

CPSC 408
Assignment 3
Spring 2021

Overview:

For this assignment you will create a python console application, that connects to a SQLite database and performs basic database operations.

Develop the following:

1. Create a database named **StudentDB**. Within the schema create a table named Students with the following schema.
 - a. Relation/Table
 - i. Student (
StudentId INTEGER PRIMARY KEY,
FirstName TEXT,
LastName TEXT,
GPA REAL,
Major TEXT,
FacultyAdvisor TEXT,
Address TEXT,
City TEXT,
State TEXT,
ZipCode TEXT,
MobilePhoneNumber TEXT,
isDeleted INTEGER
)
2. Develop an application with the following features:
 - a. Write a python function to import the ***students.csv*** file (provided to you) into your newly created Students table
 - b. Display All Students and all of their attributes.
 - i. Create the necessary SELECT statement to produce this result to standard output
 - c. Add New Students
 - i. All attributes are **required** when creating a new student.
 - ii. Please make sure to validate user input appropriately.
 1. for example, a GPA can't have a value of 'foobar' etc.
 - d. Update Students
 - i. Only the following fields can be updated
 1. Major, Advisor, MobilePhoneNumber
 - ii. Make sure that your UPDATE statement makes use of the correct **key** so that you **don't** update every record in the database.
 - e. Delete Students by ***StudentId***
 - i. Perform a "soft" delete on students that is, set ***isDeleted*** to **true** (1)
 - f. Search/Display students by Major, GPA, City, State and Advisor.

- i. User should be able to query by the 5 aforementioned fields

Requirements:

When the application runs it should:

1. Ask the user what option they would like to execute and prompt for the appropriate input.
2. Execute the command and re-prompt the menu until the user exits the application
3. All code must be your own. Please cite any references you use in the README file from GitHub.
4. Development must be completed in the PyCharm IDE, since I will use this platform to test/run your application.

Grading:

As usual, you will be graded on correctness, elegance of solution, **and your adherence to the above requirements**. As always, style and comments are also important, so be aware that a well-documented, object-oriented, clean solution will receive more credit than a sloppy solution without comments.

Due Date:

Submit your assignment to a GitHub repository by 11:59 pm on 3-20-2021. The README should contain your name, student id, and any comments you have to make about your solution.