Validation of the User Login.

DESCRIPTION

Create a servlet-based web application that shows a login page and validates it. The correct values are hard-coded. On successful login, a dashboard page is shown. The dashboard will provide a link for logging out. Incorrect logins need to be handled by showing an error message page.

Background of the problem statement:

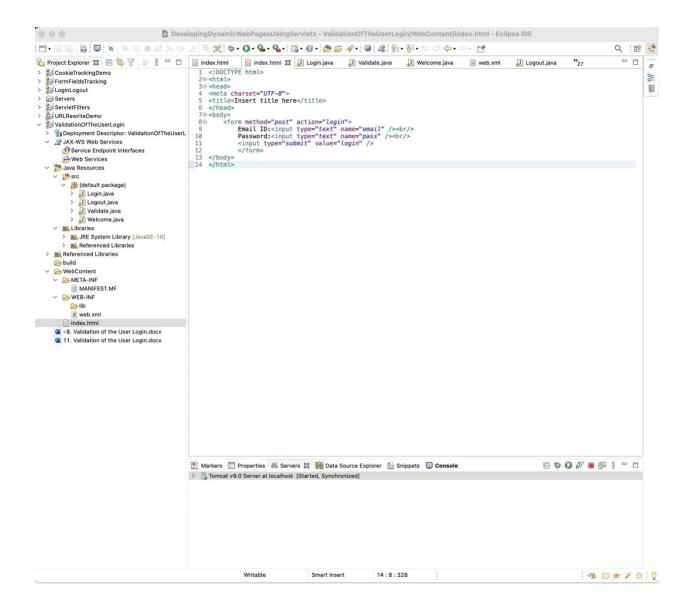
As a part of developing an e-commerce web application, you have to prototype a login scenario for the user. There is no database involved here, so you have to use fixed values for login email id and password.

You must use the following:

- Eclipse as the IDE
- Apache Tomcat as the web server
- HTML pages for the front end
- Servlets for backend processing

Following requirements should be met:

- Show a login form in HTML
- Handle invalid logins and show appropriate error messages using servlets
- Show the dashboard page using servlets
- Handle logouts using servlets
- Document the step-by-step process involved in completing this task



Index.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<form method="post" action="login">
Email ID:<input type="text" name="email" |><br/>>
```

```
Password:<input type="text" name="pass"/><br/>
<input type="submit" value="login"/>
</form>
</body>
</html>
```

```
DevelopingDynamicWebPagesUsingServlets - ValidationOfTheUserLogin/src/Login.java - Eclipse IDE
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🏠 Project Explorer 🕱 🚍 👺 🥫 🕝 📗 🖟 🗇 🔝 🦂 🖂 🔯 index.html 🔝 index.html 📗 Logini.java 🖫 💹 Validate.java 📝 Welcome.java 📦 web.xml 📝 Logout.java
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  CookieTrackingDemo
                                                 3 2⊕ import java.io.*;
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> FormFieldsTracking
> LoginLogout
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13⊕ /**
14 * 15 */
16 @We
17 pub
                                                                                                                                                                                                       * Servlet implementation class Login
*/
  Servers
ServletFilters
                                                       */
@WebServlet("/Login")
public class Login extends HttpServlet {
    private static final long serialVersionUID = 1L;
   URLRewriteDemo
  ValidationOfTheUserLogin
     Reployment Descriptor: ValidationOfTheUserL
  JAX-WS Web Services
                                                   200
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                                                              * Default constructor.
       Service Endpoint Interfaces
        Web Services
                                                            */
public Login() {
    super();
    // TODO Auto-generated constructor stub

√ May Java Resources

                                                 ✓ ∰ src
✓ ∰ (default package)
          > Login.java
> Logout.java
> Validate.java
                                                              * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
*/
                                                            */
protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOExcepti
// TODO Auto-generated method stub
response.getWriter().append("Served at: ").append(request.getContextPath());
     ∨ M Libraries
          JRE System Library [JavaSE-15]
          Referenced Libraries
  > Referenced Libraries
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                                                              * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
  ∨ (≥ WebContent
                                                            protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOExcept
                                                                 // TODO Auto-generated method stub
response.setContentType("text/html;charset=UTF-8");
PrintWriter out = response.getWriter();

→ WEB-INF

          ⊘lib
           x web.xml
                                                                 String email = request.getParameter("email");
String pass = request.getParameter("pass");
     if(Validate.checkUser(email, pass))
{
     11. Validation of the User Login.docx
                                                                      RequestDispatcher rs = request.getRequestDispatcher("Welcome");
rs.forward(request, response);
                                                                     out.println("Username or Password incorrect");
RequestDispatcher rs = request.getRequestDispatcher("index.html");
rs.include(request, response);
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```

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.annotation.*;
import javax.servlet.http.*;
import java.io.IOException;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
* Servlet implementation class Login
*/
@WebServlet("/Login")
public class Login extends HttpServlet {
       private static final long serialVersionUID = 1L;
  /**
   * Default constructor.
   */
  public Login() {
       super();
    // TODO Auto-generated constructor stub
  }
        * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
        */
//
        protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
```

```
//
               // TODO Auto-generated method stub
//
               response.getWriter().append("Served at: ").append(request.getContextPath());
//
       }
       /**
        * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
       protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
               // TODO Auto-generated method stub
               response.setContentType("text/html;charset=UTF-8");
     PrintWriter out = response.getWriter();
     String email = request.getParameter("email");
     String pass = request.getParameter("pass");
     if(Validate.checkUser(email, pass))
    {
       RequestDispatcher rs = request.getRequestDispatcher("Welcome");
       rs.forward(request, response);
    }
     else
     {
      out.println("Username or Password incorrect");
       RequestDispatcher rs = request.getRequestDispatcher("index.html");
       rs.include(request, response);
       }
       }
```

}

```
DevelopingDynamicWebPagesUsingServlets - ValidationOfTheUserLogin/src/Logout.java - Eclipse IDE
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> FormFieldsTracking
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Login.java

Logout.java

Validate.java

Welcome.java

Libraries
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Logout.java

import java.io.*;

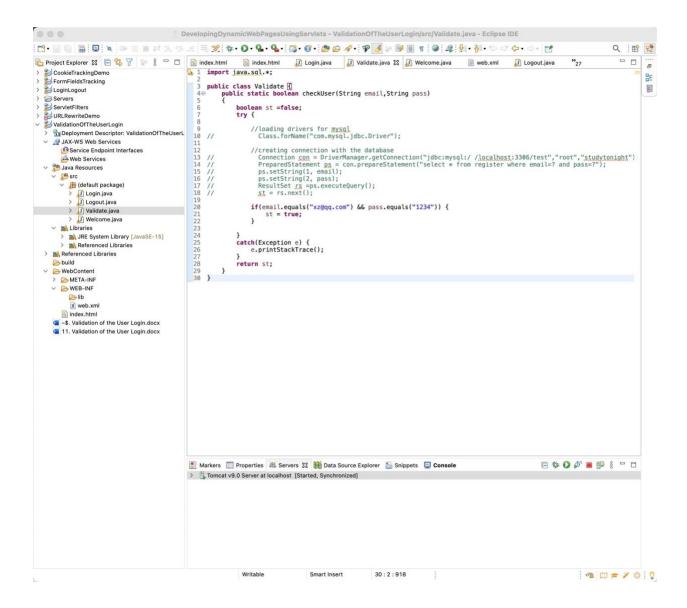
import java.io.PrintWriter;

import javax.servlet.http.HttpSession;

import java.io.IOException;

import javax.servlet.ServletException;

```
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
/**
* Servlet implementation class LoginLogout
*/
@WebServlet("/LoginLogout")
public class Logout extends HttpServlet {
       private static final long serialVersionUID = 1L;
  /**
   * Default constructor.
   */
  public Logout() {
       super();
    // TODO Auto-generated constructor stub
  }
       /**
        * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
        */
       protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
               // TODO Auto-generated method stub
               HttpSession session=request.getSession();
     session.invalidate();
    PrintWriter out = response.getWriter();
     out.println("<html><body>");
     out.println("Logged out of session.<br>");
```



Validate.java

```
import java.sql.*;

public class Validate {
   public static boolean checkUser(String email,String pass)
   {
      boolean st =false;
      try {
        //loading drivers for mysql
```

```
//
         Class.forName("com.mysql.jdbc.Driver");
        //creating connection with the database
//
         Connection <a href="mailto:con">con</a> = DriverManager.getConnection("jdbc:mysql:/
/localhost:3306/test","root","studytonight");
         PreparedStatement <u>ps</u> = con.prepareStatement("select * from register where email=? and
pass=?");
//
         ps.setString(1, email);
//
         ps.setString(2, pass);
//
         ResultSet <u>rs</u> =ps.executeQuery();
//
         \underline{st} = rs.next();
        if(email.equals("xz@qq.com") && pass.equals("1234")) {
                st = true;
        }
     }
     catch(Exception e) {
        e.printStackTrace();
     }
     return st;
  }
}
```

```
DevelopingDynamicWebPagesUsingServlets - ValidationOfTheUserLogin/src/Welcome.java - Eclipse IDE
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                                                           * Servlet implementation class Welcome */
                                                      9 * Serviet implementation class Welcome
10 */
11 @WebServlet("/Welcome")
2 public class Welcome extends HttpServlet {
13 private static final long serialVersionVID = 1L;
14
15 /**
  ServletFilters
URLRewriteDemo
∨ WalidationOfTheUserLogin
      Deployment Descriptor: ValidationOfTheUserL
                                                               /**
 * Default constructor.
     A JAX-WS Web Services
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        */
public Welcome() {
    super();
    // TODO Auto-generated constructor stub
  ✓ 🏞 Java Resources
✓ 🏞 src
✓ 🔠 (default package)
        (default package)

Login.java

Logout.java

Validate.java

Welcome.java
                                                               /**
    * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
    */
                                                                protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOExcepti
   > _____ Welcome.java

> _____ Libraries

> _____ JRE System Library [JavaSE-15]

> _____ Referenced Libraries

> _____ Referenced Libraries
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    * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
      ( build
                                                                protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOExcept
     // TODO Auto-generated method stub
response.setContentType("text/html;charset=UTF-8");
PrintWriter out = response.getWriter();
     > META-INF
      ⊘lib
            web.xml
         index.html
     -$. Validation of the User Login.docx
11. Validation of the User Login.docx
                                                                    HttpSession session=request.getSession(false);
String userId = null;
                                                                    out.println("<a href='logout'>Logout of session</a><br>");
                                                                    out.println("</body></html>");
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```

Welcome.java

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.annotation.*;
import javax.servlet.http.*;
import javax.servlet.ServletException;
```

```
import javax.servlet.annotation.WebServlet;
/**
* Servlet implementation class Welcome
@WebServlet("/Welcome")
public class Welcome extends HttpServlet {
       private static final long serialVersionUID = 1L;
  /**
  * Default constructor.
  public Welcome() {
       super();
    // TODO Auto-generated constructor stub
  }
       /**
        * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
        */
       protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
              // TODO Auto-generated method stub
       }
        * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
        */
       protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
              // TODO Auto-generated method stub
```

```
response.setContentType("text/html;charset=UTF-8");

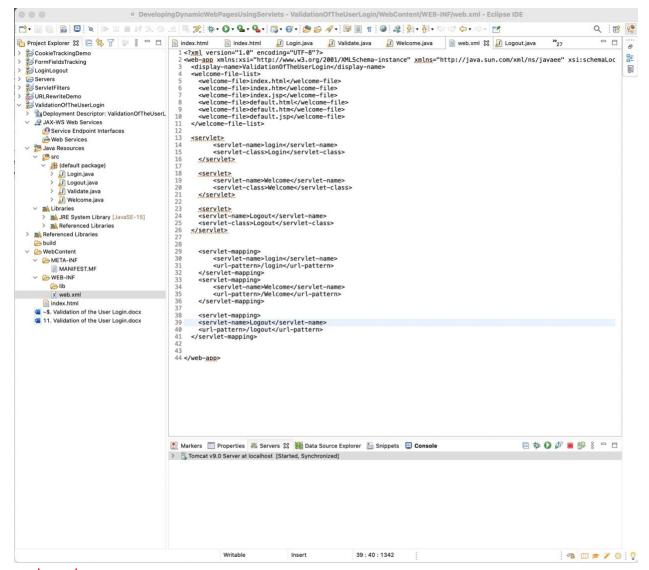
PrintWriter out = response.getWriter();

out.println("<html><body>");
out.println("Welcome user<br>");

HttpSession session=request.getSession(false);
String userId = null;

out.println("<a href="logout">Logout of session</a><br>");

out.println("</body></html>");
}
```



web.xml

- <welcome-file-list>
- <welcome-file>index.html</welcome-file>
- <welcome-file>index.htm</welcome-file>
- <welcome-file>index.jsp</welcome-file>

```
<welcome-file>default.html</welcome-file>
 <welcome-file>default.htm</welcome-file>
 <welcome-file>default.jsp</welcome-file>
</welcome-file-list>
<servlet>
   <servlet-name>login</servlet-name>
   <servlet-class>Login/servlet-class>
 </servlet>
 <servlet>
   <servlet-name>Welcome</servlet-name>
   <servlet-class>Welcome</servlet-class>
 </servlet>
 <servlet>
 <servlet-name>Logout</servlet-name>
 <servlet-class>Logout</servlet-class>
</servlet>
 <servlet-mapping>
   <servlet-name>login</servlet-name>
   <url-pattern>/login</url-pattern>
 </servlet-mapping>
 <servlet-mapping>
   <servlet-name>Welcome</servlet-name>
   <url-pattern>/Welcome</url-pattern>
 </servlet-mapping>
 <servlet-mapping>
```

<servlet-name>Logout</servlet-name>
<url-pattern>/logout</url-pattern>
</servlet-mapping>

</web-<u>app</u>>

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 ValidationOfTheUserLogin 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 the servlet-api.jar, then click on Cancel and exit the window
 - If it is not there, then click on Classpath entry and click on the 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**

Building the project

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

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 ValidationOfTheUserLogin 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

Running the project

• To run the project, open a web browser and type:

http://localhost:8080/ ValidationOfTheUserLogin

Step 1.10.11: 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:

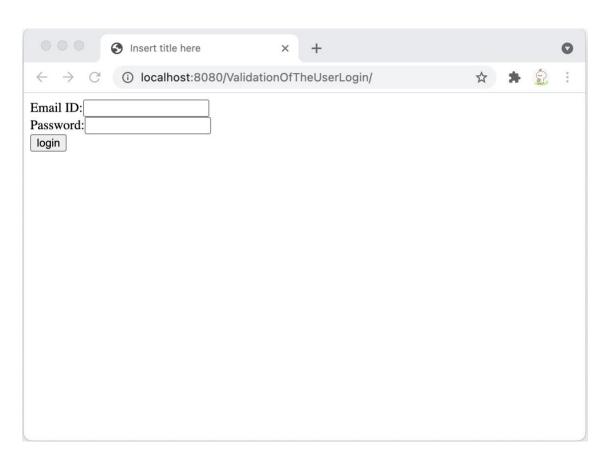
git add.

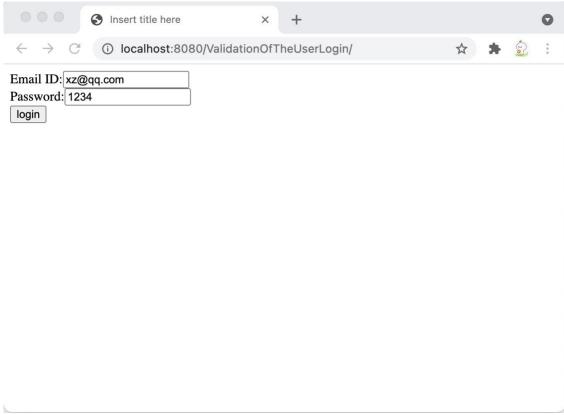
• Commit the changes using the following command:

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

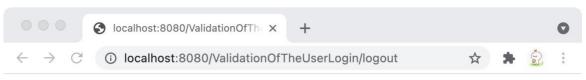
• Push the files to the folder you initially created using the following command:

git push -u origin master









Logged out of session.

