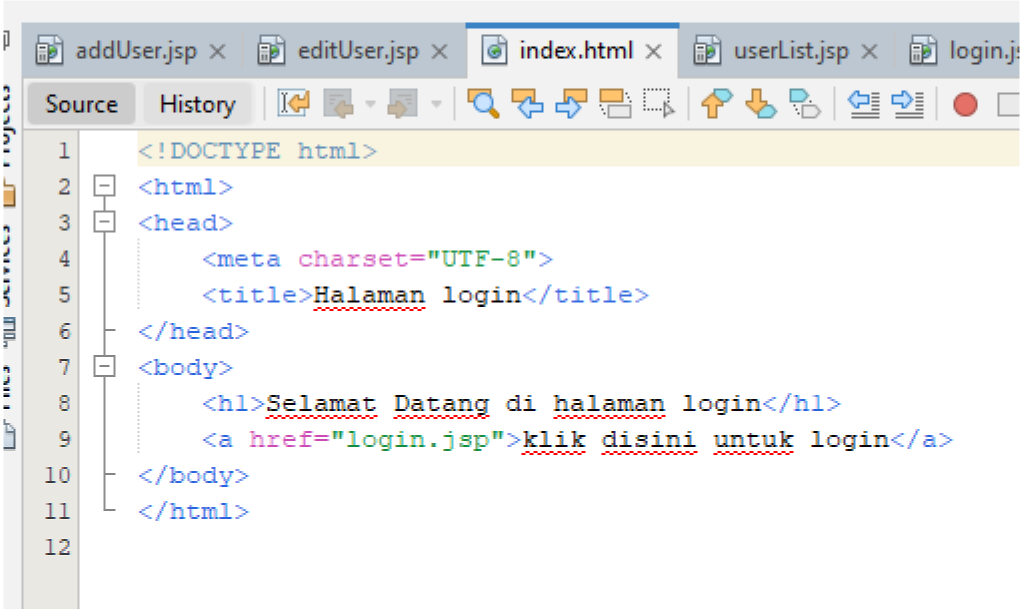
Nama : Helmi Efendi Lubis

NIM : 1301223338

Quiz Finish Code

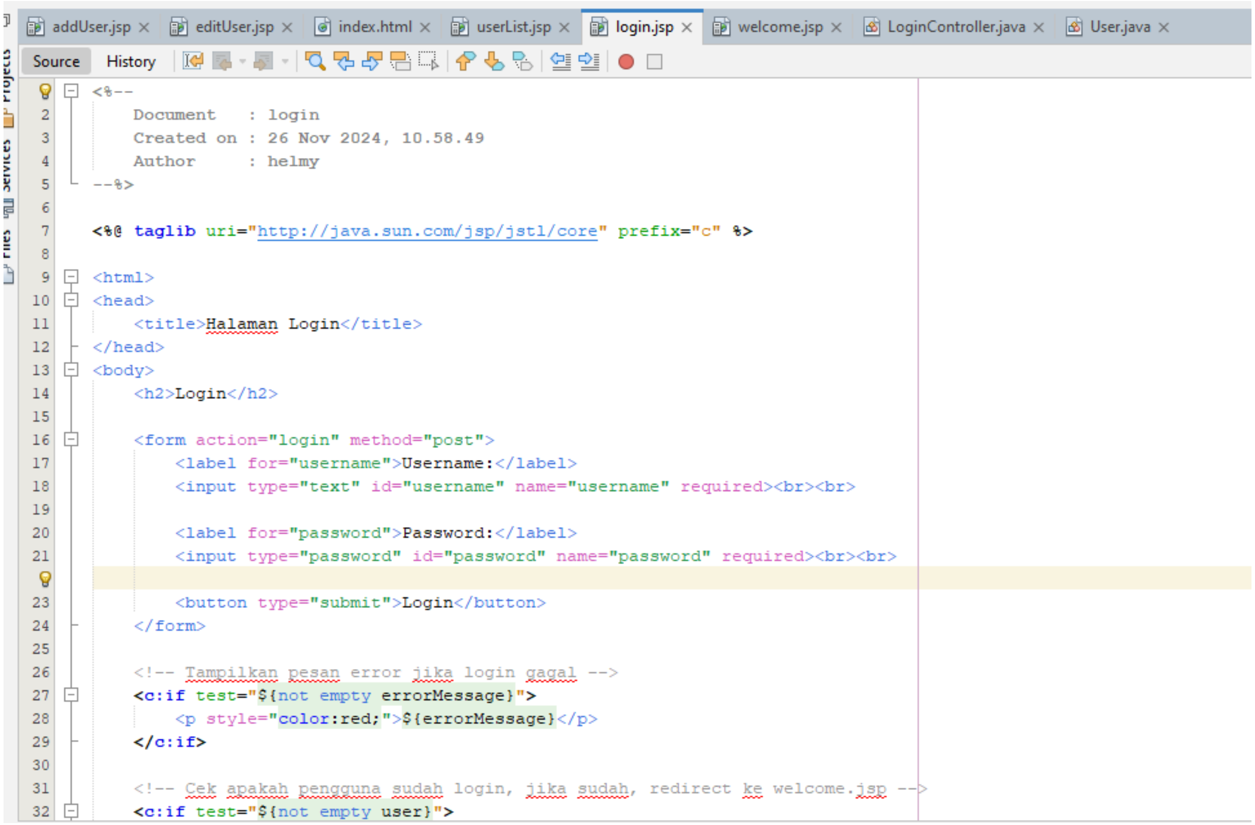
JSP (view)

- Index.html → tidak ada perubahan yang dilakukan pada file ini.

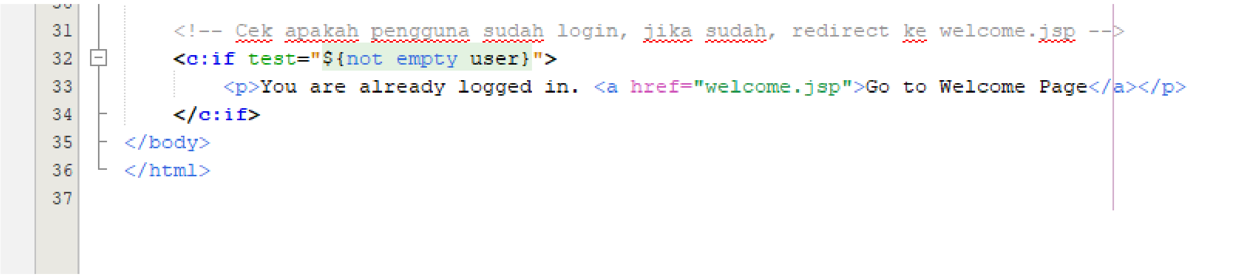


```
<!DOCTYPE html>
<html>
<head>
    <meta charset="UTF-8">
    <title>Halaman login</title>
</head>
<body>
    <h1>Selamat Datang di halaman login</h1>
    <a href="login.jsp">klik disini untuk login</a>
</body>
</html>
```

- login.jsp → tidak ada perubahan yang dilakukan pada file ini.

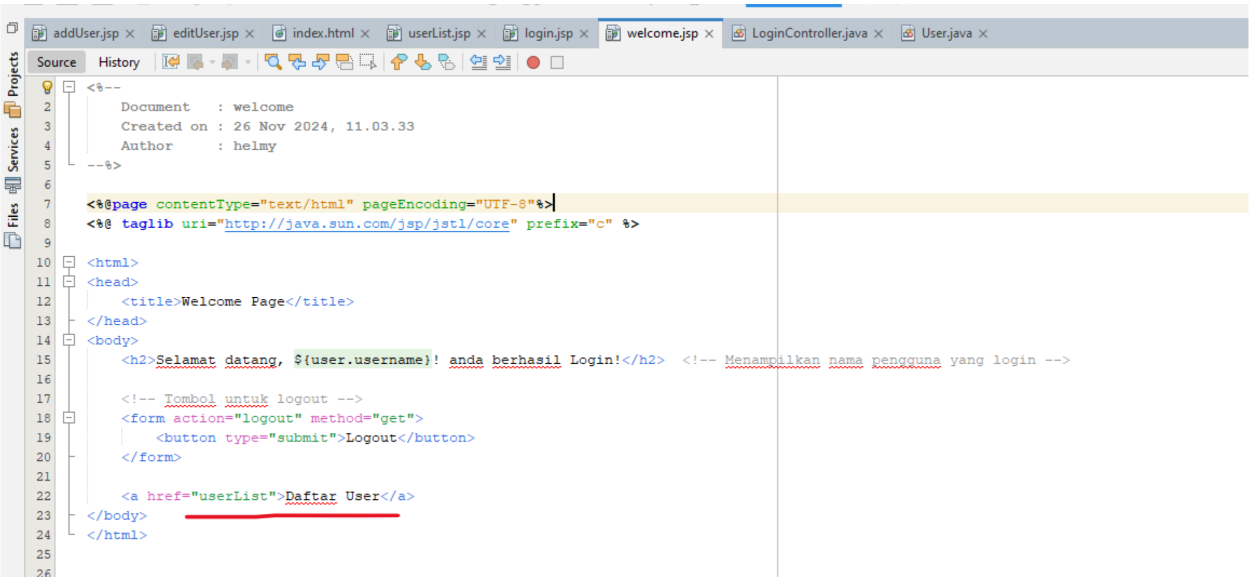


```
<%--
    Document   : login
    Created on : 26 Nov 2024, 10.58.49
    Author     : helmy
--%>

<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>

<html>
<head>
    <title>Halaman Login</title>
</head>
<body>
    <h2>Login</h2>

    <form action="login" method="post">
        <label for="username">Username:</label>
        <input type="text" id="username" name="username" required><br><br>

        <label for="password">Password:</label>
        <input type="password" id="password" name="password" required><br><br>

        <button type="submit">Login</button>
    </form>

    <!-- Tampilkan pesan error jika login gagal -->
    <c:if test="${not empty errorMessage}">
        <p style="color:red;">${errorMessage}</p>
    </c:if>

    <!-- Cek apakah pengguna sudah login, jika sudah, redirect ke welcome.jsp -->
    <c:if test="${not empty user}">
```



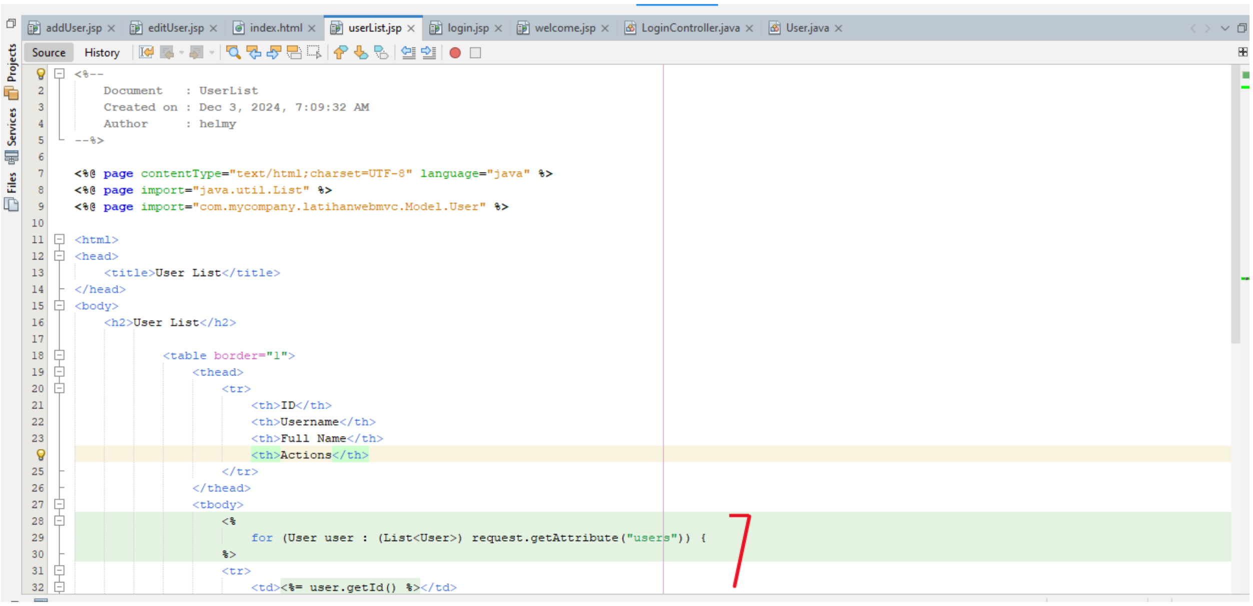
```
    <!-- Cek apakah pengguna sudah login, jika sudah, redirect ke welcome.jsp -->
    <c:if test="${not empty user}">
        <p>You are already logged in. <a href="welcome.jsp">Go to Welcome Page</a></p>
    </c:if>
</body>
</html>
```

- welcome.jsp → menambahkan tag <a> yang menuju ke userList untuk menampilkan daftar user. Karena sebelumnya setelah berhasil login, untuk menuju ke userList harus menuliskan secara langsung pada URL.

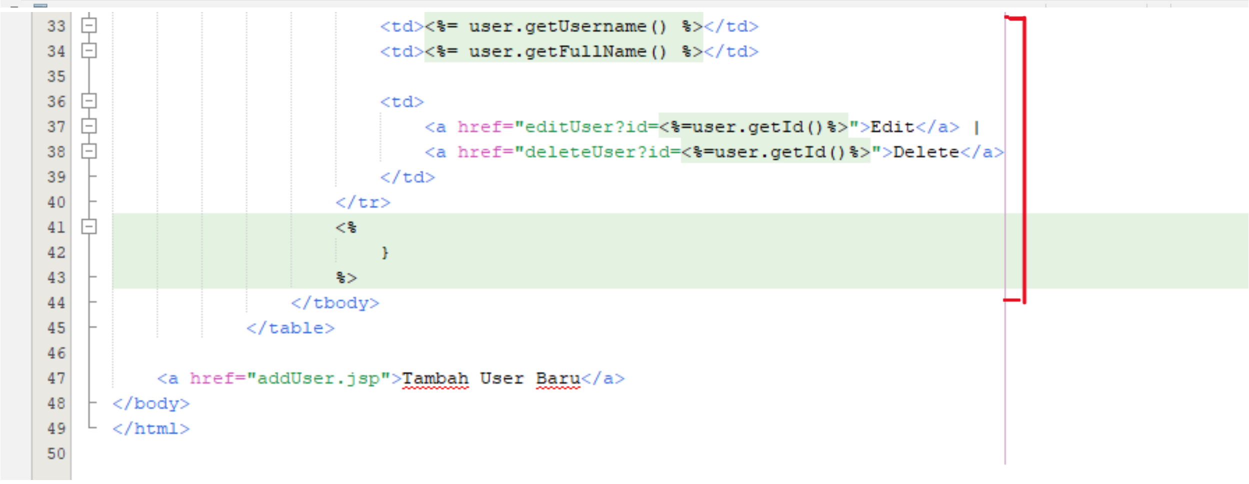


```
<%--
    Document   : welcome
    Created on : 26 Nov 2024, 11.03.33
    Author     : helmy
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>

<html>
<head>
    <title>Welcome Page</title>
</head>
<body>
    <h2>Selamat datang, ${user.username}! anda berhasil Login!</h2>  <!-- Menampilkan nama pengguna yang login -->

    <!-- Tombol untuk logout -->
    <form action="logout" method="get">
        <button type="submit">Logout</button>
    </form>

    <a href="userList">Daftar User</a>
</body>
</html>
```

- userList.jsp → mengubah run code java menggunakan prefix “c” dengan yang dicontohkan pada modul praktikum.

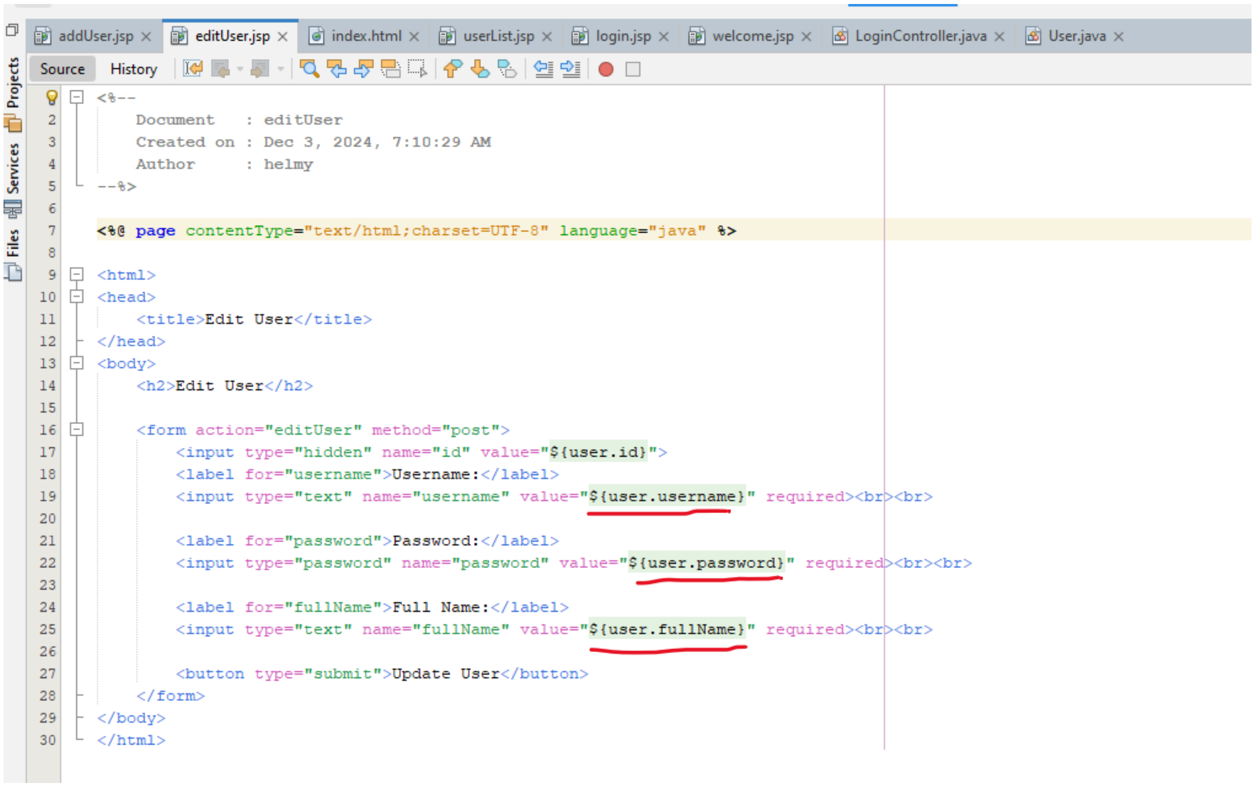


```
<%--
    Document   : UserList
    Created on : Dec 3, 2024, 7:09:32 AM
    Author     : helmy
--%>

<%@ page contentType="text/html;charset=UTF-8" language="java" %>
<%@ page import="java.util.List" %>
<%@ page import="com.mycompany.latihanwebmvc.Model.User" %>

<html>
<head>
    <title>User List</title>
</head>
<body>
    <h2>User List</h2>

            <table border="1">
                <thead>
                    <tr>
                        <th>ID</th>
                        <th>Username</th>
                        <th>Full Name</th>
                        <th>Actions</th>
                    </tr>
                </thead>
                <tbody>
                    <%
                        for (User user : (List<User>) request.getAttribute("users")) {
                    %>
                    <tr>
                        <td><%= user.getId() %></td>
```



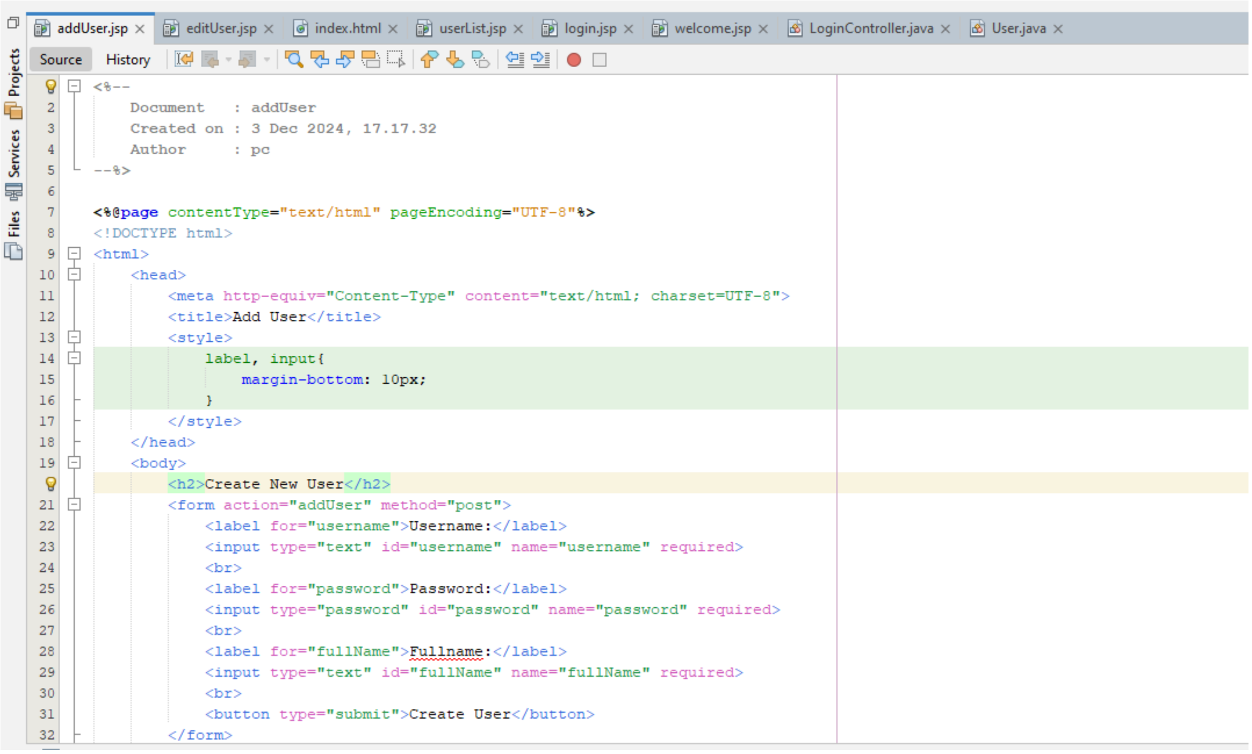
```
                        <td><%= user.getUsername() %></td>
                        <td><%= user.getFullName() %></td>

                        <td>
                            <a href="editUser?id=<%=user.getId()%>">Edit</a> |
                            <a href="deleteUser?id=<%=user.getId()%>">Delete</a>
                        </td>
                    </tr>
                    <%
                        }
                    %>
                </tbody>
            </table>

    <a href="addUser.jsp">Tambah User Baru</a>
</body>
</html>

```

- editUser.jsp → menyesuaikan attribute “value” pada tag <input> sesuai dengan model user.

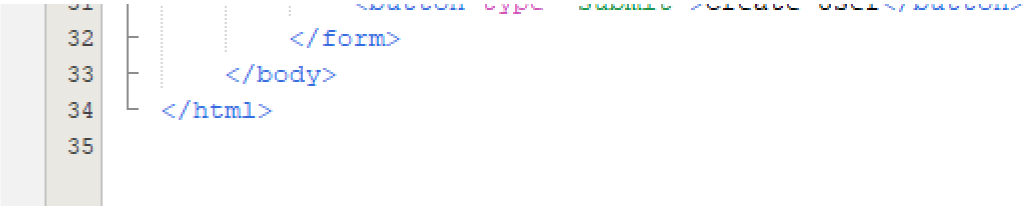


```
<%--
    Document   : editUser
    Created on : Dec 3, 2024, 7:10:29 AM
    Author     : helmy
--%>

<%@ page contentType="text/html;charset=UTF-8" language="java" %>

<html>
<head>
    <title>Edit User</title>
</head>
<body>
    <h2>Edit User</h2>

    <form action="editUser" method="post">
        <input type="hidden" name="id" value="${user.id}">
        <label for="username">Username:</label>
        <input type="text" name="username" value="${user.username}" required><br><br>

        <label for="password">Password:</label>
        <input type="password" name="password" value="${user.password}" required><br><br>

        <label for="fullName">Full Name:</label>
        <input type="text" name="fullName" value="${user.fullName}" required><br><br>

        <button type="submit">Update User</button>
    </form>
</body>
</html>
```

- addUser.jsp → menambahkan file jsp baru addUser.jsp dikarenakan sebelumnya belum tersedia. `



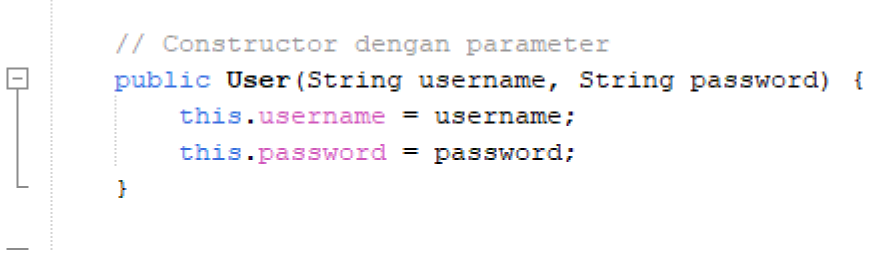
```
<%--
    Document   : addUser
    Created on : 3 Dec 2024, 17.17.32
    Author     : pc
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>Add User</title>
        <style>
            label, input{
                margin-bottom: 10px;
            }
        </style>
    </head>
    <body>
        <h2>Create New User</h2>
        <form action="addUser" method="post">
            <label for="username">Username:</label>
            <input type="text" id="username" name="username" required>
            <br>
            <label for="password">Password:</label>
            <input type="password" id="password" name="password" required>
            <br>
            <label for="fullName">Fullname:</label>
            <input type="text" id="fullName" name="fullName" required>
            <br>
            <button type="submit">Create User</button>
        </form>
```



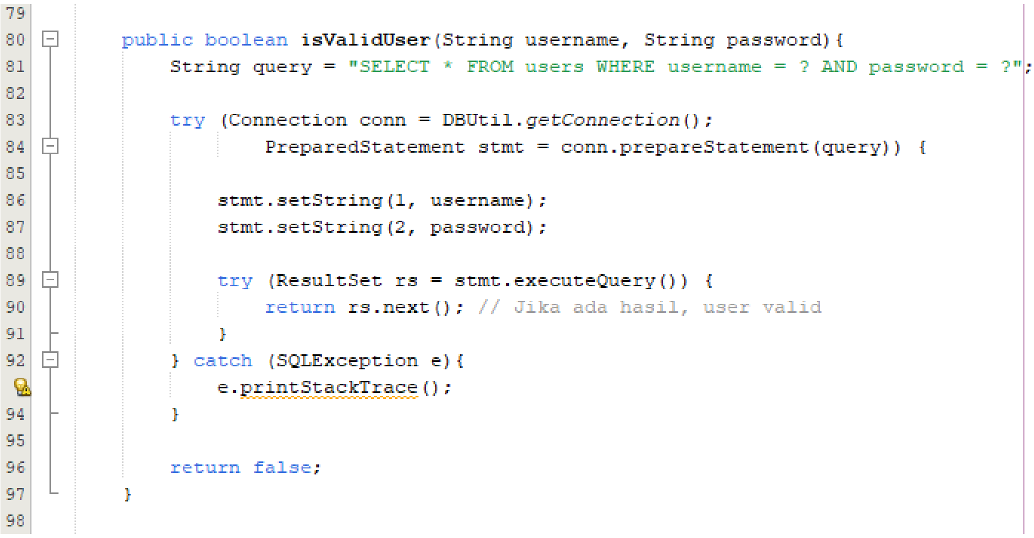
```
            <button type="submit">Create User</button>
        </form>
    </body>
</html>
```

Model

- User.java → menambahkan constructor dengan dua parameter yaitu username dan password. Lalu memodifikasi fungsi isValidUser agar dapat mengecek apakah user valid (terdapat dalam database).



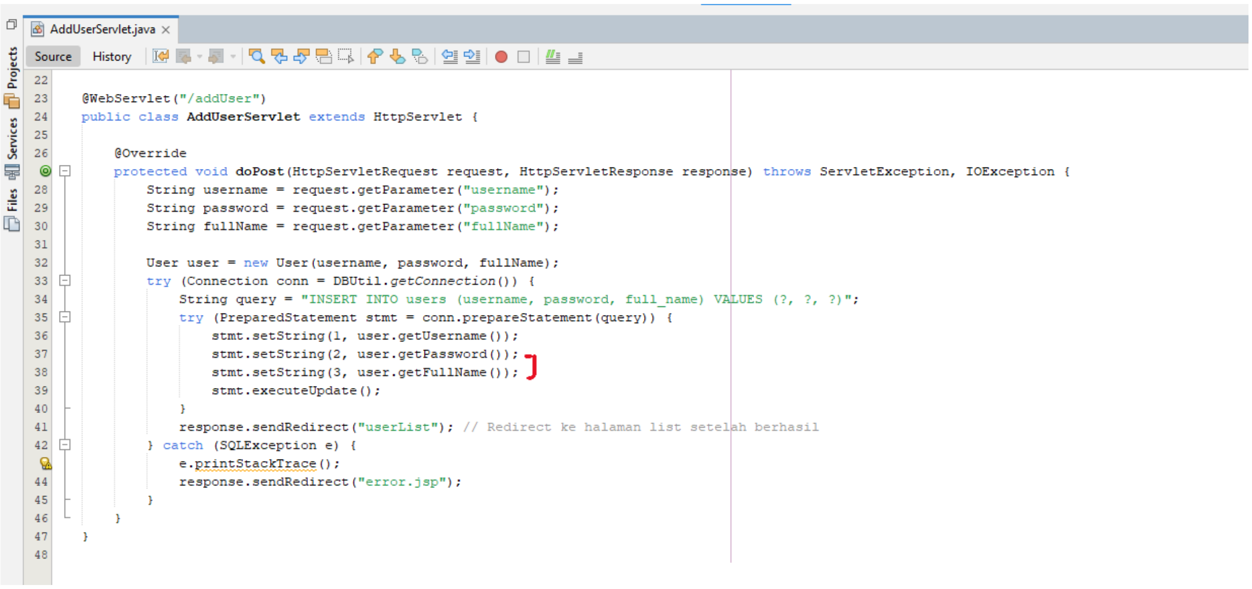
```
// Constructor dengan parameter
public User(String username, String password) {
    this.username = username;
    this.password = password;
}
```



```
public boolean isValidUser(String username, String password){
    String query = "SELECT * FROM users WHERE username = ? AND password = ?";

    try (Connection conn = DBUtil.getConnection();
            PreparedStatement stmt = conn.prepareStatement(query)) {

        stmt.setString(1, username);
        stmt.setString(2, password);

        try (ResultSet rs = stmt.executeQuery()) {
            return rs.next(); // Jika ada hasil, user valid
        }
    } catch (SQLException e){
        e.printStackTrace();
    }

    return false;
}
```

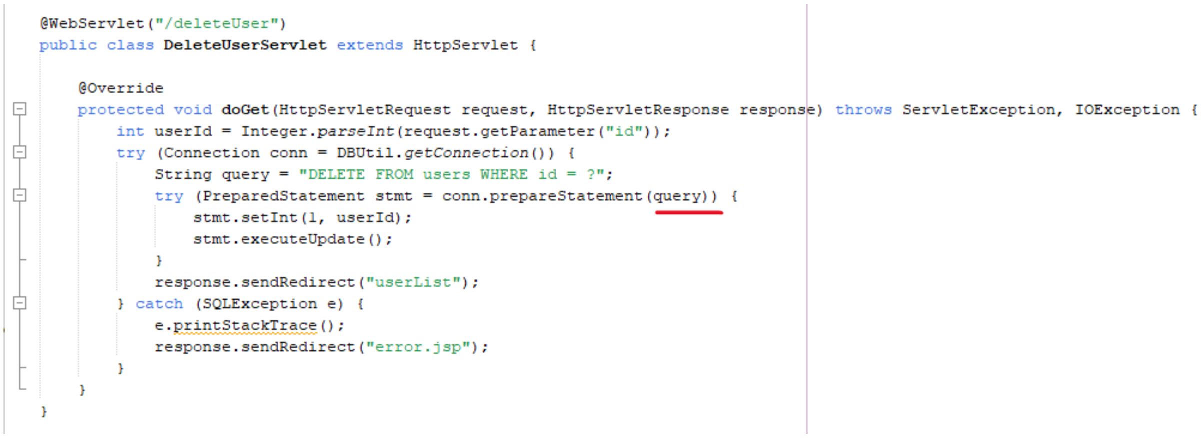
Servlet

- addUserServlet.java → memodifikasi servlet addUser dengan menambahkan parameter index yang belum terisi.



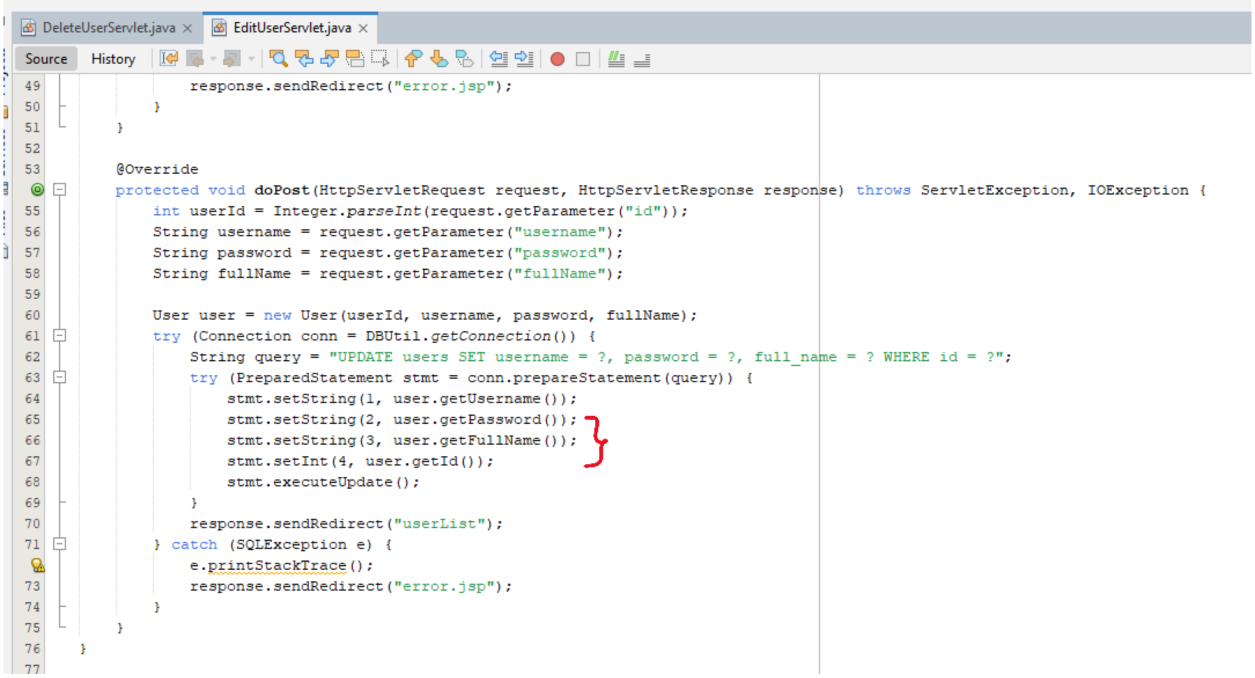
```
@WebServlet("/addUser")
public class AddUserServlet extends HttpServlet {

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        String username = request.getParameter("username");
        String password = request.getParameter("password");
        String fullName = request.getParameter("fullName");

        User user = new User(username, password, fullName);
        try (Connection conn = DBUtil.getConnection()) {
            String query = "INSERT INTO users (username, password, full_name) VALUES (?, ?, ?)";
            try (PreparedStatement stmt = conn.prepareStatement(query)) {
                stmt.setString(1, user.getUsername());
                stmt.setString(2, user.getPassword());
                stmt.setString(3, user.getFullName());
                stmt.executeUpdate();
            }
            response.sendRedirect("userList"); // Redirect ke halaman list setelah berhasil
        } catch (SQLException e) {
            e.printStackTrace();
            response.sendRedirect("error.jsp");
        }
    }
}
```

- deleteUserServlet.java → memodifikasi parameter prepareStatement agar menjalankan query.



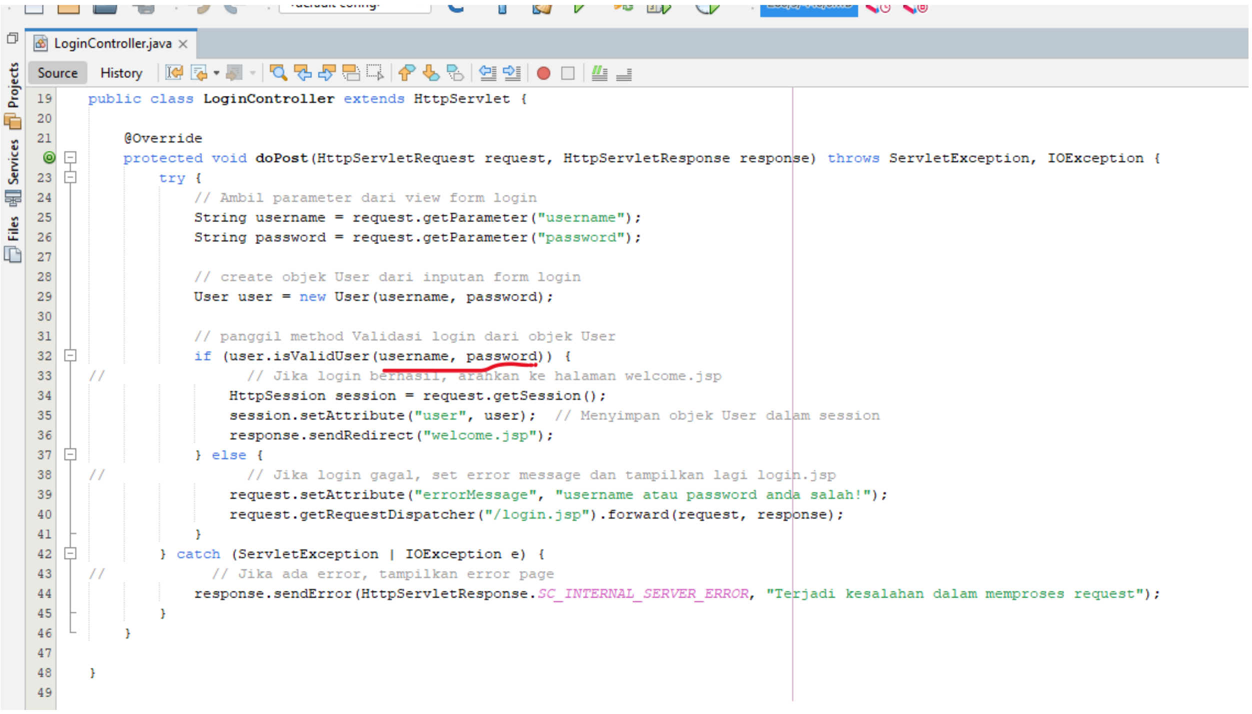
```
@WebServlet("/deleteUser")
public class DeleteUserServlet extends HttpServlet {

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        int userId = Integer.parseInt(request.getParameter("id"));
        try (Connection conn = DBUtil.getConnection()) {
            String query = "DELETE FROM users WHERE id = ?";
            try (PreparedStatement stmt = conn.prepareStatement(query)) {
                stmt.setInt(1, userId);
                stmt.executeUpdate();
            }
            response.sendRedirect("userList");
        } catch (SQLException e) {
            e.printStackTrace();
            response.sendRedirect("error.jsp");
        }
    }
}
```

- editUserServlet.java → memodifikasi procedure doPost dengan menambahkan statement set sebelum akhirnya query dijalankan.



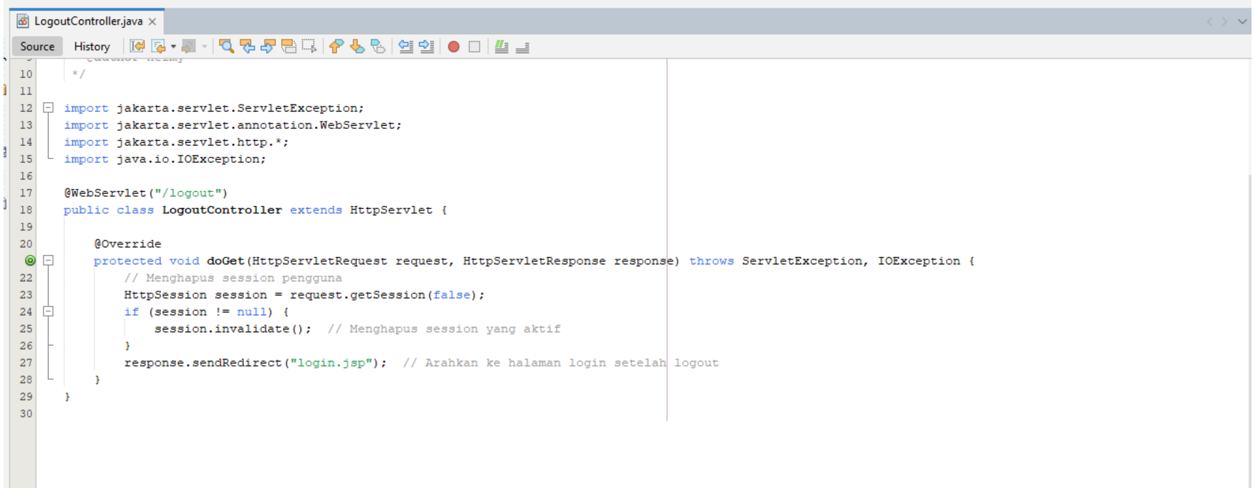
```java
                response.sendRedirect("error.jsp");
            }
        }

        @Override
        protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
            int userId = Integer.parseInt(request.getParameter("id"));
            String username = request.getParameter("username");
            String password = request.getParameter("password");
            String fullName = request.getParameter("fullName");

            User user = new User(userId, username, password, fullName);
            try (Connection conn = DBUtil.getConnection()) {
                String query = "UPDATE users SET username = ?, password = ?, full_name = ? WHERE id = ?";
                try (PreparedStatement stmt = conn.prepareStatement(query)) {
                    stmt.setString(1, user.getUsername());
                    stmt.setString(2, user.getPassword());
                    stmt.setString(3, user.getFullName());
                    stmt.setInt(4, user.getId());
                    stmt.executeUpdate();
                }
                response.sendRedirect("userList");
            } catch (SQLException e) {
                e.printStackTrace();
                response.sendRedirect("error.jsp");
            }
        }
    }
```

- loginController.java → melakukan uncomment terhadap code yang sudah ada, lalu menyesuaikan parameter isValidUser sesuai yang ada pada Model User.



```java
public class LoginController extends HttpServlet {

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        try {
            // Ambil parameter dari view form login
            String username = request.getParameter("username");
            String password = request.getParameter("password");

            // create objek User dari inputan form login
            User user = new User(username, password);

            // panggil method Validasi login dari objek User
            if (user.isValidUser(username, password)) {
//                  // Jika login berhasil, arahkan ke halaman welcome.jsp
                HttpSession session = request.getSession();
                session.setAttribute("user", user);  // Menyimpan objek User dalam session
                response.sendRedirect("welcome.jsp");
            } else {
//                  // Jika login gagal, set error message dan tampilkan lagi login.jsp
                request.setAttribute("errorMessage", "username atau password anda salah!");
                request.getRequestDispatcher("/login.jsp").forward(request, response);
            }
        } catch (ServletException | IOException e) {
//              // Jika ada error, tampilkan error page
            response.sendError(HttpServletResponse.SC_INTERNAL_SERVER_ERROR, "Terjadi kesalahan dalam memproses request");
        }
    }

}
```

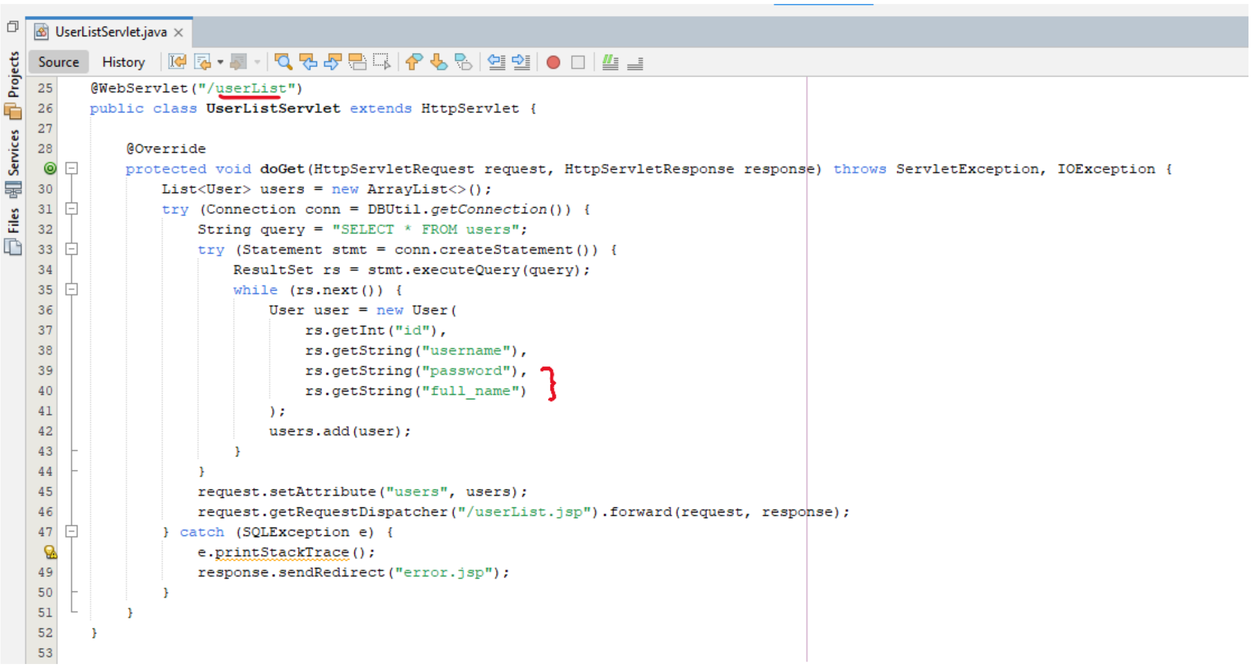
- logoutController.java → tidak ada perubahan yang dilakukan pada file ini.



```java
 */

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.*;
import java.io.IOException;

@WebServlet("/logout")
public class LogoutController extends HttpServlet {

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        // Menghapus session pengguna
        HttpSession session = request.getSession(false);
        if (session != null) {
            session.invalidate();  // Menghapus session yang aktif
        }
        response.sendRedirect("login.jsp");  // Arahkan ke halaman login setelah logout
    }
}
```

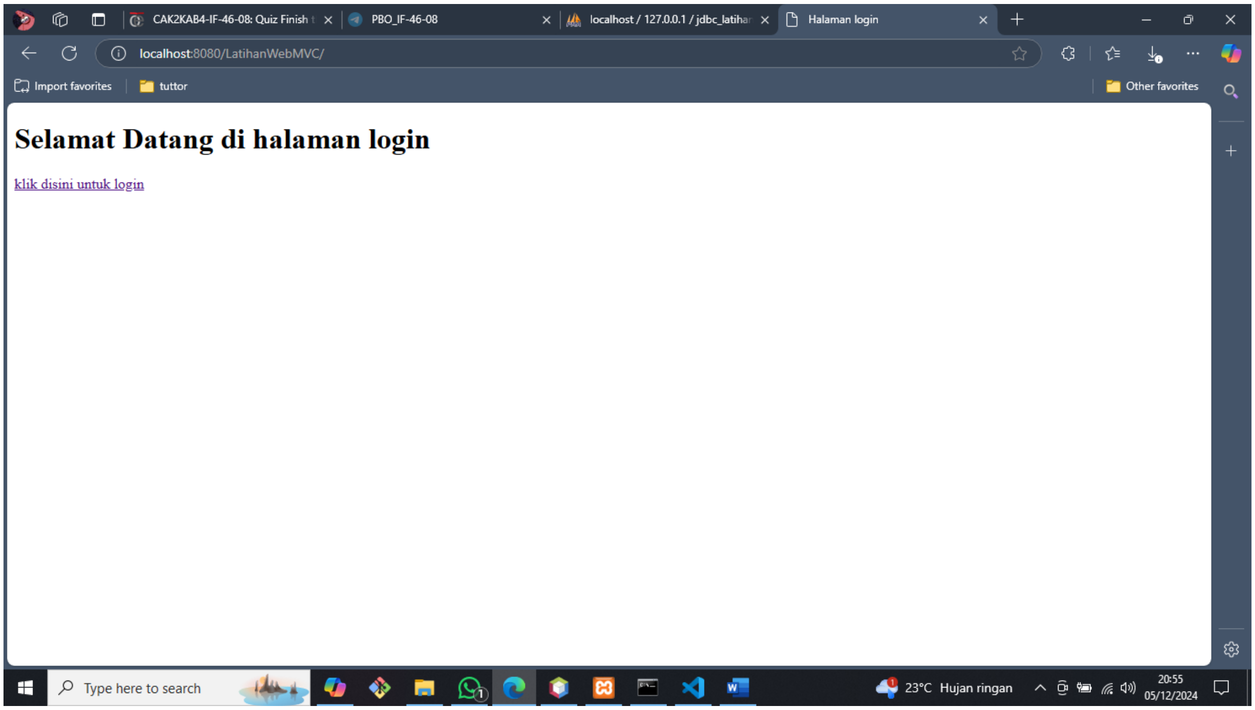
- userListServlet.java → menyesuaikan nama file userList pada line 25 sesuai dengan nama file userList.JSP, karena sebelumnya huruf ‘U’ nya besar.

  memodifikasi procedure doGet dengan menambahkan ResultSet yang belum ada.



```java
25  @WebServlet("/userList")
26  public class UserListServlet extends HttpServlet {
27
28      @Override
29      protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
30          List<User> users = new ArrayList<>();
31          try (Connection conn = DBUtil.getConnection()) {
32              String query = "SELECT * FROM users";
33              try (Statement stmt = conn.createStatement()) {
34                  ResultSet rs = stmt.executeQuery(query);
35                  while (rs.next()) {
36                      User user = new User(
37                          rs.getInt("id"),
38                          rs.getString("username"),
39                          rs.getString("password"),
40                          rs.getString("full_name")
41                      );
42                      users.add(user);
43                  }
44              }
45              request.setAttribute("users", users);
46              request.getRequestDispatcher("/userList.jsp").forward(request, response);
47          } catch (SQLException e) {
48              e.printStackTrace();
49              response.sendRedirect("error.jsp");
50          }
51      }
52  }
53
```

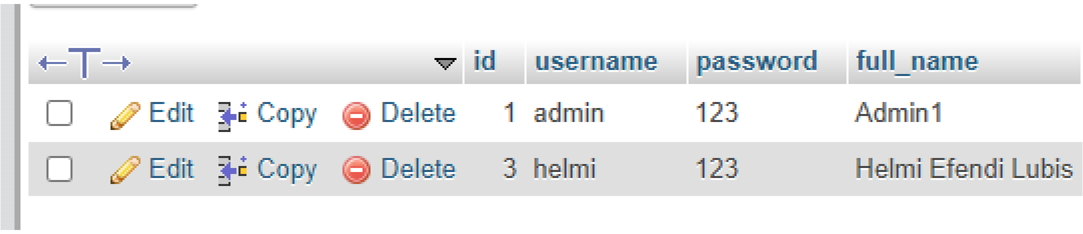
Uji Coba



Selamat Datang di halaman login

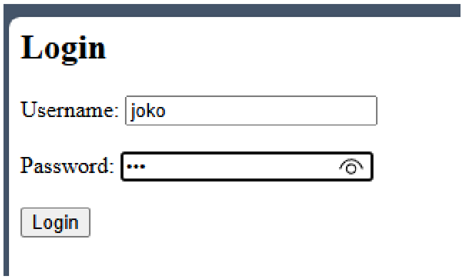
klik disini untuk login

- Daftar user pada database:



				id	username	password	full_name
□	Edit	Copy	Delete	1	admin	123	Admin1
□	Edit	Copy	Delete	3	helmi	123	Helmi Efendi Lubis

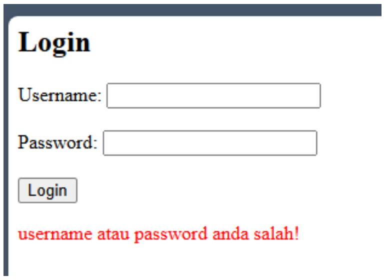
1. Login dengan data user yang tidak tersedia dalam database



Login

Username: joko

Password: •••



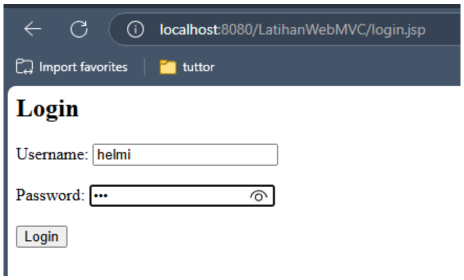
Login

Username:

Password:

username atau password anda salah!

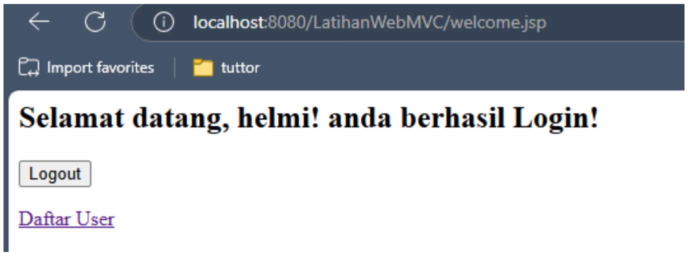
2. Login dengan menggunakan data user yang tersedia pada database. Sebagai contoh kita akan login menggunakan username “helmi”.



Login

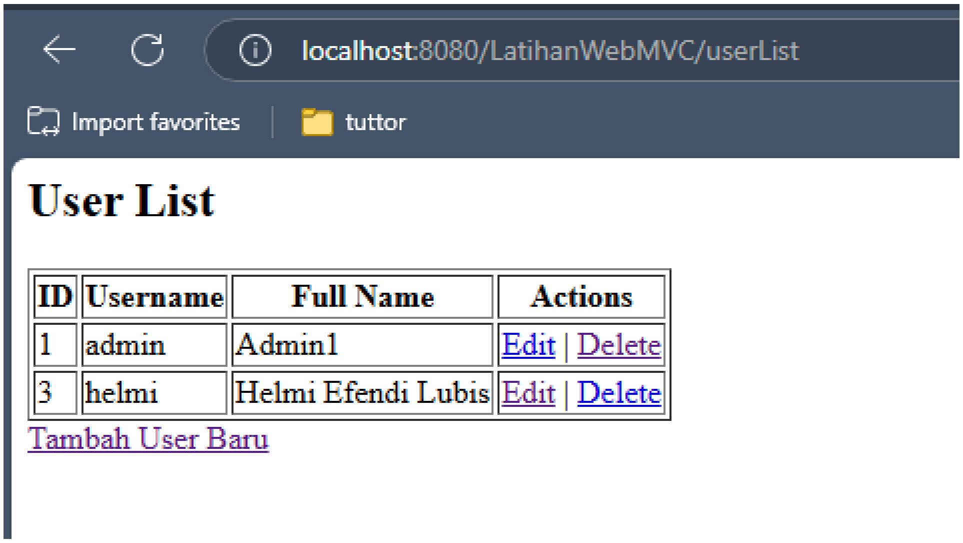
Username: helmi

Password: •••



Selamat datang, helmi! anda berhasil Login!

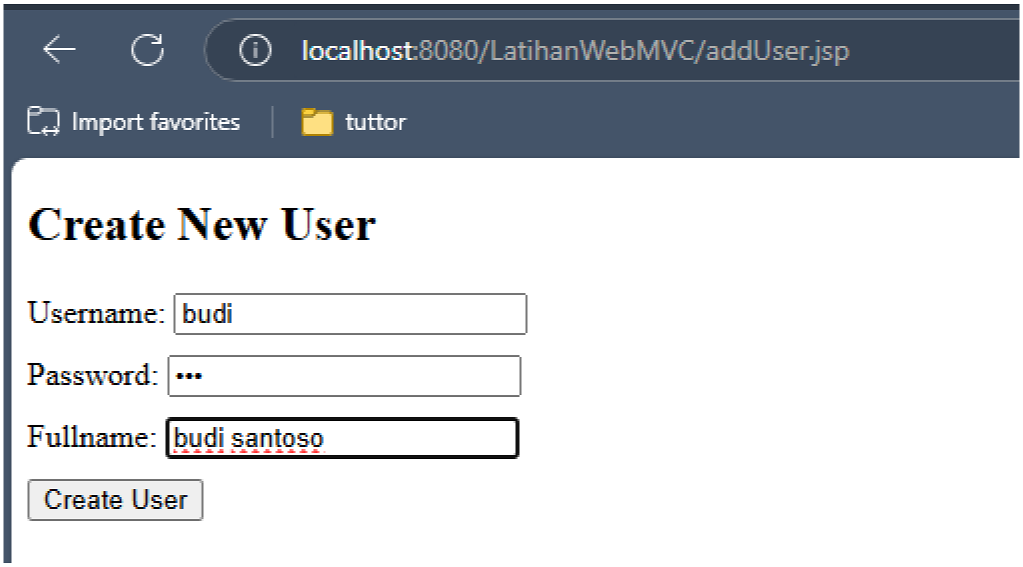
- **Read** → Daftar user yang ditampilkan sudah sesuai dengan yang ada pada database.



User List

ID	Username	Full Name	Actions
1	admin	Admin1	Edit | Delete
3	helmi	Helmi Efendi Lubis	Edit | Delete

- **Create** → Menambahkan user baru

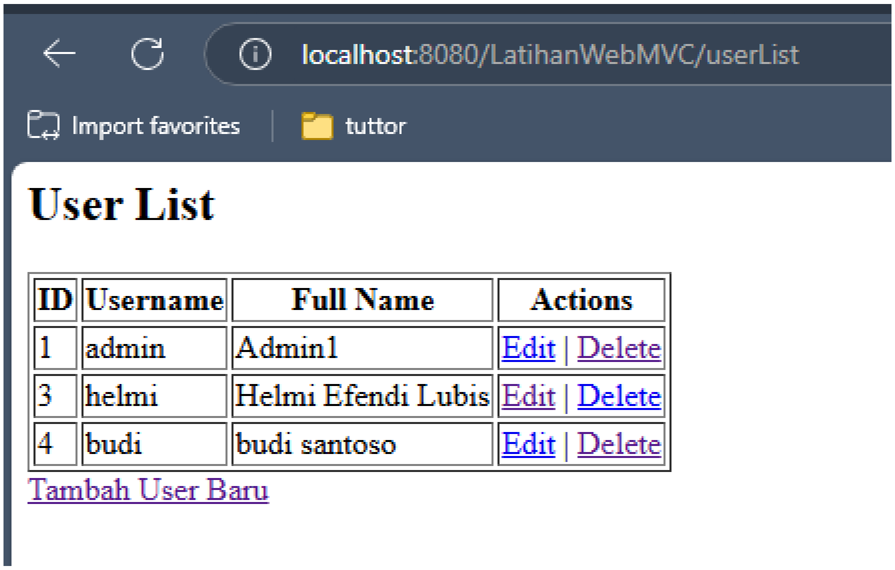


Create New User

Username: budi

Password: •••

Fullname: budi santoso

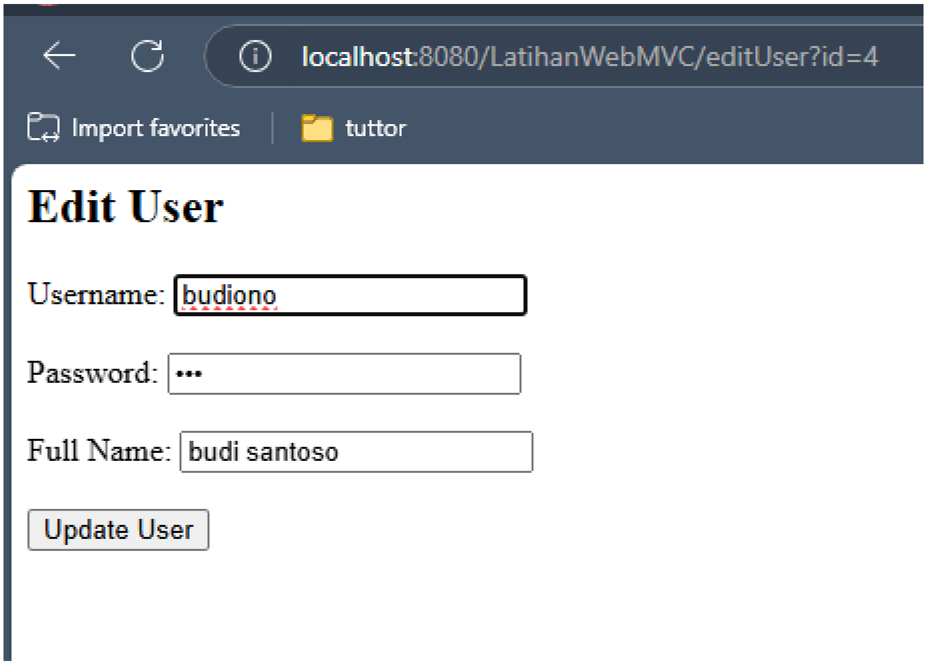


User List

ID	Username	Full Name	Actions
1	admin	Admin1	Edit | Delete
3	helmi	Helmi Efendi Lubis	Edit | Delete
4	budi	budi santoso	Edit | Delete

Tambah User Baru

- **Update →** Melakukan edit user, sebagai contoh kita akan mengedit username "budi"

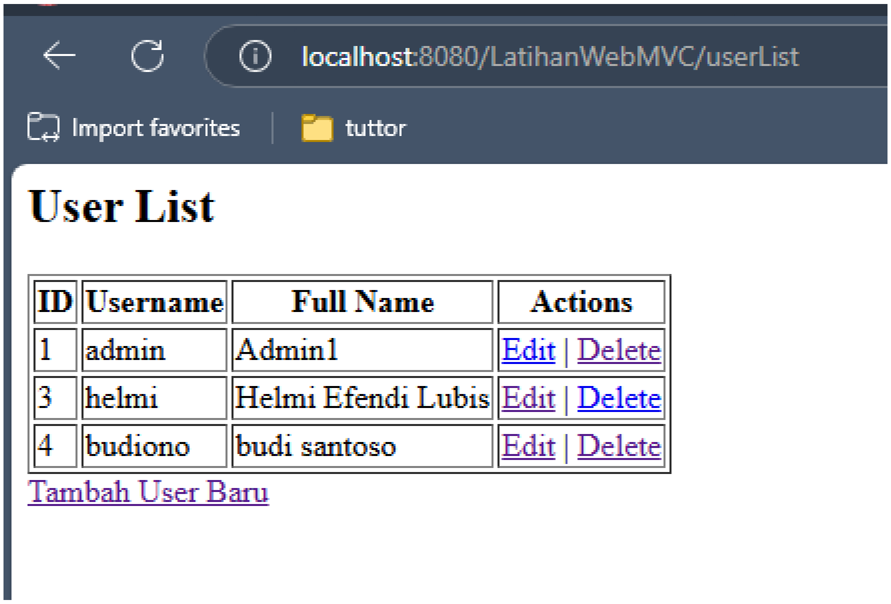


Edit User

Username: budiono

Password: •••

Full Name: budi santoso

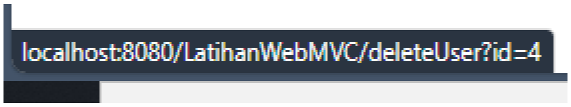


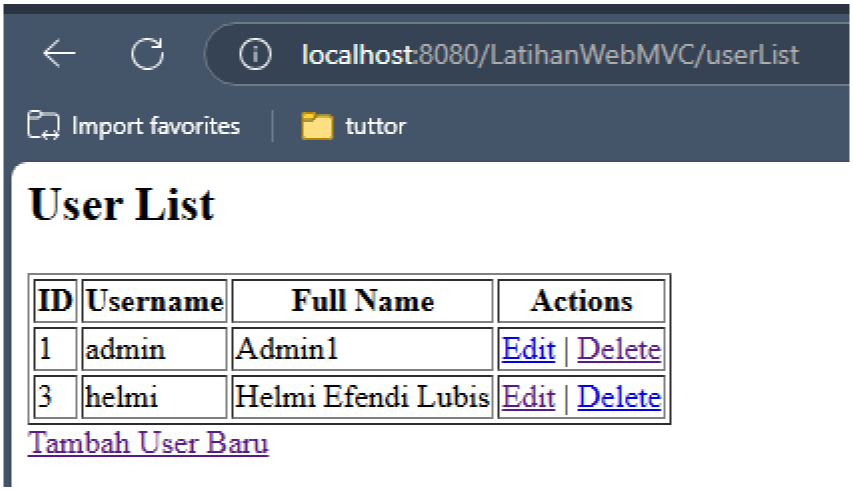
User List

ID	Username	Full Name	Actions
1	admin	Admin1	Edit | Delete
3	helmi	Helmi Efendi Lubis	Edit | Delete
4	budiono	budi santoso	Edit | Delete

Tambah User Baru

- **Delete** → Melakukan delete user, sebagai contoh kita akan melakukan delete username "budiono" yang memiliki id "4"





User List

ID	Username	Full Name	Actions
1	admin	Admin1	Edit | Delete
3	helmi	Helmi Efendi Lubis	Edit | Delete

Tambah User Baru