# JSP

# Directive Elements

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The **jsp directives** are messages that tells the web container how to translate a JSP page into the corresponding servlet.

There are three types of directives:

o   page directive

o   include directive

o   taglib directive

### Syntax of JSP Directive

1.   <%@ directive attribute="value" %>

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# JSP page directive

The page directive defines attributes that apply to an entire JSP page.

### Syntax of JSP page directive

1.   <%@ page attribute="value" %>

### Attributes of JSP page directive

o   import

o   contentType

o   extends

o   info

o   buffer

o   language

o   isELIgnored

o   isThreadSafe

o   autoFlush

o   session

o   pageEncoding

o   errorPage

o   isErrorPage

---

### 1)import

The import attribute is used to import class,interface or all the members of a package.It is similar to import keyword in java class or interface.

### Example of import attribute

1.   <html>
2.   <body>
3.   <%@ page **import**="java.util.Date" %>
4.   Today is: <%= **new** Date() %>
5.   </body>
6.   </html>

## 2)contentType

The contentType attribute defines the MIME(Multipurpose Internet Mail Extension) type of the HTTP response.The default value is "text/html;charset=ISO-8859-1".

### Example of contentType attribute

1. &lt;html&gt;
2. &lt;body&gt;
3. &lt;%@ page contentType=application/msword %&gt;
4. Today is: &lt;%= **new** java.util.Date() %&gt;
5. &lt;/body&gt;
6. &lt;/html&gt;

## 3)extends

The extends attribute defines the parent class that will be inherited by the generated servlet.It is rarely used.

## 4)info

This attribute simply sets the information of the JSP page which is retrieved later by using getServletInfo() method of Servlet interface.

### Example of info attribute

1. &lt;html&gt;
2. &lt;body&gt;
3. &lt;%@ page info="composed by Sonoo Jaiswal" %&gt;
4. Today is: &lt;%= **new** java.util.Date() %&gt;
5. &lt;/body&gt;
6. &lt;/html&gt;

The web container will create a method getServletInfo() in the resulting servlet.For example:

1. **public** String getServletInfo() {
2.     **return** "composed by Sonoo Jaiswal";
3. }

## 5)buffer

The buffer attribute sets the buffer size in kilobytes to handle output generated by the JSP page.The default size of the buffer is 8Kb.

### Example of buffer attribute

1. &lt;html&gt;
2. &lt;body&gt;
3.  &lt;%@ page buffer="16kb" %&gt;
4. Today is: &lt;%= **new** java.util.Date() %&gt;
5.  &lt;/body&gt;
6. &lt;/html&gt;

## 6)language

The language attribute specifies the scripting language used in the JSP page. The default value is "java".

### 7)isELIgnored

We can ignore the Expression Language (EL) in jsp by the isELIgnored attribute. By default its value is false i.e. Expression Language is enabled by default. We see Expression Language later.

1. <%@ page isELIgnored="true" %>//Now EL will be ignored

---

### 8)isThreadSafe

Servlet and JSP both are multithreaded.If you want to control this behaviour of JSP page, you can use isThreadSafe attribute of page directive. The value of isThreadSafe value is true.

If you make it false, the web container will serialize the multiple requests, i.e. it will wait until the JSP finishes responding to a request before passing another request to it.If you make the value of isThreadSafe attribute like:

<%@ page isThreadSafe="false" %>

The web container in such a case, will generate the servlet as:

1. **public class** SimplePage_jsp **extends** HttpJspBase
2.  **implements** SingleThreadModel{
3. .......
4. }

---

### 9)errorPage

The errorPage attribute is used to define the error page, if exception occurs in the current page, it will be redirected to the error page.

**Example of errorPage attribute**

**index.jsp**

1. <html>
2. <body>
3.  <%@ page errorPage="myerrorpage.jsp" %>
4.  <%= 100/0 %>
5.  </body>
6. </html>

---

### 10)isErrorPage

The isErrorPage attribute is used to declare that the current page is the error page.

**Note:** The exception object can only be used in the error page.

**Example of isErrorPage attribute**

**myerrorpage.jsp**

1.  <html>
2.  <body>
3.  <%@ page isErrorPage="true" %>
4.  Sorry an exception occured!<br/>
5.  The exception is: <%= exception %>
6.  </body>
7.  </html>

# Jsp Include Directive

The include directive is used to include the contents of any resource it may be jsp file, html file or text file. The include directive includes the original content of the included resource at page translation time (the jsp page is translated only once so it will be better to include static resource).

## Advantage of Include directive

Code Reusability

## Syntax of include directive

1. <%@ include file="resourceName" %>

If file is in the same folder where the current JSP page resides then we can just mention the file name else the relative path to the file needs to be specified.

## Include Directive Example

### index.jsp

```
<html>
<head>
<title>Main JSP Page</title>
</head>
<body>
<%@ include file="file1.jsp" %>
Main JSP Page: Content between two include directives.
<%@ include file="file2.jsp" %>
</body>
</html>
```
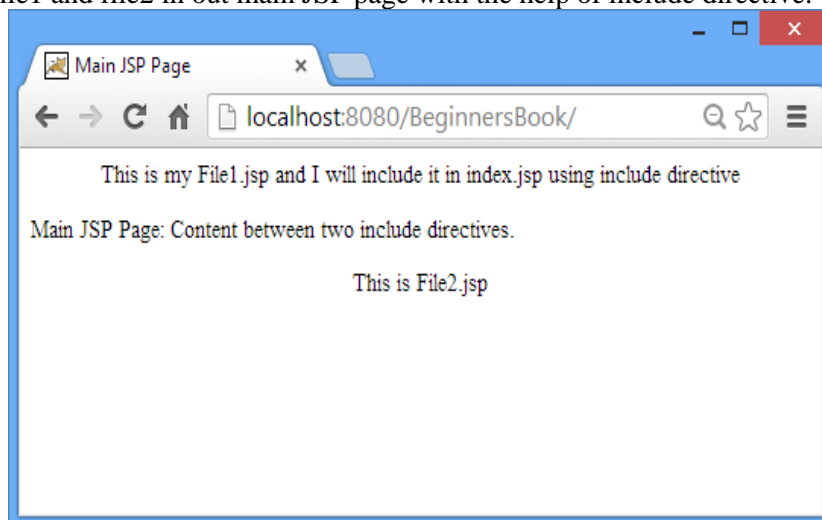
### file1.jsp

```
<p align="center">
This is my File1.jsp and I will include it in index.jsp using include directive
</p>
```

### file2.jsp

```
<p align="center">
This is File2.jsp
</p>
```

## Output

The output would look like this when you run the above code. As you can see we have included the content of file1 and file2 in out main JSP page with the help of include directive.

# JSP Taglib directive

The JSP taglib directive is used to define a tag library that defines many tags. We use the TLD (Tag Library Descriptor) file to define the tags. In the custom tag section we will use this tag so it will be better to learn it in custom tag.

## Syntax JSP Taglib directive

1. <%@ taglib uri="uriofthetaglibrary" prefix="prefixoftaglibrary" %>

---

## Example of JSP Taglib directive

In this example, we are using our tag named currentDate. To use this tag we must specify the taglib directive so the container may get information about the tag.

1. <html>
2. <body>
3. <%@ taglib uri="http://www.javatpoint.com/tags" prefix="mytag" %>
4. <mytag:currentDate/>
5. </body>
6. </html>