1. When we run the jsp program internally jsp convert back to servlet ie known as page translation. So performance wise jsp is slower than servlet.
2. In JSP we can't re-use the same code. We can include whole jsp page or forward whole jsp page using jsp include or forward. But not part of the web page. Because in jsp we can use more than scriptlet tag
   <%

   %>. But in servlet we can write user defined method and that code we can call in doGet or doPost.
3. JSP not secure. If we write any business logic or database logic client can see that code once we provide them code.

Servlet and JSP

Session Tracking or Management

Session is a collection of request and response within a particular period of time.

By default http is stateless protocol.

1st req

2nd req + sessionId

3rd req

Client   Server

1st res   + cookies

2nd res

3rd res
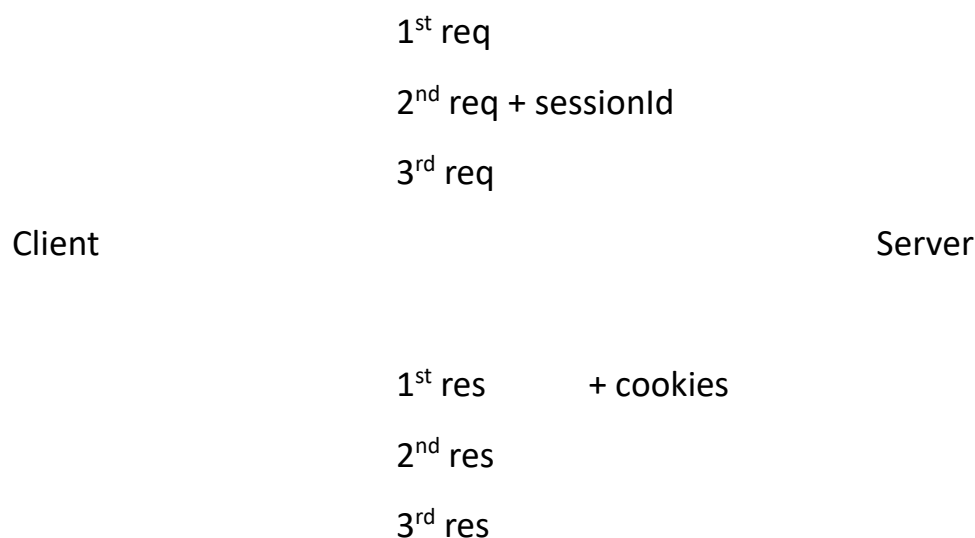
Session tracking technique or API.

1. Cookies : Cookies is a small test file created by server when client first request to server. This file contains lot of information with unique id ie session id. Cookies files store in client machine.
   Client can disable cookies option in browser in client machine.
   Cookies file not secure.
2. URL Writing : if cookies disable in client machine then server can send sessionId through URL in encryption format.
   URL?sessionId=&&&&&11afsf******%%%%%%
   This technique is good when cookies option disable But it support only for get method.
3. HttpSession : HttpSession is an interface which provided set of method which help us to keep the track about session.
4. SSL :secure socket layer : https : in server side we need to purchase the certificate for https protocol.

From 3.0 version of dynamic web project

Web.xml file is optional and servlet and servlet mapping tag replace by one of the annotation ie @WebServlet

If we want to handle session concept in jsp we need to use pre defined or implicit object ie session

In Servlet we need to create session object with help of request object ie

HttpSession hs = request.getSession();

session is equal to hs in Servlet.

Demo.java   Servlet

String name = "Akash Kale";

Demo.jsp   jsp   or   Home.java ==Servlet==

We are not creating object of servlet or jsp. object creation taken care by web container part of tomcat servlet.

Using Scope object/value we can share the data or value or object from one servlet to another servlet or jsp.

1. Page scope or servlet scope : if variable declare as an instance or variable
   The scope of the variable within that page. Ie servlet or jsp.
2. Request scope :
        request.setAttribute("key",value); source
        request.getAttribute("key");   target
3. Session scope hs.setAttribute("key",value); source
        session.getAttribute("key");   target
4. Application scope

  RequestDispatcher forward Vs   response sendRedirect

  forward part of request , old request, we can move within a same application.
  sendRedirect part of response, new request , we can move other application.

: MVC is a design pattern or architecture which help to divided the application or program base on the coding or role etc.
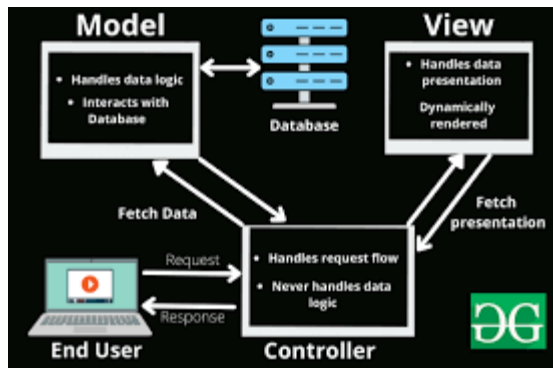
M : Model

              Java Bean

              Service class   : pure business logic

              Dao class   : pure database logic using jdbc

              Resource class   : load the resource ie database connection

V : View   or console or browser   JSP(dynamic) / HTML(static)

Presentation logic.

If we do any business/database logic inside JSP. Code is not secure.

C : Controller   or   main class or utility class or   Servlet

If we do any business/database logic inside doGet or doPost. That code become local to that servlet means same logic we need to write in each servlet doGet or doPost method.

Employee management system using MVC style

Service layer or class it normal class which contains more than one business method and those method are user defined methods.

Servlet is a type of special class which response to create web page.

Servlet contains pre defined method ie doGet, doPost, etc.