# Lab 6 - EJB Service Layer

### **Summary**

The purpose of this assignment is to implement a foundation EJB service layer and explore generic types.

## Requirements

#### **Documentation**

You can take a break from the wiki this week. No docs required for this lab.

#### **Database Setup**

Use your itmd4515 database and user from Lab 1.

#### **Project Setup**

Your uid-fp repository should already be setup, and you should continue pushing your commits into GitHub for this lab.

## **Project Requirements**

You should add these changes to your uid-fp project.

Make sure you are following standard Java naming conventions. Please review the following if you are not sure what those naming conventions are:

- <u>Java 8 Pocket Guide by Patricia Liguori, Robert Liguori Chapter 1. Naming</u> Conventions
- <u>Code Conventions for the Java Programming Language 9 Naming Conventions</u> (dated, but still correct)
- 1. Clean up your codebase to remove any prior Lab 3 unnecessary code
- 2. As demonstrated in class, create @Stateless EJB components to function as your service layer
  - Your @Stateless EJB components must implement all database operations (i.e. CRUD) for your domain model. You must use JPA for these operations, do not use JDBC.
  - o Obtain an EntityManager using Resource Injection (@PersistenceContext).

- You may follow whatever design pattern you wish, but if you chose to follow the
  pattern discussed in class this might involve an abstract service and then a
  service-class-per-entity to implement specific functionality for that entity.
- 3. As demonstrated in class, create a Startup Singleton EJB to seed your database with sample data. You must invoke the CRUD methods in your Stateless EJB components from above. Do not use the EntityManager directly in the Startup Singleton EJB. In this way, we will be exercising the code we have written. *Include a section that writes output for all your sample data using a Logger including navigating your relationships*.
- 4. Submit to Canvas or Beacon
  - 1. Right your **uid-fp** project and select "Clean"
  - 2. Go to your NetBeans Projects directory. Create a zip file of the **uid-fp** folder and submit it to the Canvas or Beacon assignment.