JavaServer Page

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Agenda

1. What is JavaServer Pages?
2. Why Use JSP?
3. Build web by Java
4. JSP – Architecture
5. Life Cycle

1. What is JavaServer Pages?

- JavaServer Pages (JSP) is a technology for developing Webpages that supports dynamic content.
- This helps developers insert java code in HTML pages by making use of special JSP tags, most of which start with <% and end with %>.
- A JavaServer Pages component is a type of Java servlet that is designed to fulfill the role of a user interface for a Java web application. Web developers write JSPs as text files that combine HTML or XHTML code, XML elements, and embedded JSP actions and commands.

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2. Why Use JSP?

- Performance is significantly better because JSP allows embedding Dynamic Elements in HTML Pages itself instead of having separate CGI files.
- JSP are always compiled before they are processed by the server unlike CGI/Perl which requires the server to load an interpreter and the target script each time the page is requested.
- JavaServer Pages are built on top of the Java Servlets API, so like Servlets, JSP also has access to all the powerful Enterprise Java APIs, including **JDBC, JNDI, EJB, JAXP,** etc.

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2. Advantages of JSP

- vs. Active Server Pages (ASP)
- vs. Pure Servlets
- vs. Server-Side Includes (SSI)
- vs. JavaScript
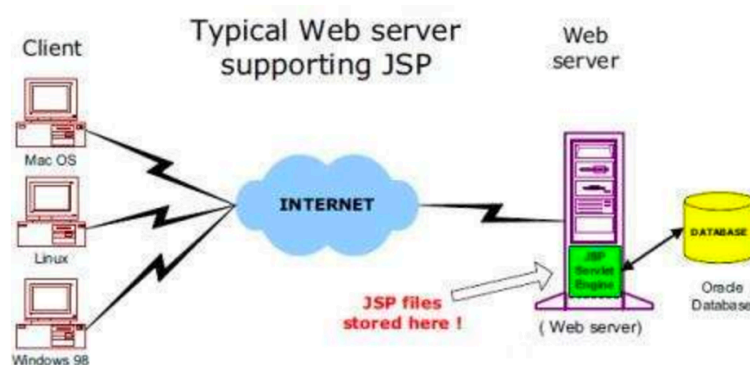- vs. Static HTML

3. Build web by Java

- Servlet: handling, business
- JSP: presentation
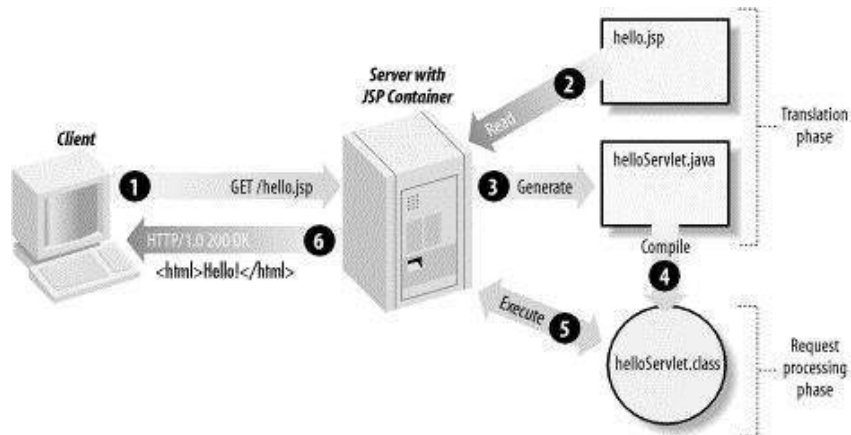- Model View Controller (MVC)
  - Servlet: Controller
  - JSP: View

4. JSP - Architecture

- The web server needs a JSP engine, i.e, a container to process JSP pages.
- The JSP container is responsible for intercepting requests for JSP pages.
- A JSP container works with the Web server to provide the runtime environment and other services a JSP needs
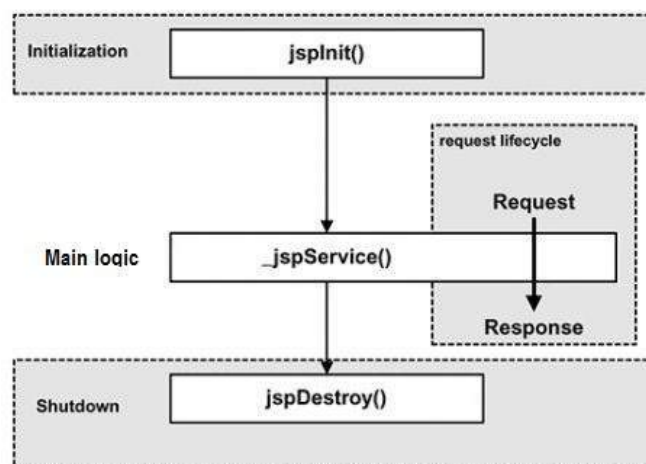
4. JSP - Architecture

4. JSP Processing

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5. Life Cycle

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5. Life Cycle

- Compilation
  - If the page has never been compiled, or if the JSP has been modified since it was last compiled, the JSP engine compiles the page.
- Initialization
  - When a container loads a JSP it invokes the **jspInit()** method before servicing any requests.
  - Initialization is performed only once
- Execution
  - This phase of the JSP life cycle represents all interactions with requests until the JSP is destroyed.
- Cleanup
  - When a JSP is being removed from use by a container.

Hỏi đáp

Tài liệu tham khảo

- Tài liệu giảng dạy – ThS. Nguyễn Hoàng Anh, ĐH. Khoa học tự nhiên
- http://www.tutorialspoint.com/servlets/