

Assisted Practice: 4.1 Creating a Simple JSP File

This section will guide you to:

- Create a JSP file and run it in the browser

Development Environment

- Eclipse IDE for Enterprise Java Developers v2019-03 (4.11.0)
- Apache Tomcat Server v9.0
- JRE: OpenJDK Runtime Environment 11.0.2

This lab has seven subsections, namely:

- 4.1.1 Creating a dynamic web project
- 4.1.2 Creating a JSP file index.jsp
- 4.1.3 Checking for servlet-api.jar
- 4.1.4 Building the project
- 4.1.5 Publishing and starting the project
- 4.1.6 Running the project
- 4.1.7 Pushing the code to your GitHub repositories

Step 4.1.1: Creating a dynamic web project

- Open Eclipse
- Go the **File** menu. Choose **New->Dynamic Web Project**
- Enter the project name as **SimpleJSP**. Click on **Next**
- Enter nothing in the next screen and click on **Next**
- Check the checkbox **Generate web.xml deployment descriptor** and click on **Finish**
- This will create the project files in the Project Explorer

Step 4.1.2: Creating a JSP file index.jsp

- In the Project Explorer, expand the project **SimpleJSP**
- Expand **WebContent**. Right click on **WebContent**. Choose **New->JSP File**
- Enter the filename as **index.jsp** and click on **Finish**
- Enter the following code:

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Simple JSP</title>
</head>
<body>
<%
    out.println("<h2>My first JSP page.</h2>");
%>
</body>
</html>
```

- Click on the **Save** icon

Step 4.1.3: Checking for servlet-api.jar

- Before building the project, we need to add **servlet-api.jar** to the project
- Servlet-api.jar file is already present in your practice lab. (Refer FSD: Lab Guide - Phase 2)
- To add it to the project, follow the below mentioned steps:
 - In the Project Explorer, right click on **SimpleJSP** and choose **Properties**
 - Select **Java Build Path** from the options on the left

- Click on **Libraries** tab on the right
- Under **ClassPath**, expand the node that says **Apache Tomcat**
- If there is an existing entry for **servlet-api.jar**, then click on **Cancel** and exit the window
- If it is not there, then click on **Classpath** entry and click on **Add External JARs** button on the right
- From the file list, select the **servlet-api.jar** file and click on **Ok**
- Click on **Apply and Close**

Step 4.1.4: Building the project

- From the **Project** menu at the top, click on **Build**
- If any compile errors are shown, fix them as required

Step 4.1.5: Publishing and starting the project

- If you do not see the **Servers** tab near the bottom of the IDE, go to **Window** menu and click on **Show View->Servers**
- Right click on the **Server** entry and choose **Add and Remove**
- Click the **Add** button to move **SimpleJSP** from the **Available** list to the **Configured** list
- Click on **Finish**
- Right click on the **Server** entry and click on **Publish**
- Right click on the **Server** entry and click on **Start**
- This will start the server

Step 4.1.6: Running the project

- To run the project, open a web browser and type:
http://localhost:8080/SimpleJSP

Step 4.1.7: Pushing the code to your GitHub repositories

- Open your command prompt and navigate to the folder where you have created your files.

cd <folder path>

- Initialize your repository using the following command:

git init

- Add all the files to your git repository using the following command:

git add .

- Commit the changes using the following command:

git commit . -m "Changes have been committed."

- Push the files to the folder you initially created using the following command:

git push -u origin master