

# Including Files and Applets in JSP Pages

This section specifies the main three capabilities for including external pieces into a JSP document.

- 1) The JSP:include action
- 2) The include directives
- 3) The JSP:plugin action

# Including Pages at Request Time: The JSP include action

The JSP:include action includes the output of a secondary page at the time the main page is requested. The output of the included page cannot contain JSP, the page can be the result of resources that use servlets or JSP to create the output.

```
<jsp:include page="resource path" />
```

# XML Syntax and jsp:include

If you are unfamiliar with XML note the following three things:

- 1) XML element names can contain colons:  
jsp:include
- 2) XML tags are case sensitive
- 3) XML tags must be explicitly closed  
<xyz></xyz> with <xyz/>

# News Headline Page

The typical use of `jsp:include` consider the example, the included pages are not complete web pages. The included pages can be html files, plain text files, JSP pages or servlets, however the client sees only the composit results.



# Including files at page Translation time

You can include directive to include a file in the main JSP document at the time the document is translated into a servlet.

```
<%@ include file="Relative URL" %>
```

The include directive as a preprocessor: the include file is inserted character into the main page, then the resultant page is treated as single JSP page.

# Difference between jsp:include & include

Action	jsp:include	include
Syntax	<code>&lt;jsp:include page="path" /&gt;</code>	<code>&lt;%@ include file="url"%&gt;</code>
Inclusion occurs	Request Time	Page Translation Time
What included	Output of page	Actual content of file
How many servlet creates	Two (main & included page)	One (included file inseted into main)
Can included page set response header	No	Yes
Does main page needed to update	No	Yes
Can include methods, fields for main page	No	Yes

## Maintenance problems with include

- 1) The problem of inclusion occurring at page translation time is difficult to maintain pages is the case with `jsp:include`.
- 2) The JSP pages that use it may needed to be update.
- 3) Servers are required to detect the changes and translate into servlets, but they are not do so.

This is a significance inconvenience; it results serious maintenance problems.

## Additional powers from include

The include directive is more powerful. With the include directive, the included file is permitted to contain JSP code. Ex: Suppose xyz.jsp contained

```
<%! Int count=0; %>
```

Access it into main page

```
<%@ include file="xyz.jsp" %>
```

```
<%= count++ %>
```



# Forwarding Requests with jsp:forward

The `jsp:forward` is used to obtain the complete output from the auxiliary page. For example here is the page that randomly selects either `page1.jsp` or `page2.jsp` to output.

```
<% String s;  
    if (Math.random()>0.5) {  
        s="examples/page1.jsp";  
    } else {  
        s="examples/page2.jsp"; } %>  
<jsp:forward page="<% s %> />
```

# Including Applets for Java Plug-In

Early in the evolution, Java's main application area was Applet. Furthermore, most browsers supported the most up-to-date Java version. Now however, Applets are very small part of Java world, and only major browser that supports the Java2 platform is Netscape 6.0 and later. This leaves applet developers with three choices

- 1) Develop the Applet with JDK 1.1
- 2) Have users install version of JRE 1.4
- 3) Have users install any version of Java2 Plug-In

# The jsp:plugin Element

The jsp:plugin supplies four attributes to include applets : type, code, width, height.

We need to supply “applet” to type attribute to plugin the applets in JSP pages.

```
<jsp:plugin type="applet"  
            code="myapplet.class"  
            width="400" height="400"  
</jsp:plugin>
```

Few more attribute are: codebase, align, hspace, vspace, archive, name, and title (tooltip).

# The jsp:param and jsp:params Element

The JSP param element is used with jsp:plugin in a manner of PARAM is used with APPLET by getParameter.

```
<jsp:plugin type="applet"  
            code="myapplet.class"  
            width="400" height="400">
```

```
<jsp:params>
```

```
    <jsp:param name="p1" vlaue="hi"
```

```
    <jsp:param name="p2" vlaue="Hello"
```

```
</jsp:param>
```

```
</jsp:pluin>
```



# The jsp:fallback element

The jsp:fallback element provides alternative text to browsers that do not support OBJECT or embed.

```
<jsp:plugin type="applet"  
            code="myapplet.class"  
            width="400" height="400">
```

```
<jsp:fallback>
```

```
<b> Error: This example requires Java </b>
```

```
</jsp:fallback>
```

```
</jsp:pluin>
```