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Roll No: 508

Practical No 7: Web Service

```
/*
```

```
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```

```
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```

```
 * and open the template in the editor.
```

```
*/
```

```
package org.me.calculator;
```

```
import javax.ws.WebService;
```

```
import javax.ws.WebMethod;
```

```
import javax.ws.WebParam;
```

```
import javax.ejb.Stateless;
```

```
/**
```

```
 *
```

```
 * @author hp
```

```
 */
```

```
@WebService(serviceName = "CalculatorWS")
```

```
@Stateless()
```

```
public class CalculatorWS {
```

```
    /**
```

```
     * Web service operation
```

```
     */
```

```
    @WebMethod(operationName = "mul")
```

```
    public int mul(@WebParam(name = "num1") int num1, @WebParam(name = "num2") int num2) {
```

```
        //TODO write your implementation code here:
```

```
        int result=num1*num2;

        return result;
    }
}
```

```
/*
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 * and open the template in the editor.
 */
```

```
package calculatorws_client_application;
```

```
/**
 *
 * @author hp
 */
```

```
public class CalculatorWS_Client_Application {
```

```
    /**
     * @param args the command line arguments
     */
```

```
    public static void main(String[] args) {
        // TODO code application logic here

        try{
            int num1=14;
            int num2=10;
            int result=mul(num1, num2);

            System.out.println("Result: " + result);
        }
    }
```

```

        catch(Exception e){
            System.out.println("Exception: " + e);

        }
    }

    private static int mul(int num1, int num2) {

        org.me.calculator.CalculatorWS_Service service = new
        org.me.calculator.CalculatorWS_Service();

        org.me.calculator.CalculatorWS port = service.getCalculatorWSPort();

        return port.mul(num1, num2);

    }

}

```

O/P:

```

ant -f C:\\Users\\hp\\Documents\\NetBeansProjects\\CalculatorWS_Client_Application -
Dnb.internal.action.name=run run

```

init:

Deleting: C:\Users\hp\Documents\NetBeansProjects\CalculatorWS\_Client\_Application\build\build-jar.properties

deps-jar:

Updating property file:

C:\Users\hp\Documents\NetBeansProjects\CalculatorWS\_Client\_Application\build\build-jar.properties

wsimport-init:

wsimport-client-CalculatorWS:

files are up to date

wsimport-client-generate:

compile:

run:

Result: 140

BUILD SUCCESSFUL (total time: 0 seconds)

```
/*
```

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```

```
 * and open the template in the editor.
```

```
*/
```

```
package org.me.calculator.client;
```

```
import java.io.IOException;
```

```
import java.io.PrintWriter;
```

```
import javax.servlet.ServletException;
```

```
import javax.servlet.annotation.WebServlet;
```

```
import javax.servlet.http.HttpServlet;
```

```
import javax.servlet.http.HttpServletRequest;
```

```
import javax.servlet.http.HttpServletResponse;
```

```
/**
```

```
 *
```

```
 * @author hp
```

```
*/
```

```

@WebServlet(name = "ClientServlet", urlPatterns = {"/ClientServlet"})

public class ClientServlet extends HttpServlet {

    /**
     * Processes requests for both HTTP GET and POST
     * methods.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    protected void processRequest(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            /* TODO output your page here. You may use following sample code. */
            out.println("<!DOCTYPE html>");
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet ClientServlet</title>");
            out.println("</head>");
            out.println("<body>");
            out.println("<h1>Servlet ClientServlet at " + request.getContextPath() + "</h1>");
            try{
                int num1=14;
                int num2=10;
                int result=num1*num2;
                out.println("Result is: "+result);
            }
            catch (Exception e) {

```

```

        out.println("Exception: " + e);
    }
    out.println("</body>");
    out.println("</html>");
}
}

```

// <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on the + sign on the left to edit the code.">

```

/**
 * Handles the HTTP <code>GET</code> method.
 *
 * @param request servlet request
 * @param response servlet response
 * @throws ServletException if a servlet-specific error occurs
 * @throws IOException if an I/O error occurs
 */
@Override
protected void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

```

```

/**
 * Handles the HTTP <code>POST</code> method.
 *
 * @param request servlet request
 * @param response servlet response
 * @throws ServletException if a servlet-specific error occurs
 * @throws IOException if an I/O error occurs
 */

```

```

@Override

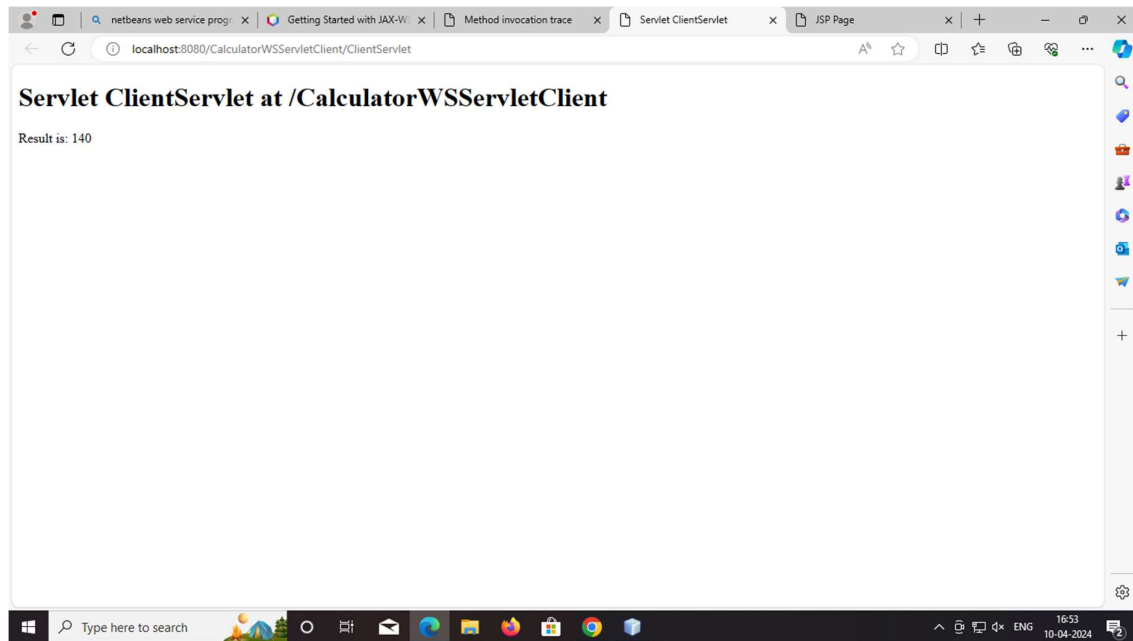
protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

/**
 * Returns a short description of the servlet.
 *
 * @return a String containing servlet description
 */
@Override
public String getServletInfo() {
    return "Short description";
}

}

```

O/P:



<%--

Document : index

Created on : 10 Apr, 2024, 4:49:27 PM

Author : hp

--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>

<!DOCTYPE html>

<html>

<head>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">

<title>JSP Page</title>

</head>

<body>

<h1>Hello World!</h1> <%-- start web service invocation --%><hr/>

<%



```
try {  
    org.me.calculator.CalculatorWS_Service service = new  
org.me.calculator.CalculatorWS_Service();  
    org.me.calculator.CalculatorWS port = service.getCalculatorWSPort();  
    // TODO initialize WS operation arguments here  
    int num1 = 14;  
    int num2 = 10;  
    // TODO process result here  
    int result = port.mul(num1, num2);  
    out.println("Result = "+result);  
} catch (Exception ex) {  
    // TODO handle custom exceptions here  
}  
%>  
<%-- end web service invocation --%><hr/>  
  
</body>  
</html>
```

O/P:

