COMP254 Project 2: Comparing Vectors and Linked Lists, again

The goal of this project is to revise your attempt at Project 1 and resubmit an improved version. You may need to rerun your experiments, or run some additional experiments, but the main emphasis of this project will be on improving your writing. You should take into account the feedback you receive from your fellow students in the peer review session, and the grading and comments from the instructor. Optionally, you may choose to visit the Dickinson [Writing Center](). If you do visit the writing center, make sure to make an appointment in advance, and prepare a list of questions on which you would like specific help.

The grading of Project 2 will strongly emphasize technical clarity and correctness of the writing, including spelling, punctuation and grammar. It will be possible to receive an excellent grade on this project by only improving the writing, and without doing further research on the content. However, especially if you received a good grade on Project 1, you may wish to extend your document to cover one or more of the following issues, each of which will be worth a small amount of extra credit:

- Are your results consistent across varying hardware and software platforms? (e.g. PC vs Mac, various operating systems, various CPUs and memory configurations)
- What is the error or uncertainty in your results, even when restricted to a single platform? Use clear and correct statistical terminology to phrase your response, most likely using the concepts of *standard error* and *standard deviation*.
- In addition to the performance considerations addressed in Project 1, discuss the various other advantages and disadvantages of the two possible Crowd implementations (LinkedList and Vector). For example, are there any features of the Vector API that are not available in the LinkedList API? What are some possible examples of some future scenarios in which the differences in the two APIs would have a practical impact?
- Give a detailed mathematical explanation of the shape of the graphs you made in Project 1. Estimate the slope and intercept of any lines and give an approximate functional form for the processing time for a Crowd, as a function of its size.

Clarification on page limits: the limit of 3–5 pages for Project 1 was intended to include any figures and tables, but to exclude the appendix containing your source code. The same page limit applies to Project 2, except that if you choose to do one or more of the extra credit options, you may use up to two additional pages.