

JSP Introduction Quiz

1. What is the main value of Java Server Pages(JSP)?

Answers: *JSP is a technology for developing web pages that support dynamic content, allowing developers to insert java code in HTML pages by making use of special JSP tags.*

2. How are JSP pages related to servlets?

Answers: *JSP focus on presentation(view) but Servlet focus on business logic and data processing. In other words, separates display from processing: html from java. The web container generates a servlet from a JSP file the first time the JSP is requested from a web application.*

3. How are JSP pages related to HTML?

Answers: *HTML is used to design static page but JSP extends HTML by providing both static HTML and JSP Elements. The dynamic part is translated and executed by the container which in turn can execute arbitrary Java code.*

4. Give an example of a JSP scriptlet and show how it will look in the JSP servlet.

Answers: *JSP Scriptlets are used to contain any code fragment that is valid for the scripting language used in a page. One example of syntax for a scriptlet could be:*

<% scripting-language-statements %>

5. Give an example of a JSP declaration and show how it will look in the JSP servlet.

Answers: *The JSP declaration tag is used to declare fields and methods. The code written inside the jsp declaration tag is placed outside the service() method of auto generated servlet. Eg.*

•<%! Java declaration statements %>

•<%! int count = 0; %>

6. Give an example of a JSP comment and show how it will look in the JSP servlet.

Answers: *JSP elements all processed by container and do not appear in generated HTML. these comments get sent to the browser (part of the HTML) . eg*

<%-- jsp comment --%>

7. Give an example of a JSP expression and show how it will look in the JSP servlet.

Answers: *An EL expression is a compact expression of a systematic evaluation of the page, request, session and application scopes. EL expects a Java expression, which puts inside 'out.print' in service method. Examples*

Syntax: <%= Java expression %>

Example : <%= ++count %>

8. Give an example of a JSP directive and show how it will look in the JSP servlet.

Answers: page level operations for the translation phase.

Syntax: `<%@ page %>`

Example: `<%@ page import="java.util.Date" %>`

9. Explain how an EL expression is evaluated.

Answers: for value a given values such as “`${salary}`” the container evaluates as at differ level as follow. It first checks page scope for an attribute named " salary", and if found use it. Otherwise check request scope for an attribute named "something", and if found use it. Otherwise check session scope for an attribute named " salary ", and if found use it. Otherwise check application scope for an attribute named " salary ", and if found use it. Otherwise ignore the expression. In general, **EL is “null friendly” that means**, if EL cannot find a value for the attribute it ignores without warning or error message.

10. Explain how servlet attributes are involved in EL expressions.

Answers: Attributes are web app stores model values where values computed in model and then accessed in page for display. Thus, *when we use JSP pages according to a Model 2 architecture, there is a servlet that acts as a controller (process of knowing) that sets attribute values based on computations and results from a business model (knower), then dispatches the request to the servlet generated by the JSP page (known). The JSP servlet then retrieves the attribute values and inserts them into the designated places in the HTML being sent to the browser.*

11. Explain how servlets and JSPs use request dispatch to interact.

Answers: The JSP and Servlet could be communicate or exchange data using three different ways.

- a) `RequestDispatcher view = request.getRequestDispatcher("result.jsp");`
`view.forward(request, response);`
- b) `response.sendRedirect("http://www.cs.mum.edu");`
- c) `response.sendRedirect("result.jsp");`