JSP Expression Language

Objectives:

1. Understanding about JSP Expression Language.

6.1 Using EL in JSP

Step 1. Create a web application in **Netbeans**

Step 2. Create a jsp file named **index.jsp** and add following code as below:

```jsp
<%--
    Document   : index
    Created on : Mar 21, 2017, 9:10:36 AM
    Author     : lhhuong
--%>


<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>Expression Language in JSP</title>
    </head>
    <body>
        <h1>Expression Language in JSP</h1>
        <form method="post" name="frmEL">
            <table border="1" cellspacing="0" cellpadding="0">
                <tr>
                    <td>Product name</td>
                    <td><input type="text" name="txtName"></td>
                </tr>
                <tr>
                    <td>Price</td>
                    <td><input type="text" name="txtPrice"></td>
                </tr>
                <tr>
                    <td>Quality</td>
                    <td><input type="text" name="txtQuality"></td>
                </tr>
                <tr>
                    <td          colspan="2"><input          type="submit"
value="Submit"></td>
                </tr>
            </table>
        </form>
```

```
            <hr>
            <table border="1" cellspacing="0" cellpadding="0">
                <tr>
                    <td align="right">Product Name: </td>
                    <td>${param.txtName}</td>
                </tr>
                <tr>
                    <td align="right">Price: </td>
                    <td>${param.txtPrice}</td>
                </tr>
                <tr>
                    <td align="right">Quality: </td>
                    <td>${param.txtQuality}</td>
                </tr>
                <tr>
                    <td align="right">Total: </td>
                    <td>${param.txtPrice * param.txtQuality}</td>
                </tr>
            </table>
        </body>
</html>
```

Step 3. Run and test the result

6.2 Using static function

Step 1. Create a web application in **Netbeans**
Step 2. Create a java class named **staticFunction** and add following code as below:

```
package com.staticFunctions;


/**
 *
 * @author lhhuong
 */
public class staticFunction {

    public staticFunction() {
    }

    public static int add(int a, int b) {
        return a + b;
```

```
    }

    public static int sub(int a, int b)
    {
        return a - b;
    }
}
```

Step 3. Edit **web.xml** file as below:

```xml
<?xml version="1.0" encoding="UTF-8"?>

<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd"
      version="3.1">
    <session-config>
        <session-timeout>
            30
        </session-timeout>
    </session-config>
    <jsp-config>
        <jsp-property-group>
            <url-pattern>*.jsp</url-pattern>
            <el-ignored>false</el-ignored>
        </jsp-property-group>
    </jsp-config>
</web-app>
```

Step 4. Create **TagLibrary Descriptor** named: **staticFunction** and add the following code as below:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<taglib      version="2.1"      xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-jsptaglibrary_2_1.xsd">
  <tlib-version>1.0</tlib-version>
  <short-name>staticfunction</short-name>
  <uri>/WEB-INF/tlds/staticFunction</uri>
  <!-- A validator verifies that the tags are used correctly at JSP
         translation time. Validator entries look like this:
```

```
        <validator>
            <validator-class>com.mycompany.TagLibValidator</validator-
class>
            <init-param>
                <param-name>parameter</param-name>
                <param-value>value</param-value>
            </init-param>
        </validator>
    -->
    <!-- A tag library can register Servlet Context event listeners in
            case it needs to react to such events. Listener entries look
            like this:
        <listener>
            <listener-class>com.mycompany.TagLibListener</listener-class>
        </listener>
    -->


    <function>
        <name>add</name>
        <function-class>com.staticFunctions.staticFunction</function-
class>
        <function-signature>int add(int, int)</function-signature>
    </function>


    <function>
        <name>sub</name>
        <function-class>com.staticFunctions.staticFunction</function-
class>
        <function-signature>int sub(int,int)</function-signature>
    </function>
</taglib>
```

Step 5.   Create a jsp file named: **index.jsp** and add the following code:

```
<%--
    Document   : staticFunction
    Created on : Mar 21, 2017, 9:38:47 AM
    Author     : lhhuong
--%>


<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@taglib uri="/WEB-INF/tlds/staticFunction" prefix="fn"%>
```

```
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-
8">
        <title>JSP Page</title>
    </head>
    <body>
        <h1>EL - Static function call</h1>
        <form method="post" name="myForm">
            <table border="1" cellspacing="0" cellpadding="0">
                <tr>
                    <td align="right">First Number: </td>
                    <td><input type="text" name="txtFirstNumber"></td>
                </tr>
                <tr>
                    <td align="right">Second Number: </td>
                    <td><input type="text" name="txtSecondNumber"></td>
                </tr>
                <tr>
                    <td colspan="2">
                        <input type="submit" value="Add">
                    </td>
                </tr>
            </table>
            <hr>
            add:  ${fn:add(param.txtFirstNumber,  param.txtSecondNumber)}
<br>
            sub: ${fn:sub(param.txtFirstNumber, param.txtSecondNumber)}
        </body>
        </html>
```

Step 6.   Run and test the result.