28 Lecture - CS506

Important Subjective

Certainly, here are 10 short-answer questions related to the Servlets Lifecycle along with their answers:
Question 1: What is the purpose of the `init()` method in the Servlets Lifecycle?
Answer: The `init()` method is used to initialize a servlet. It's called when the servlet is first loade into memory.
Question 2: What is the primary role of the `service()` method in the Servlets Lifecycle?
Answer: The `service()` method handles client requests and generates responses. It is responsible for processing different types of HTTP requests like GET, POST, etc.
Question 3: How does the `service()` method determine which HTTP method is being used in a request?
Answer: The `service()` method examines the HTTP method specified in the request and delegate the request processing to the appropriate method like `doGet()`, `doPost()`, etc.
Question 4: What is the sequence of method calls when a client sends a request to a servlet?
Answer: The sequence is `init()` (if not initialized), `service()`, and `destroy()` (when the servlet is removed from service).
Question 5: When is the `destroy()` method of a servlet called?

Answer: The `destroy()` method is called when the servlet is being removed from service, typically during server shutdown or when the servlet container decides to unload the servlet due to inactivity.

Question 6: How is the `destroy()` method useful in servlets? **Answer:** The `destroy()` method is useful for releasing resources like database connections, closing files, and performing cleanup operations before the servlet instance is removed from memory. **Question 7:** Can the `service()` method be overridden directly, or should the specific HTTP method methods like `doGet()` and `doPost()` be overridden? **Answer:** While the `service()` method can be overridden, it's generally recommended to override the specific HTTP method methods like 'doGet()', 'doPost()', etc., for better control over request handling. **Question 8:** What happens if a servlet is initialized but the `service()` method is not overridden? **Answer: ** If the `service()` method is not overridden, the default implementation from the `HttpServlet` class will be used. This default implementation returns an "HTTP method not supported" error for all requests. **Question 9:** What is the purpose of using the `init()` and `destroy()` methods over the constructor and `finalize()` method? **Answer: ** The `init()` and `destroy()` methods are specifically designed for servlet lifecycle management, allowing proper initialization and cleanup, unlike the constructor and `finalize()` methods which may not align with the servlet lifecycle. **Question 10:** How does the Servlets Lifecycle contribute to efficient memory management?

Answer: The Servlets Lifecycle, with the `init()` and `destroy()` methods, helps in effective

destruction, preventing memory leaks and ensuring efficient utilization.

memory management by allowing resources to be allocated during initialization and released during