# # Enterprise Java #

## Stateful Session Bean & Stateless Session Bean

**How to create :-**

⇨ Java with maven -> EJB module -> Finish

⇨ In Source Packages -> new package -> named(ejbStates)-> New -> Other -> Enterprise JavaBeans ->Session Bean -> named (StatefulBean)

⇨ If Session Bean make Stateless or Stateful according option select -> Local (if want Local Bean creation)

⇨ StatefulLocalBean , StatefulBean , StatelessBean , StatelessLocalBean

⇨ Make Servlet -> (package)ejbStatesServlets -> Client1Servlet and Client2Servlet

## What is a Session Bean (EJB)?

- A Session Bean is a business logic component.

- It does not handle HTTP requests directly.

- **Types:**

  o **Stateless** → No client-specific state; shared by all clients.

  o **Stateful** → Keeps state per client (like shopping cart).

  o **Singleton** → One instance per application.

## What is a Servlet?

- A **Servlet** is a **web component** that **handles HTTP requests and responses**.

- It sits in the **web layer** and talks directly with the client (browser, Postman, etc.).

- It can call **EJBs** to perform business logic.

  ⇨ **Servlet** = deals with HTTP request, prepares response (HTML, JSON, etc.).
  ⇨ **EJB** = performs the logic (calculation, DB access, transaction).

## Why do we need both?

Think in **layers**:

- **Servlets (Web Layer)**:
  - Entry point for HTTP clients.
  - Handles GET, POST, query parameters, cookies, sessions, etc.
  - Responsible for presentation/output.
- **EJBs (Business Layer)**:
  - Encapsulate reusable **business logic**.
  - Manage transactions, concurrency, security, pooling, etc.
  - Can be reused from Servlets, REST endpoints, other EJBs, or even remote clients.

**EJB =** business logic, no HTTP knowledge

**Servlet =** web interface, talks HTTP, calls EJBs

- You need both:
- Servlet = "front desk"
- EJB = "back office"