## JSP directives

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:

- page directive
- include directive
- taglib directive

#### Syntax of JSP Directive

<%@ directive attribute="value" %>

# JSP page directive

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

#### Syntax of JSP page directive

<%@ page attribute="value" %>



#### Attributes of JSP page directive

- import
- contentType
- extends
- info
- buffer
- language
- isELIgnored

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- isThreadSafe
- autoFlush
- session
- pageEncoding
- errorPage
- 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

```
<html>
<body>

<math display="black" style="black" style="
```

## 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

```
<html>
<body>
<%@ page contentType=application/msword %>
Today is: <%= new java.util.Date() %>
</body>
</html>
```

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#### 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

```
<html>
<body>
<%@ page info="composed by Sonoo Jaiswal" %>
Today is: <%= new java.util.Date() %>
</body>
</html>
```

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

```
public String getServletInfo() {
  return "composed by Sonoo Jaiswal";
}
```

## 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

```
<html>
<body>
<%@ page buffer="16kb" %>
Today is: <%= new java.util.Date() %>

</body>
</html>
```

### 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.

```
<%@ 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:

```
public class SimplePage_jsp extends HttpJspBase
implements SingleThreadModel{
.......
}
```

#### 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
<html>
<body>
<%@ page errorPage="myerrorpage.jsp" %>
<%= 100/0 %>
</body>
</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
```

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

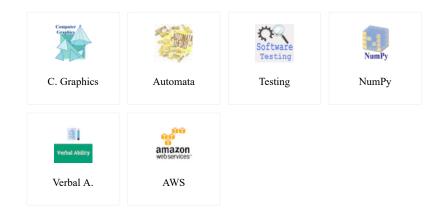
Sorry an exception occured!<br/>
The exception is: <%= exception %>
</body>
</html>
```

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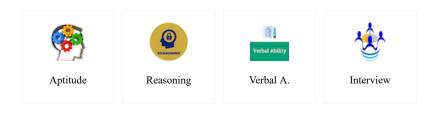
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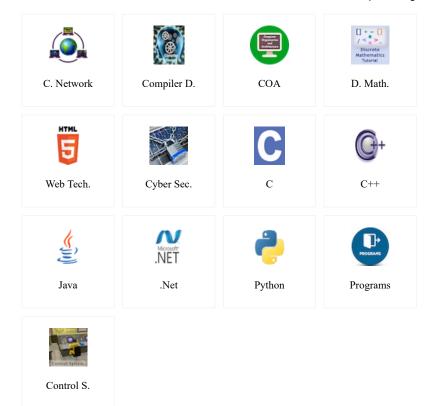


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# Jsp Include Directive

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

<%@ include file="resourceName" %>

## Example of include directive

In this example, we are including the content of the header.html file. To run this example you must create an header.html file.

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

Today is: <%= java.util.Calendar.getInstance().getTime() %>
</body>
</html>
```

Note: The include directive includes the original content, so the actual page size grows at runtime.

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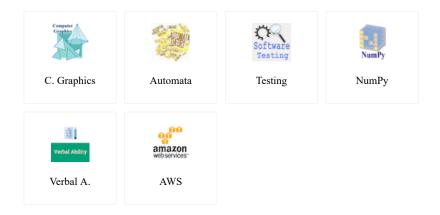




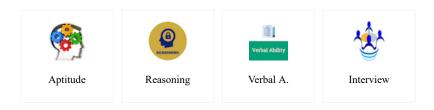




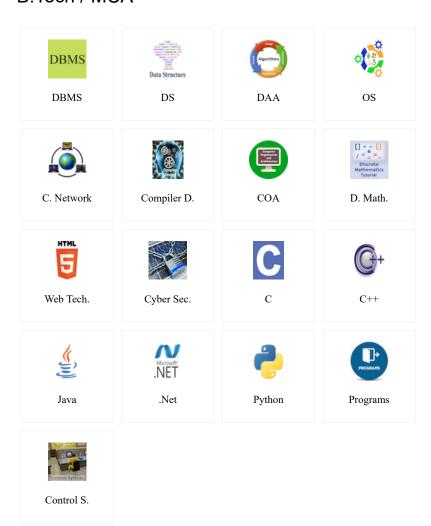
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# JSP Taglib directive

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

<%@ 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.

```
<html>
<body>
<%@ taglib uri="http://www.javatpoint.com/tags" prefix="mytag" %>
<mytag:currentDate/>
</body>
</html>
```

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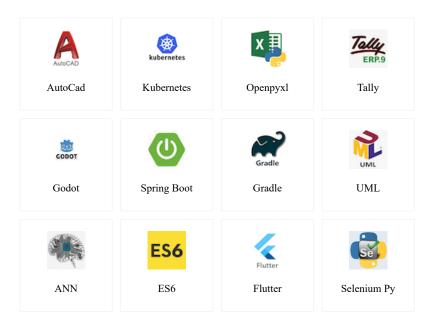




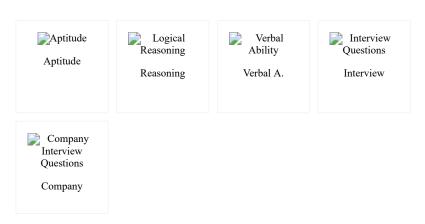
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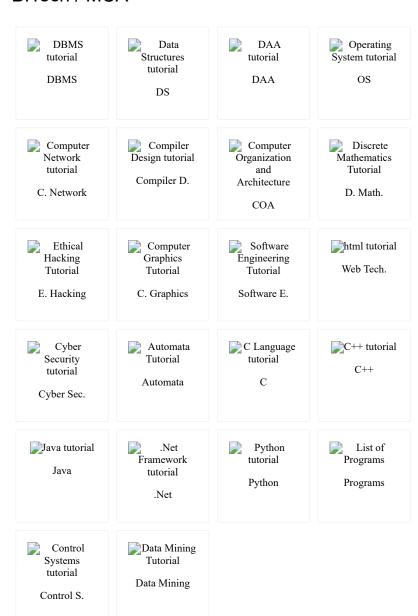


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# **JSP Action Tags**

There are many JSP action tags or elements. Each JSP action tag is used to perform some specific tasks.

The action tags are used to control the flow between pages and to use Java Bean. The Jsp action tags are given below.

| JSP Action<br>Tags | Description  |
|--------------------|--|
| jsp:forward        | forwards the request and response to another resource.                           |
| jsp:include        | includes another resource.   |
| jsp:useBean        | creates or locates bean object.  |
| jsp:setProperty    | sets the value of property in bean object.                                       |
| jsp:getProperty    | prints the value of property of the bean.  |
| jsp:plugin         | embeds another components such as applet.  |
| jsp:param          | sets the parameter value. It is used in forward and include mostly.              |
| jsp:fallback       | can be used to print the message if plugin is working. It is used in jsp:plugin. |



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The jsp:useBean, jsp:setProperty and jsp:getProperty tags are used for bean development. So we will see these tags in bean development.

## jsp:forward action tag

The jsp:forward action tag is used to forward the request to another resource it may be jsp, html or another resource.

Syntax of jsp:forward action tag without parameter

```
<jsp:forward page="relativeURL | <%= expression %>" />
```

#### Syntax of jsp:forward action tag with parameter

```
<jsp:forward page="relativeURL | <%= expression %>">
<jsp:param name="parametername" value="parametervalue | <%=expression%>" />
</jsp:forward>
```

# Example of jsp:forward action tag without parameter

In this example, we are simply forwarding the request to the printdate.jsp file.

#### index.jsp

```
<html>
<body>
<h2>this is index page</h2>
<jsp:forward page="printdate.jsp" />
</body>
</html>
```

#### printdate.jsp

```
<html>
<body>
<% out.print("Today is:"+java.util.Calendar.getInstance().getTime()); %>
</body>
</html>
```

#### download this example