

# SPPU-TE-COMP-CONTENT – KSKA Git

Q1]

What is EJB? what are Benefits of EJB.  
EJB (Enterprise JavaBeans) is a server-side software component in Java EE (Enterprise Edition) used to build modular, scalable, and secure enterprise-level application.

- Benefits of EJB :-

1. Simplified development.
2. Scalability.
3. Security.
4. Transaction Management.
5. Portability.
6. Integration with other technologies.
7. Concurrency Handling.
8. Asynchronous Messaging.
9. Life cycle Management.
10. Remote Method Invocation (RMI).

Q2] What are Enterprise Bean types?

Following are types of Enterprise Beans :-

1. Session Beans.

Session Beans are designed to handle business logic that is associated with a client session. They are not persistent and exist only for duration of client session.

- Session Beans Types :-

- i. Stateless Session Beans
- ii. Stateful Session Beans

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iii. Singleton Session Beans.

2. Message-Driven Beans (MDBs)

Message-Driven Beans are used to process messages asynchronously, typically from a message queue or topic using Java Message Service (JMS).

3. Entity Beans

Entity Beans were used in earlier versions of EJB for handling database interactions. They represent persistent data in a database.

Q3] What is Session Bean?

- i. - A Session Bean is a type of Enterprise JavaBean (EJB) that encapsulates the business logic of an application.
- ii. - It is designed to handle specific tasks associated with a single client and typically represent a single user or application session.
- iii. - Session Beans are ~~p~~ non-persistent, meaning they are not directly tied to a database and their state (if any) lasts only for the duration of client session.
- iv. Types :-
  - a. Stateless Session Beans.
  - b. Stateful Session Beans.
  - c. Singleton Session Beans.

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Q4]

List ACID properties of transaction

1. Atomicity :- Ensures that a transaction is treated as single, indivisible unit of work.
2. Consistency :- Ensures that the database remains in consistent state before and after the transaction.
3. Isolation :- Ensures that concurrent transactions do not interfere with each other.
4. Durability :- Ensures that once transaction is committed, its changes are permanently saved in the database, even in system failure.

Q5] What is difference between stateful and stateless session bean.

Stateful Bean

Stateless Bean.

- |   |   |
|---|---|
| 1. Maintains client-specific state across multiple method calls and transactions.   | 1. Does not maintain any client-specific state each method call is independent. |
| 2. A single client is associated with a single instance of the bean during session. | 2. can handle multiple requests from client using same instance.                |

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3. Less Scalable

3. Highly Scalable

4. Slightly slower due to overhead.

4. Faster due to lack of state management.

5. Eg:- A shopping cart in an e-commerce app.

5. A service to verify login credentials

Q6] How to create responsive web page using Bootstrap

→ 1. Include Bootstrap in your project  
You can include Bootstrap via a Content Delivery Network (CDN) or by downloading it.

2. Use the Bootstrap Grid system.

The grid system is the foundation of responsive design in Bootstrap. It divides the page into 12 columns and adjusts layout based on screen size.

3. Add a Navbar:

Bootstrap provides a responsive, mobile-friendly navbar.

4. Add a Responsive Image.

5. Use utility class for Responsiveness

6. Create footer

7. Add Responsive Buttons.