CSC 675/775: Introduction to Database Systems
Assignment 2
Total Points: 100

The goal of this assignment is to give you a hands-on experience with a DBMS software, and a moderately sized database. This assignment consists of three parts.

Part 1. Install SQLite: Use the instructions given at the below webpage to install SQLite for your platform. http://www.tutorialspoint.com/sqlite/sqlite_installation.htm

Part 2. Setting up the Database: We will use a database called the chinook database that contains 11 tables. The data model for the chinook database can be found here: https://chinookdatabase.codeplex.com/wikipage?title=Chinook_Schema&referringTitle=Documentation

Follow these steps to setup the database:

1. Download the `chinook.db` file from the ilearn to the directory where you installed SQLite.
2. Open a terminal or shell (Unix and Mac) /command prompt (Windows).
3. Change your current directory to the SQLite directory.
4. Start SQLite by issuing command: `sqlite3`
5. At the sqlite prompt, issue the following command to read-in the `chinook.db` database to your current session of SQLite.

   `sqlite> .open chinook.db`

6. Issue the following command at the SQLite prompt to obtain the list of all the tables in the chinook database.

   `sqlite> .tables`

   This command should list names of 11 tables, such as, `Album`, `Artist`, and so on.

7. To view the schema of an individual table issue the following command with the appropriate table name.

   `sqlite> .schema [TABLE NAME]`

Now you are ready to start testing the queries you write for the information needs given below.

Part 3: Using the database: Write SQL queries for each of the questions below. Upload one file containing all the 10 queries to ilearn by the due date. Query results are not required. Each question is worth 7.5 points.

For each question the number of results that a correct query should retrieve are given for reference.

1. Find the genre which has at most 1 track. Print the name of such genre.
   Number of rows returned in the result = 1

2. Find the tracks that were purchased in California (CA) or Washington (WA). Print the name of such tracks.
   Number of rows returned in the result = 151

3. Find the tracks that have been purchased in quantities greater than 5. Print the name of such tracks.
    Number of rows returned in the result = 0

4. Find the tracks which cost less than a dollar but the track length (Milliseconds) is more than the average track length in this database. Print the name of such tracks.
    Number of rows returned in the result = 282

5. Find the playlists which have one or more tracks that have never been purchased. Print the Id, and the name of such playlists.
    Number of rows returned in the result = 14

6. Find the playlists where the composer is not specified for 10 or more tracks. Print the Id, and the name of such playlists.
    Number of rows returned in the result = 6

7. Find the playlists where all the tracks are by the same composer. Print the Id, and the name of such playlists.
    Number of rows returned in the result = 1 (4 is acceptable too)

8. Find the playlists with 50 or more composers. Print the Id, and the name of such playlists. Tracks with no composer (null) should not be considered.
    Number of rows returned in the result = 4

9. Find all the customers who have invoice total greater than 5.65. Print the first and last name, postal code, and invoice total for such customers.
    Number of rows returned in the result = 179

10. Find all the Employees to whom no other employee reports to. Print the Id, and the first and last name of such employees.
    Number of rows returned in the result = 5