Introduction to Servlets Quiz

# What is the difference between a web server and a web container?

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| **Web server** | **Web container** |
| Web server gets the request, finds the resource, and returns something to the user. | Web containers provide essential support services for servlets. |
| The web server application serves only static pages | This is the main component of Web Server that manages the life cycle of Servlets. |
| it can handle HTTP Requests send by client and responds the request with an HTTP Response. |  |

# What is a servlet?

Servlets are the basis of dynamic web applications. Servlets process information from a request object and generate new information in a response object.

# How do web servers and web containers interact with servlets?

* When a request comes to the web server, if the server sees the request is for a servlet, it passes the request data to the servlet container.
* The servlet container locates the servlet, creates request and response objects and passes them to the servlet, and returns to the web server the response stream that the servlet produces.
* The web server sends the response back to the client browser to be rendered.

# Who creates request objects?

Container creates request objects

# What are the states in the servlet lifecycle?

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| **Step** | **State** | **Description** |
| 1 | Preparation | When the web server starts up, the servlet container deploy and loads all the servlets. |
| 2 | Instantiation | Once all the Servlet classes loaded, the servlet container creates instances of each servlet class. Servlet container creates only once instance per servlet class and all the requests to the servlet are executed on the same servlet instance. |
| 3 | Initialization | Once all the servlet classes are instantiated, the init() method is invoked for each instantiated servlet. This method initializes the servlet.  **The init() method is called only once during the life cycle of servlet.** |
| 4 | Implementation | Each time the web server receives a request for servlet, it spawns a new thread that calls service() method.  ***Out of all the 5 steps in life cycle, this is the only step that executes multiple times.*** |
| 5 | Destruction | When servlet container shuts down(this usually happens when we stop the web server), it unloads all the servlets and calls destroy() method for each initialized servlets. |

# Who calls init and when?

Container then invokes the init() method once the servlet is instantiated.

# Which of init, service, and doGet should you override?

We should overried doGet method

# In what sense are servlets multi-threaded?

Each time the web server receives a request for servlet, it spawns a new thread that calls service() method.

# What are the implications of this for servlet instance variables?

* All threads share instance variables
* Each thread has own stack for local variables