# JAVA SERVER PAGES PART-2

#### **Directives:**

There are three directives in JSP.

- 1) page directive
- 2) include directive
- 3) taglib directive

# 1) page directive:

Syntax: <%@ page ..... %>

### **Attributes:**

- 1) language="...."=> Java language is a default. JSP supports java language only.
- 2) import="....." => It is used to import packages. The following packages are implicitly imported in JSP.
- i) java.lang package
- ii) javax.servlet package
- iii) javax.servlet.http package
- iv) javax.servlet.jsp package

#### **Examples:**

- 1) <%@ page import="java.util.\*" %>
- 2) <%@ page import="java.util.\*, java.sql.\*" %>
- 3) buffer="...." => It is used to specify the buffer size
- 4) autoFlush="...." => true is default. Data automatically flushed.

The above two attributes are used for utilizing buffer memory efficiently.

- 5) errorPage="...." => It is used to specify the url of an error page. Whenever exception occurs in a program control jumps to specified error page.
- 6) isErrorPage="....." => Here false is default. It is used in error page only. It is used to display user friendly error message.
- 7) contentType="....."=> It is used to specify MIME(Multipurpose Internet Mail Extensions)type. Default mime type is "text/html"
- 8) session="....." => true is default.

**Example:** <%@ page session="false" %> => This statement indicates web container that do not create session. It does not allow to access implicit session object also.

9) isThreadSafe="....." => default is true.

**Example:** <%@ page isThreadSafe="false" %> => This statement indicates web container to implement javax.servlet.SingleThreadModel interface in a converted servlet. If that interface implemented in a servlet, then that servlet allows to access only one thread at a time.

10) isELIgnored="...."=> default is false.

**Example:** <%@ page isELIgnored="true" %> => This statement indicates web container that do not allow expression language in a JSP.

### 2) include directive:

Syntax: <%@ include file="...." %> => It is used to include jsp file or html file.

#### **Example:**

<html>

<body bgcolor=yellow text=red>

<h1><u> Include Directive Example </u></h1>

<%@ include file="test.jsp" %>

<%@ include file="time.jsp" %>

<%@ include file="table.jsp" %>

```
</body>
```

</html>

# 3) taglib directive:

Syntax: <%@ taglib prefix="....." wri="....." %> => It is used to include tag libraries.

# **JSP Actions:**

- 1) <jsp:forward>
- 2) <jsp:include>
- 3) <jsp:useBean>
- 4) <jsp:setProperty>
- 5) <jsp:getProperty>
- 6) <jsp:plugin>
- 7) <jsp:fallback>
- 8) <jsp:params>
- 9) <jsp:param>

# 1)<jsp:forward>:

It is used to forward the request and response of one jsp to another jsp.

#### **Example:**

# arithmetic.html

<html>

<body bgcolor=green text=yellow>

<center>

<h1><u>Arithmetic Application</u></h1>

<form action=arithmetic.jsp>

```
First Number <input type=text name=first><br>
Second Number <input type=text name=second><br><br>
<input type=submit name=operation value=ADD>
<input type=submit name=operation value=SUB>
<input type=submit name=operation value=MUL>
<input type=submit name=operation value=DIV>
</form>
</center>
</body>
</html>
arithmetic.jsp
<% String s=request.getParameter("operation")</pre>
if(s.equals("ADD")) { %>
<jsp:forward page="add.jsp" />
<% } else if(s.equals("SUB")) { %>
<jsp:forward page="sub.jsp" />
<% } else if(s.equals("MUL")) { %>
<jsp:forward page="mul.jsp" />
<% } else { %>
<jsp:forward page="div.jsp" />
<% } %>
add.jsp
<html>
<body bgcolor=red text=yellow>
```

```
<h1>
<% String s1=request.getParameter("first");</pre>
String s2=request.getParameter("second");
int a=Integer.parseInt(s1);
int b=Integer.parseInt(s2);
out.println("Output: "+(a+b));
%>
</h1>
</body>
</html>
sub.jsp
<html>
<body><br/>body bgcolor=blue text=yellow></br>
<h1>
<% String s1=request.getParameter("first");</pre>
String s2=request.getParameter("second");
int a=Integer.parseInt(s1);
int b=Integer.parseInt(s2);
out.println("Output: "+(a-b));
%>
</h1>
</body>
</html>
mul.jsp
```

```
<html>
<body bgcolor=green text=yellow>
<h1>
<% String s1=request.getParameter("first");</pre>
String s2=request.getParameter("second");
int a=Integer.parseInt(s1);
int b=Integer.parseInt(s2);
out.println("Output: "+(a*b));
%>
</h1>
</body>
</html>
div.jsp
<html>
<body bgcolor=yellow text=red><h1>
<% String s1=request.getParameter("first");</pre>
String s2=request.getParameter("second");
int a=Integer.parseInt(s1);
int b=Integer.parseInt(s2);
out.println("Output: "+(a/b));
%>
</h1>
</body>
</html>
```

# 2)<jsp:include>:

It is used to include the request and response of one jsp into another jsp.

#### **Example:**

```
header.jsp
```

```
<html>
```

<body>

<center>

<font color=red>

<h1><u><% out.println("JSP Tutorial"); %></u></h1>

</font>

</center>

</body>

</html>

#### footer.jsp

<html>

<body>

<center>

<font color=green>

<h3><% out.println("By"); %></h3>

<h2><% out.println("Venkatesh Mansani"); %></h2>

<h1><% out.println("Naresh i Technologies"); %></h1>

</font>

</center>

</body>

```
</html>
page1.jsp
<html>
<body bgcolor=yellow text=blue>
<jsp:include page="header.jsp"/>
<h1><u>JSP:</u></h1>
<% out.println("JSP stands for Java Server Pages. JSP is a specification for developing web applications with Java programming language."); %>
<jsp:include page="footer.jsp"/>
</body>
</html>
page2.jsp
```

```
<html>
```

<body bgcolor=yellow text=blue>

<jsp:include page="header.jsp" />

<h1><u>JSTL:</u></h1>

<% out.println("JSTL stands for Java Server Pages Standard Tag Library. JSTL
introduced with JSP 2.0 version to simplify the JSP."); %>

<jsp:include page="footer.jsp" />

</body>

</html>

### 3)<jsp:useBean>:

It is used to create an object to a Java bean class.

# 4)<jsp:setProperty>:

It is used to call setter methods of a Java bean.

# 5)<jsp:getProperty>:

It is used to call getter methods of a Java bean.

#### **Example:**

```
bean.html
```

```
<html>
<body bgcolor=red text=yellow><h1>
<jsp:useBean id="mb" class="beanapp.MessageBean">
<jsp:setProperty name="mb" property="message" value="Welcome" />
<jsp:getProperty name="mb" property="message" />
</jsp:useBean>
</h1></body>
</html>
MessageBean.java
package beanapp;
import java.io.Serializable;
public class MessageBean implements Serializable{
      private String message;
      public String getMessage() {
            return message;
      public void setMessage(String message) {
           this.message = message;
```