CSCI 3308 Group Project
Milestone III - Database

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1 Database Description

There are three things that need to be stored in this database:

1. Users and their information. We want users to be able to log in to the application, mostly to be able to access their set of incorrect questions. This set of incorrect questions discussed later allows us to play around with giving users more practice with questions they find difficult, and saves this information for later on down the line.

   For the first iteration of this app we are not storing actual "tests" (tests will simply be randomly picked questions with the same topic). We are also not planning on saving great deals of information on the history of the user (subjects, topics, time spent on a topic, user comments on the relevance of a test, etc) as we believe that is outside the scope of the initial functionality of the app. Any user preferences or history data that we feel a need to save in the initial run of the app can be stored using the `NSUserDefaults` class of the Swift `Foundation` framework.

   If it is deemed necessary to centralize this information in the future, we would likely store it in a combination of the "Users" table and new "Subjects" and "Topics" tables.

2. Questions and their associated answers, subjects, and topics. This will be stored in a "Questions" table.

3. Incorrect questions. This table is necessary to ensure we know which questions a user has gotten wrong; storing incorrect questions is necessary if we plan to do anything special when a user misses a question.

2 Data Model

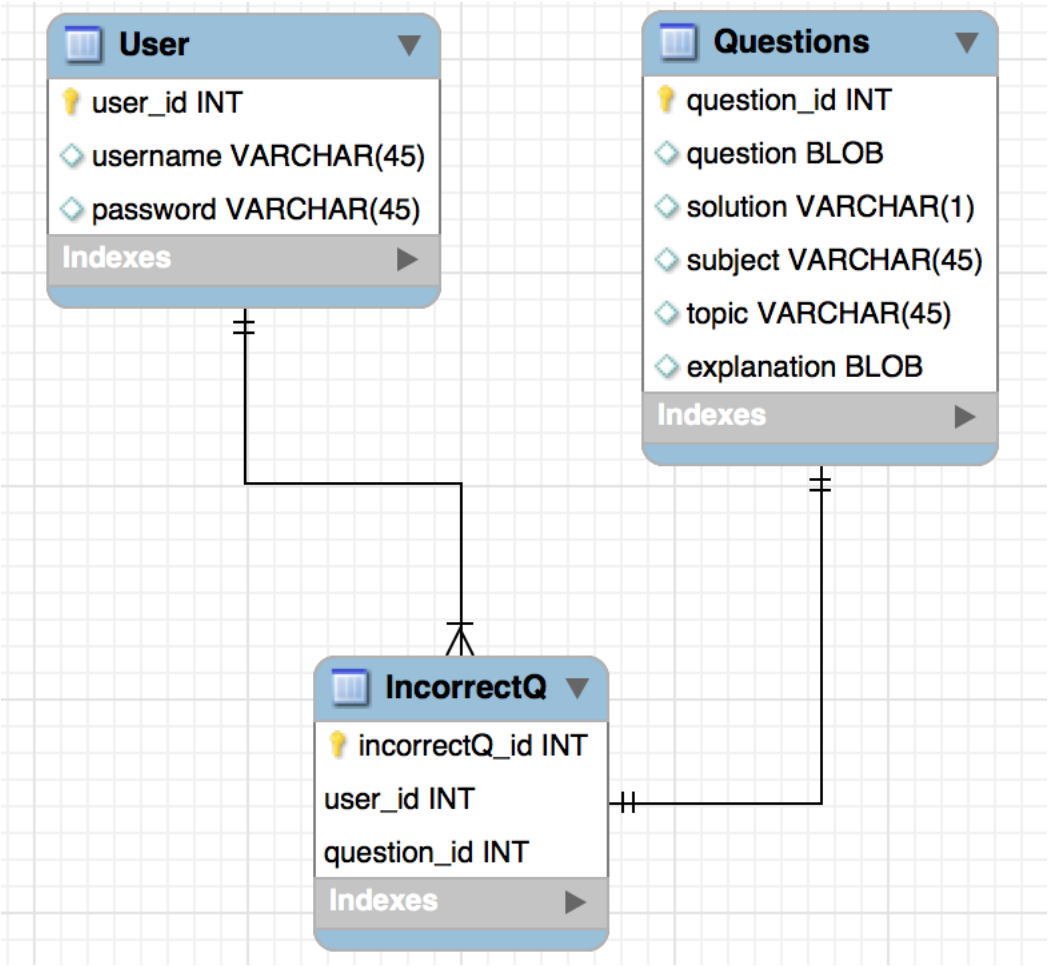

Figure 1: ER Diagram describing relationships between tables in the database.

3 MySQL Script

This SQL script can be found here.

1. Run `drop database StudyOutlet;` (although that shouldn't be necessary)
2. Put all images (Q1.png-Q5.png & Q1sol.png-Q5sol.png) directly into the directory specified by the command `SHOW VARIABLES LIKE "secure_file_priv";`
3. With the command `chmod 644 Q*` give the files proper permissions
4. Ensure your MySQL user has proper privileges with the command `grant file ON *.* to root@localhost;` (assuming the user is root)
5. Run `FLUSH PRIVILEGES;` and restart MySQL
6. Change the file paths in the initialization script to the paths for your system

If you're getting errors about NULL values, it's almost certainly a permissions issue. Let the group know and we can help fix it.