

ICON OF JAVA

ADV. JAVA JSP

5. JSP Directives



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JSP Directives

To provide Jsp Directives in Jsp pages we have to use the following syntaxes.

1. Jsp-Based Syntax:

`<%@Directive_name [attribute-list]%>`

Ex: `<%@page import="java.io.*"%>`

2. XML-Based Syntax:

`<jsp:directive.directiveName[attribute-list]%/>`

Ex: `<jsp:directive.page import="java.io.*"/>`

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There are 3 types of Directives in Jsp technology.

1. Page Directive
2. Include Directive
3. Taglib Directive

1. Page Directive:

In Jsp technology, **Page Directive** can be used to define the present Jsp page characteristics like to define import statements, specify particular super class to the translated servlet, to specify metadata about present Jsp pages and so on.

Syntax 1: <%@page [attribute-list]%>

Syntax 2: <jsp:directive.page [attribute-list]/>

Where attribute-list in Jsp page directive may include the following list.

1. language
2. contentType
3. import
4. extends
5. info
6. buffer
7. autoFlush
8. errorPage
9. isErrorPage
10. session
11. isThreadSafe
12. isELIgnored

1. language:

This attribute can be used to specify a particular scripting language to use scripting elements.

The default value of this attribute is java.

Ex: <%@page language="java"%>

2. contentType:

This attribute will take a particular MIME type in order to give an intimation to the client about to specify the type of response which Jsp page has generated.

Ex: <%@page contentType="text/html"%>



3. import:

This attribute can be used to import a particular package/packages into the present Jsp pages.

Ex: `<%@page import="java.io.*"%>`

If we want to import multiple number of packages into the present Jsp pages then we have to use either of the following 2 approaches.

Approach 1:

Specify multiple number of packages with comma(,) as separator to a single import attribute.

Ex: `<%@page import="java.io.*,java.util.*,java.sql.*"%>`

Approach 2:

Provide multiple number of import attributes for the list of packages.

Ex: `<%@page import="java.io.*" import="java.util.*" import="java.sql.*"%>`

Note: Among all the Jsp page attributes only import attribute is repeatable attribute, no other attribute is repeatable.

The default values of this attribute are java.lang, javax.servlet, javax.servlet.http, javax.servlet.jsp.

4. extends:

This attribute will take a particular class name, it will be available to the translated servlet as super class.

Ex: `<%@page extends="com.dss.MyClass"%>`

Where MyClass should be an implementation class to `HttpJspPage` interface and should be a subclass to `HttpServlet`.

The default value of this attribute is `HttpJspBase` class.

5. info:

This attribute can be used to specify some metadata about the present Jsp page.

Ex: `<%@page info="First Jsp Application"%>`

If we want to get the specified metadata programmatically then we have to use the following method from Servlet interface.

```
public String getServletInfo()
```

The default value of this attribute is Jasper JSP2.2 Engine.

6. buffer:

This attribute can be used to specify the particular size to the buffer available in `JspWriter` object.

Note: Jsp technology is having its own writer object to track the generated dynamic response, `JspWriter` will provide very good performance when compared with `PrintWriter` in servlets.

Ex: `<%@page buffer="52kb"%>`

The default value of this attribute is 8kb.



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7. autoFlush:

It is a boolean attribute, it can be used to give an intimation to the container about to flush or not to flush dynamic response to client automatically when JspWriter buffer filled with the response completely.

If autoFlush attribute value is true then container will flush the complete response to the client from the buffer when it reaches its maximum capacity.

If autoFlush attribute value is false then container will raise an exception when the buffer is filled with the response.

Ex: `<%@page buffer="52kb" autoFlush="true"%>
<html>
<body bgcolor="lightgreen">
<center>

<%
for(int i=0; i<10000000; i++) {
out.println("RAMA");
}
%>
</center></body>
</html>`

In the above piece of code, if we provide autoFlush attribute value false then container will raise an exception like

org.apache.jasper.JasperException: An exception occurred processing JSP page/first.jsp at line:9

root cause: java.io.IOException: Error: Jsp Buffer Overflow.

Note: if we provide 0kb as value for buffer attribute and false as value for autoFlush attribute then container will raise an exception

like org.apache.jasper.JasperException: /first.jsp(1,2) jsp.error.page.badCombo

The default value of this attribute is true.



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8. errorPage:

This attribute can be used to specify an error page to execute when we have an exception in the present Jsp page.

Ex: `<%@page errorPage="error.jsp"%>`

9. isErrorPage:

It is a boolean attribute, it can be used to give an intimation to the container about to allow or not to allow exception implicit object into the present Jsp page.

If we provide value as true to this attribute then container will allow exception implicit object into the present Jsp page.

If we provide value as false to this attribute then container will not allow exception implicit object into the present Jsp page.

The default value of this attribute is false.

Ex: `<%@page isErrorPage="true"%>`

first.jsp:

```
<%@page errorPage="error.jsp"%>
```

```
<%
```

```
java.util.Date d=null;
```

```
out.println(d.toString());
```

```
%>
```

error.jsp:

```
<%@page isErrorPage="true"%>
```

```
<html>
```

```
<body bgcolor="lightgreen">
```

```
<center><b><font size="" color=""><br><br>
```

```
<%=expression%>
```

```
</font></b></center></body>
```

```
</html>
```

10. session:

It is a boolean attribute, it is give an intimation to the container about to allow or not to allow session implicit object into the present Jsp page. The default value of this attribute is true.

Ex: `<%@page session="true"%>`

11. isThreadSafe:

It is a boolean attribute, it can be used to give an intimation to the container about to allow or not to allow multiple number of requests at a time into the present Jsp page.

If we provide true as value to this attribute then container will allow multiple number of requests at a time.

If we provide false as value to this attribute then automatically container will allow only one request at a time and it will implement SingleThreadModel interface in the translated servlet.

The default value of this attribute is true.

Ex: `<%@page isThreadSafe="true"%>`

12. isELIgnored:

It is a boolean attribute, it can be used to give an intimation to the container about to allow or not to allow Expression Language syntaxes in the present Jsp page.

Note: Expression Language is a Scripting language, it can be used to eliminate java code completely from the Jsp pages.

If isELIgnored attribute value is true then container will eliminate Expression Language syntaxes from the present Jsp page.

If we provide false as value to this attribute then container will allow Expression Language syntaxes into the present Jsp pages.

The default value of this attribute is false.

Ex: `<%@page isELIgnored="true"%>`

2. Include Directive:

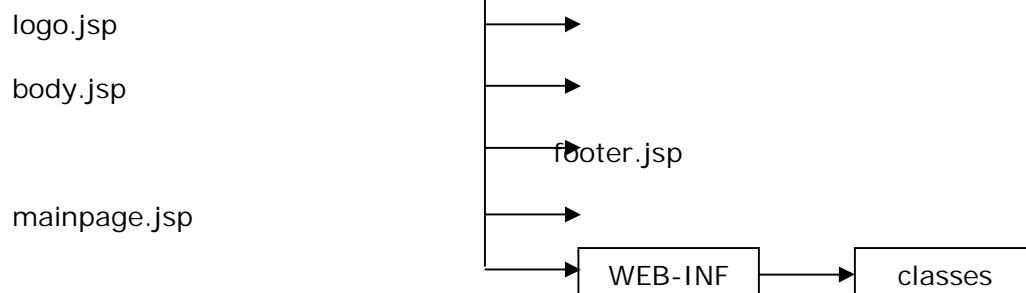
Include Directive can be used to include the content of the target resource into the present Jsp page.

Syntax: `<%@include file="--" %>`

Where file attribute can be used to specify the name and location of the target resource.

Application:

Directory Structure:



logo.jsp:

```
<html>
<body><center>
<table width="100%" height="20%" bgcolor="red">
<tr><td colspan="2"><center><b><font size="7" color="white">
Durga Software Solutions
</font></b></center></td></tr>
</table></center></body>
</html>
```

footer.jsp:

```
<html>
<body><center>
<table width="100%" height="15%" bgcolor="blue">
<tr><td colspan="2"><center><b><font size="6" color="white">
copyrights2010-2020@durgasoftwaresolutions
</font></b></center></td></tr>
</table></center></body>
</html>
```

body.jsp:

```
<html>
<body bgcolor="lightyellow">
<center><b><font size="7">
<p><br>
    Durga Software Solutions is one of the Training Institute.
<br><br></p>
</font></b></center></body>
</html>
```

mainpage.jsp:

```
<%@include file="logo.jsp"%>
<%@include file="body.jsp"%>
<%@include file="footer.jsp"%>
```

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3. Taglib Directive:

The main purpose of **Taglib Directive** is to make available user defined tag library into the present Jsp pages.

Syntax: <%@taglib uri=" _ _ " prefix=" _ _ "%>

Where uri attribute can be used to specify the name and location of user defined tag library.

Where prefix attribute can be used to define prefix names for the custom tags.

Ex: <%@taglib uri="/WEB-INF/db.tld" prefix="connect"%>



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