SERVLETS LIFE CYCLE

– From creation till the destruction process that can also be described as a series of steps through which a servlet goes during its life span. The servlet life cycle is controlled by the container that deploys the servlet. We used Servlets in java to extend the capabilities of servers that host applications accessed by means of a request-response programming model.

WEB SERVER

– it’s also known as HTTP Server because it is a system that processes requests via HTTP, the communication between client and server takes place using the HTTP. It can handle HTTP Requests send by client and responds the request with an HTTP Response. The function of web server is to store, process and deliver web pages to client.

WEB CONTAINER

– also known as Servlet Container and Servlet Engine. It is a part of Web Server that interacts with Servlets. This is the main component of Web Server that manages the life cycle of Servlets. In java web container controls servlet because Servlet don’t have main() method so they require container to load them. Container is a place where servlet gets deployed.

LIFE CYCLE OF A SERVLET

LOAD SERVLET CLASS

* The servlet container must first load its definition before a servlet can be invoked. To load the servlet class the responsible for that is what we called classloader. The servlet class is loaded when the first request for the servlet is received by the web container.

CREATE INSTANCE OF SERVLET

* The servlet container will create an instance if and only if the servlet class is loaded. After loading the servlet class the web container will create the instance of a servlet. In the servlet life cycle the servlet instance is ceated only once.

INVOKE init() METHOD

* The servlet is initialized by calling this method. The init() method is called only once. It is called only when the servlet is created, and not called for ny user requests afterwards. It is use for one time initializations. The init() method simply creates or loads some data that will be used throughout the life of the servlet. The init() method must complete successfully before the servlet can receive any requests.

THE service() METHOD

* It is the main method to perform the actual task. It is called to handle requests coming from the client and write the formatted response back to the client. This is only called when the servlet’s init() method has completed successfully.

THE destroy() METHOD

* Called by servlet container to indicate to a servlet that the servlet is being taken out of service. It is called only once at the end of the lifecycle of a servlet. This method gives you servlet a chance to close database connections, halt background threads, write cookies list or hit counts t disk, and perform other such cleanup activities. This method gives the servlet an opportunity to clean up any resources that are being held.