12/21/2015 PR4E

Welcome Stephanie from Using Databases with Python



To get credit for this assignment, perform the instructions below and upload your SQLite3 database here:

```
Choose File No file chosen (Must have a .sqlite suffix)

Submit
```

You do not need to export or convert the database - simply upload the **.sqlite** file that your program creates. See the example code for the use of the **connect()** statement.

Musical Track Database

This application will read an iTunes export file in XML and produce a properly normalized database with this structure:

```
CREATE TABLE Artist (
    id INTEGER NOT NULL PRIMARY KEY AUTOINCREMENT UNIQUE,
    name
            TEXT UNIQUE
);
CREATE TABLE Genre (
    id INTEGER NOT NULL PRIMARY KEY AUTOINCREMENT UNIQUE,
            TEXT UNIQUE
    name
);
CREATE TABLE Album (
    id INTEGER NOT NULL PRIMARY KEY AUTOINCREMENT UNIQUE,
    artist_id INTEGER,
    title TEXT UNIQUE
);
CREATE TABLE Track (
    id INTEGER NOT NULL PRIMARY KEY
        AUTOINCREMENT UNIQUE,
    title TEXT UNIQUE,
    album id INTEGER,
    genre_id INTEGER,
    len INTEGER, rating INTEGER, count INTEGER
);
```

If you run the program multiple times in testing or with different files, make sure to empty out the data before each run.

You can use this code as a starting point for your application:

http://www.pythonlearn.com/code/tracks.zip (http://www.pythonlearn.com/code/tracks.zip). The ZIP file contains the **Library.xml** file to be used for this assignment. You can export your own tracks from iTunes and create a database, but for the database that you turn in for this assignment, only use the **Library.xml** data that is provided.

To grade this assignment, the program will run a query like this on your uploaded database and look for the data it expects to see:

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SELECT Track.title, Artist.name, Album.title, Genre.name
 FROM Track JOIN Genre JOIN Album JOIN Artist
 ON Track.genre_id = Genre.ID and Track.album_id = Album.id
 AND Album.artist_id = Artist.id
 ORDER BY Artist.name LIMIT 3

The expected result of this query on your database is:

Track	Artist	Album	Genre
Chase the Ace	AC/DC	Who Made Who	Rock
D.T.	AC/DC	Who Made Who	Rock
For Those About To Rock (We Salute You)	AC/DC	Who Made Who	Rock