**Servlet Life Cycle Methods and Phases**

For a java program, there is one method which serves as the entry point to the application which is the main() method. For a servlet, we have three methods listed below.

**Life Cycle methods**

init()

service()

destroy()

These methods are called by the Web Container such as Apache Tomcat, WebLogic.

Init() method is called once. So, this is a good place to write code to establish connections to the database server.

The Service method is where all our business logic is kept. The service method is called n-times.

The destroy method should have code which does the opposite of what the init() method does. The destroy method is also called once.

Putting code in these method is our responsibility but calling the methods is the container’s responsibility.

There are 4 life cycle phases associated with the above three methods, which are listed below.

**Life Cycle Phases**

Instantiation – This is when the classes are loaded by the container.

Initialization – This is when the init method is used to open resources.

Servicing – this is where the service method is executed.

Destruction – this iswhen the destroy method is called.

**Web Application Folder Structure**

com/samsonmarikwa/OrderServlet.class

login.jsp

Mysql.jar spring.jar hibernate.jar

lib

classes

web.xml

home.html

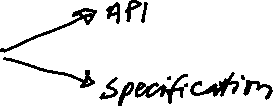
WEB-INF

WEBAPP

**Servlets**

A technology in the JEE that allows us to build dynamic web applications using java. The Servlet standard has an API and a Specification just like other standards from Oracle.

The API is for developers to develop dynamic web applications. There is a set of interfaces and classes. The Specification itself is a set of rules written in plain English which is for Application Server or Web Container developers like Apache Tomcat, WebSphere, WebLogic. The developers follow the rules described in the spec.



**Servlet**

is a program which runs on a web container. It receives input from a browser, processes it and depending on the request, can make calls to a database server. It can do a lot of things such as writing to files and reading from files. It receives responses from the database server and processes it before sending the response back to the client (browser).

OrderServlet.java

Servlet

Web Browser

DB

Web Container

**Servlet Annotations 3.0**

Servlet 3.0 version introduces annotations that can be used to configure various servlet components instead of using the web.xml file.

Examples include

@WebServlet

@WebInitParam

@WebFilter

@WebListener

*web.xml configurations override the annotations defined for the same component.*