CPSC 408
Assignment 2
Spring 2020

<u>Overview:</u>

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

Develop the following Application/Database.

1. Create a Database(Schema) named StudentDB with the following schema
   a. Relation/Table
      i. Student (
         StudentId PK INT,
         FirstName varchar(32),
         LastName varchar(32),
         GPA Numeric,
         Major varchar(16),
         FacultyAdvisor varchar(32),
         isDeleted bit or boolean
)

2. The application should be able to:
   a. Display All Students and all their attributes.
      i. Create the necessary SELECT statement to produce this result
   b. Create Students
      i. All attributes are **required** when creating new student.
      ii. Please make sure to validate user input appropriately.
   c. Update Students
      i. Only the Major and Advisor attributes can be updated.
      ii. Make sure you construct a proper UPDATE statement so that you
          don't update every record in the database.
   d. Delete Students by StudentId
      i. Perform a "soft" delete on students
      ii. Set isDeleted to **true** (1)
   e. Search/Display students by Major, GPA and Advisor.
      i. User should be able to query by the three aforementioned fields

<u>Requirements:</u>

When the application runs it should:
   1. Ask the user what option they would like to execute and prompt for the
      appropriate input.
   2. Carry out the instruction and re-prompt the menu until the user exits the
      application

- All code must be your own. Please cite any references you use in a README file (on GitHub).
- Development must be completed in the PyCharm IDE, since I will use this platform to test 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 (i.e. use your chapman account) by 11:59 pm on 3-22-2020. The README should contain your name, student Ids, and any comments you have to make about your solution.