Java Server Pages

JSP technology is used to create web application just like servlet technology. It can be thought of as an extension to servlet because it provides more functionality than servlet.

A JSP page contains HTML code and JSP tags. The jsp pages are easier to maintain than servlet because we can separate designing and development. It provides some additional features such as Expression Language, Custom Tag etc.

**JSP Implicit Obects**

Implicit objects are set of pre-defined Object available on jsp page. There are 9 implicit objects available for the JSP.

Following are them:

i.out

ii.request

iii.response

iv.config

v.application

vi.session

vii.pageContext

viii.page

ix.exception

**JSP Directives**

The directives are messages that tells the web container how to translate a JSP page into corresponding servlet. There are three types of directives:

i.Page

ii.include

iii.taglib

**Page Directive**

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

Attributes of JSP page directive

i.import

ii.contentType

iii.extends

iv.info

v.buffer

vi.language

vii.isELIgnored

viii.isThreadSafe

ix.autoFlush

x.session

xi.pageEncoding

xii.errorPage

xiii.isErrorPage

**Scripting Elements**

The scripting elements provides the ability to insert java code inside the jsp. There are three types of scripting elements:

i.scriplet tag:

A scriplet tag is used to execute java source code in JSP. Syntax as follows:

*<% java source code %>*

ii.expression tag:

The code placed within expression tag is written to the output stream of the response. So you need not write out.print() to write data. It is mainly used to print the values of variable or method. Eg, *<%= statement %>*

iii.declaration tag:

The JSP declaration tag is used declare fields and methods. The code written inside the jsp declaration tag is placed outside the service() method of auto generated servlet. So it doesn’t get memory at each request. Eg, *<%! Statement %>*

**JSP Action Tag**

JSP action tag is used to perform some specific tasks. The action tags basically are used to control the flow between pages and to use Java Bean. Most use jsp action tags are as follows:

i.jsp:forward

The jsp:forward action tag is used to forward the request to another resource it may be jsp,html or another resource. Eg, *<jsp:forward page=”nameofpage”>*

ii.jsp:include

The jsp:include action tag is used to include the content of another resource it may be jsp,html or servlet. The jsp include action tag includes the resource at request time so it is better for dynamic pages because there might be changes in future. Eg, *<jsp:include page=”page”/>*

iii.jsp:useBean

The jsp:useBean action tag is used to locate or instantiate a bean class. If bean object of the Bean class is already created, it doesn’t create the bean depending on the scope. But if

object of bean is not created, it instantiates the bean. Eg,

*<jsp:useBean id=”instanceName” scope=”page|request|session|application” class=”packageName.className”/>*

iv.jspSetProperty

v.jsp:getProperty

vi.jsp:param

vii.jsp:plugin

viii.jsp:fallback

**request**

The JSP request is an implicit object of type HttpServletRequest i.e. created for each jsp request by the web container. It can be used to get request information such as parameter, header information, remote address, server name, server port, content type, character encoding etc.

It can also be used to set, get and remove attributes from the jsp request scope.

**response**

In JSP, response is an implicit object of type HttpServletResponse. The instance of HttpServletResponse is created by the web container for each jsp request.

It can be used to add or manipulate response such as redirect response to another resource, send error etc.

**session**

In JSP, session is an implicit object of type HttpSession.The Java developer can use this object to set,get or remove attribute or to get session information.

**cookie**

Cookies are text files stored on the client computer and they are kept for various information tracking purposes. JSP transparently supports HTTP cookies using underlying servlet technology.