Phase 3: JDBC Implementation. (10%) Write a program in JDBC that will allow users to access and query your database. Command-line menu is acceptable.

To create and populate your database, you have two options:

1. Have the TA run your SQL script from Phase 2. Make sure that in the beginning of the script, **delete all tables that you are about to create**. This is very important. Failure to do so might prevent your tables from being created correctly (since the previous student being graded might use the same table name(s)). As a result, the TA won't be able to test your program, and you might receive zero for the following parts.

       Or

2. (Extra Credit 1: 2%) Copy & paste your CREATE TABLE and INSERT commands from Phase 2 to your JDBC program. You can also read the script file and parse each command.

Your program should allow users to do the following:

- View table content: Give user a list of existing tables so that he/she can select one to view the tuples
- Add records: Enter information for new customers, new merchants, new deals, and new purchase (who buys what, with all relevant information). Update/delete information.
- Search database: search all (current or past) deals based on location and merchant name (you should use partial matching instead of exact matching. For example, if the search keyword is "Pizza", the program should retrieve all merchants that contain the word "Pizza").
- Display all deals that are still open for purchase for a given location. A deal is open if it's sale end date/time > current date/time
- Exit the program
- (Extra credit 2: 2%) Open queries – allow user to enter any SQL query and display the query result.

Here is a suggestion on what your menu should look like:

When the program starts, prompt the user for his/her login and password. Once the program connects to the database successfully, then display the following menu options. After each selection is executed, your program should go back to the main menu.

1. View table content – list your tables for the user to choose, then upon user selection, display the content (tuples) in the table
2. Insert new record into… (the exact attributes depend on your database design)
   a. Customer
      i. First name
      ii. Last name
      iii. Etc.
   b. Merchant
      i. Name
      ii. Headquarter
      iii. Etc.
   c. Deal
      i. Merchant
      ii. Description
      iii. Etc.
   d. Purchase
      i. Customer
      ii. Merchant
      iii. Etc.
3. Update record
   a. Update (then ask for information to update)
   b. Delete (then ask for record to delete)
4. Search for deals
   a. Merchant name
   b. Location
      i. Open deals
      ii. All deals
5. (Extra credit 2) Open queries – allow user to enter any SQL query and display the query result. You will need to parse the query to determine how to execute the query and print the output.
6. Exit