

University of Belize
Department of Mathematics, Physics, & Information
Technology

CMPS1171 - Introduction to Databases

Quiz 2

Part A:

NOTE: Create a file named `solution_a.sql` to save your SQL code.

[5 points]

1. Create a **music** database with a **music** user. Log into the database. **[5 points]**

SCENARIO: An album has many tracks(songs). A track(song) also has a length specified in minutes.

2. Create a table named **album** with the following column names and corresponding data types. **[10 points]**

- **id** serial PRIMARY KEY
- **title** text NOT NULL

3. Create a table named **track** with the following column names and corresponding data types. **[10 points]**

- **id** serial PRIMARY KEY
- **title** text NOT NULL
- **len** integer NOT NULL

4. Establish a **one-to-many** relationship between **album** and **track** by creating a foreign key named **album_id**. Ensure that if an album is deleted, all its tracks are also deleted. **[10 points]**

5. Use the **INSERT ... VALUES** SQL command to insert three rows into the **album** table, and five rows into the **track** table. **[10 points]**

6. Write a **JOIN** query to display each album and its associated track(s) along the length of the track(s). **[10 points]**

7. Log out of the **music** database.

Part B:

NOTE: Create a file named `solution_b.sql` to save your SQL code in.

[5 points]

1. Login to the **week5** database that you created as a part of this week's lesson and run the **code.sql** file to create and populate the **lecturer** and **course** tables. **[5 points]**
2. Use the **GROUP BY .. HAVING** clause in combination with **COUNT()** to find the courses that have only one section. **[10 points]**
3. Use the **GROUP BY** clause in combination with **COUNT()** to find how many courses each lecturer teaches. **[10 points]**
4. Write a query to find all the lecturers who teach **Principles of Programming 1**, **Principles of Programming 2**, and **Web Development**. **[10 points]**