R·I·T	Rochester Institute of Technology Golisano College of Computing and Information Sciences School of Information

ISTE-330 Database Connectivity and Access
Practice Exercise 9 - Authentication and Authorization

Assignment Purpose: Practice checking credentials and controlling access.

1. Create a new table, "users", in the travel database. It should have at least these fields: UserName, Password, Name, Access (*current* possible values are: 'General', 'Editor', and 'Admin')
2. Create a data layer class named "user" with the usual attributes, constructors, and methods.
    a. Create a "login" method that verifies the credentials. If they are good, it should fill in the remaining attributes (name and access), and return true. Otherwise, it should return false.
3. Create a business layer class named "user" that extends the data class.
4. Create an equipment class in the business layer.
    a. Create a save() method in the business layer that tests the user's access. Only Editors and Admins should be allowed to use the save() method. All other access results in an error being thrown or false being returned. Choice of error implementation and handling is up to you.
5. Create a MySQL script that creates the User table, and populates it with test data used in your program.
6. Create a main testing class that:
    a. Uses a General user to display information for a given equipment id (eg: 568)
    b. Using the swap from the previous PE, attempt to swap dissimilar equipment names between two records. Such as swapping "Continental" with "Bus 264" between equipment id 568 and 894.

Note: With a Data Layer class called User and a Business Layer class called User (same name), this could be placing the files in separate folders and set CLASSPATH or the imports/using to get to the files. Without the proper include statements separate folders makes grading this PE a nightmare for all the different possibilities that are probably not going to be documented.
OR, **for this assignment**, call the User class for the data layer DLUser, and the User class for the business layer BLUser. Then you can keep both in the same folder, which makes everyone's lives easier.

What to submit to dropbox: Everything! This includes, *but not limited to*:

- The data layer code, source and compiled code for:
    - User
    - Equipment
- The business layer, source and compiled code for:
    - User
    - Equipment
- A main testing program, source and compiled code
- MySQLDatabase, for database access, source and compiled code
- MySQL script (file) to (re)create and populate the MySQL table "User" in the travel2 database
- Other files as needed