

The purpose of this lab is to build most of the database portion of your project using Spring's JDBC approach. It should represent a "significant start", but does not need to include all the database classes or functions that your final project requires.

1. Build at least two DAO classes that will be required for your project.
2. The DAO classes should be capable of CRUD (create, read, update, delete). In other words, you should be able to insert new rows, read data from one or more rows, update data in a row, and remove rows)
3. Where appropriate, retrieve the generated primary key.
4. Create JUnit test cases for your DAO classes. Put a comment at the top of every method indicating specifically what the test is intended to test – in other words, what DAO capability are you trying to test (describe the capability rather than specific function name).
5. Include in the **resources** folder the **sql** file necessary to create any necessary user accounts, create your database tables and any run your DAO tests. See the sample JDBC project if you are not sure what this should look like. This SQL commands can be generated in MySQL Workbench from existing tables – you might have to touch up slightly.
6. Support transactions so that if there is a runtime exception, the operations will be rolled back and your database will remain in a valid state.
7. (Optional) Add a Service layer

Hand in an STS Project – export the project in the same way you did for Eclipse.

Include a short write-up describing:

1. The database tables you are using (there should be at least two for this lab). In your writeup, include sample data for each table (you can take a snapshot of your table in MySQL – ask if you are not sure how to do this). Briefly describe why the tables are needed for your project and what data the tables hold.
2. The name and location of the files containing the SQL needed to create and fill in sample data for your tables
3. A brief description of how you have implemented support for item #6 (transaction support).

Make sure your explanations are clear – that will be part of the grade. It is important to be able to explain your work to others. Someone looking at your write-up should be able to understand very quickly what you have done.