**Web Development in Java**

Java is a commonly used language for web development, especially on the server-side. Java web applications are distributed applications that run on the internet. Web development with Java allows us to create dynamic web pages where users can interact with the interface

A Java web application is a collection of dynamic resources (such as Servlets, JavaServer Pages, Java classes and jars) and static resources (HTML pages and pictures). A Java web application can be deployed as a WAR (Web ARchive) file.

**What is JDBC Servlet?**

Servlets are the Java programs that run on the Java-enabled web server or application server. They are used to handle the request obtained from the webserver, process the request, produce the response, then send a response back to the webserver.

**Web Server and Client**

Web Server is a software that can process the client request and send the response back to the client. For example, Apache is one of the most widely used web servers. Web Server runs on some physical machine and listens to client request on a specific port.

A web client is a software that helps in communicating with the server. Some of the most widely used web clients are Firefox, Google Chrome, Safari, etc. When we request something from the server (through URL), the web client takes care of creating a request and sending it to the server and then parsing the server response and present it to the user.

**HTML and HTTP**

Web Server and Web Client are two separate softwares, so there should be some common language for communication. HTML is the common language between server and client and stands for HyperText Markup Language.

Web server and client needs a common communication protocol, HTTP (HyperText Transfer Protocol) is the communication protocol between server and client. HTTP runs on top of TCP/IP communication protocol.

Some of the important parts of the HTTP Request are:

* HTTP Method – action to be performed, usually GET, POST, PUT etc.
* URL – Page to access
* Form Parameters – similar to arguments in a java method, for example user,password details from login page.

### Why we need Servlet and JSPs?

Web servers are good for static contents HTML pages but they don’t know how to generate dynamic content or how to save data into databases, so we need another tool that we can use to generate dynamic content. There are several programming languages for dynamic content like PHP, Python, Ruby on Rails, Java Servlets and JSPs.

Java Servlet and JSPs are server-side technologies to extend the capability of web servers by providing support for dynamic response and data persistence.

### Web Container

Tomcat is a web container, when a request is made from Client to web server, it passes the request to web container and it’s web container job to find the correct resource to handle the request (servlet or JSP) and then use the response from the resource to generate the response and provide it to web server. Then the webserver sends the response back to the client.

### Deployment Descriptor

**web.xml** file is the deployment descriptor of the web application and contains a mapping for servlets (prior to 3.0), welcome pages, security configurations, session timeout settings, etc.