

LAB ACTIVITY 5

CLO <> (IQA NATALYA BINTI IBRAHIM – 01DIT24F1027)

Task 1: Create JSP Project (Web Application)

Instructions

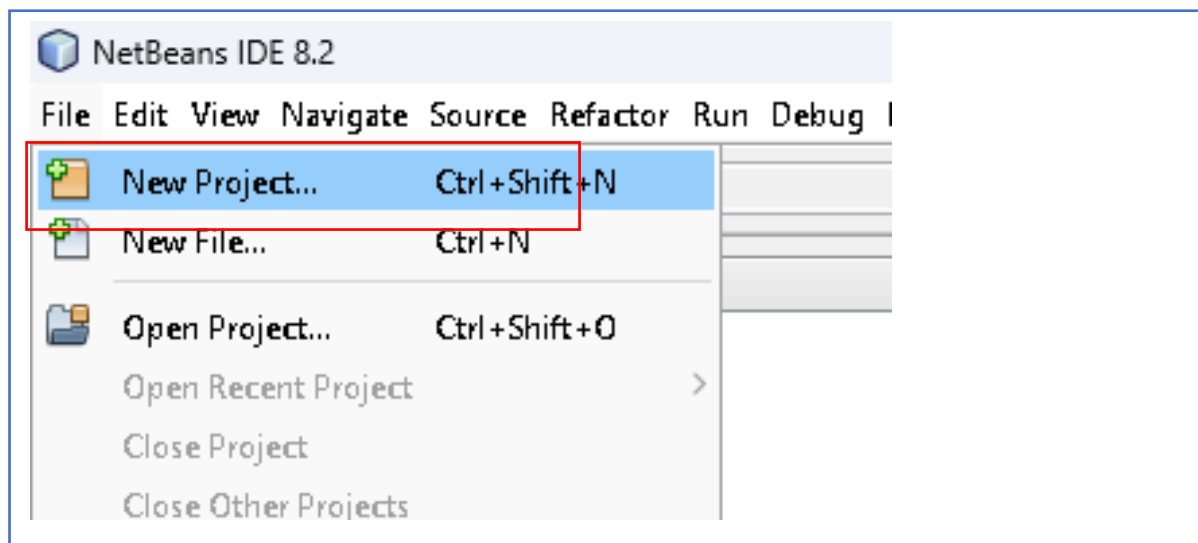
Step 1 — Open NetBeans

- Click the **Start Menu** on your computer.
- Search for **NetBeans IDE 8.2**
- Click the application to open it.
- OR
- Double-click the **NetBeans** icon on your desktop.
- Wait a few seconds until the IDE fully loads.



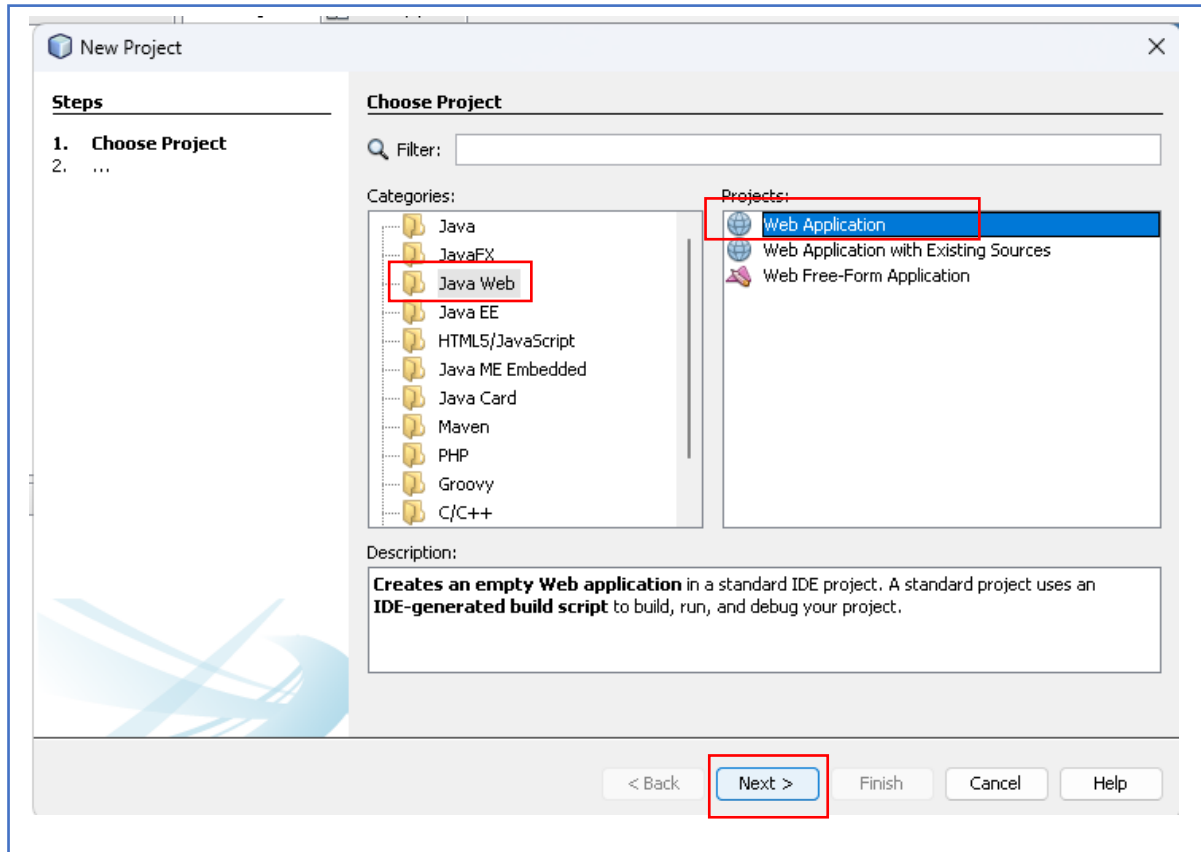
Step 2 — Create a New Project

- At the top menu, click:
 - **File → New Project**
- A “New Project” window will appear



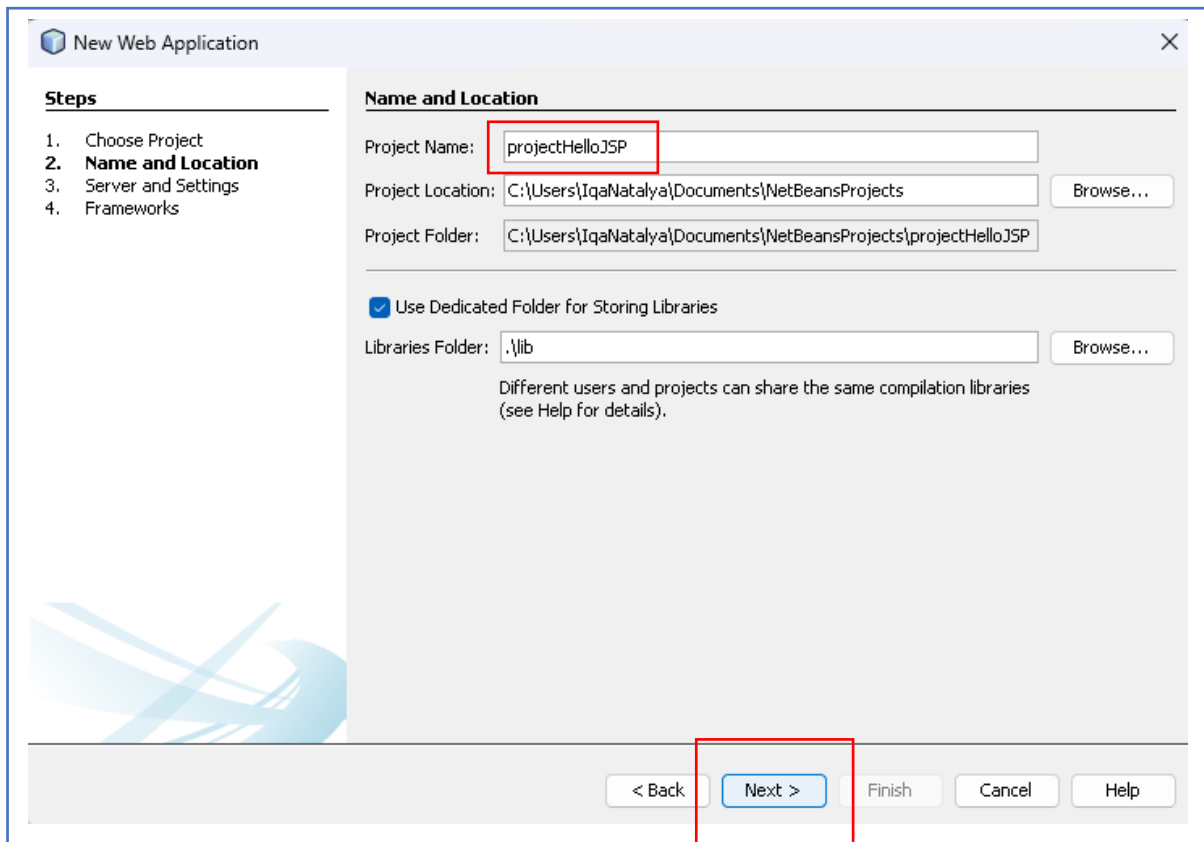
Step 3 — Choose Java Web Application

- Under **Categories**, select:
 - **Java Web**
 - Under **Projects**, select:
 - **Web Application**
- Click **Next**.



Step 4 __ Set Project Name

- In **Project Name and Location**, type your project name.
 - Example: projectHelloJSP
- Choose the location to save your project.
- Click **Next**.



New Web Application

Steps

1. Choose Project
2. **Name and Location**
3. Server and Settings
4. Frameworks

Name and Location

Project Name: projectHelloJSP

Project Location: C:\Users\IqaNatalya\Documents\NetBeansProjects Browse...

Project Folder: C:\Users\IqaNatalya\Documents\NetBeansProjects\projectHelloJSP

☒ Use Dedicated Folder for Storing Libraries

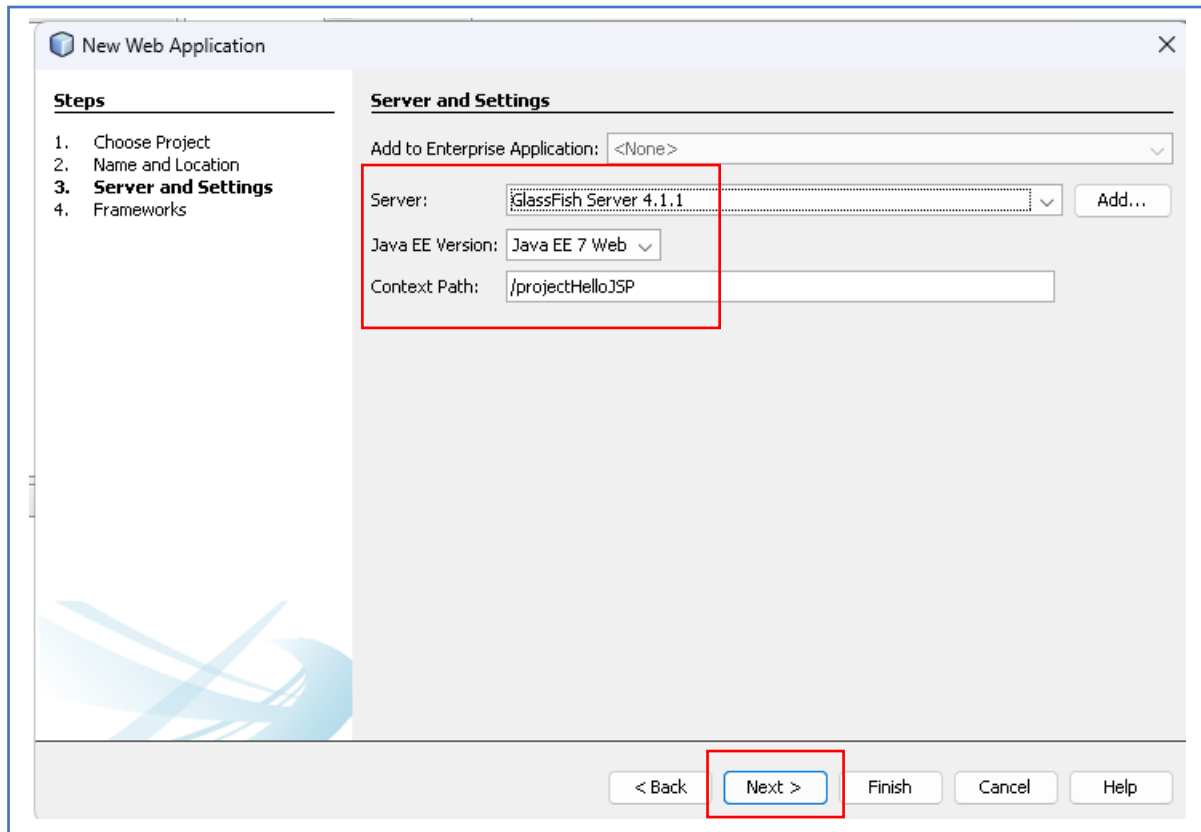
Libraries Folder: .\lib Browse...

Different users and projects can share the same compilation libraries (see Help for details).

< Back Next > Finish Cancel Help

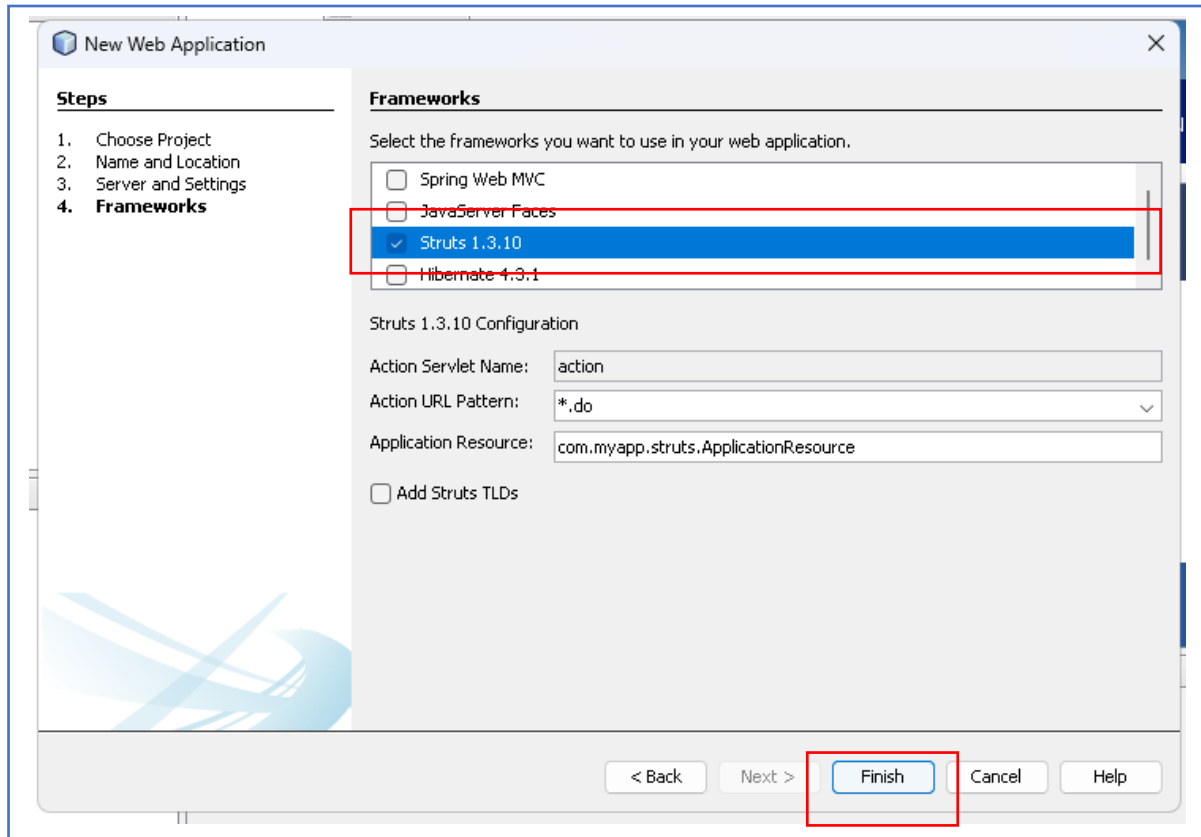
Step 5 Server Setting

- In **Server and Settings**, choose server as below:
 - GlassFish Server
 - Java EE version: Java EE 7 Web
 - Content Path as: /projectHelloJSP
- Click **Next**.



Step 6 :Framework

- In framework, Choose any option as example below:
 - ☑ Struts 1.3.10
- Click Finish



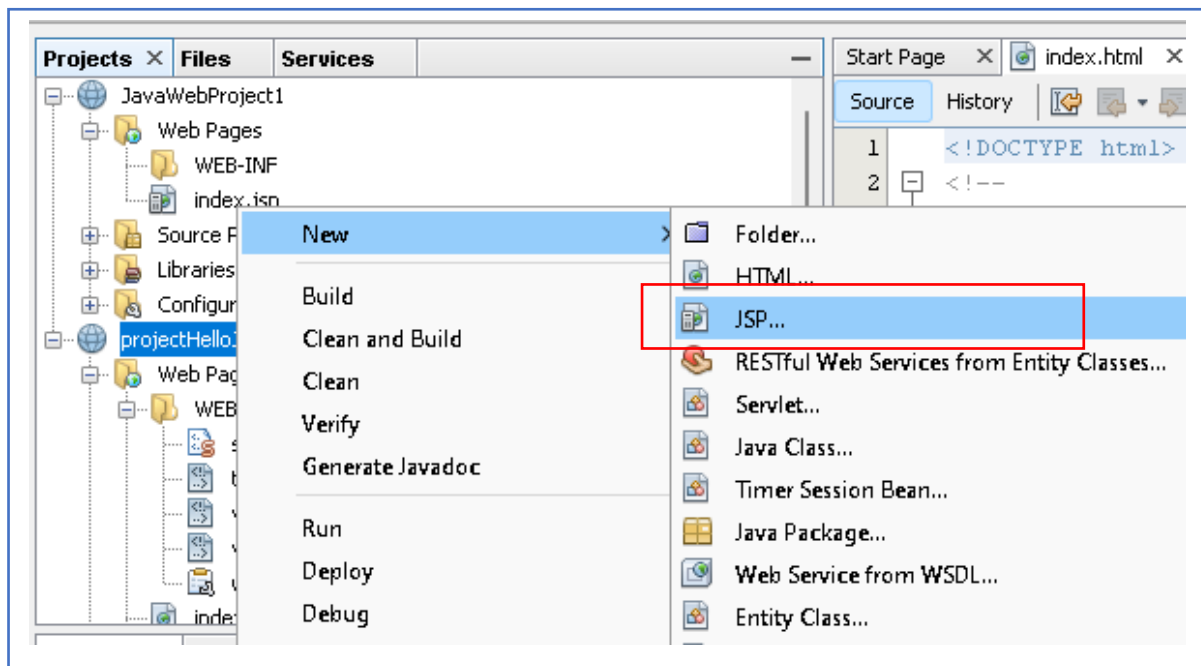
Task 2: Create JSP File

Instructions

After the project is successfully created, students need to create a JSP file

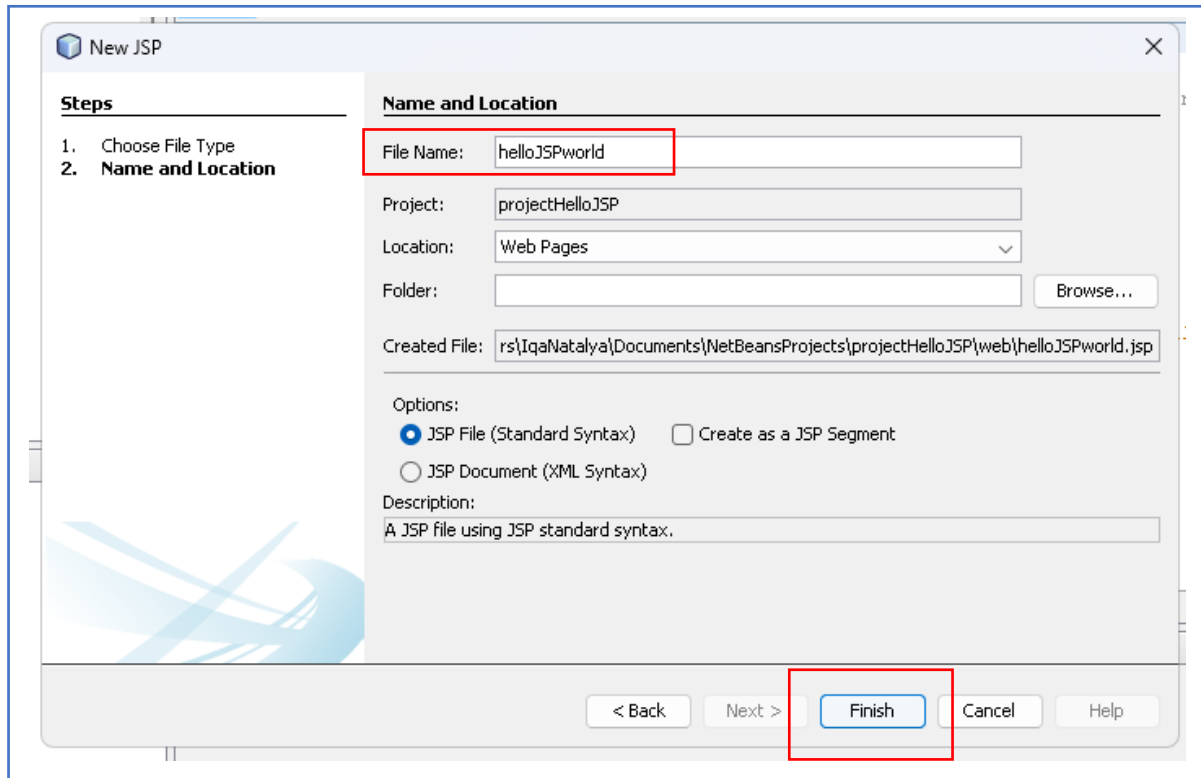
Step 1 — Select Project

- At the left-side panel under project Example: projectHelloJSP
- Right-click the project name
- Click New → JSP
- The New JSP File Window will appear



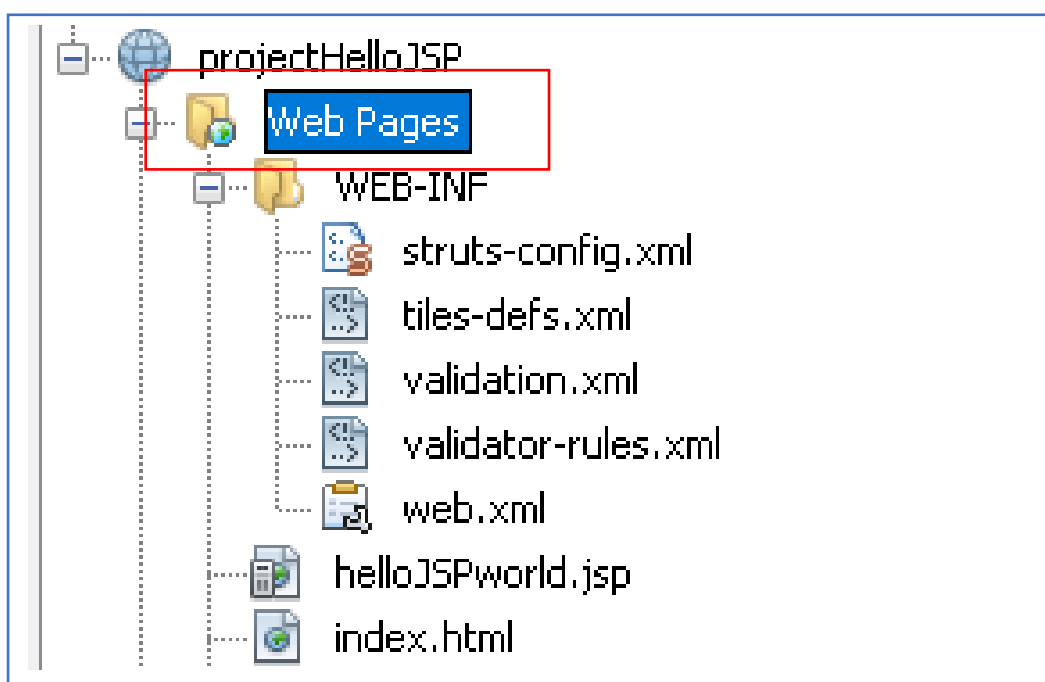
Step 2 - Create New JSP page

- In Project Name and Location, type your JSP name. Example: helloJSPworld
- Choose the location to save your project.
- Click **Finish**.



IMPORTANT!

Students must ensure that the JSP file is created inside the Web Pages folder → helloJSPworld.



Task 3: Scripting JSP File using JSP Tag

Type of JSP Tags

JSP Tag	Description
<code><% %></code>	JSP Scriptlet Tag- used to write Java code
<code><%= %></code>	JSP Expression Tag- used to display output directly
<code><%@ %></code>	JSP Directive Tag- used to configure JSP page settings
<code><%! %></code>	JSP Declaration Tag- used to declare variables and methods

Instructions

Step 1 — write JSP script using Tag

- In JSP file example named helloJSPworld.
- Write JSP code below inside the `<body>` here `</body>` section.

```
<!--
Document : helloJSPworld
Created on : Aug 10, 2026, 11:55:56 AM
Author : IqaNatalya
--%>

<%@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>
<h2>JSP Scriptlet Tag &lt;% %></h2>
<%
String name = "Ali";
String course = "Diploma in Information Technology";
out.println("Hello " + name);
out.println("<br>");
out.println("Course: " + course);
%>

<br><br>
<h2>JSP Expression Tag &lt;%= %></h2>

Current Date:
<%= new java.util.Date() %>
```

```

<br><br>
<h2>JSP Declaration Tag &lt;%! %></h2>
<%!
    int num1 = 10;
    int num2 = 20;

    int addNumbers() {
        return num1 + num2;
    }
%>

Total = <%= addNumbers() %>

<br><br>

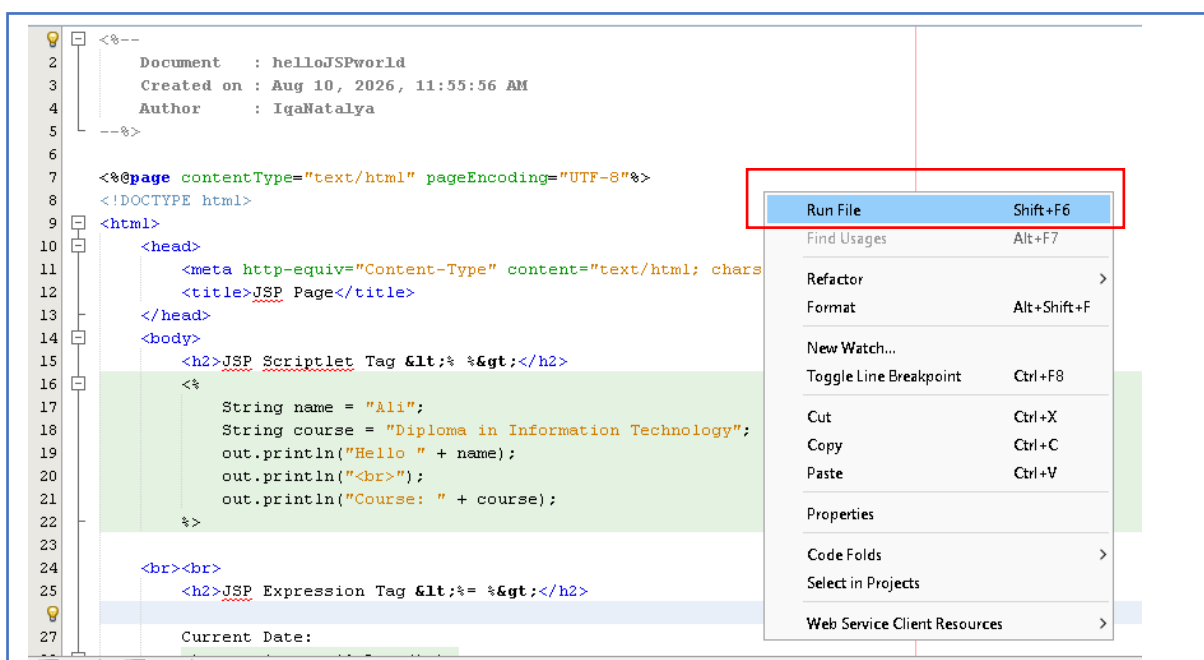
<h2>JSP Directive Tag &lt;%@ %></h2>

<p>
    The page directive is used at the top of this JSP file:
</p>
<pre>&lt;%@page contentType="text/html" pageEncoding="UTF-8"%></pre>
</body>
</html>

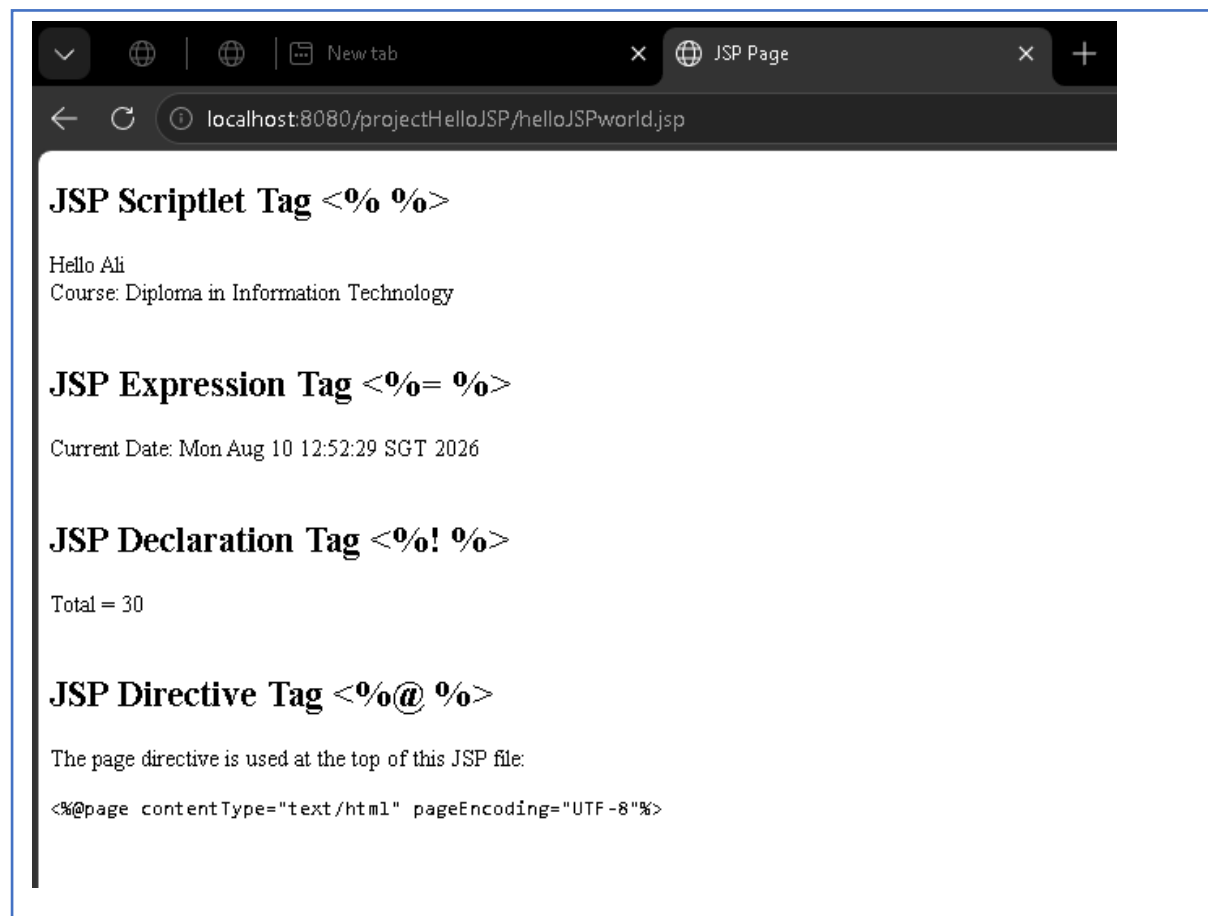
```

Step 2 – Run JSP file

- Right-click anywhere inside the JSP coding editor
- A shortcut menu will appear Run File



Output.



Task 4: JSP Comments

Instructions

- In Projects panel, right click your project.
- Select New -> JSP
- Enter File Name -> comments.jsp
- Click Finish.
- Inside comments.jsp, write the following code
- Save and run the project.
- Observe that JSP comments are not displayed in the browser.
- Capture the output.

```
<%--
  Document : comments
  Created on : Aug 10, 2026, 12:57:18 PM
  Author : IqaNatalya
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <title>JSP Comments</title>
  </head>
  <body>
    <h1>JSP Comment Example</h1>

    <%-- This is a JSP comment (hidden in page source) --%>

    <!-- This is an HTML comment (visible in page source) -->

    <%
      // This is a Java single-line comment

      /*
        This is a Java
        multi-line comment
      */
    %>

    <p>Hello World</p>
  </body>
</html>
```

Task 5: JSP Action Elements

Common JSP Action Elements :

<jsp:include>

<jsp:forward>

<jsp:param>

Instructions

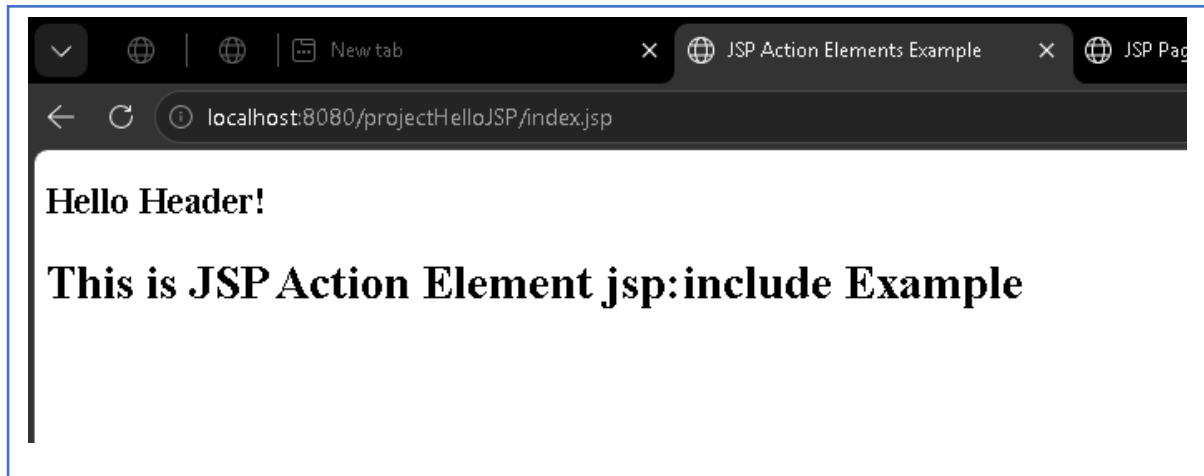
- **<jsp:include>**
- Create new JSP file -> header.jsp
- Inside header.jsp, write the following code:

```
<%--  
  Document : header  
  Created on : Aug 10, 2026, 1:03:07 PM  
  Author : IqaNatalya  
--%>  
  
<%@page contentType="text/html" pageEncoding="UTF-8"%>  
<!DOCTYPE html>  
<html>  
  <body>  
    <h2>Hello Header!</h2>  
  </body>  
</html>
```

- Delete index.html.
- Create new JSP file -> index.jsp
- Inside index.jsp , write the following code:

```
<%--  
  Document : index  
  Created on : Aug 10, 2026, 1:07:36 PM  
  Author : IqaNatalya  
--%>  
  
<%@page contentType="text/html" pageEncoding="UTF-8"%>  
<!DOCTYPE html>  
<html>  
  <head>  
    <title>JSP Action Elements Example</title>  
  </head>  
  <body>  
    <jsp:include page="header.jsp"/>  
    <h1>This is JSP Action Element jsp:include Example</h1>  
  </body>  
</html>
```

- Save and run the project.
- Observe and capture the output.



- **<jsp:forward>**
- Create new JSP file -> welcome.jsp
- Inside welcome.jsp write the following code:

```
<%--
  Document   : welcome
  Created on : Aug 10, 2026, 1:13:42 PM
  Author    : IqaNatalya
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <title>Welcome Page</title>
  </head>
  <body>
    <h1>Welcome to JSP Forward Example</h1>
  </body>
</html>
```

- Inside index.jsp, write the following code:

```
<%--  
  Document : index  
  Created on : Aug 10, 2026, 1:07:36 PM  
  Author : IqaNatalya  
--%>  
  
<%@page contentType="text/html" pageEncoding="UTF-8"%>  
<!DOCTYPE html>  
<html>  
  <head>  
    <title>JSP Action Elements Example</title>  
  </head>  
  <body>  
    <jsp:forward page="welcome.jsp"/>  
  </body>  
</html>
```

- Save and run the project.
- Observe and capture the output.



- **<jsp:param>**
- Inside index.jsp write the following code:

```
<%--
  Document : index
  Created on : Aug 10, 2026, 1:07:36 PM
  Author : IqaNatalya
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <title>JSP Param Example</title>
  </head>
  <body>
    <jsp:forward page="welcome.jsp">
      <jsp:param name="username" value="admin" />
    </jsp:forward>
  </body>
</html>
```

- Inside welcome.jsp write the following code:

```
<%--
  Document : welcome
  Created on : Aug 10, 2026, 1:13:42 PM
  Author : IqaNatalya
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <title>Welcome Page</title>
  </head>
  <body>
    <h1>
      Welcome to JSP Param Example<br>
      Welcome <%= request.getParameter("username") %>
    </h1>
  </body>
</html>
```

- Save and run the project.
- Observe and capture the output.



Task 6: JSP Directives

Instructions

- Inside index.jsp, write the following code:

```
<%--
  Document : index
  Created on : Aug 10, 2026, 1:07:36 PM
  Author : IqaNatalya
--%>

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

<!DOCTYPE html>
<html>
  <head>
    <title>JSP Directive Example</title>
  </head>
  <body>
    <h1>This is JSP Directive Example</h1>
  </body>
</html>
```

- Save and run the project.
- Observe and capture the output.



- Add inside index.jsp with include directive as follows:

```
<%--
  Document   : index
  Created on : Aug 10, 2026, 1:07:36 PM
  Author    : IqaNatalya
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@include file="header.jsp" %>
<!DOCTYPE html>
<html>
  <head>
    <title>JSP Directive Example</title>
  </head>
  <body>
    <h1>This is JSP Directive Example</h1>
  </body>
</html>
```

- Save and run the project.
- Observe and capture the output.

