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Lab 5 Checkpoint #5

The business tier of the application consists of two projects: the EJB and EJBClient projects within out repository. These projects contain the core business logic for the application, which currently just composed of the inventory logic. The inventory logic has been consolidated in these two projects, hiding the complexity of managing this business aspect from the presentation layer of the application.

There is a fundamental difference between the OrderProcessingServiceBean and the InventoryServiceBean. The OrderProcessingServiceBean is a local bean that is only accessible in the scope of the application while the InventoryServiceBean is a remote bean that can be imported by any java project that has access to the module. In a broader sense, the OrderProcessingServiceBean is only exposed in the JVM that the web application is running in, while the InventoryServiceBean can be referenced in any running JVM remotely. Any other application besides the web application would only be able access the InventoryServiceBean since it is a remote bean.

The OrderProcessingServiceBean is not fully independent of the functional responsibility of the web application, because it is local to the web application and is packaged with it. By contrast the InventoryServiceBean is completely independent of the web application’s functional responsibility because it has been extracted into a second module. The InventoryBean does not need to have any knowledge of the state of the consuming application to function, making it logically separate from the web application or any other application that consumes it.

The OrderProcessingServiceBean could be written as a stateful bean, but this comes with a complication: Each session in the web application would need to have its own copy of the bean, which would lead to the application eating up memory and ruining performance. If the bean is stateless than the EJB or Spring frameworks can expose one singular object and allow all sessions to utilize it without security or performance concerns.