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Assignment 7

Code:

WebService Server:

Calculator.java operation

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Source | Design | History

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/WebServices/WebService.java to edit this template
 */
package com.unique;

import javax.jws.WebService;
import javax.jws.WebMethod;
import javax.jws.WebParam;

/**
 *
 * @author MyLappy
 */
@WebService(serviceName = "Calculator")
public class Calculator {

    /**
     * Web service operation
     */
    @WebMethod(operationName = "getNumber")
    public int getNumber(@WebParam(name = "num1") int num1, @WebParam(name = "num2") int num2) {
        int sum=num1+num2;
        return sum;
    }

    /**
     * This is a sample web service operation
     */

}
```

Web Service Tester

Calculator Web Service Tester

This form will allow you to test your web service implementation (WSDL File)

To invoke an operation, fill the method parameter(s) input boxes and click on the button labeled with the method name.

Methods :

public abstract int com.unique.Calculator.getNumber(int,int)

getNumber (12 , 14)

getNumber Method invocation

Method parameter(s)

Type	Value
int	12
int	14

Method returned

int : "**26**"

SOAP Request

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
    <SOAP-ENV:Header/>
    <S:Body>
        <ns2:getNumber xmlns:ns2="http://unique.com/">
            <num1>12</num1>
            <num2>14</num2>
        </ns2:getNumber>
    </S:Body>
</S:Envelope>
```

SOAP Response

```
<?xml version="1.0" encoding="UTF-8"?><S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/" xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
    <SOAP-ENV:Header/>
    <S:Body>
        <ns2:getNumberResponse xmlns:ns2="http://unique.com/">
            <return>26</return>
        </ns2:getNumberResponse>
```

Web Service Client :

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Source | History

```
1  <!DOCTYPE html>
2  <!--
3  Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this license
4  Click nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Html.html to edit this template
5  -->
6  <html>
7      <head>
8          <title>TODO supply a title</title>
9          <meta charset="UTF-8">
10         <meta name="viewport" content="width=device-width, initial-scale=1.0">
11     </head>
12     <body>
13         <form action="Calculator">
14             Enter no 1: <input type="text" name="txt1" value="" /> <br>
15             Enter no 2: <input type="text" name="txt2" value="" /> <br>
16             <input type="submit" value="Submit" />
17         </form>
18     </body>
19 </html>
20
```

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Source | History

```
29      * @param response servlet response
30      * @throws ServletException if a servlet-specific error occurs
31      * @throws IOException if an I/O error occurs
32      */
33     protected void processRequest(HttpServletRequest request, HttpServletResponse response)
34             throws ServletException, IOException {
35         response.setContentType(type:"text/html;charset=UTF-8");
36         try (PrintWriter out = response.getWriter()) {
37             int num1=Integer.parseInt(s: request.getParameter(name:"txt1")), num2=Integer.parseInt(s: request.getParameter(name:"txt2"));
38             out.println(x: "<!DOCTYPE html>");
39             out.println(x: "<html>");
40             out.println(x: "<head>");
41             out.println(x: "<title>Servlet Calculator</title>");
42             out.println(x: "</head>");
43             out.println(x: "<body>");
45             out.println("<h1>Servlet Calculator at " + getNumber(num1, num2) + "</h1>");
45             out.println(x: "</body>");
46             out.println(x: "</html>");
47         }
48     }
49
50     HttpServlet methods. Click on the + sign on the left to edit the code.
88
89     private int getNumber(int num1, int num2) {
90         // Note that the injected javax.xml.ws.Service reference as well as port objects are not thread safe.
91         // If the calling of port operations may lead to race condition some synchronization is required.
92         com.unique.Calculator port = service.getCalculatorPort();
93         return port.getNumber(num1, num2);
94     }
95
96 }
```

Output:

Enter no 1: 1

Enter no 2: 2

Submit

Servlet Calculator at 3