

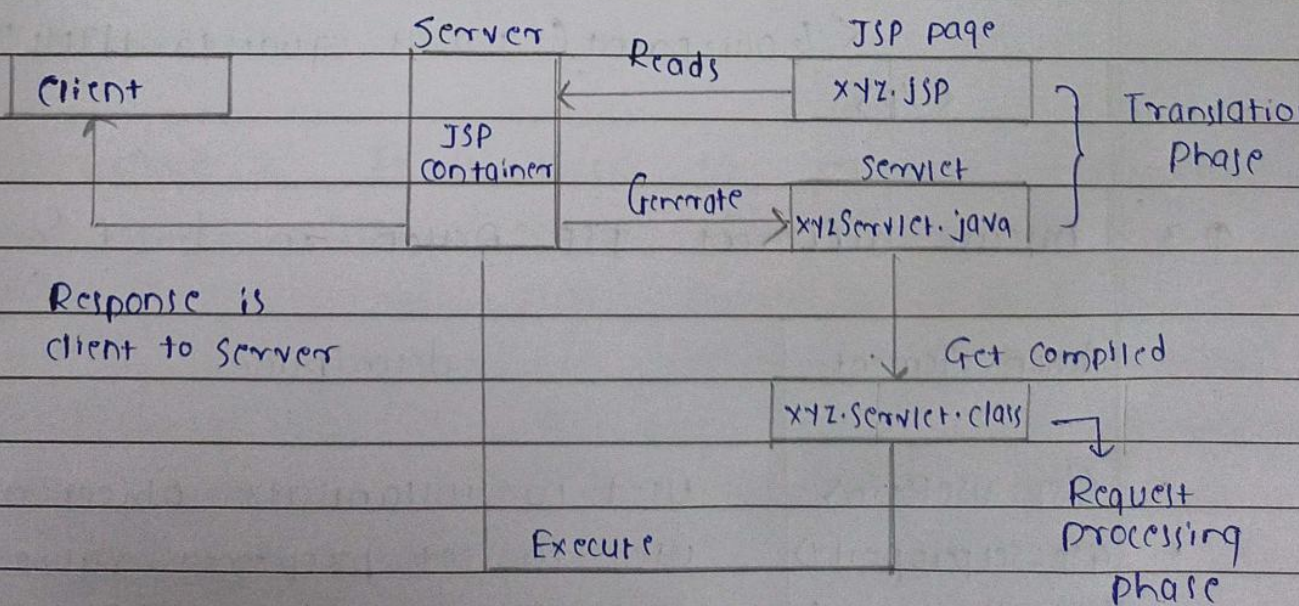
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Q 1 What is JSP ? Explain life cycle of JSP

- JSP (Java Server Pages) is technology used to develop dynamic, platform-independent web applications.
- It allows embedding Java code directly into HTML pages using special JSP tags.

JSP Life Cycle :-

- JSP pages can be processed using JSP containers
- 1) Client makes request for required JSP page server. The server must have JSP container as request processed.
- 2) On receiving request JSP container searches and then reads desired JSP page. This JSP page is straightforwardly converted to corresponding Servlet. Every JSP element is converted into corresponding Java code.
- 3) This Servlet is then compiled to generate Servlet class file. Using this response is generated.
- 4) The JSP container executes Servlet class file.



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Q2 what are various elements of JSP pages?

→ JSP pages contain four elements.

1) Template text :- XML or HTML code can be directly used in JSP document.

2) Action element :- They are used to create documents dynamically.

i) opening tags ii) Action body iii) closing body

3) Directives : JSP directives control processing of entire JSP page. It gives direction to server regarding processing of page.

Ex :- `<%@page import = "java.io" %>`

`<%@page language = "java" %>`

4) Scriptlets :- Scriptlets are nothing but java code enclosed within `<%` and `%>` tags

Ex :- `<P>`

`<% out.print("JSP is equal to HTML") %>`

`</P>`

Q3 Discuss different JSP Action in brief?

Action Element	Description
• <code><jsp:useBean></code>	used to instantiate object of java bean
• <code><jsp:setProperty></code>	used to set property value of java bean
• <code><jsp:getProperty></code>	used to get property value from bean.

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Action element	Description
• <code><jsp: param></code>	for adding specific parameter to request this tag is used.
• <code><jsp: forward></code>	This tag helps in forwarding request
• <code><jsp: plugin></code>	used to generate HTML code and to embed applet into it.
• <code><jsp: attribute></code>	used to set value of action attribute
• <code><jsp: element></code>	used to generate XML elements.
• <code><jsp: text></code>	used to handle template text
• <code><jsp: body></code>	used to set body element.
• <code><jsp: include></code>	This tag works as Subroutine. It include response from Servlet

Q4 Discuss different directives in JSP with Example?

-
- i) page directive
 - ii) Include directive
 - iii) Taglib directive

1) page directive :- It is used to provide information about page. also used to set attribute. Various attribute of page directive are :-

- i) import ii) language iii) Content Type iv) extends
- v) session vi) buffer vii) auto flush viii) isThreadSafe
- ix) info x) errorPage xi) isErrorPage

Ex :- `<%@page import = "java.io.*" %>`

`<%@page language = "java" %>`

`<%@page contentType = "text/html" %>`

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2) Include directive :- It is used to Copy Content of one Jsp page to another . It's like including code of one file into another.

Ex :

```
<%@include file = calculate.jsp %>
```

3) Taglib directive :-

This directive basically allows users to use Custom tags in jsp. The Custom tags are those which are Created by user.

for Ex :-

```
<%taglib uri = "mytaglib" prefix = "sampletag" %>
```

Q 5 Explain Implicit objects in JSP ?

→ • Implicit objects are predefined variables used to access request and application data. These objects are used by Scripting elements

Name	Class Name	Meaning
application	javax.servlet.ServletContext	It provides resources shared within a web application
		log()
		getServerInfo()

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Name	class Name	
config	javax.servlet.ServletConfig	It helps in passing information to Servlet or JSP getInitparameter()
request	java.servlet.http.HttpServletRequest	provide method for accessing information made by request getContentlength()
response	java.servlet.http.HttpServletResponse	provide methods related to adding cookies, sessions. addCookie()
out	java.servlet.jsp.JSPWriter	provide methods related to I/O clear()
page	java.lang.Object	Variable is assigned to instance of JSP implementation class.
pageContext	javax.servlet.jsp.PageContext	It provide access to several JSP page attribute getPage() getRequest()