Problem Set 3

Questions taken from UTSC's course: Introduction To Computer Science I

Create the following class with the appropriate methods

1. Create a Book class which has instance variables for the author and title, and methods to set/change these variables

2. Create a Swimming Pool class takes in a value for the length, width and depth of the pool and which, when printed, gives the volume of the pool

3. Create a Country class that takes in a countries name, population, area, and has methods to retrieve the values for the three instance variables of your class, as well as to calculate the population density (average # of people per square metres)

4. Create a Shape class that takes in the shape's name, area, perimeter and has a method that returns True if the area of the first Shape object is larger than the area of the Shape object (e.g. square_1.is_larger(square2))

5. Create a course class that takes in the course code, the number of students, and the location of the class nad has a __str__ method that will return "(course code) is held in (location) and has (# of students) of students enrolled"

6. Create a Student class with variables and methods that are sensible for students

7. Add a method to our Course class from question 5 that takes a Student object (as created in question 6). Then adds methods to print a full student list and calculate average GPA for all students in the course