Practical 4b – Develop JSP using Eclipse for Java EE

Objectives:

- ❑ Learn to use Eclipse for Java EE for web application Development
  - Creating and configure JSP pages
  - Learn how to use scriptlets, expression to generate dynamic content

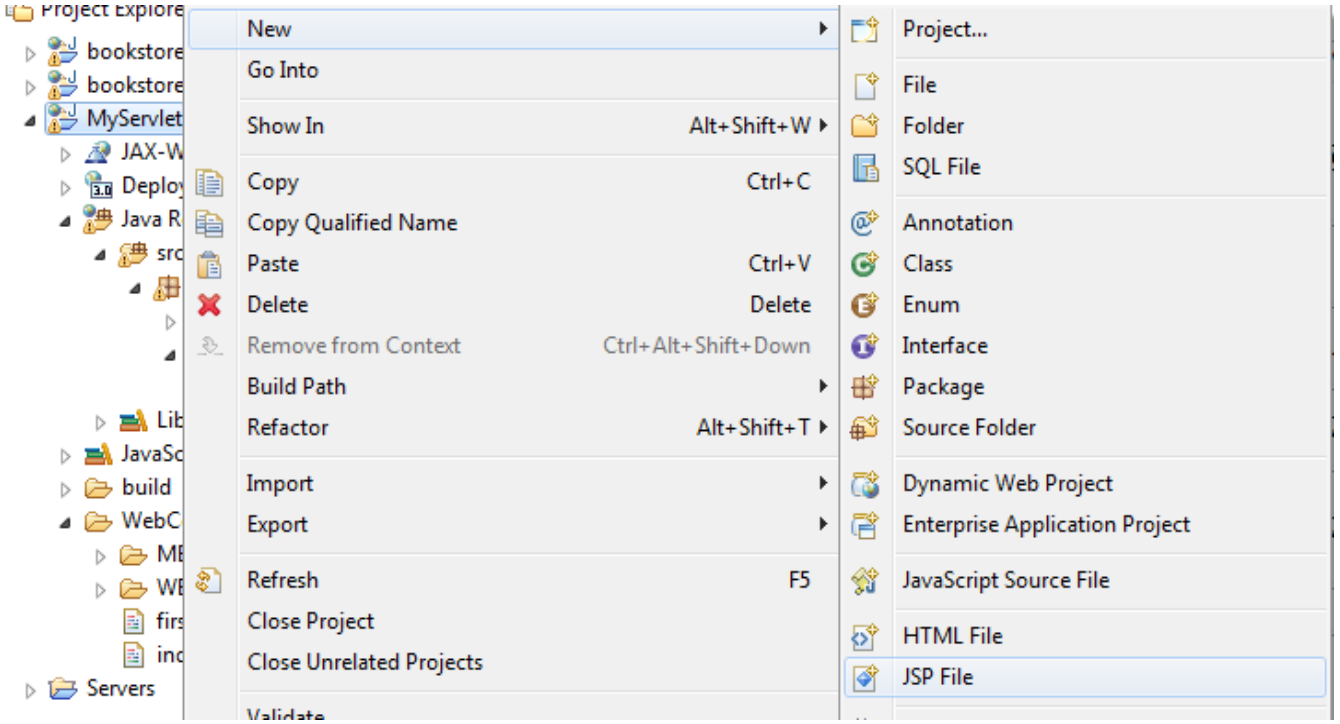
Prerequisites:

- Completed Practical 4a – Session tracking and Request forwarding
- MyServlet.war is available

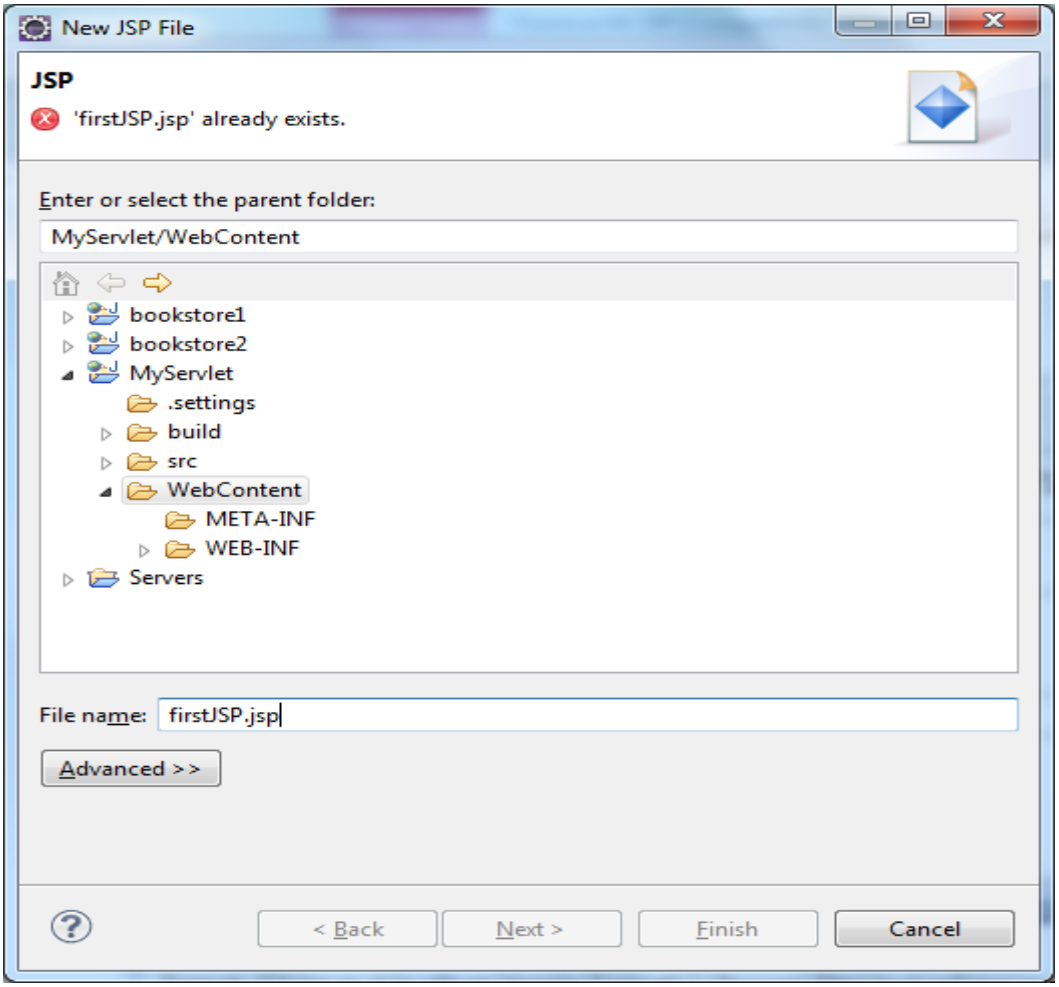
Creating Web application using JSP

In this workshop we will replace the "MainScreenServlet" with a JSP.

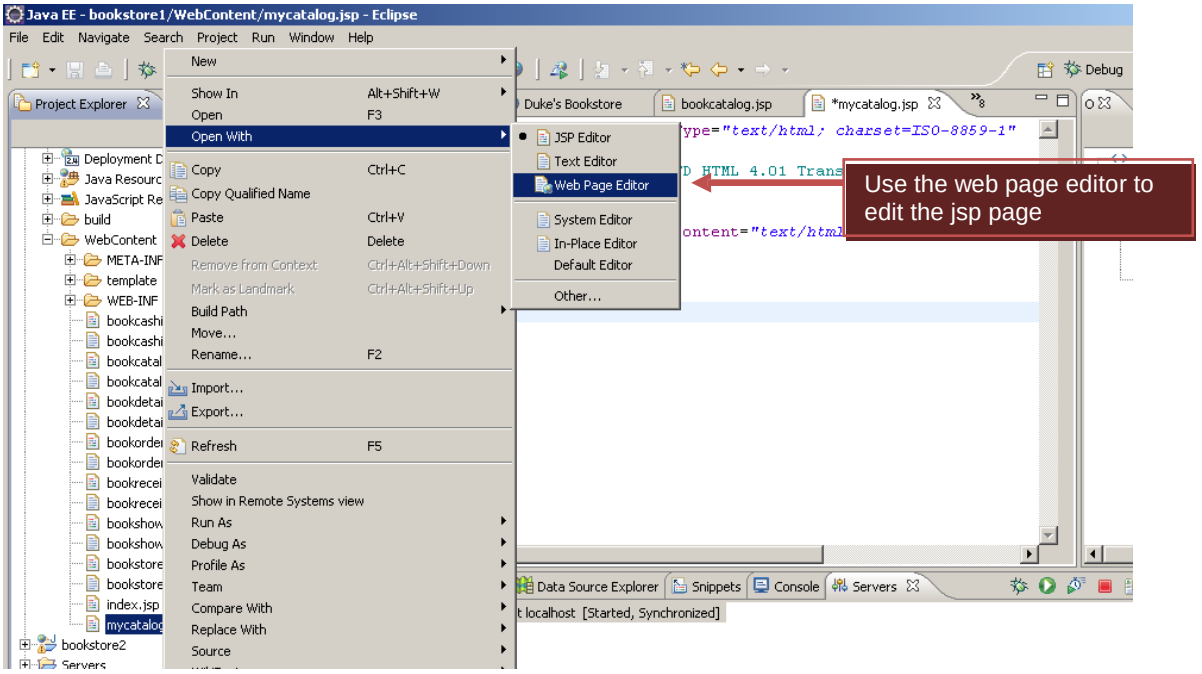
1) Startup Eclipse for Java EE. Load your previous practical project.
2) Create a JSP page, call it **firstJSP.jsp**. Right-Click project name→New



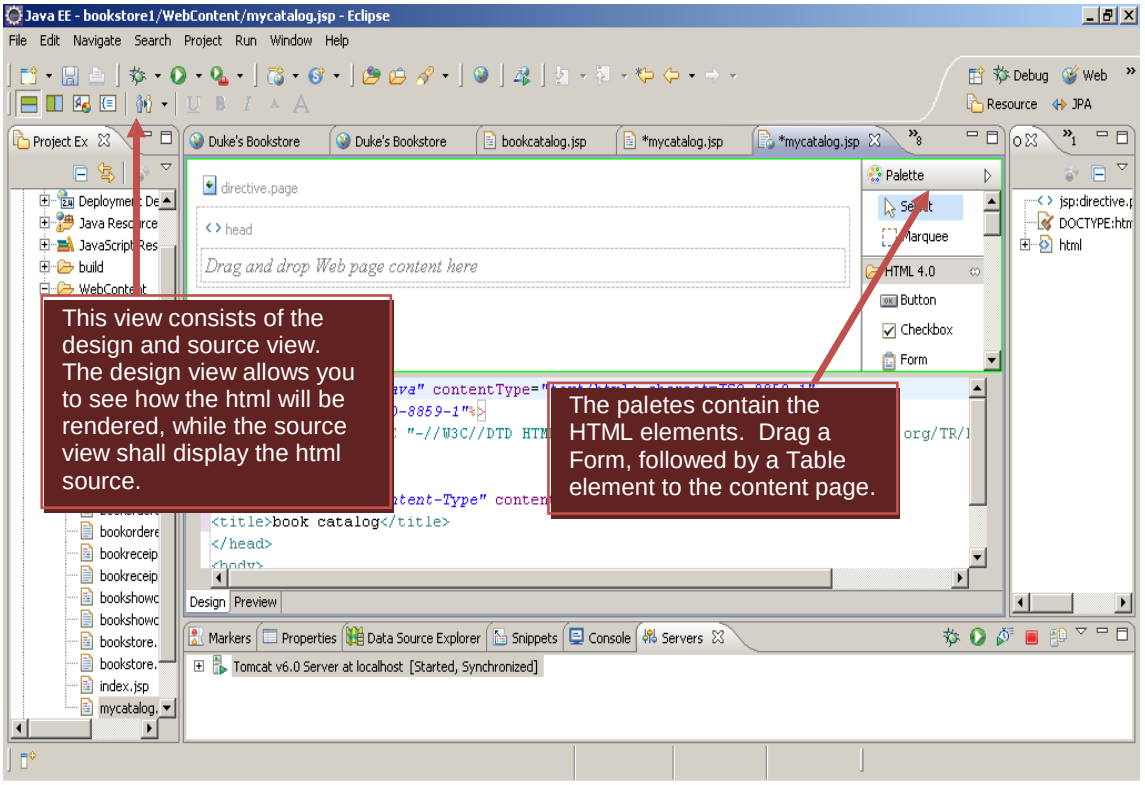
3) Select "Web Content" as the folder to save the JSP file.



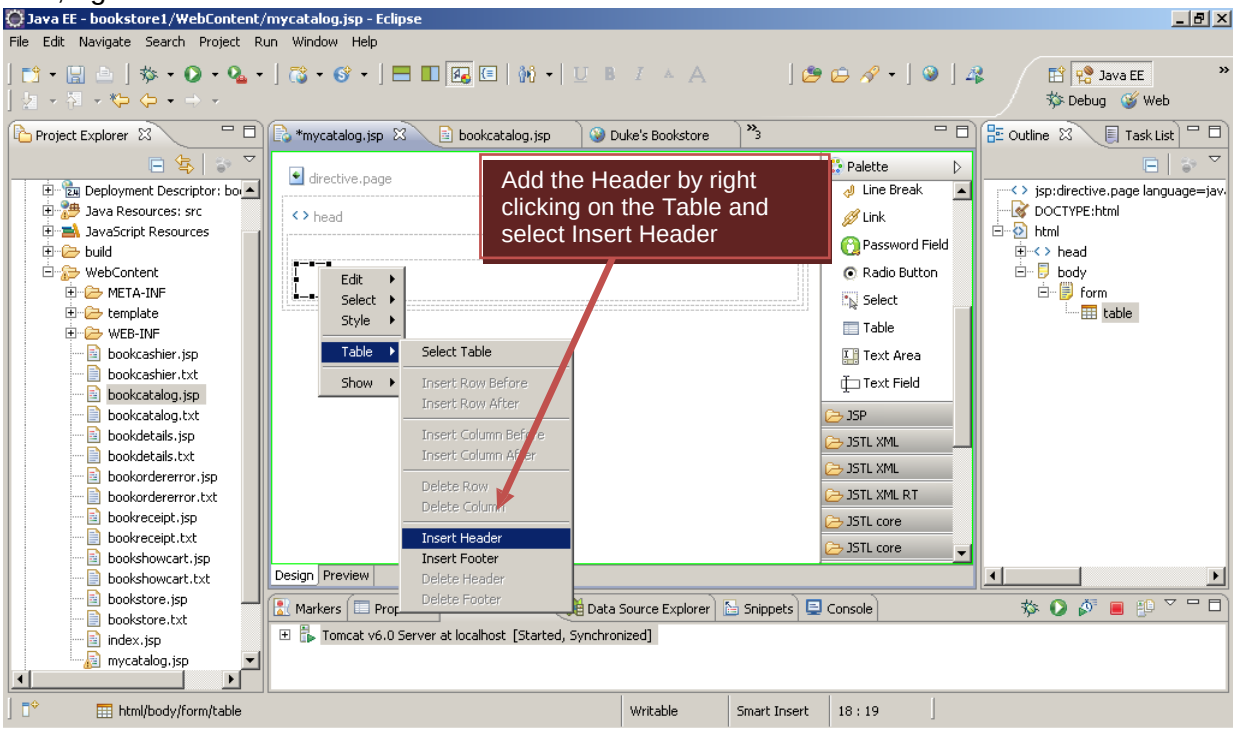
4) We shall use the web page editor to edit this page accordingly. Right click on jsp page, and select **open with→web page editor**.



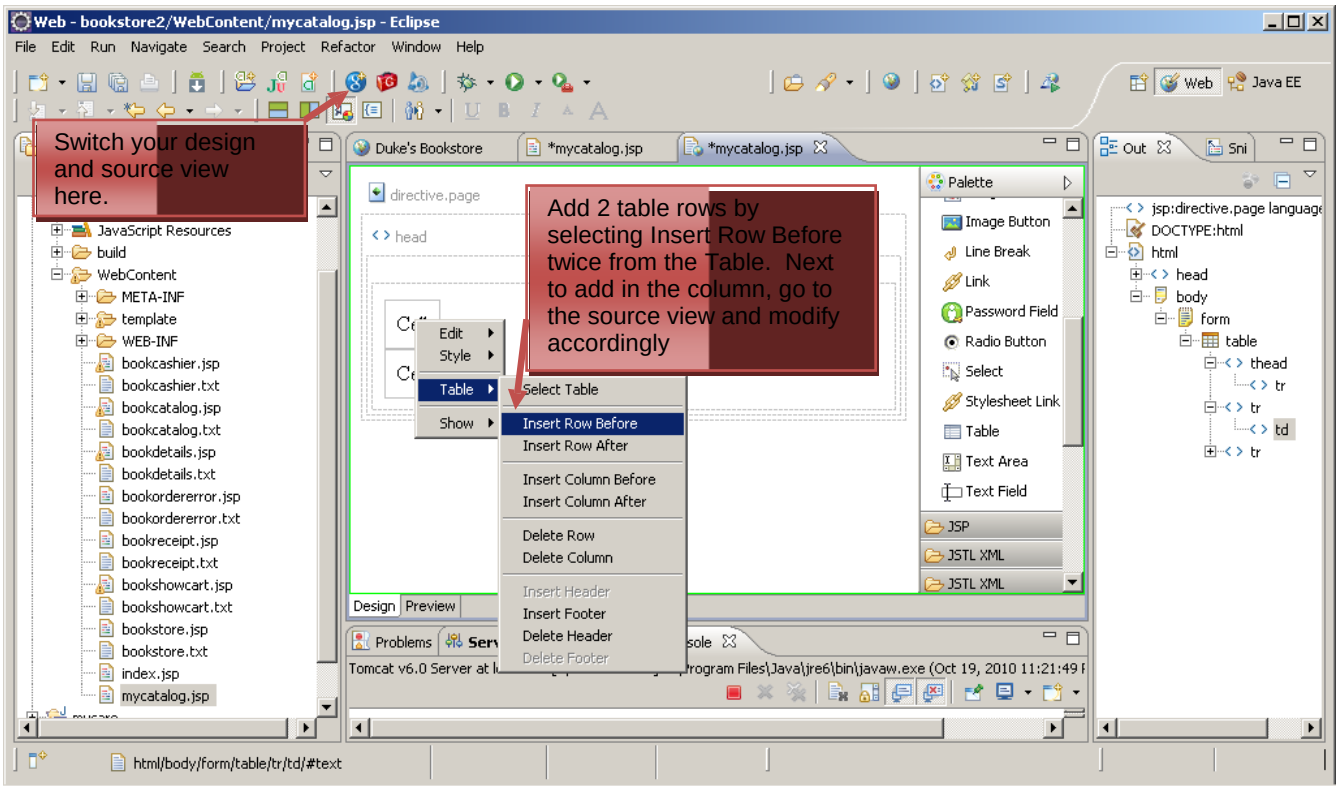
5) The web page editor allows you to edit the jsp page by drag and drop from the palette. You may switch the view accordingly on the top left hand corner. In general if you need more space, you may also expand the editor view or double click on the view to enlarge it. Drag and drop a **table** element onto the page.

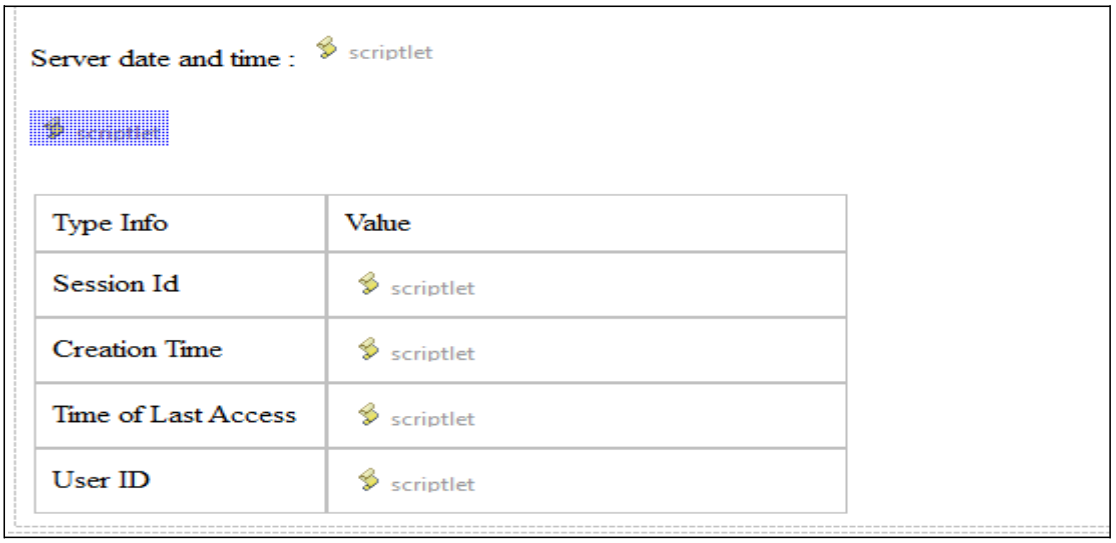


The view is not very obvious from the design page. In order to use the drag and drop feature of the IDE, some knowledge of HTML design will be helpful. Select the table element on the design view, right click and select Insert Header to add in the table header.



6) Now you are able to add column, row to the table accordingly by right click on the table on the design view. However, as you can see this might not be the best way to design your HTML. It is more efficient to toggle between the source and design view. Switch to the source view and modify your table so that you have 4 rows of 2 columns.





7) Add “scriptlet” from the Palette.

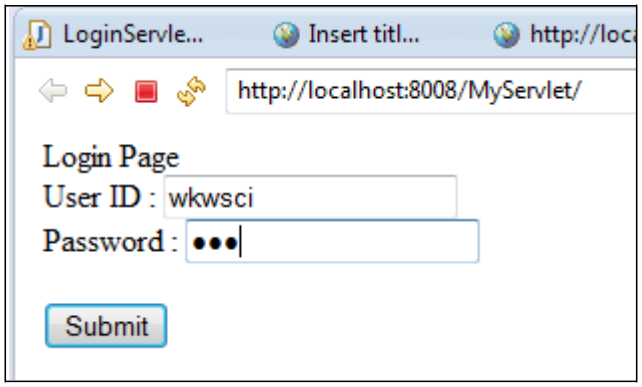
8) After modification, you should have a table with 1 header, and 4 rows of static and dynamic(scriptlets) data. Each of these rows has 2 columns. Your code should be close to the one display below.

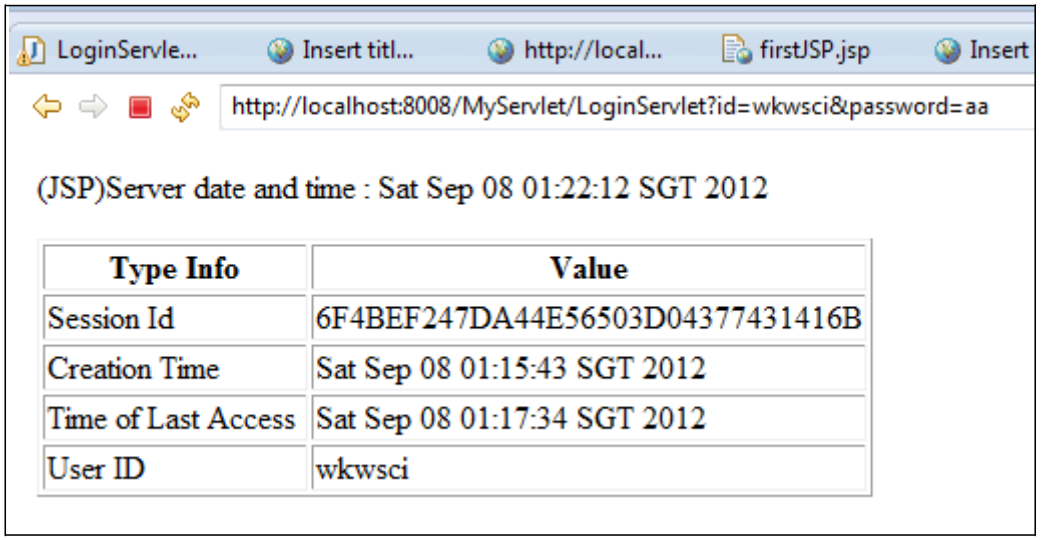
firstJSP.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ page import="java.util.Date" %>

<html>
<head>
<title>My First JSP</title>
</head>
  <body>

   <p>(JSP)Server date and time : <% out.print(new Date()); %></p>

   <p> <%
    application.setAttribute("applicationAttribute",new String("Accessible across sessions"));
    session.setAttribute("sessionAttribute",new String("Accessible across requests"));
    request.setAttribute("requestAttribute",new String("Accessible in a single requests"));
     %>
   </p>
   <table style="width: 238px;" border=1>


      <thead>
            <tr>
                  <th>Type Info</th>
                  <th>Value</th>
            </tr>
      </thead>
      <tr>
            <td>Session Id</td>
            <td> <jsp:scriptlet> out.print(session.getId()); </jsp:scriptlet></td>
      </tr>
      <tr>
            <td>Creation Time</td>
            <td><jsp:scriptlet> out.print(new Date(session.getCreationTime())); </jsp:scriptlet></td>
      </tr>
      <tr>
            <td>Time of last Access</td>
            <td><jsp:scriptlet>out.print(new Date(session.getLastAccessedTime())); </jsp:scriptlet></td>
      </tr>
      <tr>
            <td>User ID </td>
            <td><% out.print(session.getAttribute("id")); %></td>
      </tr>

   </table>
  </body>
</html>
```

8) Modify LoginServlet.java so that a request can be forwarded to firstJSP.jsp page.
request.getRequestDispatcher("/firstJSP.jsp").forward(request,response);

9) Let's run the project now by selecting Run As → Run on server.





Conclusion

In this workshop, you learn how to create a jsp using the Eclipse IDE, and use the web editor to design your page in the design and source view. You have also learnt how you can modify the html page into a jsp page by using scriptlets and expressions to replace the static content with the dynamic content.