MAT2440 - Project 1

November 7, 2016

Due: November 16, 2016 by 6:00pm **Instructions:**

The goal of this project is to put into practice a version of some of the algorithms we have discussed in the course. You may work in groups of two. Your task it to write these two separate programs:

- 1. Write a program that, given a list of 10 integers, finds the average of the numbers on the list. (Note: you might need float variables rather than int variables for this.)
- 2. Write a program that, given a list of 10 integers and an integer x, finds the location of the first integer in the list that is greater than x.

You can write your programs in whatever language you choose. You can consult outside source material for help, but you must write your own code. DO NOT COPY AND PASTE SOME-ONE ELSE'S CODE.

The final product should include two distinct files that satisfy the above requirements. The programs do not necessarily have to prompt the user to input the numbers before producing the right output. You are allowed to create fixed-length arrays that are used for your computations. You must also include your pseudocode for each program. These are to be written (or typed) separately from the programs.

You can turn in your work by emailing it to me (nmelissaris@gradcenter.cuny.edu). Your subject will start with MAT2440. I won't search for your emails outside my MAT2440 folder so follow the instructions carefully. Your files will be named in the following example format: If I was submitting a project with my friend Bill Gates, our code for the first exercise (a Python script in this case) would be named: nmelissaris_bgates_1.py and the pseudocode would be named nmelissaris_bgates_1.txt.

Each program you submit will be graded out of 10 points. I will review each program's code and I will test each one multiple times with a variety of different <u>valid</u> inputs.

Extra credit: For an additional 5 points on your homework grade, you can submit a third program that, given a list of 20 integers, sorts them according to bubble sort.