

Enterprise Java

Singleton Bean

How to Create :-

- ➔ Java with Maven -> EJB Module -> Singleton7App -> Finish
- ➔ In Source Packages -> new package -> named -> ejb -> SessionBean -> Singleton -> named -> FirstBean , SecondBean , SingleBean

What is Singleton EJB ? :-

- ➔ A **Singleton EJB** is a session bean that is **created only once** per application and **shared by all users and threads**.
- ➔ It is like a global object—only **one instance** exists in the entire application.
- ➔ It is useful for **shared configuration, caching, counters, login counts, etc.**

Code Explanation (Simple Words) :-

Part	What It Does
@Singleton	Creates only one instance of the bean in the whole application.
@Startup	Bean is created automatically when server starts.
@PostConstruct	Method runs once after bean is created → good for initialization.
@ConcurrencyManagement (BEAN)	You control concurrency using @Lock.
@Lock (LockType.READ)	Method is read-only and can be accessed by multiple users at the same time.
@Lock (LockType.WRITE)	Method modifies data and only one thread can access it.
@TransactionManagement (BEAN)	You manually manage transactions using UserTransaction.

Real-life Use Cases of Singleton EJB :-

Use Case	Example
App Configuration	Load company name, GST number when server starts
Caching	Store frequently accessed data
Counter/Statistics	Count website visitors
Scheduler	Execute code at startup and run periodically