

Max Wright
Assignment 3
Analysis Document
CS 2410
2/5/15

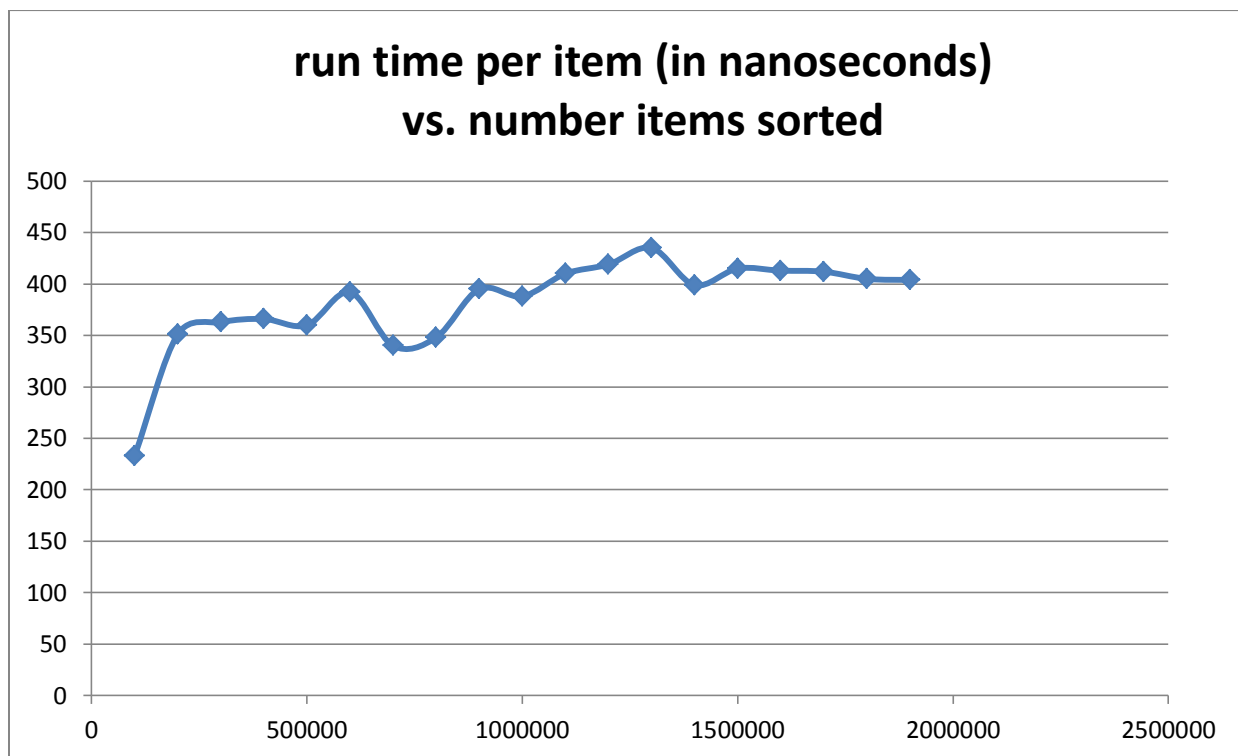
1. My programming partner is Lucas Fivas, Lucas is submitting the code.

2. I and my programming partner don't switch roles very often. I prefer our current roles because my hand would cramp typing at the pace we need to work.

3. Lucas is a very good and experienced programming partner, I plan on working with him again.

4. If I had backed the sorted set with a Java List instead of a basic array, the main points in which our implementation would have differed. are that we would use a Java ArrayList instead of our class MySortSet. I expect that using a Java List would have been more efficient in programming time because the programming is already done by a trained programmer, and the code from ArrayList to be run as fast or faster than our current attempt because it shouldn't have bugs, be efficient, and compatible with all other Java programs.

5. I expect the Big-O behavior of MySortedSet's contains method to be $O(\log N)$ because we implemented a binary search method for how it searches the array that contains the information.

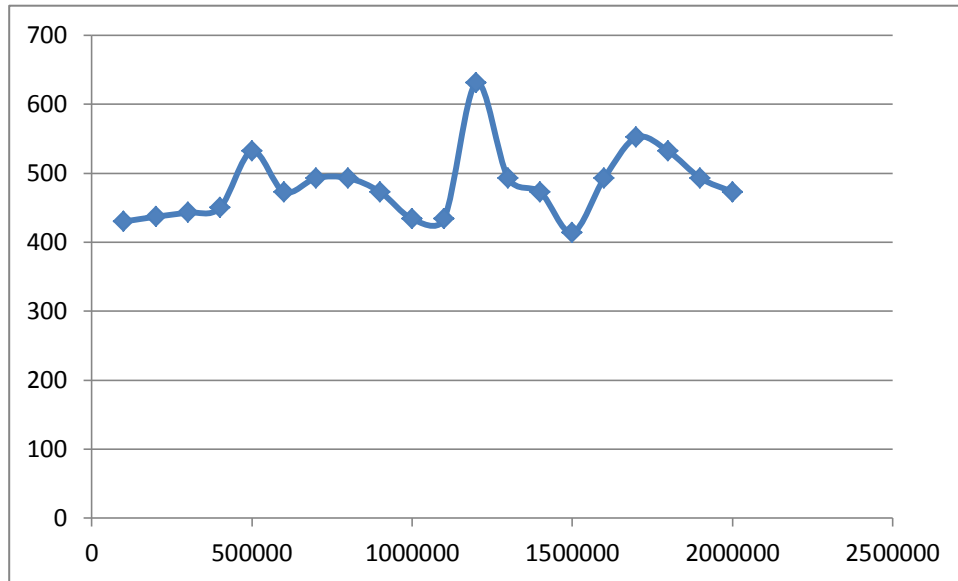


6. The growth rate of these running times match the Big-oh behavior I predicted in question 5 fairly well,

but it did not produce a really smooth curve like I expected. This may be due to the computer I ran the tests on.

7.

Run time per item (in nanoseconds)
vs, number of items searched



8. How many hours did you spend on this assignment? 12 hours roughly.