CSE 4/560 PA 0: Hello SQorLd

Due 23:59 09/10/2020 EST

September 4, 2020

This is a programming assignment for getting ready to write SQL queries. Upon finishing this programming assignment, you will have your environment ready for the rest of PAs and (probably) have the first SQL query written.

Please note that academic integrity is strictly implemented and any violation will lead to a F grade in this course.

1 Part 1: Setting up MySQL Server/Client (1 point)

1.1 Install MySQL Server

This project ONLY use MySQL (version 8.0.13) as the canonical database. To download MySQL community server, please go to `https://downloads.mysql.com/archives/community/`.

1.2 Install SQL Client

There are many SQL clients, this course does NOT specify an official one. However, we have following recommended clients if you do not have any preference:

1. MySQL workbench: `https://www.mysql.com/products/workbench/`
2. DBeaver: `https://dbeaver.io/`

After installing both server and client, use the client to connect to the server and provide a screenshot as a proof of part 1.

2 Part 2: Setting up a database (2 points)

Follow the steps below to install the project database

1. Download the GitHub Repository: `https://github.com/datacharmer/test_db`

2. Launch command line console, change the working directory to your downloaded repository

3. Type following command:
   `mysql < employees.sql`
   or
   `mysql -u YOUR_MY_SQL_USER_NAME -p < employees.sql`

4. Then run following commands:
   `mysql -t < test_employees_md5.sql`
   or
   `mysql -u YOUR_MY_SQL_USER_NAME -p < test_employees_md5.sql`

5. Use your SQL client to execute following SQL statements, remember to replace the Name, UBIT, and person number:
   ```
   use employees;
   SELECT 'Hello CSE 4/560', 'Your Name', 'Your UBIT', 'Person #'
   ```

Take a screenshot for the result of step 3, step 4, and step 5 as a proof of part 2.

3 Part 3: Explanation (2 points)

Recall steps from Part 2, the text only provides what commands or statements needs to be done, but it does not explain what happened in each step. Try to understand those commands and statements, then *provide an explanation for each step*. You may need to briefly examine the content of those file to provide a comprehensive explanation.

Note that the explanation shall focus on what happened or what are the effects after executing the commands or statements in term of DB.

4 Report

Submit all parts, including screenshots, in one pdf report. There is no official template for this report, but remember to have your name, UBIT, person number on top of the report.

5 Submission

Failure to comply with the submission specifications will incur penalties for EACH violation.

- What to submit: A zip file has to be submitted through the 'submit_cse460' (if you are CSE460 student) or 'submit_cse560' (if you are CSE560 student) submit script by 09/10/2020 11:59PM EST. Only zip extension will be accepted, please **don't** use any other compression methods such as tar or 7zip. You can submit multiple times, note that **only the last submission** will be kept on the server. **No late submission will be accepted**.

- Zip file naming: Use *ubit_pa0* (**NO SPACE!**) for the filename, for example: *jsmith_pa0.zip*, where *jsmith* is the ubit of submitter. The project is an **INDIVIDUAL** project, so everyone needs to submit ONE zip file.

- Sub-structure of zip file: On unzipping the zip file, there should be a folder named with your ubit *ubit_pa0*, under the folder *ubit_pa0*, there should be a pdf report, named as *ubit_report.pdf*

- Follow steps below to submit your work:

  1. copy your file to server, note that there is a dot at the end of the command:
     `scp jsmith_pa0.zip jsmith@timberlake.cse.buffalo.edu:.`
  2. login to server:
     `ssh jsmith@timberlake.cse.buffalo.edu`
  3. submit your file (if you miss this step, we won't be able to see your work and you will NOT receive any score):
     - For CSE 460 students:
       `submit_cse460 jsmith_pa0.zip`
     - For CSE 560 students:
       `submit_cse560 jsmith_pa0.zip`