

- 1) My programming partner was Mitchell Terry. Mitchell submitted the code of our program.
- 2) We switched roles once a work session. I feel like this was a good amount of times to switch roles so that we did not waste time in the process of switching.
- 3) Working with Mitchell was alright. With this more complex assignment it did not work well that our schedules only aligned 8 hours. I will work with him again because it would be too difficult to find another partner, but I am looking forward to the week we change partners classwide.
- 4) If we had used a Java List such as ArrayList to hold the data, the program would have been different in that methods such as add would have been much simpler. We would have been able to use the List's add, remove, and contains methods instead of implementing our own for the most part. Add would have to be slightly modified to allow for items to be inserted in order, but remove and contains would have had only minor differences. This would have been more efficient in both running time and development time since I am sure the creators of the Java's List classes did a better job implementing them than we did and the vast majority of our difficulties came with the add, contains, and remove methods.
- 5) I expect the contains method to be Order $\log N$ since rather than looping through every element of the array it halves the array each time and looks in the worst case at $N/2$ elements.
- 6) My partner would not give me the code, so I was unable to run the tests.
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- 8) I spent approximately 8 hours on the main part of this assignment, plus another half hour working on the first five questions of the analysis, plus 3 more hours trying to wrangle the code from my partner (I would have spent more time but the due date approached) . So about 12 hours total. get my partner to give me the code so I could complete questions 6 and 7.