**JEE**

### Q1-> What is JSP? How does JSP work?

### Ans->JSP stands for Java Server Pages. This technology is used to create dynamic web pages in the form of [HyperText Markup Language](https://www.interviewbit.com/html-interview-questions/) (HTML). They have embedded Java code pieces in them. They are an extension to the Servlet Technology and generate Servlet from a page. It is common to use both servlets and JSP pages in the same web apps.

### The JSP container has a special servlet called the page compiler. All HTTP requests with URLs that match the .jsp file extension are forwarded to this page compiler by the configuration of the servlet container. The servlet container is turned into a JSP container with this page compiler. When a .jsp page is first called, the page compiler parses and compiles the .jsp page into a servlet class. The JSP servlet class is loaded into memory on the successful compilation. For the subsequent calls, the servlet class for that .jsp page is already in memory. Hence, the page compiler servlet will always compare the timestamp of the JSP servlet with the JSP page. If the .jsp page is more current, recompilation is necessary. With this process, once deployed, JSP pages only go through the time-consuming compilation process once.

### Q2-> Explain the Life Cycle of a servlet.

**Ans->**A Java class that uses the Servlet Application Programming Interface (API) is a Servlet. The Servlet API consists of many classes and interfaces that define some methods. These methods make it possible to process HTTP requests in a web server-independent manner.

A servlet is loaded when a web server receives a request that should be handled by it. Once a servlet has been loaded, the same servlet instance (object) is called to process succeeding requests. Eventually, the webserver needs to shut down the servlet, typically when the web server itself is shut down.

The 3 life cycle methods are:

* public void init(ServletConfig config)
* public void service(ServletRequest req, ServletResponse res)
* public void destroy( )

These methods define the interactions between the web server and the servlet.

### Q3->What is Servlet? What are the advantage of Servlet?

### Ans->Servlet can be described in many ways, depending on the context

* Servlet is a technology which is used to create a web application.
* Servlet is an API that provides many interfaces and classes including documentation.
* Servlet is an interface that must be implemented for creating any Servlet.
* Servlet is a class that extends the capabilities of the servers and responds to the incoming requests. It can respond to any requests.
* Servlet is a web component that is deployed on the server to create a dynamic web page.

There are many advantages of Servlet over CGI. The web container creates threads for handling the multiple requests to the Servlet. Threads have many benefits over the Processes such as they share a common memory area, lightweight, cost of communication between the threads are low. The advantages of Servlet are as follows:

1. **Better performance:** because it creates a thread for each request, not process.
2. **Portability:** because it uses Java language.
3. **Robust:** [JVM](https://www.javatpoint.com/jvm-java-virtual-machine) manages Servlets, so we don't need to worry about the memory leak, [garbage collection](https://www.javatpoint.com/Garbage-Collection), etc.
4. **Secure:** because it uses java language.

**Q4-**>What is JSTL?

Ans->The JSP Standard Tag Library (JSTL) represents a set of tags to simplify the JSP development.

## **Advantage of JSTL**

1. **Fast Development** JSTL provides many tags that simplify the JSP.
2. **Code Reusability** We can use the JSTL tags on various pages.
3. **No need to use scriptlet tag** It avoids the use of scriptlet tag.

There JSTL mainly provides five types of tags:

[**Core tags**](https://www.javatpoint.com/jstl-core-tags) - The JSTL core tag provide variable support, URL management, flow control, etc. The URL for the core tag is **http://java.sun.com/jsp/jstl/core**. The prefix of core tag is **c**.

[**Formatting tags**](https://www.javatpoint.com/jstl-formatting-tags) **-** The Formatting tags provide support for message formatting, number and date formatting, etc. The URL for the Formatting tags is **http://java.sun.com/jsp/jstl/fmt** and prefix is **fmt**.

[**SQL tags**](https://www.javatpoint.com/jstl-sql-tags) **-** The JSTL SQL tags provide SQL support. The URL for the SQL tags is **http://java.sun.com/jsp/jstl/sql** and prefix is **sql.**

**Function Tags -**The function tag provide support for string manipulation and string length. The URL for the functions tags is https:/java.sun.com/jsp/jstl/functions ans prefix is fn.

**Q5->Write the code for create the JSP file?**

**Ans->**In the "Project Explorer" view, R-click "WebContent" / New / JSP.Name your JSP - to be consistent with the example, name it "Home.jsp" place the JSP the following code:

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"

pageEncoding="ISO-8859-1"%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"

"http://www.w3.org/TR/html4/loose.dtd">

<html>

<head>

<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">

<title> My first JSP </title>

</head>

<body>

<form action="HelloServlet">

Please enter a color <br>

<input type="text" name="color"size="20px">

<input type="submit" value="submit">

</form>

</body>

</html>