

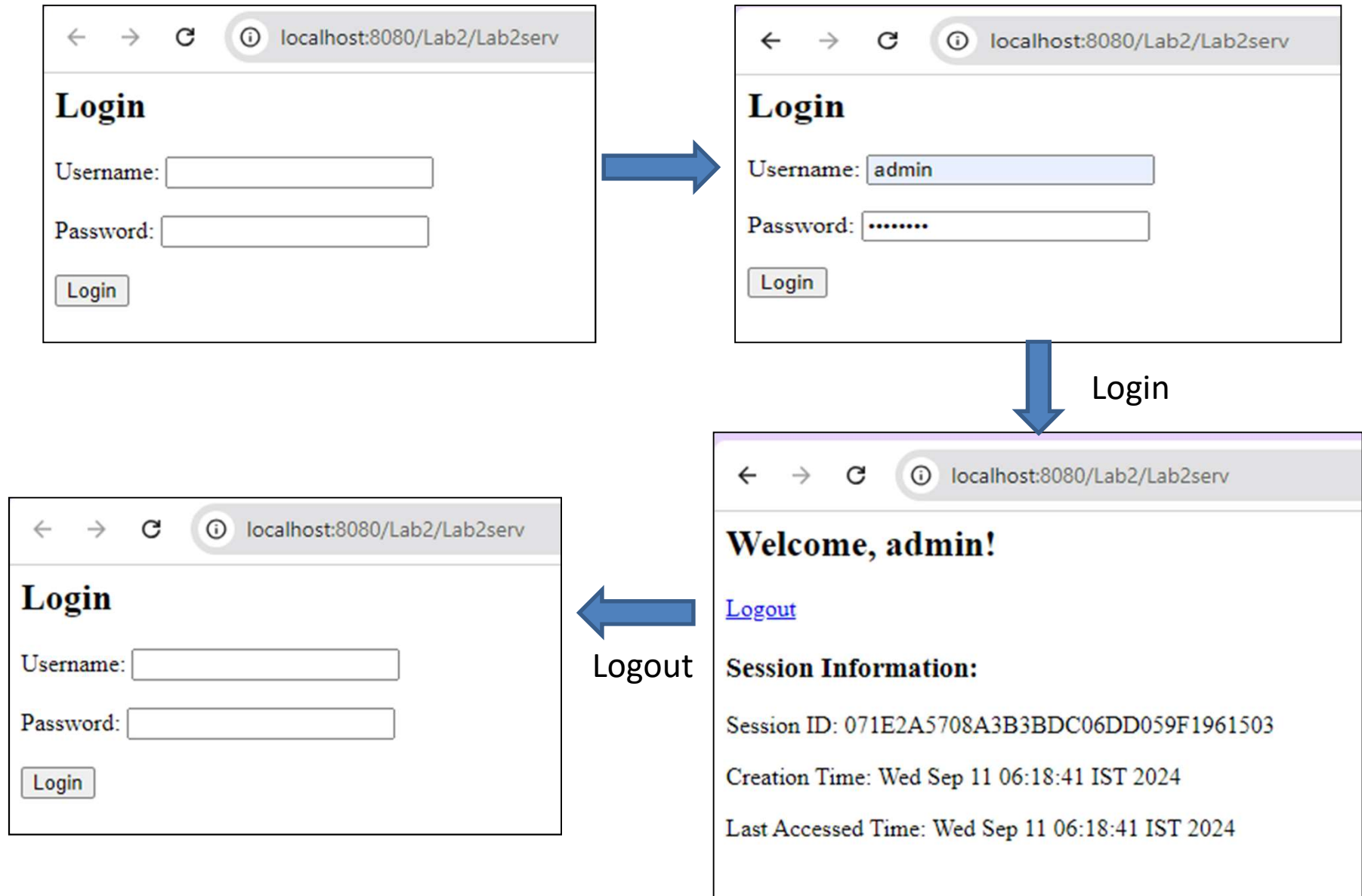
Lab Program 1b

- Implement a Java Servlet (SessionServlet) to demonstrate session tracking using cookies and session objects. The servlet should:
 - Display a login form when accessed initially.
 - Handle login functionality via a POST request, validating username and password.
 - Upon successful login, store username in a session attribute and display a welcome message with logout option.
 - Implement logout functionality to invalidate the session upon user request.

Display session information including session ID, creation time, and last accessed time on the response page.

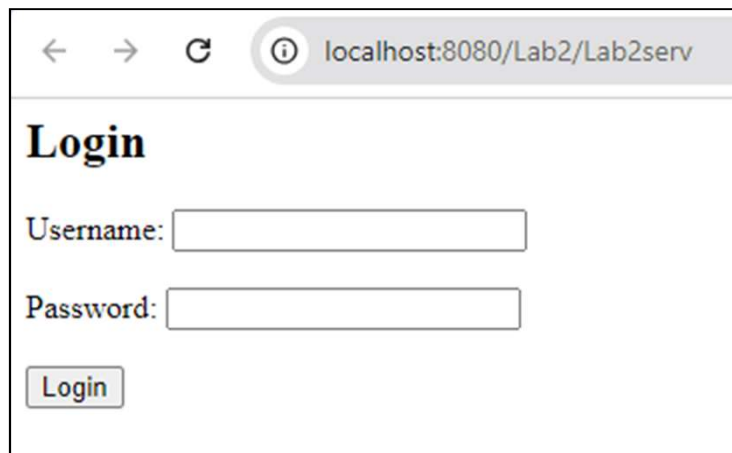
Output

Case 1:



Output

Case 2:



← → ↻ ⓘ localhost:8080/Lab2/Lab2serv

Login

Username:

Password:

Login



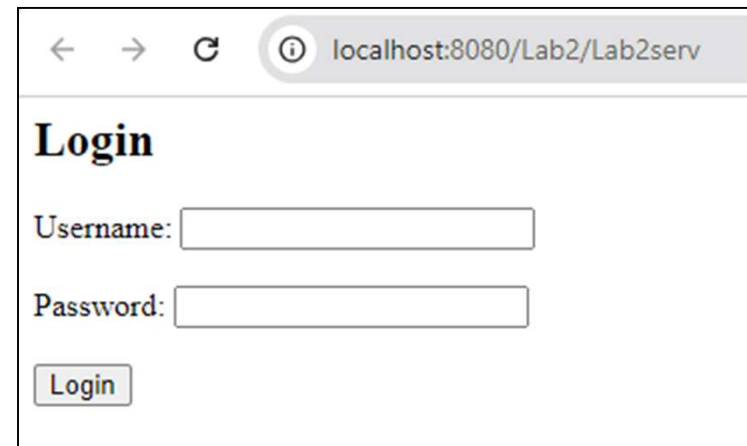
← → ↻ ⓘ localhost:8080/Lab2/Lab2serv

Login

Username:

Password:

Login



← → ↻ ⓘ localhost:8080/Lab2/Lab2serv

Login

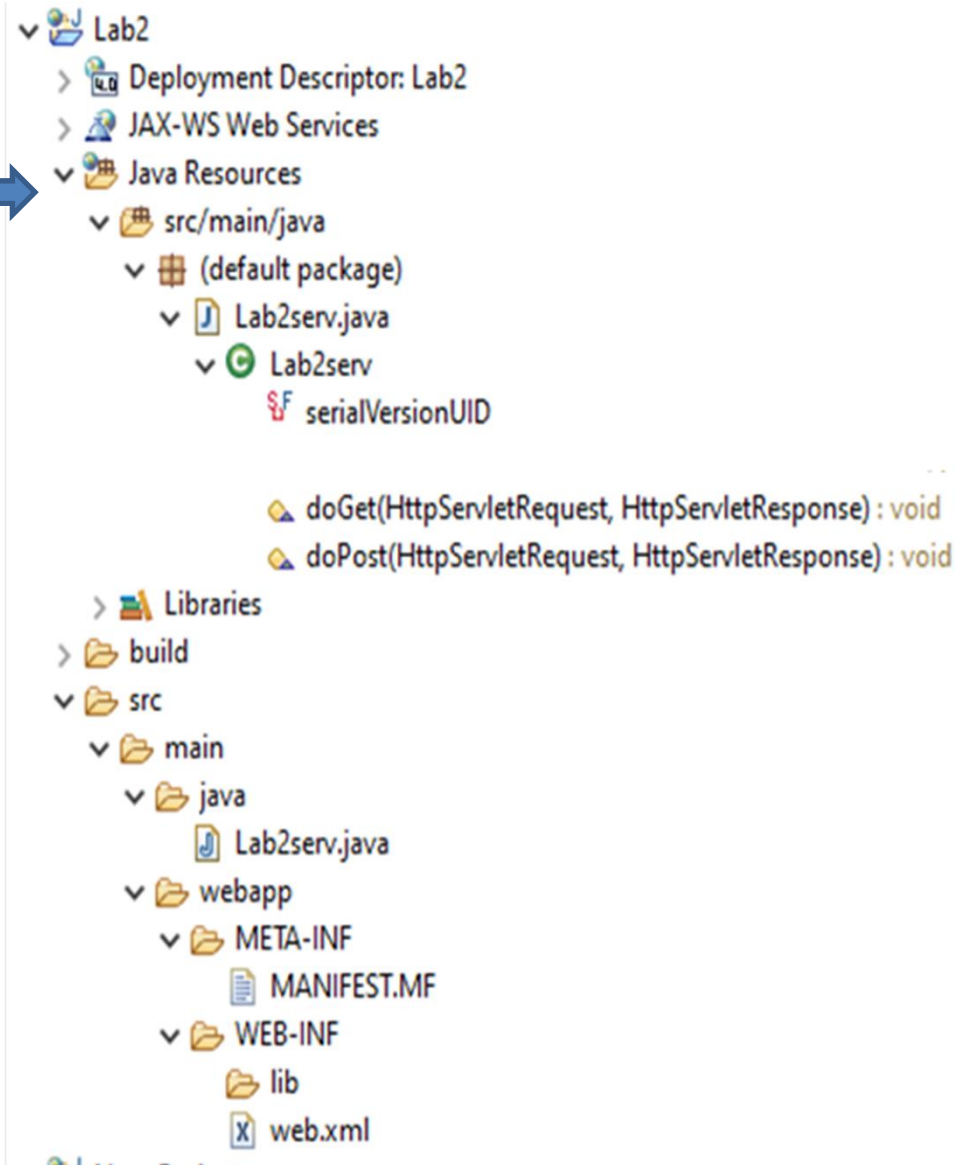
Username:

Password:

Login

- **Project Structure**

- Create servlet (Lab2serv.java) with following methods
 - doGet
 - doPost



```
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.*;

@WebServlet("/Lab2serv")
public class Lab2serv extends HttpServlet {
    private static final long serialVersionUID = 1L;
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        // Check if the logout action is requested
        String action = request.getParameter("action");
        if ("logout".equals(action)) {
            HttpSession session = request.getSession(false);
            if (session != null) {
                session.invalidate(); // Invalidate the session
            }
            response.sendRedirect("Lab2serv"); // Redirect to the login page
            return;
        }
    }
}
```

```

// Check if session exists
HttpSession session = request.getSession(false);
if (session != null && session.getAttribute("username") != null) {
// User is logged in, display welcome message and session info
out.println("<html><head><title>Welcome</title></head><body>");
out.println("<h2>Welcome, " + session.getAttribute("username") + "!</h2>");
out.println("<p><a href='Lab2serv?action=logout'>Logout</a></p>");
out.println("<h3>Session Information:</h3>");
out.println("<p>Session ID: " + session.getId() + "</p>");
out.println("<p>Creation Time: " + new Date(session.getCreationTime()) + "</p>");
out.println("<p>Last Accessed Time: " + new Date(session.getLastAccessedTime()) + "</p>");
out.println("</body></html>");
}
else {
// User is not logged in, display login form
out.println("<html><head><title>Login</title></head><body>");
out.println("<h2>Login</h2>");
out.println("<form method='post' action='Lab2serv'>");
out.println("Username: <input type='text' name='username'><br><br>");
out.println("Password: <input type='password' name='password'><br><br>");
out.println("<input type='submit' value='Login'>");
out.println("</form>");
out.println("</body></html>");
}
}

```



```
protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
    // Process login form submission
    String username = request.getParameter("username");
    String password = request.getParameter("password");
    // For demonstration purposes, validate against hardcoded credentials
    if (username != null && username.equals("admin") && password != null && password.equals("password")) {
        // Login successful, create session and store username
        HttpSession session = request.getSession(true); // create new session if not exists
        session.setAttribute("username", username);
        // Redirect to doGet to display welcome message and session info
        response.sendRedirect("Lab2serv");
    }
    else {
        // Login failed, redirect back to login page
        response.sendRedirect("Lab2serv");
    }
}
}
```