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CSD-430  
Module 4 Discussion Board – Session Beans**

**What:**  
I opted to explore **Session Beans**, a key type of Enterprise JavaBean (EJB). These server-side components have been around since the early Java EE era and encapsulate business logic—basically acting as the middle layer between client requests and backend processing. They come in three flavors: **stateless** (no client-specific memory), **stateful** (maintains conversational state), and **singleton** (one shared instance across the app).

**How:**  
What makes Session Beans especially useful is how they structure your code and add built-in enterprise-grade services. You can write a method that does something like "process order," or "authenticate user", and let the EJB container handle important stuff like transactions, lifecycles, and security. It’s like offloading the plumbing so you can focus on core logic. I’ve seen how separating responsibilities that way makes your app easier to maintain and reuse.

**Why:**  
Here's why they matter: Session Beans help with **scalability** and **maintainability**. For instance, if your business logic for calculating prices changes, updating the bean reflects it everywhere—no need to update scattered code. Plus, stateless beans are lightweight and fast; stateful beans are handy for keeping conversations (like shopping carts); and singleton beans are perfect when you want one shared resource, like a configuration loader.

**Quick Example (Stateless Session Bean):**

import javax.ejb.Stateless;

@Stateless

public class GreetingBean {

public String sayHello(String name) {

return "Hey " + name + ", welcome back!";

}

}

**References**

* Jakarta Enterprise Beans: History of specification, types of beans (stateless, stateful, singleton) ([**Wikipedia**](https://en.wikipedia.org/wiki/Jakarta_Enterprise_Beans)).
* Oracle Java EE Tutorial: Session bean concepts and distinctions between types ([Oracle Docs](https://docs.oracle.com/javaee/6/tutorial/doc/gipjg.html)).
* Infoworld: EJB architecture overview and Session Beans role in enterprise logic ([InfoWorld](https://www.infoworld.com/article/2262515/what-is-ejb-the-evolution-of-enterprise-javabeans.html)).
* IBM Docs: How Session Beans encapsulate high-level business logic and compare types ([IBM](https://www.ibm.com/docs/en/SS7K4U_9.0.5/com.ibm.websphere.zseries.doc/ae/cejb_main.html)).