

Java Server Pages (JSP)

Lesson 08 : JSP Actions



Lesson Objectives

In this lesson, you will learn the following concepts:

- JSP Actions
 - jsp:include Action
 - include Action Vs Directive
 - jsp:forward Action
 - Integrating Servlets & JSP
 - jsp:forward Vs response.sendRedirect





The JSP Action

JSP actions controls the behavior of the servlet engine.

Available Actions are as follows:

- `jsp:include`
- `jsp:forward`



The Include Action

The include action allows to insert files into the page being generated.

Syntax:

```
<jsp:include page="{relativeURL | <%=  
expression%>}" flush="true"/>
```

or

```
<jsp:include page="{relativeURL | <%= expression  
%>}" flush="true" >  
<jsp:param name="parameterName" value="{parameterValue |  
<%= expression %>}" /> +  
</jsp:include>
```



Examples for jsp:include

Example 1:

```
<jsp:include page="scripts/login.jsp" />  
  <jsp:include page="copyright.html" />  
  <jsp:include page="/index.html" />
```

Example 2:

```
<jsp:include page="scripts/login.jsp">  
  <jsp:param name="username" value="jsmith" />  
</jsp:include>
```



8.2: jsp:include Action Demo

Demo on:

- jspIncludeAction.jsp
- header.jsp
- footer.jsp





8.2.1: include Action Vs Directive

include Action versus include Directive

The include directive includes files at the time the JSP page is translated into a servlet. Hence it is called static include.

- The include action includes files when the page is requested. Hence it is called dynamic include.
- In case of include directive as the include process is static, a change in the included file will not be reflected in the JSP file in which it is included (this behavior is dependent on JSP container).



The forward Action

The `<jsp:forward>` element forwards the request object containing the client request information from one JSP file to another file.

The target file can be an HTML file, another JSP file, or a servlet.

A `jsp:forward` effectively terminates the execution of the current page.

If the page output is buffered, then the buffer is cleared prior to forwarding.



Syntax and Examples for jsp:forward

Syntax:

```
<jsp: forward page="{ relativeURL | <%= expression %> }"  
    {/}>|> [ <jsp:param name=" parameterName " value="{  
parameterValue | <%= expression %>}" /> ]+  
    </jsp: forward>
```

Example 1:

```
<jsp:forward page="/pages/login.jsp" />
```

Example 2:

```
<jsp:forward page="/pages/login.jsp">  
    <jsp:param name="username" value="jsmith" />  
</jsp:forward>
```



8.3: jsp:forward Action Demo

Demo on:

- first.jsp
- second.jsp





Integrating Servlets and JSP

jsp:forward can be used to forward a request from jsp page to a servlet.

```
<!-- Forward to a servlet -->  
<jsp:forward page="/servlet/servlettojsp" />
```

Model 2 Architecture combines the use of Servlets and JSP. It takes advantage of the predominant strengths of both technologies, using JSP to generate the presentation Layer and servlets to perform process-intensive tasks.

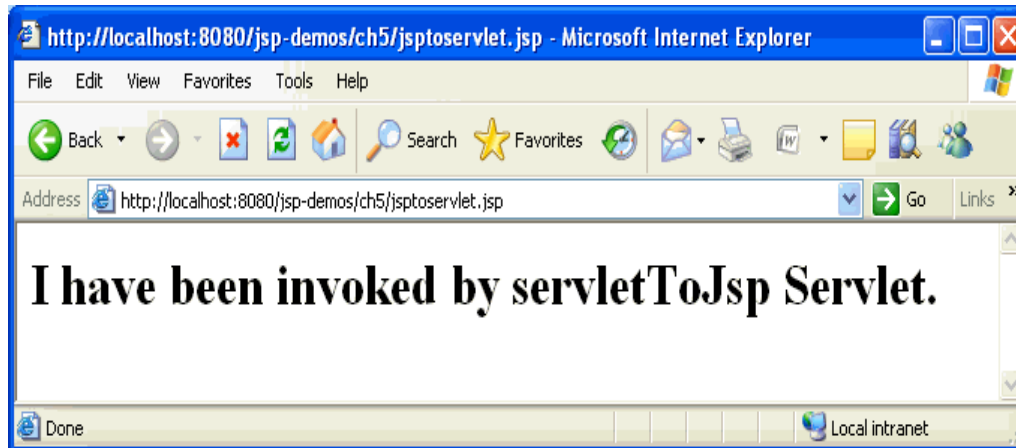


8.3.1: Integrating Servlets and JSP

Demo: Integrating Servlets and JSP

Demo on:

- `servletToJsp.java` (servlet)





`jsp:forward` versus `response.sendRedirect`

<code>jsp:forward</code>	<code>response.sendRedirect</code>
Server-side redirect, hence no network traffic	Client-side redirect, hence additional network round trip
The address of the destination page hidden from user	The address of the destination page visible to user in the address bar
Allows forwarding of the request to another page in the same context as the current page.	Allows re-direction of the request to another page in same or different context as the current page

Lab: Integrating JSP with Servlet



Lab 4.1



Summary



In this lesson, you have learnt the following concepts:

- JSP Actions: include, forward, and plugin





Review Question

Question 1: The include action is a ____ include.

- Option 1: dynamic
- Option 2: static
- Option 3: both the above

Question 2: The ____ attribute of include action is mandatory to be set.

Question 3: ____ sub-element can be used to pass information to included or forwarded JSP page.

Question 4: ____ action terminates the execution of current page before moving on to the next page.

Question 5: ____ is a client-side redirect.

