Chapter 1: 1. What is JSP?

JSP (Java Server Pages) is a Java-based technology used to create dynamic web pages.

- Combines HTML with Java code to generate web pages dynamically.
- Runs on the server, generating HTML content to be sent to the client browser.
- Easier to write and maintain compared to pure servlets.

Chapter 2: 2. Why Use JSP?

- To produce dynamic content based on user requests, database data, session data, etc.
- Integrates well with Java EE ecosystem.
- Allows embedding Java code directly into HTML.

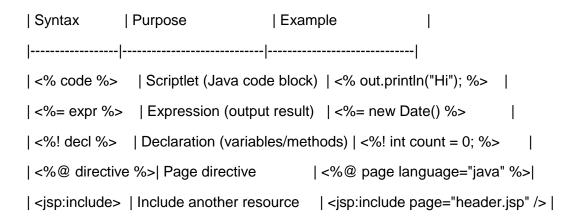
Chapter 3: 3. JSP Page Structure

Hello, <%= username %>!

Chapter 4: 4. JSP Lifecycle (Brief)

- 1. User requests JSP page.
- 2. Server compiles JSP to a servlet (if not already compiled).
- 3. Servlet executes and produces HTML.
- 4. HTML sent to client browser.

Chapter 5 : 5. Key JSP Elements and Syntax



Chapter 6 : 6. JSP Implicit Objects

- request HTTP request object
- response HTTP response object
- session Session object for current user
- application Servlet context object
- out PrintWriter to send output
- config Servlet config object
- pageContext JSP page context
- page Current page (this)
- exception Exception object (for error pages)

Chapter 7 : 7. Example: Simple JSP Page with Parameter

< @ page contentType="text/html;charset=UTF-8" language="java" %>

```
<html>
<head><title>My JSP Example</title></head>
<body>
<%
String name = request.getParameter("name");
if (name == null || name.isEmpty()) { name
= "Guest";
}
%>
<h1>Welcome, <%= name %>!</h1>
</body>
</html>
- Access with http://yourserver/page.jsp?name=CrazyBoy
- Output: "Welcome, CrazyBoy!"
```

Chapter 8: 8. Session Handling in JSP

```
<%
    String user = (String) session.getAttribute("username");
if (user == null) {         response.sendRedirect("login.jsp");
    } else {         out.println("Welcome
back, " + user);
    }
%>
```

Chapter 9: 9. Advantages of JSP

- Easy to learn for Java developers.
- Seamless integration with Java code.
- Generates dynamic content efficiently.

- Supports MVC architecture with Servlets and frameworks.

Chapter 10: 10. Disadvantages of JSP

- Mixing Java code with HTML can make code messy.
- Modern frameworks like JSF, Thymeleaf are often preferred.
- Debugging scriptlets can be harder.

Chapter 11: 11. Summary

- JSP allows you to embed Java in HTML for dynamic web content.
- It's compiled into servlets by the server.
- Supports all standard web programming needs: sessions, request params, output, includes.
- Should be used with clean MVC patterns for best results.