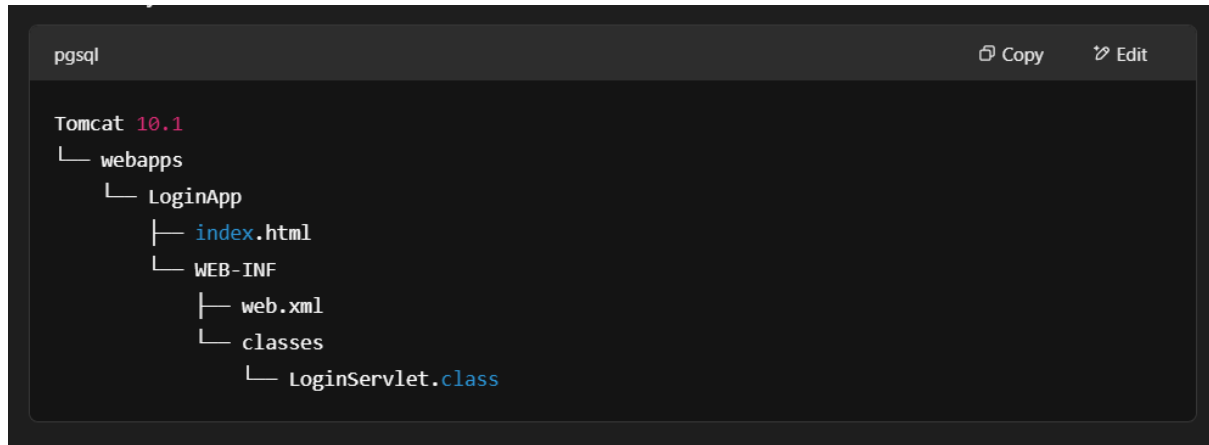


## Experiment no 07

Code:

File Structure:



```
<!DOCTYPE html>
<html>
<head>
  <title>Login Form</title>
</head>
<body>
  <form method="post" action="login">
    Email ID: <input type="text" name="email" /><br/>
    Password: <input type="password" name="pass" /><br/>
    <input type="submit" value="Login" />
  </form>
</body>
</html>
```

---

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns="https://jakarta.ee/xml/ns/jakartaee"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="https://jakarta.ee/xml/ns/jakartaee
    https://jakarta.ee/xml/ns/jakartaee/web-app_5_0.xsd"
  version="5.0">

  <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-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>
</web-app>

```

---

```

import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.http.*;

public class Login extends HttpServlet {

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

        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);
        }
    }
}

```

---

```

import java.io.*;
import jakarta.servlet.*;

```

```

import jakarta.servlet.http.*;

public class LoginServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

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

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

        if(email.equals("user@example.com") && password.equals("password123")) {
            out.println("<h1>Login Successful!</h1>");
        } else {
            out.println("<h1>Invalid credentials</h1>");
        }
    }
}

```

---

```

import java.sql.*;

public class Validate {

    public static boolean checkUser(String email, String pass) {
        boolean isValid = false;

        try {
            // Load MySQL JDBC driver (for mysql-connector-java-9.2.0)
            Class.forName("com.mysql.cj.jdbc.Driver");

            // Connect to MySQL database
            Connection con = DriverManager.getConnection(
                "jdbc:mysql://localhost:3306/test", "root", "Sarban@123");

            // Prepare SQL statement
            PreparedStatement ps = con.prepareStatement(
                "SELECT * FROM register WHERE email = ? AND pass = ?");

            ps.setString(1, email);
            ps.setString(2, pass);

            // Execute query
            ResultSet rs = ps.executeQuery();

            isValid = rs.next(); // true if a match is found
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}

```

```

        // Clean up
        rs.close();
        ps.close();
        con.close();

    } catch (Exception e) {
        e.printStackTrace();
    }

    return isValid;
}
}

```

---

```

import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.http.*;

public class Welcome extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<h2>Welcome, user!</h2>");
    }
}

```

## Database:

```

CREATE DATABASE test;
USE test;

```

```

CREATE TABLE register (
    email VARCHAR(100),
    pass VARCHAR(100)
);

```

```

INSERT INTO register (email, pass) VALUES ('user@example.com', 'password123');

```

```

mysql> show databases;
+-----+

```

```

| Database      |
+-----+
| abdul        |
| information_schema |
| lab_6         |
| mydb          |
| mysql         |
| performance_schema |
| student       |
| student_database |
| sys           |
| test          |
+-----+
10 rows in set (0.07 sec)

```

```

mysql> use test
Database changed
mysql> show tables;

```

```

+-----+
| Tables_in_test |
+-----+
| register       |
+-----+
1 row in set (0.04 sec)

```

```

mysql> select * from register;
+-----+-----+
| email      | pass    |
+-----+-----+
| user@example.com | password123 |
+-----+-----+
1 row in set (0.01 sec)

```

```
mysql>
```

## Commands:

If you installed JDK 21, the path might look like:

```

makefile
CopyEdit
C:\Program Files\Java\jdk-21

```

In the same CMD where you're starting Tomcat:

```
cmd
```

CopyEdit

```
set JAVA_HOME=C:\Program Files\Java\jdk-21
set PATH=%JAVA_HOME%\bin;%PATH%
```

```
C:\Program Files\Apache Software Foundation\Tomcat 10.1\bin>set
JAVA_HOME=C:\Program Files\Java\jdk-22
```

```
C:\Program Files\Apache Software Foundation\Tomcat 10.1\bin>set
PATH=%JAVA_HOME%\bin;%PATH%
```

```
cd "C:\Program Files\Apache Software Foundation\Tomcat 10.1\bin"
startup.bat
```

Go to:

makefile

CopyEdit

```
C:\Program Files\Apache Software Foundation\Tomcat 10.1\bin
```

1. Run these commands:

```
shutdown.bat
startup.bat
```

**Download:**jakarta.servlet-api.jar

And copy at:

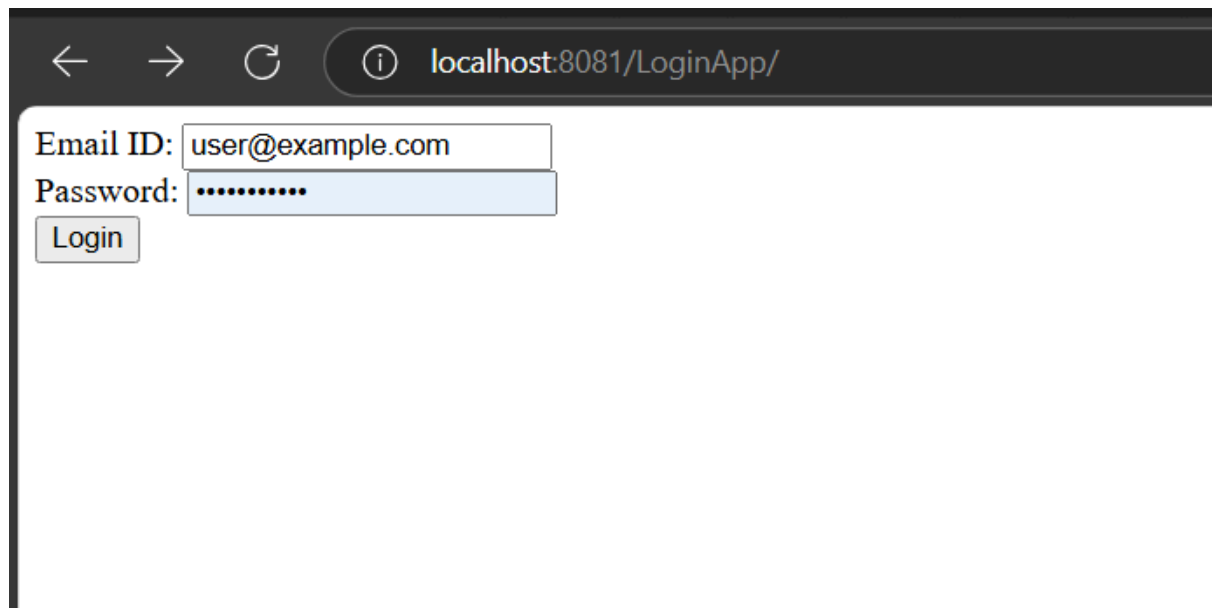
```
C:\Program Files\Apache Software Foundation\Tomcat 10.1\lib\jakarta.servlet-api.jar
```

```
cd "C:\Program Files\Apache Software Foundation\Tomcat
10.1\webapps\LoginApp\WEB-INF\classes"
```

```
javac -cp ".;C:\Program Files\Apache Software Foundation\Tomcat
10.1\lib\jakarta.servlet-api-6.0.0.jar" LoginServlet.java
```

**Check output at:** <http://localhost:8081/LoginApp/>

## Output:



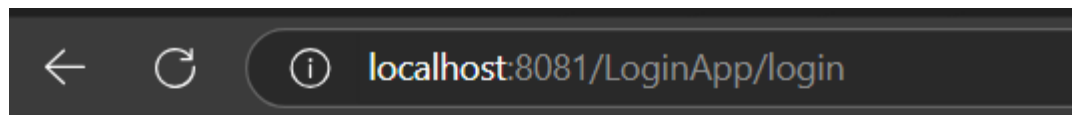
A screenshot of a web browser window. The address bar shows 'localhost:8081/LoginApp/'. The page contains a login form with two input fields: 'Email ID:' with the value 'user@example.com' and 'Password:' with masked characters '.....'. Below the password field is a 'Login' button.

Use

[user@example.com](mailto:user@example.com)

Password123

Then login



A screenshot of a web browser window. The address bar shows 'localhost:8081/LoginApp/login'. The page content is not visible in this snippet.

**Welcome, user!**

