

### ### \*\*Servlet Interview Questions\*\*

#### 1. \*\*What is a Servlet?\*\*

- A Servlet is a Java-based server-side component that handles requests and generates dynamic web content, typically used in web applications. It runs on a web server or application server like Tomcat.

#### 2. \*\*What is the life cycle of a Servlet?

- The Servlet life cycle consists of:
  - **Initialization**: `init()` method is called once to initialize the servlet.
  - **Service**: `service()` method handles client requests (e.g., `doGet`, `doPost`).
  - **Destruction**: `destroy()` method is called to release resources when the servlet is removed.

#### 3. \*\*What is the difference between `doGet()` and `doPost()` methods?

- `doGet()`: Handles HTTP GET requests; data is sent via URL (visible, limited size).
- `doPost()`: Handles HTTP POST requests; data is sent in the request body (secure, larger data).

#### 7. \*\*What is a web.xml file?

- The `web.xml` (deployment descriptor) is a configuration file in a Java web application that defines servlets, their mappings, init parameters, and other settings.

#### 8. \*\*What is the purpose of the `RequestDispatcher`?

- `RequestDispatcher` is used to forward a request to another resource (servlet, JSP, or HTML) or include the content of another resource in the response.

#### 10. \*\*What is session management in Servlets?

- Session management tracks user data across multiple requests. Servlets use `HttpSession` to create, manage, and invalidate sessions (e.g., storing user login info).

### ### \*\*JSP Interview Questions

## 1. **What is JSP?**

- JSP (JavaServer Pages) is a technology for creating dynamic web pages using Java. It allows embedding Java code in HTML using scriptlets, directives, and tags.

## 2. **What are the advantages of JSP over Servlets?**

- JSP is easier to write and maintain as it combines HTML and Java.
- It supports reusable components like custom tags.
- It separates presentation logic from business logic.

## 3. **What is the life cycle of a JSP page?**

- The JSP life cycle includes:
  - **Translation**: JSP is converted to a servlet (Java code).
  - **Compilation**: The servlet is compiled into a `.class` file.
  - **Initialization**: `jspInit()` is called.
  - **Execution**: `_jspService()` handles requests.
  - **Destruction**: `jspDestroy()` is called.

## 4. **What are JSP directives?**

- Directives provide instructions to the JSP container. Common directives are:
  - `<%@ page %>`: Defines page attributes (e.g., content type, import).
  - `<%@ include %>`: Includes another file at translation time.
  - `<%@ taglib %>`: Declares custom tag libraries.

## 5. **What are JSP scriptlets?**

- Scriptlets (`<% %>`) are Java code snippets embedded in JSP to perform server-side logic, like processing form data or database operations.

## 6. **What are JSP implicit objects?**

- JSP provides built-in objects for common tasks, including:
  - `request`: `HttpServletRequest` object.
  - `response`: `HttpServletResponse` object.
  - `out`: `PrintWriter` for output.

- ``session``: HttpSession object.
- ``application``: ServletContext object.

#### 10. **\*\*What is EL (Expression Language) in JSP?\*\***

- EL (``${}``) is used to access and display data in JSP, like JavaBean properties or request attributes, in a simpler way than scriptlets (e.g., ``${user.name}``).

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**What is the difference between ApplicationContext and BeanFactory?**

**What is the role of DispatcherServlet in Spring?**

What are the different ways to configure Spring beans?

What is the difference between singleton and prototype scope in Spring?

What is the purpose of `@Configuration` and `@ComponentScan` in Spring?

What is the difference between `@RestController` and `@Controller`?

How does Spring Boot differ from Spring Core?

**What is difference between Spring MVC and Spring?**

**Explain Architecture of Spring MVC?**