LABORATORY 4 (100 points)

Importing CSV Files into pgAdmin with Foreign Key Relationships

Objective:

1. Set up PostgreSQL and pgAdmin.
2. Create a new database in pgAdmin.
3. Create two tables where one table contains a foreign key that references another table.
4. Import data from CSV files into the tables.
5. Verify that the data was imported correctly and that the foreign key relationship is enforced.

Instructions:
   To document and demonstrate your work during the laboratory activity, you are required to create a report that includes screenshots and description for each part of the activity. This documentation will serve as evidence of your understanding and execution of the task, and will also be used for grading.

Email Subject: SE 2142 - Laboratory 4

Send to: laaholleza@cpu.edu.ph

Tools Required:

- PostgreSQL (pgAdmin)
- A CSV file containing the data
- Text editor (for modifying CSV if needed)

Part 1: Setting Up the PostgreSQL Database

→ Create a New Database in PostgreSQL:
   ◆ Database name: lastname_db

Part 2: Creating a Table Structure

→ Inspect the CSV File:
   ◆ Open the CSV file in a text editor or Excel to identify its structure (columns and data types).
→ Create a Table in PostgreSQL that Matches the CSV Structure:
   ◆ Based on the CSV columns, create a table with the appropriate structure in PostgreSQL
   ◆ Adjust the table structure based on your actual CSV columns and data types.

Note: Write the SQL command to create `Table B`, ensuring it contains a column that references the `id` column in `Table A` as a foreign key.

Part 3: Creating and Importing the CSV File into PostgreSQL
1. Using pgAdmin to Import the CSV File
   a. Place the CSV File in an Accessible Directory
   b. Open pgAdmin and Connect to Your Database
   c. Set Up the Import
   d. Verify Import

Note: Each CSV file must contain a minimum of 30 rows and 5 columns of data.

Part 4: Handling Errors and Verifying Data
1. Post-import Verification:
     Query the data to ensure it has been imported correctly.
     -   Show the comparison of data in detailed form.

2. If an error occurs, take a screenshot and provide a description of how you fixed it.

Basis for grading:

Part 1: Setting Up the PostgreSQL Database (10 points)

Part 2: Creating a Table Structure (30 points)

Part 3: Creating and Importing the CSV File into PostgreSQL (40 points)

Part 4: Handling Errors and Verifying Data (20 points)

Expected Output:

By the end of this activity, you are required to submit the following:

1. **Two CSV files**:
     ○   One CSV file containing the data imported into Table A.
     ○   Another CSV file containing the data imported into Table B.
2. **One document**:
     ○   Include screenshots of the queries used to create the database and both tables.
     ○   Include screenshots showing the data in both Table A and Table B as seen in pgAdmin.

Ensure all required files are submitted together for evaluation.

Take Note:

➔   Points will be deducted for not following instructions.
➔   As with other laboratory exercises, **only the first submission will be accepted**. Please double-check that you have attached all the necessary files.
     ◆   A deduction of 10 points will be applied for each day a submission is late; however, this does not apply if you have already submitted but forgotten to attach your files.

Deadline: October 16, 2024 23:50:00