**Q1: MCQ [~20 Marks]**

**Q2: Essay Questions:**

1. Difference between JavaSE, JavaEE
2. Difference between JAR, WAR, EAR
3. Difference between Stateful, Stateless, Singleton
4. Draw the lifecycle of (Stateless, Stateless, Singleton). [Wa7ed menhon]
5. Difference between declarative and programmatic security.
6. Difference between Lazy Loading, Edger Loading

**Q3: Write the code that corresponds to the following schema [~6 marks]**

**Q4: According to the following code, what is the response code for each end point [~8 Marks]**

**(200, 400, 403, 404, 405, 409, 500)**

1. [**https://127.0.0.1/api/**](https://127.0.0.1/api/)**:**
2. [**https://127.0.0.1/api/**](https://127.0.0.1/api/)**:**
3. [**https://127.0.0.1/api/**](https://127.0.0.1/api/)**:**
4. [**https://127.0.0.1/api/**](https://127.0.0.1/api/)**:**
5. [**https://127.0.0.1/api/**](https://127.0.0.1/api/)**:**
6. [**https://127.0.0.1/api/**](https://127.0.0.1/api/)**:**
7. [**https://127.0.0.1/api/**](https://127.0.0.1/api/)**:**
8. [**https://127.0.0.1/api/**](https://127.0.0.1/api/)**:**

**Q5: For each of the following system requirements, identify the most a suitable type of session bean, and justify why you chose that session bean type specifically. If no justification is given, no grade would be given.**

1. An online Solitaire game allows one player to play the game while enforcing a persistent connection between the client (player) and the server. Multiple players can be playing Solitaire at the same time, but none share the same game.
2. ii. Consider an online multiplayer that is concurrently accessed by all players, and stores the shared state common to all players. There is only one live instance of the game that all players connect to.
3. iii. My-E-bay is an online buy/sell application, where buyers can post their items for sale. Interested shoppers can bid (دJيزا (on an item, or view the current bids (داتJمزا .(My-E-Bay administrators can view or remove bids. What kind of sessions beans could be most appropriate for the bid-related actions shown in the figure below.

**Q6: Apply The (declarative/programmatic security) for the following code:**

**Q7: Define the following:**

1. Authentication:
2. Authorization:
3. Lazy Loading:
4. Edger Loading:

75%