**Servlet and Jsp**

**What is Servlet?**

Servlet is simple java program that runs on server and capable of handling request and generating dynamic response.

**What is static web-application?**

A Static Web Application is any web application that can be delivered directly to an end user's browser without any server-side alteration of the HTML, CSS, or JavaScript content.

**What is Dynamic web-application?**

A dynamic web application generates the pages/data in real time, as per the request, a respective response will trigger from the server end and will reach the client end(your end). Depending upon the response the client side code will take action as it's supposed to.

**Example**: On twitter when you click on follow. The button turns blue. In reality, when you click that button. You generate a request that is sent to the server. The server then generates a response. And with the response the button turns blue.

**Methods in Servlet:**

Init(): server will call new method by init method (this is for initialization)

Service(): service will process the request .(service processing)

Destroy(): After completing the task destroy() will destroy the server(for releasing the resources)

**RequestDispatcher(Interface):**

It is responsible for dispatching the request to another resources it may be html,servlet or jsp.

To forword one request to another resources we will use requestdispatcher.

To use include() we will use requestdispatcher(I) .means we can choose our own resources for output.

**forword() method:**

RequestDispatcher dispatcher = request.getRequestDispatcher("SuccessServlet");

dispatcher.forward(request, response);

**include() method:**

RequestDispatcher dispatcher = request.getRequestDispatcher("index.html");

dispatcher.include(request, response);

**Deployment Descriptor:(web.xml):**

* File that contains configuration of your java web application

**Parameter and attributes in servlet:**

**Parameter –**These are those values which are provided by user to any servlet to process the request during the request operation.

Servlet only read that value for request processing.

Parameter mostly **Data send using form, initialization parameter** etc.

**How to get initialization parameter?**

String name = request.getParameter("name-of-your-parameter");

Now process your request

**Attributes:**

These are the objects that are attached by one servlet to object, request, config, context etc) and other servlet can fetch that object to process to logic.

Servlet can easily modify, add and remove the content.

**How to perform Attributes?**

* **setAttributes(String name, String value);**
* **Object value = getAttributes(String name);**
* **removeAttributes(String name);**

**Session-tracking in Servlet:**

1)Session Tracking is a way to maintain state (data) of an user.

2)It is also known as State Management.

**What is state less protocol?**

State less protocol take every request as a new request.

There are four type of session tracking system.

1.cookies

2.Hidden form field

3.URL Rewriting

4.HttpSession

**Cookies:**

Cookies are the textual information which are stored in key value pair formate to the clients browser during multiple request.

**How to use cookies in java?**

* In order to use cookies in java, there is a Cookie class in java present in javax.servlet.http package.
* To make cookie just create a object of Cookie class and pass name and its value**.**

**How to add a cookie to response?**

To add cookie in response just use addCookie(Cookie) method of response interface.

* **HttpServletResponse**