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1. Who is your programming partner? Which of you submitted the source code of your program?

Ching-Yuang Chang was my partner, and she submitted the source code for the program.

2. How often did you and your programming partner switch roles? Would you have preferred to switch less/more often? Why or why not?

My partner and I switched computers every hour. Personally, I was happy with the arrangement. I think I might have preferred it if we'd split up our time on the keyboard based on the number of methods (or work in general) completed, rather than simply time, because I felt like our focus waned from switching places in the middle of a method or statement just because the time was up.

3. Evaluate your programming partner. Do you plan to work with this person again?

My programming partner was amazing and totally knew what she was doing. She helped me catch a bunch of mistakes that I didn't even know could pose issues and saved me when I had no idea what I was doing. Yes, I would love to work with her again.

4. If you had backed the sorted set with a Java List instead of a basic array, summarize the main points in which your implementation would have differed. Do you expect that using a Java List would have more or less efficient and why? (Consider efficiency both in running time and in program development time.)

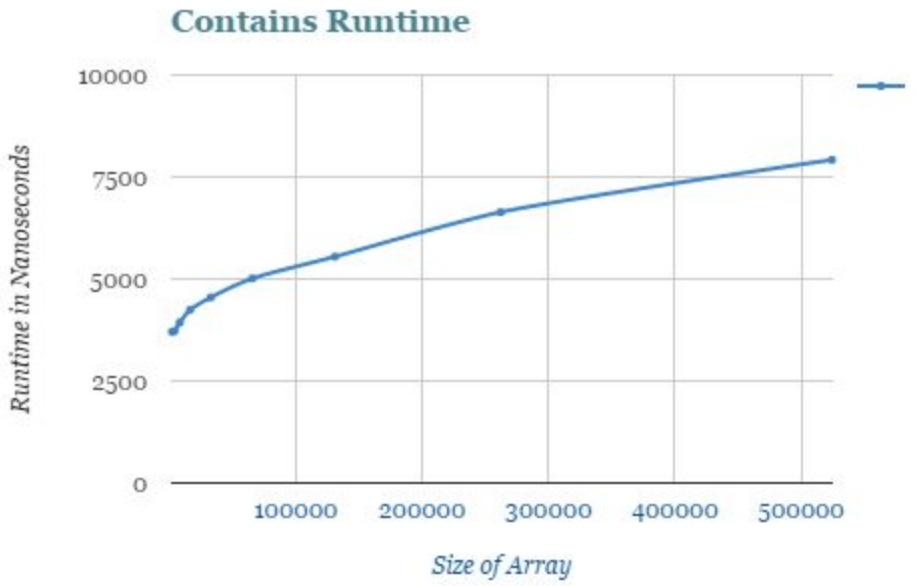
It would have been simpler and more efficient, because the majority of our workload would have been set up in advance without our intervention.For example, we wouldn't necessarily have had to implement Binary Search, since Java List by definition would have ordered the added elements for us.

5. What do you expect the Big-O behavior of BinarySearchSet's contains method to be and why?

I expect the Big O for the BinarySearchSet's contains method to be log(n), because we never programmed anything more complex than a for loop for each of the elements in a set.

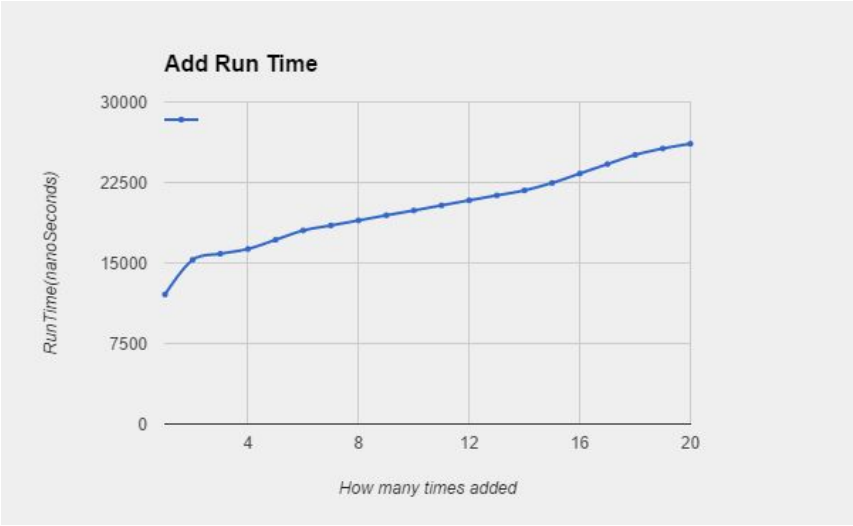
6. Plot the running time of BinarySearchSet's contains method, using the timing techniques demonstrated in Lab 2. Does the growth rate of these running times match the Big-oh behavior you predicted in question 5?

The growth rate of these running times looks approximately to be O(log n), which does match our prediction for the Big O behavior.



7. Consider your add method. For an element not already contained in the set,how long does it take to locate the correct position at which to insert the element? Create a plot of running times. In the worst-case, how much time does it take to locate the position to add an element (give your answer using Big-oh)?

In the worst case, our program takes O(log n) time to locate the position to add an element.



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

We spent about five to six hours on this assignment.