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TE-A-42

Unit - III

Q.6) List and elaborate any five JSP implicit Objects with examples.

→ Implicit Objects in JSP :-

- 1) The request Object.
- 2) The response object.
- 3) The out Object.
- 4) The session Object.
- 5) The application object.
- 6) The config Object.
- 7) The pageContext object.
- 8) The page object.
- 9) The exception Object.

• The session object :-

The session object is an instance of `javax.servlet.http.HttpSession`. The session object track the client session between different client requests. It is valid only for HTTP requests.

• The application Object :-

The instance of a `javax.servlet.ServletContext` Object. It represents the context within which the JSP is executing.

- The Config Object :-

The config object is an instance of `javax.servlet.ServletConfig`. It represents the Servlet configuration. This object has page scope.

- The page object :-

This object is considered as real reference to the instance of the JSP page. It is an object which represents the complete JSP pages.

- The execution object :-

This object is an instance of class `java.lang.Throwable`. It refers to the runtime exception which is resulted in the error page being involved. This object has page scope.

The execution object is a container which holds the execution which is thrown by the preceding page. It generates suitable response to the error situation.

Q.2) What is use of JSP action tag? Discuss in detail jsp:useBean action tag.

- 1) JSP action are used to handle the behaviour of servlet engine
- 2) These action can perform various

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task. like insertion of file dynamically forward the control of next page usage JavaBeans Component

3) `<jsp:useBean>` Action

This action is used to use beans in a JSP pages Beans are invoked by this tag.

Syntax - `<jsp:useBean>`

4) `<jsp:useBean id = "bean id" class = package.name.class name "/>`

Q.3) Write difference between include action & include directive in JSP.

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| | Include Directive | Include action |
|----|---|---|
| 1) | The code of one jsp page is inserted into another jsp. It called compile time / static including. | The response of one page will be inserted in to another page. It is called runtime or dynamic including. |
| 2) | For both source & destination pages, only a single servlet will be generated internally so no. of servlet increase the no. of object are reduced. | Individual Servlet are generated for each jsp page so it internally so no. of servlet increase the no. of object are reduced. |
| 3) | Both HTML & XML syntax for the tag. | Only XML Syntax but there is only HTML syntax. |
| 4) | <code><%@include file = "%></code> | <code><% JSP include page = "%></code> |
| 5) | File must be available in the within some application | Pages may exist either within same application or another web appl ⁿ of server. |

Q.4) Write advantages of JSP over Servlet
Explain life cycle of JSP.

→ Advantages:-

- 1) Extension to Servlet
- 2) Easy to maintain
- 3) Fast Development
- 4) Less code than Servlet
- 5) Exception Handling
- 6) Readability
- 7) Less complexity

Life cycle of JSP :-

1) Translation Phase :-

At first when there is a request for JSP pages, the JSP pages is translated into Servlet.

2) Compilation Phase :-

JSP engine check whether the JSP page request is for first time. If yes then generated Servlet is compiled.

3) Execution Phase :-

JSP Servlet method are executed
`public void jspInit()`

4) Cleanup Phase :- The end of JSP life cycle is in this phase of JSP is destroy & removed from the container.
`jspDestroy()`