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Project Based Learning in Java
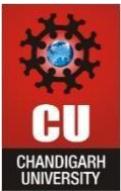
Experiment 9

23CSP-304

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Experiment 9: Servlet for Login Validation
Aim
To write a Java Servlet that accepts user credentials through an HTML form and displays a personalized welcome message upon successful login.

Objectives
- To understand how to link an HTML form with a Java Servlet.
- To handle HTTP POST requests using doPost() method.
- To retrieve and validate form data using HttpServletRequest.
- To generate a response dynamically using HttpServletResponse.
- To learn basic Servlet configuration using annotations or web.xml

Code Implementation

1. **HTML Form (login.html)**

```
<!DOCTYPE html>
<html>
<head>
<title>Login Page</title>
</head>
<body>
<h2>Login Form</h2>
<form action="LoginServlet" 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>
</body>
</html>
```
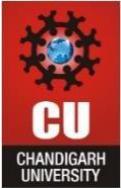
2. **Java Servlet (LoginServlet.java)**

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

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

// Step 1: Set content type
response.setContentType("text/html");
PrintWriter out = response.getWriter();
```

```
// Step 2: Retrieve form data
String username = request.getParameter("username");
String password = request.getParameter("password");

// Step 3: Validate credentials (hardcoded)
if ("John".equals(username) && "12345".equals(password)) {
out.println("<h2>Welcome, " + username + "! Login Successful.</h2>");
} else {
out.println("<h2>Invalid credentials! Please try again.</h2>");
}

out.close();
}
}
```

Output

Case 1: Successful Login

Welcome, John! Login Successful.

Case 2: Invalid Credentials

Invalid credentials! Please try again.

Learning Outcomes
- Learned how to create and configure a **Java Servlet**.
- Understood how to **link HTML forms** with Servlets using POST requests.
- Practiced retrieving form data using request.getParameter().
- Implemented basic **login validation logic** in Servlets.
- Learned how to send **dynamic responses** to the client browser.