



Servlet/JSP Connect #1

Agenda

1

To understand how to create a Web Application using Servlets

Objectives

At the end of this session, you will be able to:

- Understand What is a Web Application
- Understand the role of HTML, CSS, Javascript and Servlet in a web application

Web Terminologies



Web Terminologies

■ Web Page

- A document which can be displayed in a web browser such as Firefox, Google Chrome, Opera, Microsoft Internet Explorer or Edge, or Apple's Safari. These are also often called just “page”.

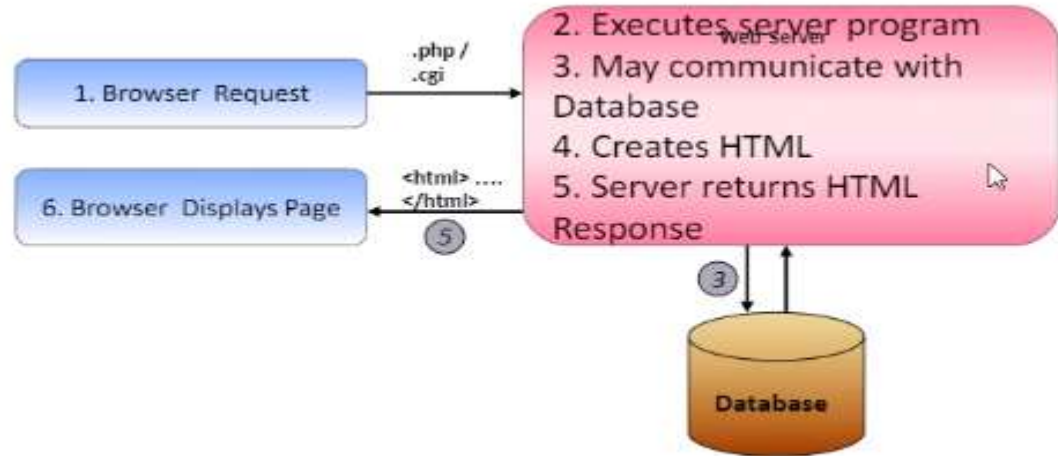
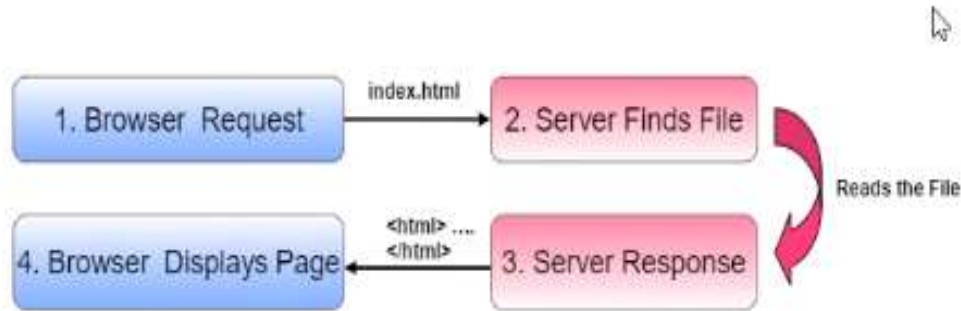
■ Web Site

- A collection of web pages which are grouped together and usually connected together in various ways. Often called a "web site" or simply a "site."

■ Web Server

- A computer that hosts a website on the Internet.

How a Web Application works?



Demo - Create a Login Application



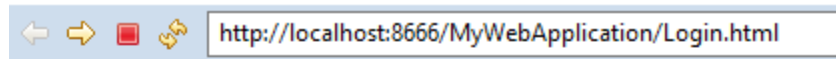
Login Application

To do list:

1. Create a HTML page with 3 components
 - 2 text boxes to capture username and password
 - a submit button
2. Add some style to the HTML Elements using CSS
3. Add some validation to the page, using Javascript
4. Create a Servlet Page to receive the request and provide response

1. Login page using HTML.

```
<form name="LoginForm">
<div>
<br>
<table>
<tr><td>User Name</td><td> <input type="text" name="uname"/></td></tr>
<tr><td>Password </td><td><input type="password" name="pwd"/></td></tr>
<tr><td colspan="2" align="Center"><input type="Submit" value="Login"/></td></tr>
</table>
</div>
</form>
```

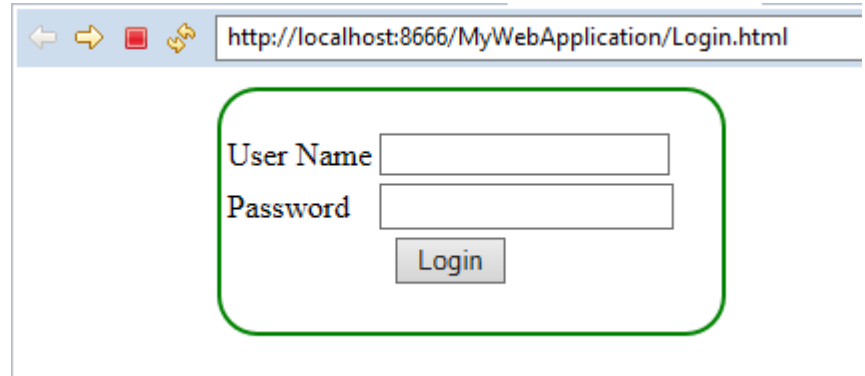


User Name

Password

2.Applying Style to Login Page Using CSS.

```
<style type="text/css">
div{
    position: absolute;
    top: 10px;
    left: 100px;
    width:250px;
    height:120px;
    border: 2px solid green;
    border-radius: 20px;
}
</style>
```

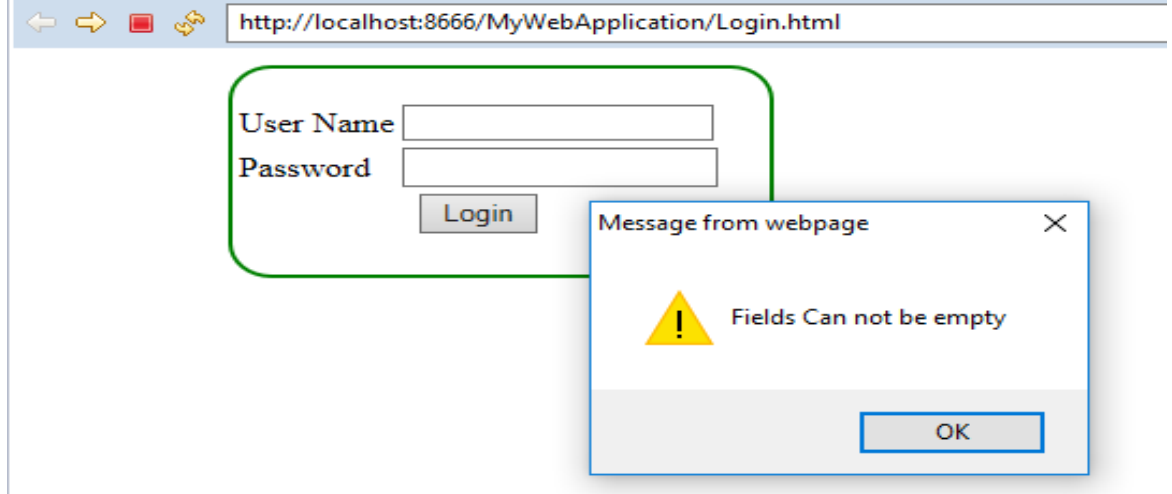


3. Applying Validation to Login Page Using JS

```
<script type="text/javascript">  
function loginValidation(){  
var userName = document.LoginForm.uname.value;  
var password = document.LoginForm.pwd.value;  
if(userName==" " || password==""){  
alert("Fields Can not be empty");  
return false;  
}  
}  
</script>
```

Applying Validation to Login Page Using JS.

```
<form name="LoginForm">
<div>
<br>
<table>
<tr><td>User Name</td><td> <input type="text" name="uname"/></td></tr>
<tr><td>Password </td><td><input type="password" name="pwd"/></td></tr>
<tr><td colspan="2" align="Center"><input type="Submit" value="Login" onClick="return
LoginValidation()"/></td></tr>
</table>
</div>
</form>
```



Update HTML with Servlet details

```
<form action="LoginServlet" name="LoginForm">
<div>
<br>
<table>
<tr><td>User Name</td><td> <input type="text"
name="uname"/></td></tr>
<tr><td>Password </td><td><input type="password"
name="pwd"/></td></tr>
<tr><td colspan="2" align="Center"><input type="Submit"
value="Login" onClick="return LoginValidation()"/></td></tr>
</table>
</div>
</form>
```

4. Calling Servlet from Login Page.

```
public class LoginServlet extends HttpServlet {  
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws  
        ServletException, IOException {  
        PrintWriter out = response.getWriter();  
        String userName = request.getParameter("uname");  
        String password = request.getParameter("pwd");  
        if(userName.equals("Admin") && password.equals("wipro@123")){  
            out.println("<font color=green><b>Welcome Admin</b></font>");  
        }  
        else{  
            out.println("<font color=red><b>Invalid User name or password</b></font>");  
        }  
        out.close();  
    }  
}
```

Calling Servlet from Login Page.

← → ⏏ 🔍 http://localhost:8666/MyWebApplication/Login.html

User Name

Password

← → ⏏ 🔍 http://localhost:8666/MyWebApplication/LoginServlet?uname=Admin&pwd=wipro@123

Welcome Admin

← → ⏏ 🔍 http://localhost:8666/MyWebApplication/Login.html

User Name

Password

← → ⏏ 🔍 http://localhost:8666/MyWebApplication/LoginServlet?uname=Hello&pwd=jljkjljkj

Invalid User name or password

Quiz



Knowledge Check

- **What does HTML stand for?**
 - Hyper Text Markup Language
 - High Text Markup Language
 - Hyper Tabular Markup Language

- **Which of the following is true with HTML**
 - You can create your own tags
 - You can share information between applications
 - You can present some information in the desired format

Knowledge Check

- If you want to have a green dotted border around an image, which css property will you use?
 - border-color
 - border-decoration
 - border-style
 - border-line
- Which of the following tag should be used to declare internal css in your page?
 - <style></style>
 - <css></css>
 - <src></src>

Knowledge Check

- Which of the following is the correct keyword to define a function in JavaScript?
 - func
 - function
 - void
 - None of the above
- Which element is used in the <HEAD> section in a HTML page to define internal javascript.
 - <style></style>
 - <script></script>
 - <src></src>

Knowledge Check

- Which of the following class should you inherit to create a Servlet?
 - Servlet
 - Http
 - HttpServlet
 - None of the above

- What is the return type of `getParameter()` method?
 - Object
 - String
 - Boolean
 - int

Exercise



Exercise-1

- Create a HTML page to accept a name as an input (textbox) from the user
- Create a submit button with the value of “Say Hello” in that HTML page
- Apply CSS to the page
- Create a JavaScript function to validate non empty text box
- If the submit button is clicked, it should invoke a Servlet which displays a Hello message (Hello and the username)

Exercise-2

- Create a HTML page to accept two numbers (integer) from the user
- Create a submit button with the value “Addition” in that HTML page
- Apply CSS to the page
- Create a JavaScript function to validate that the text boxes are not empty and it contains only integers.
- If the submit button is clicked, it should invoke a Servlet which should display the sum of the two numbers

Exercise-3

- Create a HTML page to accept a number(integer) as an input from the user.
- Create a submit button with the value of “Factorial” in that HTML page.
- Apply CSS to the page.
- Create a JavaScript function to validate that the text box is not empty and it contains only integers.
- If the submit button is clicked, it should invoke a Servlet which should display the factorial of the given number



Thank you