Experiment No. 6

Problem stmt1:

Create a login form (HTML) with username and password fields

Code:

```java
package vaish1;

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

@WebServlet("/login")
public class LoginPage extends HttpServlet {
    private static final long serialVersionUID = 1L;

    // Handles POST request from login form
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        String username = request.getParameter("username");
        String password = request.getParameter("password");

        response.setContentType("text/html");
        PrintWriter out = response.getWriter();

        // Very simple validation (hardcoded)
        if ("Vaishnawi".equals(username) && "1234".equals(password)) {
            out.println("<h2>Welcome, " + username + "!</h2>");
        } else {
            out.println("<h2>Invalid username or password</h2>");
        }
    }
}
```
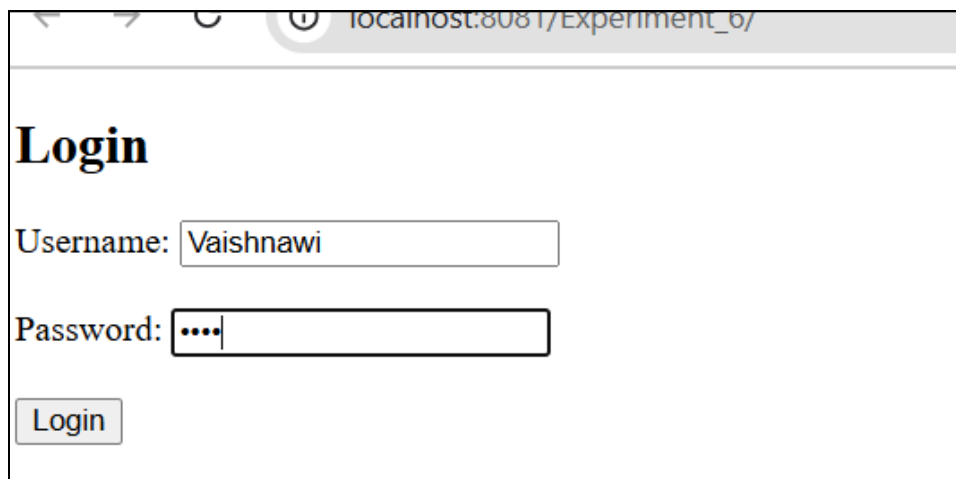
HTML CODE:

```html
<!DOCTYPE html>
<html>
<head>
    <title>Login Form</title>
</head>
<body>
```

```html
    <h2>Login</h2>
    <form method="POST" action="login">
      <label>Username:</label>
      <input type="text" name="username" required><br><br>

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

      <input type="submit" value="Login">
    </form>
</body>
</html>
```

Output:

Problem stmt2:

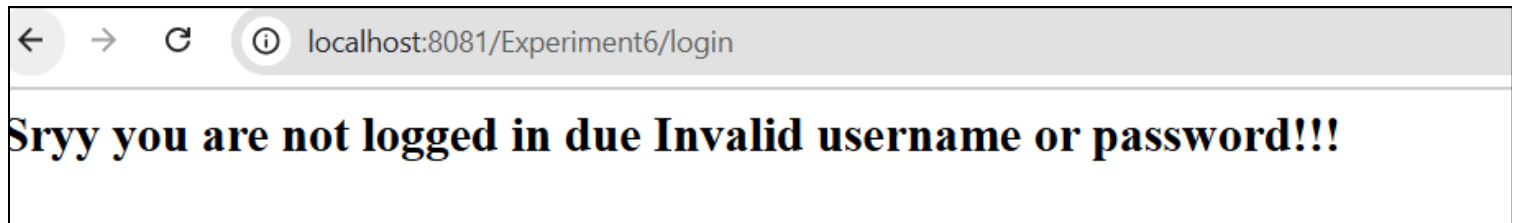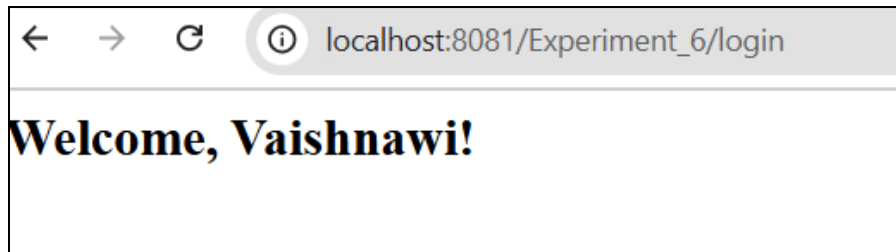Develop a servlet that validates user input against hardcoded credentials.

Problem stmt3:

Display success or failure messages based on authentication results.

Output:

Welcome, Vaishnawi!

Sryy you are not logged in due Invalid username or password!!!

Problem stmt4:

Implement logout functionality that invalidates the session and redirects users to the login page.

Code: Login.java

```java
package vaish;

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

@WebServlet("/login")
public class Login extends HttpServlet {
    private static final long serialVersionUID = 1L;

    // Handle GET request (e.g., browser direct access)
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        // Redirect to login form
        response.sendRedirect("login.html");
    }

    // Handle POST request (form submission)
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {

        String username = request.getParameter("username");
        String password = request.getParameter("password");
```

```java
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();

        if ("Vaishnawi".equals(username) && "1234".equals(password)) {
            HttpSession session = request.getSession();
            session.setAttribute("user", username);

            out.println("<h2>Welcome, " + username + "!</h2>");
            out.println("<a href='logout'>Logout</a>");
        } else {
            out.println("<h2>Sryy you are not logged in due to invalid username or password!!!
</h2>");
        }
    }
}
```

Redirects.java
Code:

```java
package vaish;

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

@WebServlet("/LogoutServlet")
public class Redirects extends HttpServlet {
    private static final long serialVersionUID = 1L;

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        // Invalidate the session
        HttpSession session = request.getSession(false);
        if (session != null) {
            session.invalidate();
        }

        // Redirect to login page
        response.sendRedirect("login.html");
    }
}
```

login.html
Code:

```html
<!DOCTYPE html>
<html>
```

```html
<head>
    <title>Login</title>
</head>
<body>
    <h2>Login Page</h2>
    <form method="post" action="login">
        Username: <input type="text" name="username" /><br/><br/>
        Password: <input type="password" name="password" /><br/><br/>
        <input type="submit" value="Login" />
    </form>
</body>
</html>
```
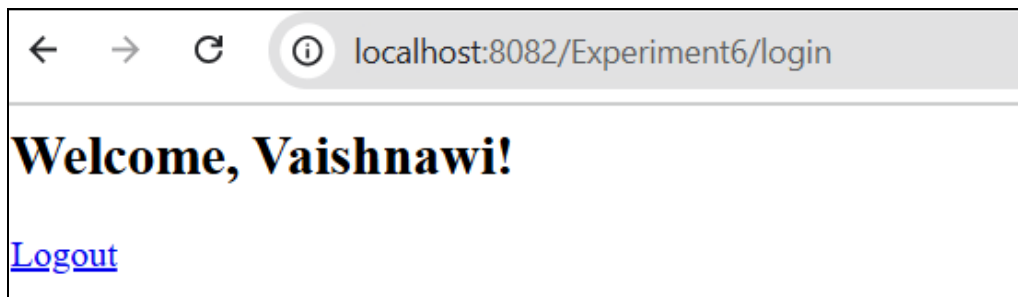
Output:

Problem stmt5:

Create a forgot password feature that allows users to reset their password via email.

Code: Login.java

```java
package vaish;
import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.*;

@WebServlet("/login")
public class Login extends HttpServlet {
    private static final long serialVersionUID = 1L;

    // Handles POST request from login form
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
```

```java
            String username = request.getParameter("username");
            String password = request.getParameter("password");

            response.setContentType("text/html");
            PrintWriter out = response.getWriter();

            if ("Vaishnawi".equals(username) && "1234".equals(password)) {
                HttpSession session = request.getSession();
                session.setAttribute("username", username);
                out.println("<h2>Welcome, " + username + "!</h2>");
                out.println("<a href='LogoutServlet'>Logout</a>");
            } else {
                out.println("<h2>Invalid username or password!</h2>");
                out.println("<a href='forgot.html'>Forgot Password?</a>");
            }
        }
    }
}
```

ForgotPassword.java

Code:

```java
package vaish;

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

@WebServlet("/forgot")
public class ForgotPassword extends HttpServlet {
    private static final long serialVersionUID = 1L;

    // Simulated user email and password reset link (you can connect this to DB later)
    private final String registeredEmail = "2217021@ritindia.edu";

    protected void doPost(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {

        String email = request.getParameter("email");

        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
```

```
        if (email.equalsIgnoreCase(registeredEmail)) {
            // Simulate password reset email
            out.println("<h3>Password reset link sent to: " + email + "</h3>");
            out.println("<p>(Simulated) Check your inbox for instructions to reset your password.
</p>");
        } else {
            out.println("<h3>Email not registered!</h3>");
        }
    }
}
```

Login.html

Code:

```html
<!DOCTYPE html>
<html>
<head>
    <title>Login Page</title>
</head>
<body>
    <h2>Login Form</h2>
    <form action="login" method="post">
        Username: <input type="text" name="username" required><br><br>
        Password: <input type="password" name="password" required><br><br>
        <input type="submit" value="Login">
    </form>
    <p><a href="forgot.html">Forgot Password?</a></p>
</body>
</html>
```
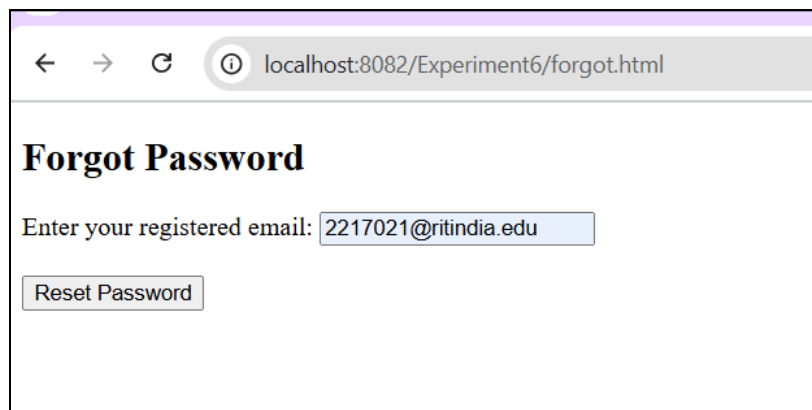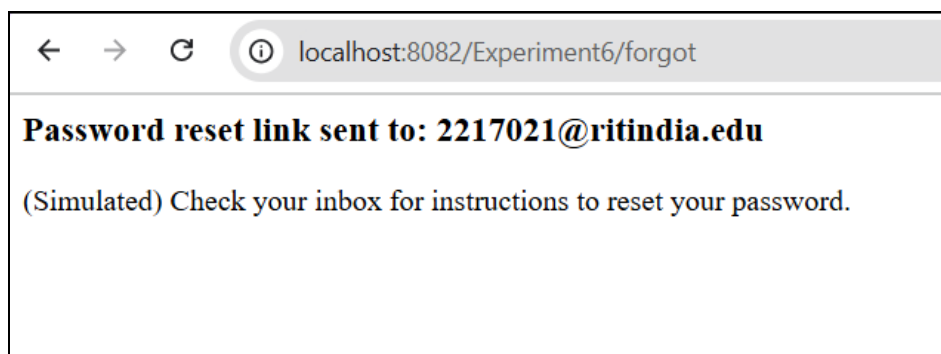
Forgot.html

Code:

```html
<!DOCTYPE html>
<html>
<head>
    <title>Forgot Password</title>
</head>
<body>
    <h2>Forgot Password</h2>
```

```
<form action="forgot" method="post">
    Enter your registered email: <input type="email" name="email" required><br><br>
    <input type="submit" value="Reset Password">
</form>
</body>
</html>
```

Output: