CSCI 423 - Analysis of Algorithms
Rhode Island College **Spring 2019**

Project 3 - Exploring Priority Queues

This project is due **Friday, March 22** at **11:59PM**. Upload a zipped file named `yourlastnameFirstinitial_proj3` that contains your python code and executive summary report to Blackboard. This is an individual project.

For this project you will implement the ADT Priority Queue in Python 3.x. The ADT Priority Queue already exists in many languages (including Python and Java), but the objective of this exercise is for you to experiment with different implementations and measure each for time efficiency.

Download the PQ.py file for the necessary template to start. In the template, you will find several empty shells for modules that you will implement for two classes, *PQ_Heap* and *PQ_List*. Both classes have modules enQueue, deQueue, sneakAPeek, isEmpty and size. How they differ is in their implementation. *PQ_Heap* uses the heap data structure while *PQ_List* uses a list.

Once you have both classes working, you will then conduct a time trial experiment that tests 7 different list sizes for both classes and report on your discoveries.
You will then create a rudimentary job scheduler that uses your ADTs. You will conduct time trials on them as well.

Grading Rubric
Points will be awarded as described in the PQ.py template for the code. For your executive summary include your summary, your pseudo code, your table, and something new for this report, your plan/schedule for completing assignment (broken down by task and date, including testing.