

LAB 7: JSP

Lab Activities

Exercise 1: Converting the Add DVD Success View Component to a JSP Page

Task 1: Convert the Success Servlet

In this task, you convert the Success servlet code into a JSP page.

Complete the following steps:

1. Create JSP file with the following characteristics:
 JSP File Name: success
 Project: DVDLibrary
 Location: Web Pages
 Options: JSP File (Standard Syntax)
 Create a JSP Segment: not checked
2. Using the Success servlet class as a guide, convert the servlet code into JSP code. Use only JSP Standard Actions to do the conversion.

```

1  <%@page contentType="text/html" pageEncoding="UTF-8"%>
2  <!DOCTYPE html>
3  <jsp:useBean id="dvdItem" scope="request" type="com.dvd.model.DVDItem" />
4
5  <html>
6  <head>
7      <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
8      <title>DVD Library Application: Add DVD Success</title>
9  </head>
10 <body>
11     <h1>Add DVD Success (JSP)</h1>
12
13     You have add the following DVD: <br/>
14     Title: <jsp:getProperty name="dvdItem" property="title" /><br>
15     Year Release: <jsp:getProperty name="dvdItem" property="year" /><br>
16     Genre of film: <jsp:getProperty name="dvdItem" property="genre" /><br>
17     <br><a href='index.html'>Home</a>
18 </body>
19 </html>

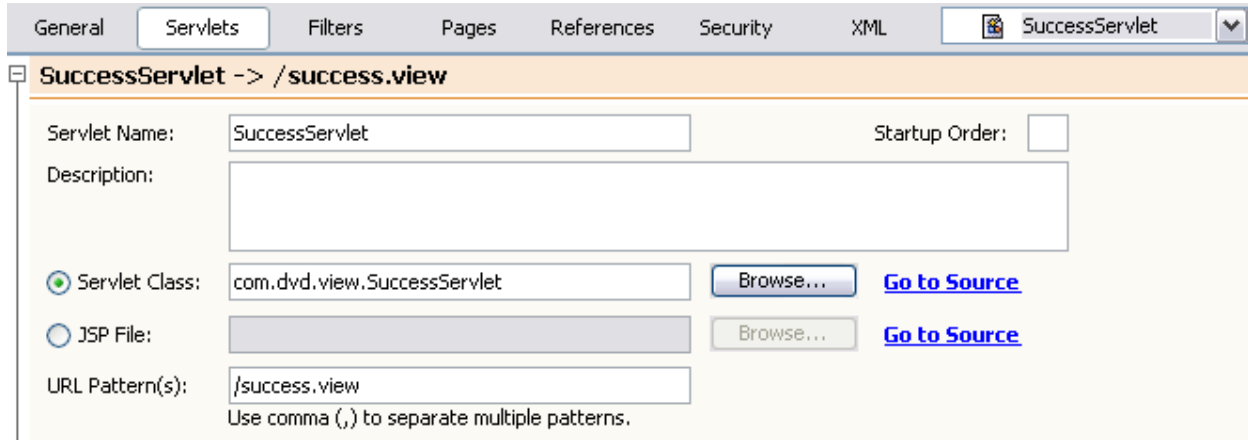
```

Task 2: Remove the Old Servlet Code (optional)

In this task, you remove the old SuccessServlet servlet and the configuration information.

Complete the following steps:

1. Delete the SuccessServlet class.
2. Open web.xml deployment descriptor and verify that the definition and mapping for the SuccessServlet servlet are removed.



General **Servlets** Filters Pages References Security XML SuccessServlet

SuccessServlet -> /success.view

Servlet Name: Startup Order:

Description:

☒ Servlet Class: [Go to Source](#)

☐ JSP File: [Go to Source](#)

URL Pattern(s):
Use comma (,) to separate multiple patterns.

Task 3: Deploy the Web Application

In this task, you build and deploy the DVDLibrary web application.

Complete the following steps:

1. Build the DVDLibrary web application. Correct any errors you encounter.
2. Deploy the DVDLibrary web application.

Task 4: Test the Web Application

In this task, you test the web application using web browser.

Complete the following steps:

1. Refresh the DVDLibrary web application home page. Test the Add DVD form page.

Exercise 2: Converting the Add DVD Form Component to a JSP Page

Task 1: Convert the AddDVDFormServlet Servlet

In this task, you convert the **add_dvd.html** code into a JSP page.

Complete the following steps:

1. Create JSP file with the following characteristics:
JSP File Name: add_dvd
Project: DVDLibrary
Location: Web Pages
Options: JSP File (Standard Syntax)
Create a JSP Segment: not checked
2. Using the **add_dvd.html** as a guide to convert the code into JSP code.
3. Set current year as default at field Year. (use JSP scriptlet to current year and expression to set the current year as default value)
4. Modify the index.html home page to change the link to the new Add DVD form JSP page.

Task 2: Create the JSP error page

Complete the following steps:

1. Create JSP file with the following characteristics:
 JSP File Name: error
 Project: DVDLibrary
 Location: Web Pages
 Options: JSP File (Standard Syntax)
 Create a JSP Segment: not checked
2. Using the AddDVDFormServlet servlet class as a guide, convert the servlet code into JSP code.
 Use only JSP Standard Actions to check error.

```

1  <%@page import="java.util.*"%>
2  <%@page contentType="text/html" pageEncoding="UTF-8"%>
3  <%
4      String genre_list = "Sci-Fi,Drama,Comedy";
5      String [] genres = null;
6      genres = genre_list.split(",");
7  %>
8  <!DOCTYPE html>
9  <html>
10     <head>
11         <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
12         <title>Add DVD Error</title>
13     </head>
14     <body>
15         <h1>Add DVD Error (JSP)</h1>
16         <%
17             List errorMsgs = (List)request.getAttribute("errorMsgs");
18             if (errorMsgs != null){
19                 %>
20                 <br>
21                 <font color="red">
22                     Please correct the following errors:
23                 <ul>
24                     <%
25                         Iterator items = errorMsgs.iterator();
26                         while (items.hasNext()) {
27                             String message = (String) items.next();
28                             %>
29                             <li><%= message %></li>
30                             <% } %>
31                     </ul>
32                 </font>
33             <% } %>
34     </body>

```

```

35      <br>
36      <form action='add_dvd.do' method='POST'>
37          Title: <input type='text' name='title' value='${param.title}'><br><br>
38          Year: <input type='text' name='year' value='${param.year}'> <br><br>
39
40          <% String genre = request.getParameter("genre"); %>
41          Genre: <select name='genre'>
42              <%
43                  for (int i = 0; i < genres.length; i++) {
44                      String genre_item = genres[i];
45                  %>
46                  <option value='<%= genre_item %>'
47                      <%
48                          if (genre_item.equals(genre)){
49                              out.print("selected");
50                          } %>
51                  > <%= genre_item %></option>
52              <% } %>
53          </select>
54          or new genre: <input type='text' name='newGenre' value='${param.newGenre}'>
55          <br><br>
56          <input type='Submit' value="Submit">
57      </form>
58  </body>
59 </html>

```

3. Modify the AddDVDServlet Servlet.
Open the AddDVDServlet class in the com.dvd.controller source package.
Modify the request dispatcher path in the sections of code that perform the dispatch if errors are encountered. (it should call error.jsp)

Task 3: Remove the Old Servlet Code (optional)

In this task, you remove the old Add DVD form servlet and the configuration information.

Complete the following steps:

1. Delete the AddDVDFormServlet class.
2. Open web.xml deployment descriptor and verify that the definition and mapping for the AddDVDFormServlet servlet are removed.

AddDVDFormServlet -> /add_dvd.view

| | | | |
|-------------------------------------------------|--------------------------------|---------------------------|------------------------------|
| Servlet Name: | AddDVDFormServlet | Startup Order: | <input type="text"/> |
| Description: | <input type="text"/> | | |
| <input checked="" type="radio"/> Servlet Class: | com.dvd.view.AddDVDFormServlet | Browse... | Go to Source |
| <input type="radio"/> JSP File: | <input type="text"/> | Browse... | Go to Source |
| URL Pattern(s): | /add_dvd.view | | |

Use comma (,) to separate multiple patterns.

Task 4: Deploy and Test the Web Application

In this task, you build and deploy the DVDLibrary web application.

Complete the following steps:

1. Build the DVDLibrary web application. Correct any errors you encounter.
2. Deploy the DVDLibrary web application.
3. Refresh the DVDLibrary web application home page.
4. Test the Add DVD form page.

Exercise 3: Converting the List Library View Component to a JSP Page

In the following exercises, you convert the List Library view into a JSP page.

Task 1: Convert the List Library Servlet

Complete the following steps:

1. Create a JSP page file with the following characteristics:

JSP File Name: list_library
 Project: DVDLibrary
 Location: Web Pages
 Options: JSP File (Standard Syntax)
 Create a JSP Segment: not checked

2. Using the ListLibraryServlet servlet class as a guide, convert the servlet code into JSP code.
3. Modify the index.html home page to change the link to the new List Library JSP page.

Task 2: Remove the Old Servlet Code (optional)

In this task, you build and deploy the DVDLibrary web application.

Complete the following steps:

1. Delete the ListLibraryServlet servlet class.
2. Open web.xml deployment descriptor and verify that the definition and mapping for the ListLibraryServlet servlet are removed.

The screenshot shows the Eclipse IDE's configuration for the ListLibraryServlet. The 'Servlets' tab is active, and the configuration for ListLibraryServlet is displayed. The Servlet Name is 'ListLibraryServlet', the Servlet Class is 'com.dvd.view.ListLibraryServlet', and the URL Pattern(s) is '/list_library.view'. The 'Go to Source' link is visible next to the Servlet Class and JSP File fields.

| General | Servlets | Filters | Pages | References | Security | XML |
|----------------------------------------------|----------|---------------------------------|-------|----------------|----------|------------------------------|
| ListLibraryServlet | | | | | | |
| ListLibraryServlet -> /list_library.view | | | | | | |
| Servlet Name: | | ListLibraryServlet | | Startup Order: | | |
| Description: | | | | | | |
| Servlet Class: | | com.dvd.view.ListLibraryServlet | | Browse... | | Go to Source |
| JSP File: | | | | Browse... | | Go to Source |
| URL Pattern(s): | | /list_library.view | | | | |
| Use comma (,) to separate multiple patterns. | | | | | | |

Task 3: Deploy the Web Application

In this task, you build and deploy the DVDLibrary web application.

Complete the following steps:

1. Build the DVDLibrary web application. Correct any errors you encounter.
2. Deploy the DVDLibrary web application.

Task 4: Test the Web Application

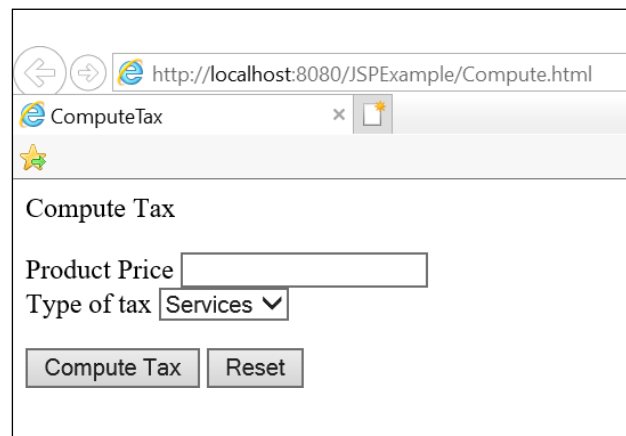
In this task, you test the web application using web browser.

Complete the following steps:

1. Refresh the DVDLibrary web application home page.
2. Test the List Library page.

Post lab Exercise

Write an HTML form to prompt the user to enter product price and type of tax, as shown in figure (a). The options for types of tax are sales (6%), good (2%) and services (4%).



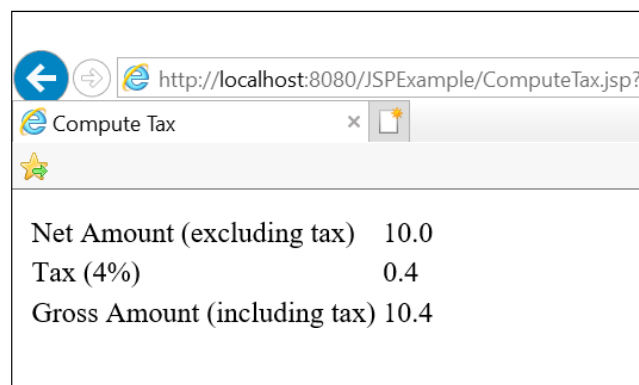
Compute Tax

Product Price

Type of tax Services ▼

Figure (a)

Clicking the Compute Tax button invokes a JSP to compute and display the tax, as shown in figure (b).



Net Amount (excluding tax) 10.0

Tax (4%) 0.4

Gross Amount (including tax) 10.4

Figure (b)