

COMP 440 - Course Project: Phase 1

Spring 2023

For all parts of this project, your system must be application or web-based. Some simple GUI interfaces are required for each functionality. **All functionality must be performed via the interface of your system; direct SQL statement execution via any tools (like MySQL Workbench) is not allowed.**

Part 1 – Deadline: Monday, 03/13 by midnight

Use Java/C#/PHP/Python/C++ and SQL, implement the following functionality:

1. (5 pts) Create a database schema and implement a user registration and login interface so that only a registered user can login into the system. The schema of the user table should be:
user(username, password, firstName, lastName, email)
username is the primary key, and *email* should be unique. You have to prevent the SQL injection attack. There is an attached pdf file about SQL injection attacks.
2. (5 pts) Sign up for a new user with information such as: *username, password, password confirmed, first name, last name, email*. Duplicate *username*, and email should be detected and fail the signup. Unmatching passwords should be detected, as well.
3. (10 pts) Implement a button called **“Initialize Database.”** When a user clicks it, all necessary tables will be created (or recreated) automatically.

Hint:

- 1) For step 3, you can use the DDL.sql from reference book for now. Later you will replace this .sql script file with the SQL file of your project database. Open the DDL.sql file in any text editor and add the following SQL command in line 1 to make sure your project database is set as the default: *use yourdatabaseName;*. Make sure the database name is the same as the database of steps 1 and 2 (user login and registration).
- 2) This is a team project. You are allowed to find and reused codes; however, make sure to refer to the original source.

How to submit:

1. The source code package. All files (source codes, class files, bat, and txt) should be contained in a war or zip file called comp440_x_part1.zip for a team whose team number is x submit via Canvas. (A team number will be assigned to your team by the deadline.)
2. A YouTube video. Use a recorder: <https://www.apowersoft.com/free-online-screen-recorder>. And upload your video to www.youtube.com. I only need you to record your screen and your voice for the project demo, not your face. You can add the YouTube URL to a readme file inside your project directory. You can create slides for your presentation if that is helpful, Or you can use YouTube for recording your video:
<https://www.labnol.org/software/create-youtube-screencast/27936/>

The project is to be done by a maximum of three students, but each student's contribution needs to be clearly stated in `readme.txt`.

Start your project early, and ask questions if you have doubts. Do not wait until the last minute.