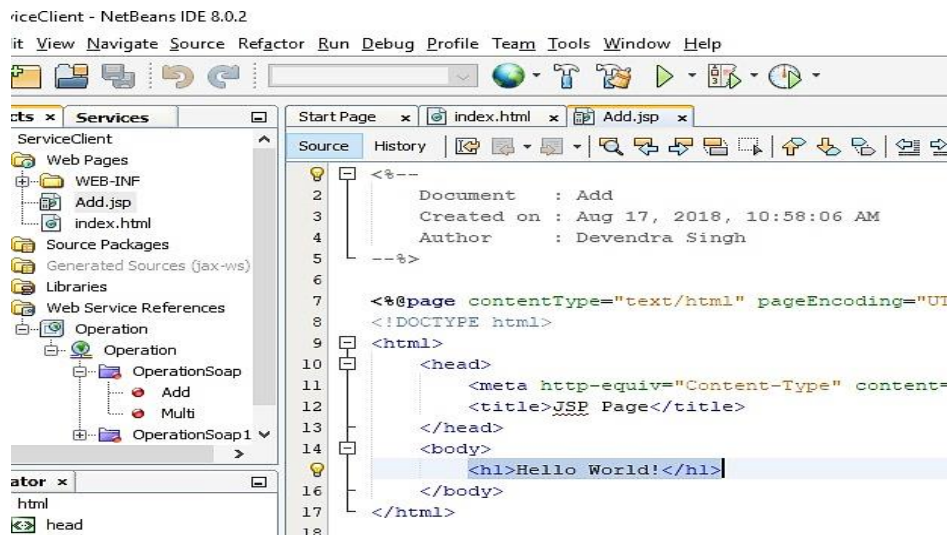
22. Select Web in Categories section -> Select JSP and click on Next button.



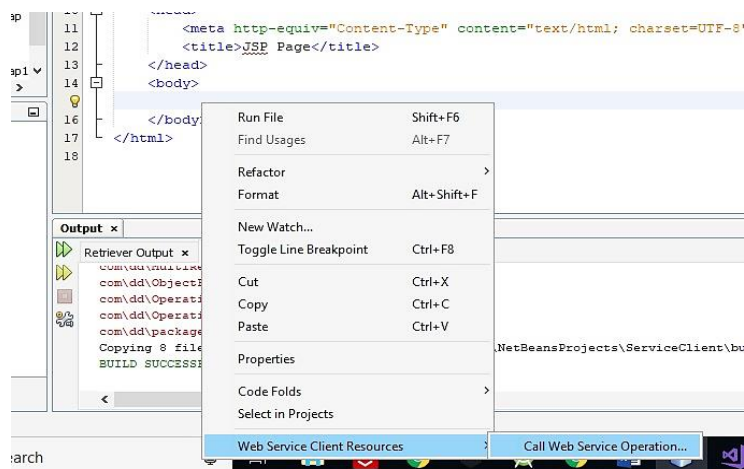
23. Enter File Name Add and click on Finish button.



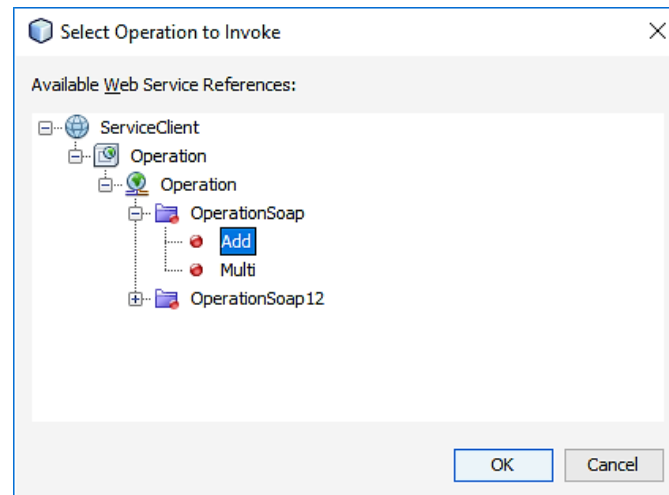
24. In Add.jsp file delete the selected part in body tag, because we don't need this.



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



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



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

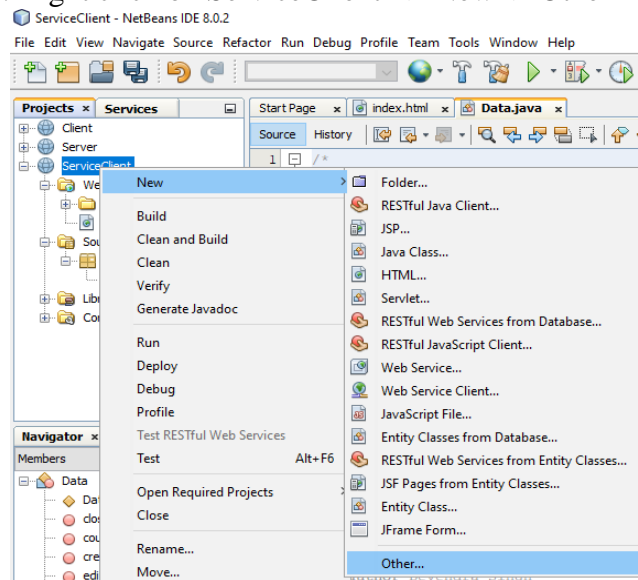
```
double num1 = Double.parseDouble(request.getParameter("txt1"));  
double num2 = Double.parseDouble(request.getParameter("txt2"));
```

```
<!-- 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/>
```

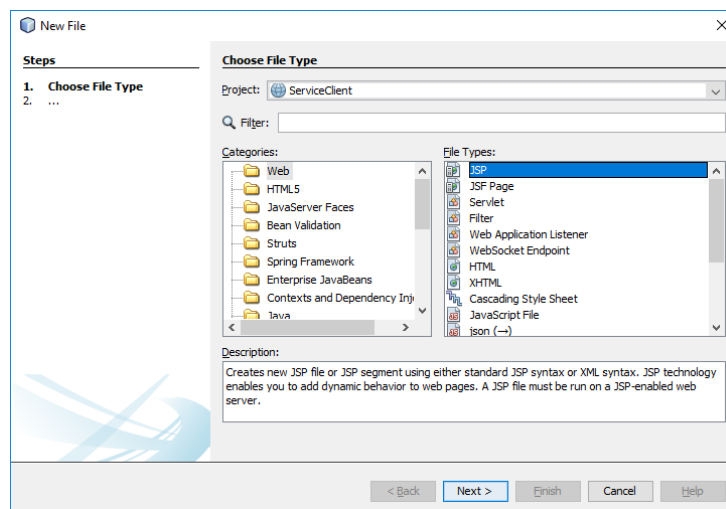
28. Now pass num1 & num2 to a & b variable respectively. After that press Ctrl+S to save this code.

```
Page x | index.html x | Add.jsp x  
History | [Icons]  
<!-- 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/>
```

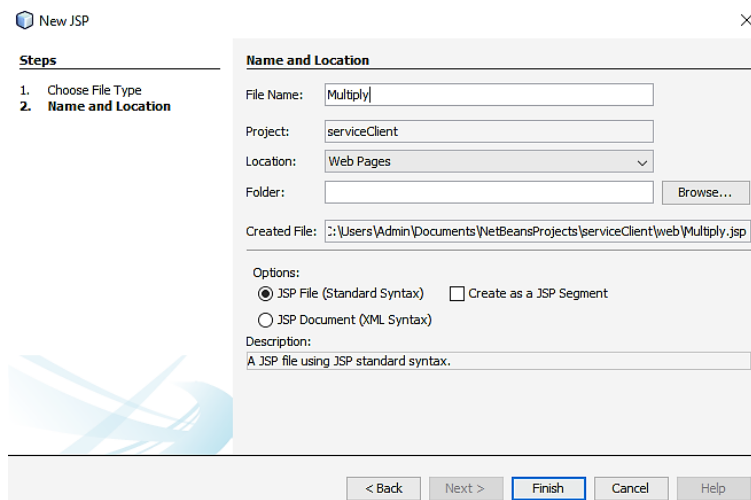
29. Now create a JSP page. Right click on ServiceClient -> New -> Other



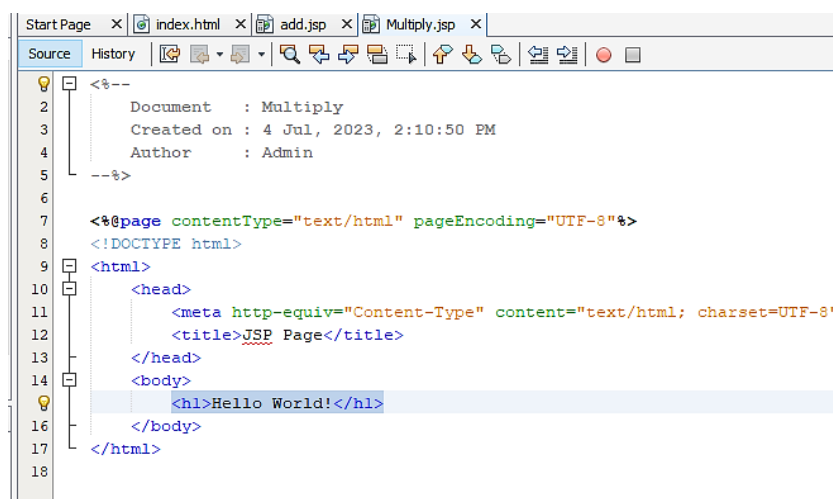
30. Select Web in Categories section -> Select JSP and click on Next button.



31. Enter File Name Multiply and click on Finish button

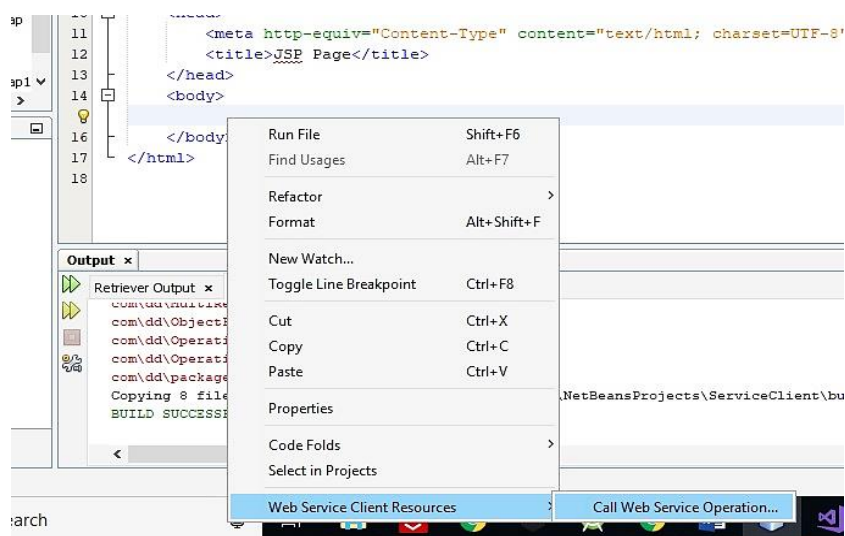


32. In Multiply.jsp file delete the selected part in body tag, because we don't need this.

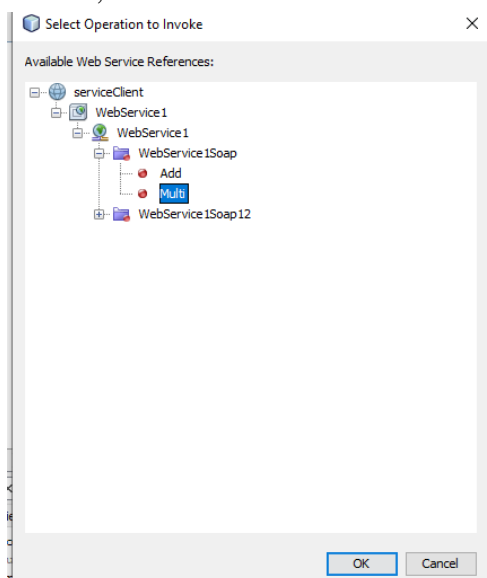


```
<!--
2   Document   : Multiply
3   Created on  : 4 Jul, 2023, 2:10:50 PM
4   Author      : Admin
5   -->
6
7   <%@page contentType="text/html" pageEncoding="UTF-8"%>
8   <!DOCTYPE html>
9   <html>
10    <head>
11      <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
12      <title>JSP Page</title>
13    </head>
14    <body>
15      <h1>Hello World!</h1>
16    </body>
17  </html>
18
```

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



34. Expand and select Multi. After select, click on OK button.



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

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

```
try {  
    double num1=Double.parseDouble(request.getParameter("txt1"));  
    double num2=Double.parseDouble(request.getParameter("txt2"));  
    com.dd.WebService1 service = new com.dd.WebService1();  
    com.dd.WebService1Soap port = service.getWebService1Soap();  
    // TODO initialize WS operation arguments here  
    double a = num1;  
    double b = num2;  
    // TODO process result here  
    double result = port.multi(a, b);  
    out.println("Result = "+result);  
} catch (Exception ex) {  
    // TODO handle custom exceptions here  
}  
%>  
<!-- end web service invocation --><hr/>  
</body>
```

36. Now pass num1 & num2 to a & b variable respectively. After that pressCtrl+S to save this code.

```
<!-- start web service invocation --><hr/>  
<%  
try {  
    double num1=Double.parseDouble(request.getParameter("txt1"));  
    double num2=Double.parseDouble(request.getParameter("txt2"));  
    com.dd.WebService1 service = new com.dd.WebService1();  
    com.dd.WebService1Soap port = service.getWebService1Soap();  
    // TODO initialize WS operation arguments here  
    double a = num1;  
    double b = num2;  
    // TODO process result here  
    double result = port.multi(a, b);  
    out.println("Result = "+result);  
} catch (Exception ex) {  
    // TODO handle custom exceptions here  
}  
%>  
<!-- end web service invocation --><hr/>  
</body>
```

37. 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 FirstNumber">

**

**<input type="text" name="txt2" placeholder="Enter SecondNumber">

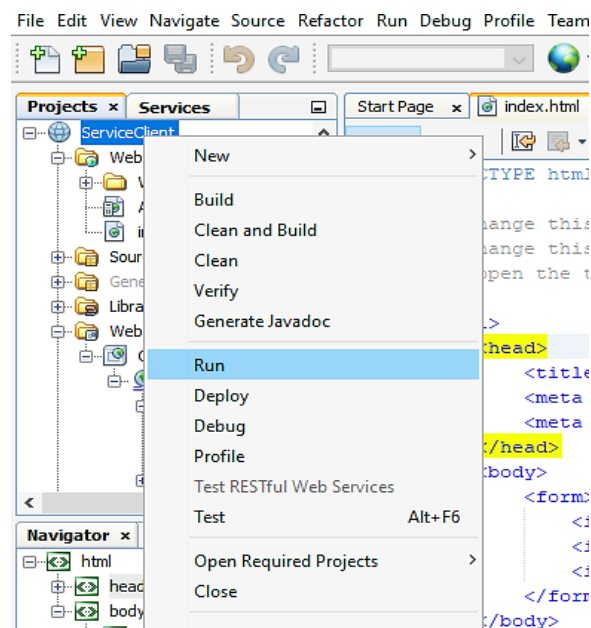
**

<input type="submit" formaction="Multiply.jsp" value="Add Numbers">

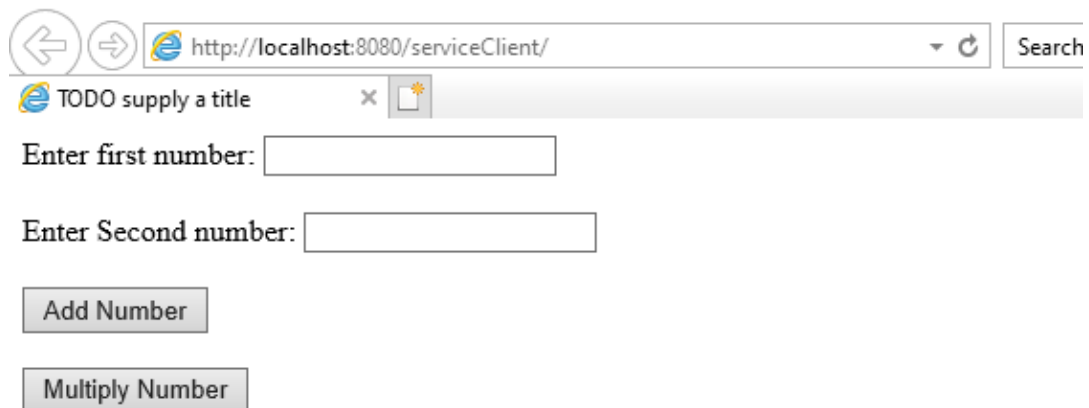
</form>

```
artPage x index.html x add.jsp x Multiply.jsp x
source History
9 <title>TODO supply a title</title>
10 <meta charset="UTF-8">
11 <meta name="viewport" content="width=device-width, initial-scale=1.0">
12 </head>
13 <body>
14 <form>
15 <input type="text" name="txt1" value="Enter first num " /><br>
16 <input type="text" name="txt2" value="Enter Second num" /><br>
17 <input type="submit" formaction="add.jsp" value="Add Number" />
18 <input type="submit" formaction="Multiply.jsp" value="Multiply Number" />
19 </form>
20 </body>
21 </html>
```

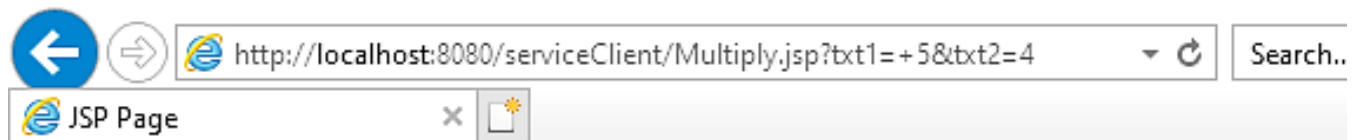
38. Now run the ServerClient web application.



39. A window will open in browser as below.



40. Now enter two numbers and click on Add Numbers button. Wait to getresult.....



Result = 20.0
