

JSP Directives

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Questions?

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Agenda

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- ❑ What is JSP directive
- ❑ Type of Directives

What is a JSP Directive?

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- ❑ A directive provides meta data information about the JSP file to the web container
- ❑ Web container uses this during the translation/compilation phase of the JSP life cycle
 - ❑ Examples:
 - ❑ Importing tag libraries
 - ❑ Import required classes
 - ❑ Set output buffering options
 - ❑ Include content from external files

Types of Directives

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- The JSP specification defines three directives:

Directive	Purpose
Page	Provides information about page, such as scripting language that is used, content type, or buffer size etc.
Include	Used to include the content of external files.
<u>Taglib</u>	Used to import custom tags defined in tag libraries. Custom tags are typically developed by developers.

JSP Directive Syntax

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- ❑ A JSP directive is declared using the following syntax

```
<%@directive attribute="value" %>
```

- ❑ Where;
 - ❑ directive – The type of directive (page, taglib or include)
 - ❑ attribute – Represents the behavior to be set for the directive to act upon

Attributes for Page Directive

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Attribute	Purpose
buffer	Specifies a buffering model for the output stream. Same as the servlet buffer. <code><%@ page buffer="none 8kb sizekb" %></code>
<u>autoFlush</u>	Controls the behavior of the <u>servlet</u> output buffer. <code><%@ page autoFlush="True False" %></code>
contentType	Defines the character encoding scheme. <code><%@ page contentType="text/html;charset=ISO-8859-1" %></code>
<u>errorPage</u>	The <u>errorPage</u> directive takes a valid relative URL to a JSP file to which the control is redirected in case of any exceptions.. <code><%@ page errorPage="relativeURL" %></code>
<u>isErrorPage</u>	Works in tandem with the page <u>errorPage</u> directive and specifies that this JSP is an error page. <code><%@ page isErrorPage="true false" %></code>

Attributes for Page Directive (Cont. I)

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Attribute	Purpose
extends	<p>Specifies a super class that the generated servlet must extend</p> <pre><%@page extends="<u>myServletClass</u>"%></pre>
import	<p>Specifies a list of packages or classes to be imported for JSP to use similar to java import..</p> <pre><%@page import="<u>java.util.Date</u> , <u>java.io.FileReader</u>"%></pre> <p>More than one package can be imported either by using separate page directive or using comma separated list in a single directive.</p>
info	<p>Defines a string that can be accessed with the <u>servlet's</u> <u>getServletInfo()</u> method.</p> <pre><%@ page info="<u>information</u>" %></pre>
<u>isThreadSafe</u>	<p>Defines the threading model for the generated Servlet.</p> <pre><%@ page <u>isThreadSafe</u>="<u>True False</u>" %></pre>

Attributes for Page Directive (Cont. II)

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Attribute	Purpose
language	Defines the programming language used in the JSP page. <code><%@page language="java" %></code>
session	Specifies whether or not the JSP page participates in HTTP sessions <code><%@page language="java" session="true" %></code>
<u>isELIgnored</u>	Specifies whether or not EL expression within the JSP page will be ignored. <code><%@ page <u>isELIgnored</u>="True False" %></code>
isScriptingEnabled	Determines if scripting elements are allowed for use. <code><%@ page <u>isScriptingEnabled</u>="True False" %></code> Setting to false will throw error during translation if your page contains any scripting element such as <u>scriptlets</u> , expression etc

Are you confused...?

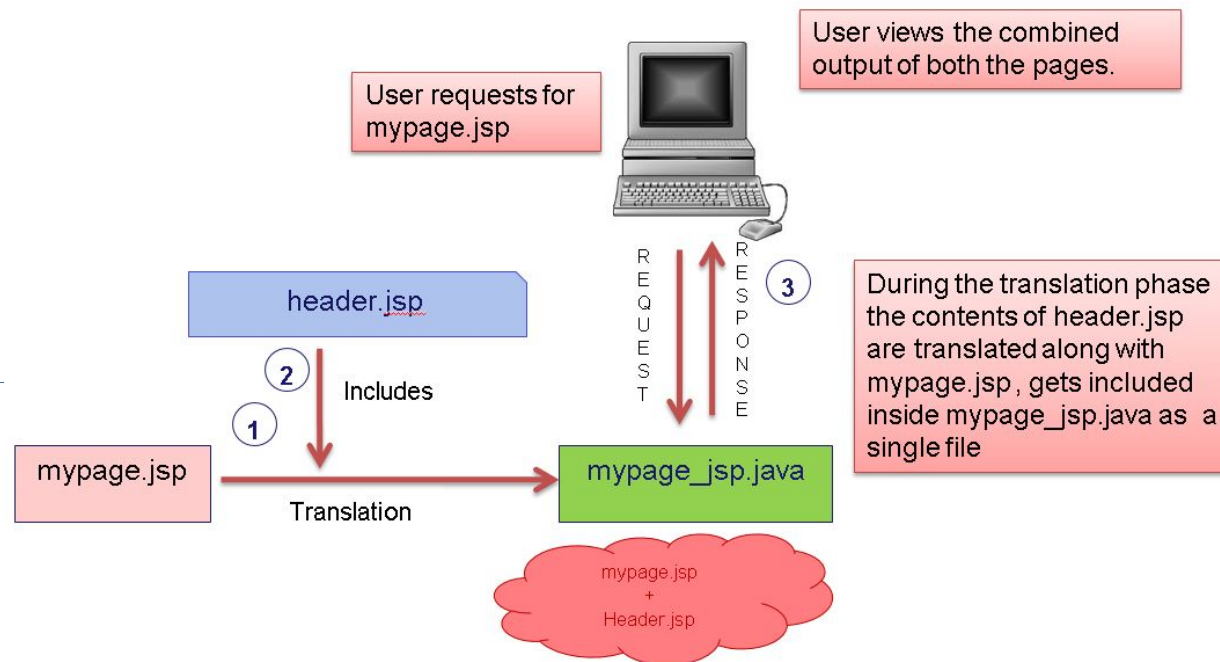
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- ❑ Confused on seeing so many directives?
- ❑ Just relax and focus on the following 4 directives which are commonly used in application development
 - ❑ Buffer
 - ❑ Error Page
 - ❑ Import
 - ❑ Session

Include Directive

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- This directive inserts a HTML file or a JSP file into another JSP file at translation time, as illustrated below:



More on Include Directive

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- ❑ The include process is static, it means that the text of the included file is added to the JSP file. (Similar to copy pasting the contents)
- ❑ The included file can be a JSP file, HTML file, or text file
- ❑ If the included page is a JSP page it will be translated along with the main JSP page

Note :

Be careful that the included file **should not** contain **<html>**, **</html>**, **<body>**, or **</body>** tags.

Because the entire content of the included file is added to the main JSP file, these tags would conflict with the same tags in the main JSP file, causing an error.

How to create an include directive?

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- Include directive is created using the following syntax

```
<%@include attribute = "value"%>
```

- Include can have only *file* attribute

```
<%@include file = "value"%>
```

- Where file specifies the relative path of the file to be included

- Example:

```
<%@include file = "header.html"%>
```

Includes a file named header.html

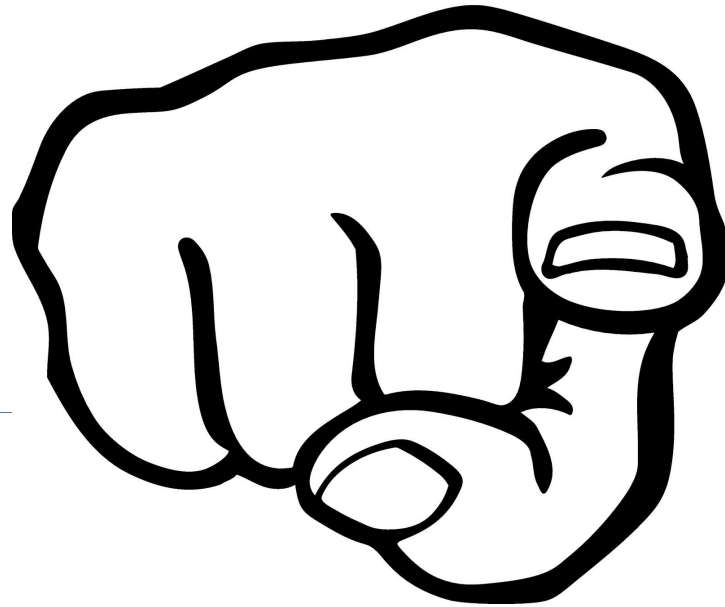
Questions?

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Your turn

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Your Turn – Page and Include Directive

- ❑ In this demo the associates will get familiarized with some of the commonly used page directives and the include directive
- ❑ We will be using the following page directive attributes and include directive in this demo
 - ❑ import
 - ❑ errorPage
 - ❑ isErrorPage
 - ❑ session
 - ❑ buffer

Your Turn (Details)

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- ❑ Scenario – You are asked to create an application which accepts a person's name and prints a greeting. If the name user input is null, the system should display an error page
- ❑ Develop the components as given below:
 - ❑ welcome.jsp – The page which accepts the name from the user
 - ❑ errorPage.jsp – The page to be displayed in case of error
 - ❑ greetings.jsp – The page which displays the greetings to the user
 - ❑ header.html – The header for all the pages which can be reused across pages
 - ❑ footer.html – The footer for all the pages which can be reused across pages

Your Turn (Code Assistance)

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□ Sample Code (welcome.jsp):

```
<%@ 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>Welcome</title>
<style type="text/css">
body,html {
    height: 100%;
}
</style>
</head>
<body>
<div id="header" style="background-color: blue;height: 20%;">
<%@include file="header.html"%>
</div>
<div id="content" style="background-color: gray;height: 70%;text-align: center;">
<br/>
<form method="post" action="greetings.jsp">
Enter Your Name <input type="text" name="name" />
<input type="submit" value="Enter" name="enter" />
</form>
</div>
<div
    style="height: 8%; bottom: 0; position: relative;"><%@include
    file="footer.html"%></div>
</body>
</html>
```

Includes header.html

Includes footer.html

Your Turn (Code Assistance)

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□ Sample Code (greetings.jsp):

```
<%@ 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">
<%@page session="true" %>
<%@page buffer="8kb" %>
<%@page errorPage="errorPage.jsp"%>
<%@page import="java.util.Date"%>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Welcome</title>
<style type="text/css">
body,html {
    height: 100%;
}
</style>
</head>
<%
String name=request.getParameter("name");
if (name==null || "".equals(name))
{
    throw new Exception("Name is Empty");
}
Date date=new Date();
%>
<body>
<div id="header" style="background-color: blue;height: 20%;">
<%@include file="header.html"%>
</div>
Current Date<%=date %>
<div id="content" style="background-color: gray;height: 70%;text-align: center;">
<br/>
<span style="color:green;font-size: 100px;">Welcome <%=name %></span>
</div>
<div
    style="height: 8%; bottom: 0; position: relative;">
<%@include file="Footer.html"%></div>
</body>
</html>
```

The session , buffer , errorPage , import attributes are set for the current page using the page directive

Throw Exception if name is null

Includes header.html

Includes footer.html

Your Turn (Code Assistance)

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- Sample Code (header.html & footer.html):

<Header>

```
<div style="background-color: olive;text-align: center;font-size: 100px;height: 100%;">  
Greetings|  
</div>
```

<Footer>

```
<div style="background-color: olive;text-align: center;font-size: 50px;height: 100%;">  
©copyright 2011-2012  
</div>
```

Let's Take A Break...

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**Time for
a Break**

Summary

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- Directive tags & types:
 - page, include, taglib

End of Section

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END



END