Data Layer Overview

NOTE: I made all my querying and inserting from the page to the database code within my servlets. I know this is not the best way to do it and is amateur at best. Personally, I felt this would be the simplest way for grading purposes, that way you don`t need to trace inheritance and imports.

AddServlet.java

This class is uses to insert into my database. It uses a session object and transaction object to save and commit the user provided data to the database. I simply just grab the user input from the 'enroll.jsp' file using 'request.getParam()' and store the values in a String variables. These Strings are then passed into an object made from my pojo class and then this object is saved into the session object. Then it is committed to the database via the transaction object.

LogInServlet.java

This class is used to query the database for a username provided by the users then uses the username if fond to compare the password that the user provided to the password matched to that username in the database. If the username provided is not found the exception handling takes care of the rest. I query the database similarly to how you would using a "select something from table where 'a = b' ". I do this by first making a 'CriteriaBuilder' object, then a 'CriteriaQuery' object, and a 'Root' object respectively. After I set the 'CriteriaBuilder' to a 'session' provided method the following objects are set to each other in a cascading format as they were mentioned in this writing. The 'Root' object is used as a container to hold the user provided values, so that the 'query' object can call the required statements 'select' and 'where'. The 'from' statement is handled when the 'Root' object is instantiated. Then I create a 'Query' object and call a session method 'createquery' to run my query into my database for the user provided input. I grab the result using an object of my pojo`s type and perform a check on the password if the username is found. If there is no username in may database matching the user input then an exception occurs. In this exception is where I [perform my error message to the user and allow them to try again.