Hyrum Johnson **11-16-2016**

Analysis Document

1. Design and conduct an experiment to assess the running-time efficiency of your priority queue. Carefully describe your experiment, so that anyone reading this document could replicate your results. Plot the results of your experiment.Since the organization of your plot(s) is not specified here, the labels and titles of your plots(s), as well as, your interpretation of the plots is critical.

   A) **See Graphs**

2. What is the cost of each priority queue operation (in Big-O notation)? Does your implementation perform as you expected? (Be sure to explain how you made these determinations.)

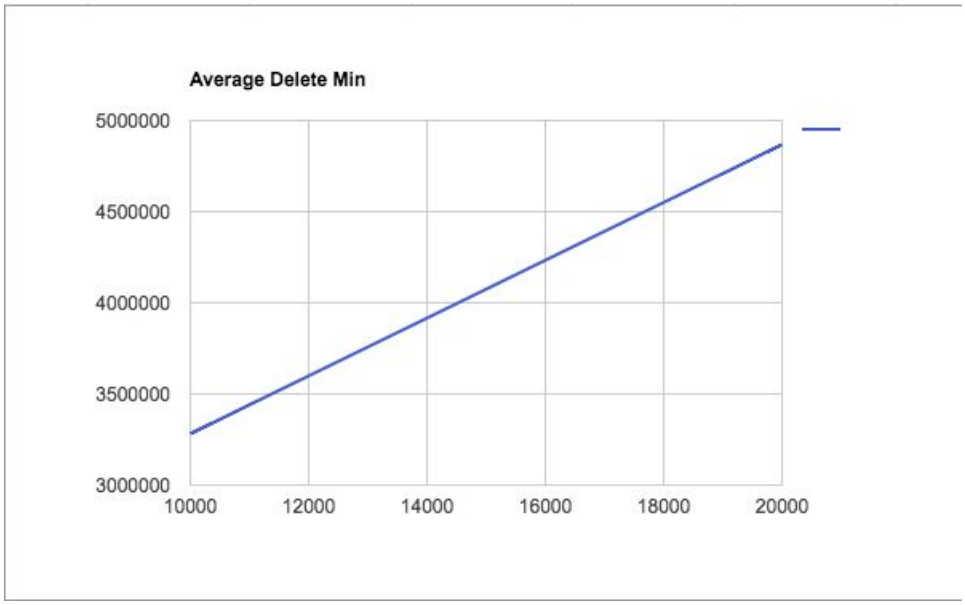
   A) **The cost for priority to insert delete and return is O(logN). My implementations does perform as I expected.**

3. Briefly describe at least one important application for a priority queue.(You may consider a priority queue implemented using any of the three versions of a binary heap that we have studied: min, max, and min-max)

   A) **One important place you can use a priority queue is in a hospital. If all doctors are busy and more patience are coming in. Then you can put the patients in the queue (waiting line) in the order of seriousness the situation is.**

4. How many hours did you spend on this assignment?

   A) **This Assignment was a lot easier than the past assignment, I only spent about 8 hours on it.**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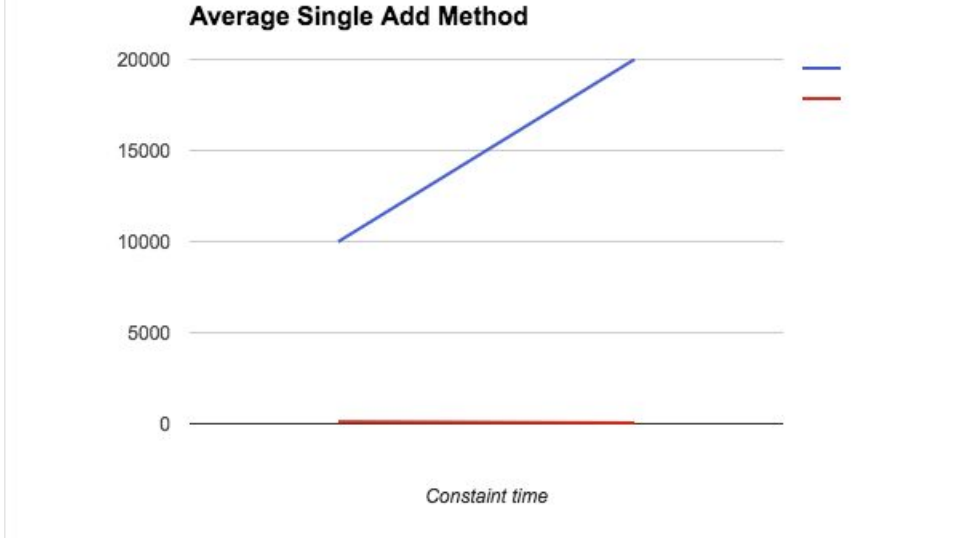
Average Single Add Method
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