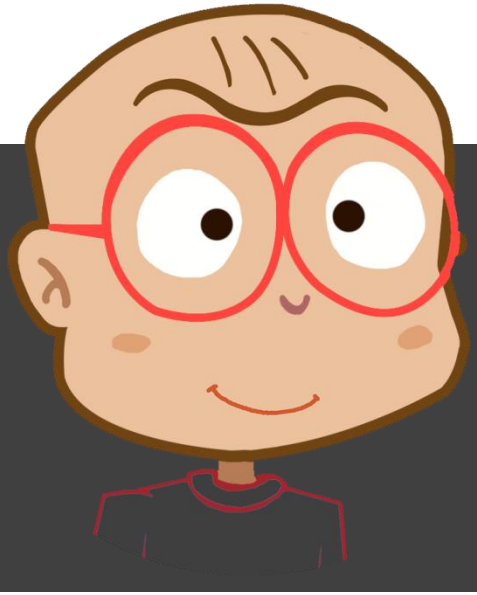


JAVA SERVER PAGES

START

Internal Use

Learning Goals

After the course, attendees will be able to:

- Know about Java Server Pages (JSP)
- Can use JSP to build Web application

Table of contents

- Introduction
- Architecture
- Implicit Objects
- Scripting
- Standard Actions
- Directives
- Session Tracking
- Exception Handling

Internal Use

Trainee's missions

To complete this course and achieve goals, trainees must:

- **Read Lecture, Reference**
- **Do Exercises**
- **Take quiz**
- **Complete Assignment**

JSP Introduction

What is JSP?

- JavaServer Pages (JSP) is a technology for developing web pages that support dynamic content which helps developers insert java code in HTML.
- A JavaServer Pages component is a type of Java servlet

Why Use JSP?

- Performance is significantly better
- JSP are always compiled before it's processed by the server
- JSPs are built on top of the Java Servlets API
- JSP pages can be used in combination with servlets

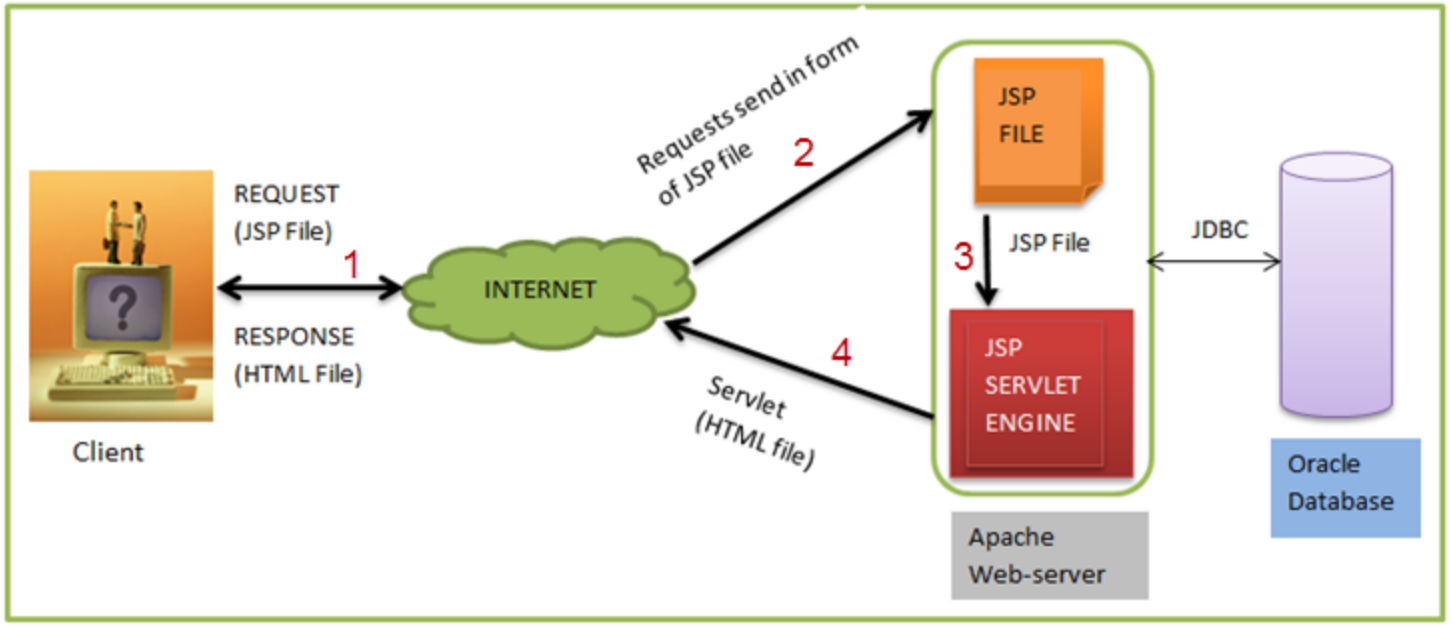
JSP Development

Internal Use

JSP Processing

How the web server creates the web page using JSP:

- Browser sends an HTTP request
- Forwards it to a JSP engine
-The JSP engine loads the JSP page from disk and converts it into a servlet content.
-The JSP engine compiles the servlet into an executable class and forwards the original request to a servlet engine.
- Web server called the servlet engine loads the Servlet class and executes it.
- The servlet produces an output in HTML format
- The web server forwards the HTTP response to your browser with HTML content



Internal Use

First Example

```jsp
<%@page import="java.util.Date"%>
<%@ include file="index.html"%>
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>The First JSP</title>
</head>
<body>

    <%!String stringHello = "Hello, Welcome to the Frist JSP!";%>

    <%=stringHello%>
    To day is:  <%=new Date()%>

    <jsp:setProperty property="HelloWorld" name="userName" />
    <jsp:forward page="Welcome.jsp"></jsp:forward>

</body>
</html>
```

1 Direction tag

2 Decleration tag

3 Expression tag

4 Action tag

Internal Use

Implicit Objects

- Are the Java objects that the JSP Container makes available
- Can call them directly without being explicitly declared

Object	Description
request	This is the **HttpServletRequest** object associated with the request.
response	This is the **HttpServletResponse** object associated with the response to the client.
out	This is the **PrintWriter** object used to send output to the client.
session	This is the **HttpSession** object associated with the request.
application	This is the **ServletContext** object associated with application context.
config	This is the **ServletConfig** object associated with the page.
pageContext	This encapsulates use of server-specific features like higher performance **JspWriters**.
page	This is simply a synonym for **this**, and is used to call the methods defined by the translated servlet class.
Exception	The **Exception** object allows the exception data to be accessed by designated JSP.

Internal Use

Fpt Software

FWA.CTC

Create Example

Internal Use

Fpt Software

FWA.CTC

Create Example

Internal Use

Banner, Footer, Menu

Menu.jsp

```
<table style="border: 1px solid #cccccc; width: 100%;">

    <tr>
        <td><h4>SELECT ONE ITEM:</h4>
        </td>
    </tr>

    <tr>
        <td><a href="Register.jsp">Register</a>
        </td>
    </tr>
    <tr>
        <td><a href="ListMember.jsp">List Member</a>
        </td>
    </tr>
    <tr>
        <td><a href="Logout.jsp">Logout</a>
        </td>
    </tr>
    <tr>
        <td height="270"> </td>
    </tr>


</table>
```

Visual/Source | Source | Preview

Banner.jsp

```
<table width ="100%">
  <tr>
   <td><img src ="images/fsoft.jpg"/></td>
  </tr>
</table>
```

Visual/Source | Source | Preview

Footer.jsp

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>

<table style="border: 1px solid #cccccc; width: 100%;">
   <tr>
     <td><h1>FSOFT.FWA - JSP DEMO</h1></td>
   </tr>
</table>
```

Visual/Source | Source | Preview

Internal Use

jsp: include

Login.jsp

```jsp
<table style="border: 1px solid;">
    <tr>
        <td colspan="2"><jsp:include page="Banner.jsp" /></td>
    </tr>
    <tr valign="top">
        <td align="center" width="100%">
            <div style="border: 1px solid #cccccc; width: 100%; height: 400px;">
                <form action="Welcome.jsp" method="post">
                    <table
                        style="border: 1px solid #cccccc; width: 20%; margin: 10px;"
                        align="center">
                        <tr>
                            <td>Username:</td><td><input type="text" name="userName" /></td>
                        </tr>
                        <tr>
                            <td>Password:</td><td><input type="password" name="password" /></td>
                        </tr>
                        <tr>
                            <td></td>
                            <td><input type="submit" value="Login" /></td>
                        </tr>
                    </table>
                </form>
            </div>
        </td>
    </tr>
    <tr>
        <td colspan="2"><jsp:include page="Footer.jsp" /></td>
    </tr>
</table>
```

1

2

3

Internal Use

Import, request

Welcome.jsp

```jsp
<%@page import="java.util.Date"%>
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@page errorPage="ErrorPage.jsp" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Welcome JSP</title>
</head>
<body>
    <table style="border: 1px solid;">
        <tr>
            <td colspan="2"><jsp:include page="Banner.jsp" /></td>
        </tr>
        <%
            String userName = request.getParameter("userName");
        %>
        <tr valign="top">
            <td  valign="top" width ="20%"><jsp:include page="Menu.jsp" /></td>
            <td align="center" width ="80%">
                <div style="border: 1px solid #cccccc; width: 100%; height: 400px;">
                        <table  style="width: 60%; margin: 10px;"   align="center">
                            <tr>
                                <td><h3>Today: <%=new Date()%></h3></td>
                            </tr>
                            <tr>
                                <td><h3>Welcome to: <%=userName%></h3></td>
                            </tr>
```

1

2

3

Internal Use

Register

Register.jsp

```
<tr valign="top">
    <td valign="top" width="20%"><jsp:include page="Menu.jsp" /></td>
    <td align="center" width="80%">
        <div style="border: 1px solid #cccccc; width: 100%; height: 400px;">
            <form action="ListMember.jsp" method="post">
                <table
                    style="border: 1px solid #cccccc; width: 20%; margin: 10px;"
                    align="center">
                    <tr>
                        <td>FullName:</td>
                        <td><input type="text" name="fullName" /></td>
                    </tr>
                    <tr>
                        <td>Email:</td>
                        <td><input type="text" name="email" /></td>
                    </tr>
                    <tr>
                        <td>Phone:</td>
                        <td><input type="text" name="phone" /></td>
                    </tr>
                    <tr>
                        <td></td>
                        <td><input type="submit" value="Register" /></td>
                    </tr>
                </table>
            </form>
        </div>
```

1

2

Internal Use

Summary

- OOP is a design philosophy.

- OOP is a programming paradigm.

- OOP systems can be easily upgraded from small to large scale

- It reduces software maintenance and developing costs.

- OOP should help in developing high quality software easily.

- Key terms in OOP: object, class, method, message…

Internal Use

Quiz!

Now let's check how you understand the lecture!

There are 6 questions below.
Click NEXT button to start!

Internal Use

Fpt Software

FWA.CTC

Now let's check how you understand the lecture!

Quiz!

There are 6 questions below.
*Click **NEXT** button to start!*

Internal Use

Fpt Software

FWA.CTC

Quiz!

Question 3 of 5/ Multi Choice/ 10

01: 08

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- [ ] Advice and opinions from industry experts
- [ ] Free downloads for your projects

Internal Use

Submit

Summary

Text

25 years ago, Infosys Technologies was started by seven Indian entrepreneurs with 10,000 apartment.

Text

25 years ago, Infosys Technologies was started by seven Indian entrepreneurs with 10,000 apartment.

Text

25 years ago, Infosys Technologies was started by seven Indian entrepreneurs with 10,000 apartment.

Internal Use

Exit Course

THANK YOU

You have completed "**Lecture 13" course.**

Click EXIT button to exit course and discover the next Lecture "**Lecture 14".**

EXIT

Internal Use