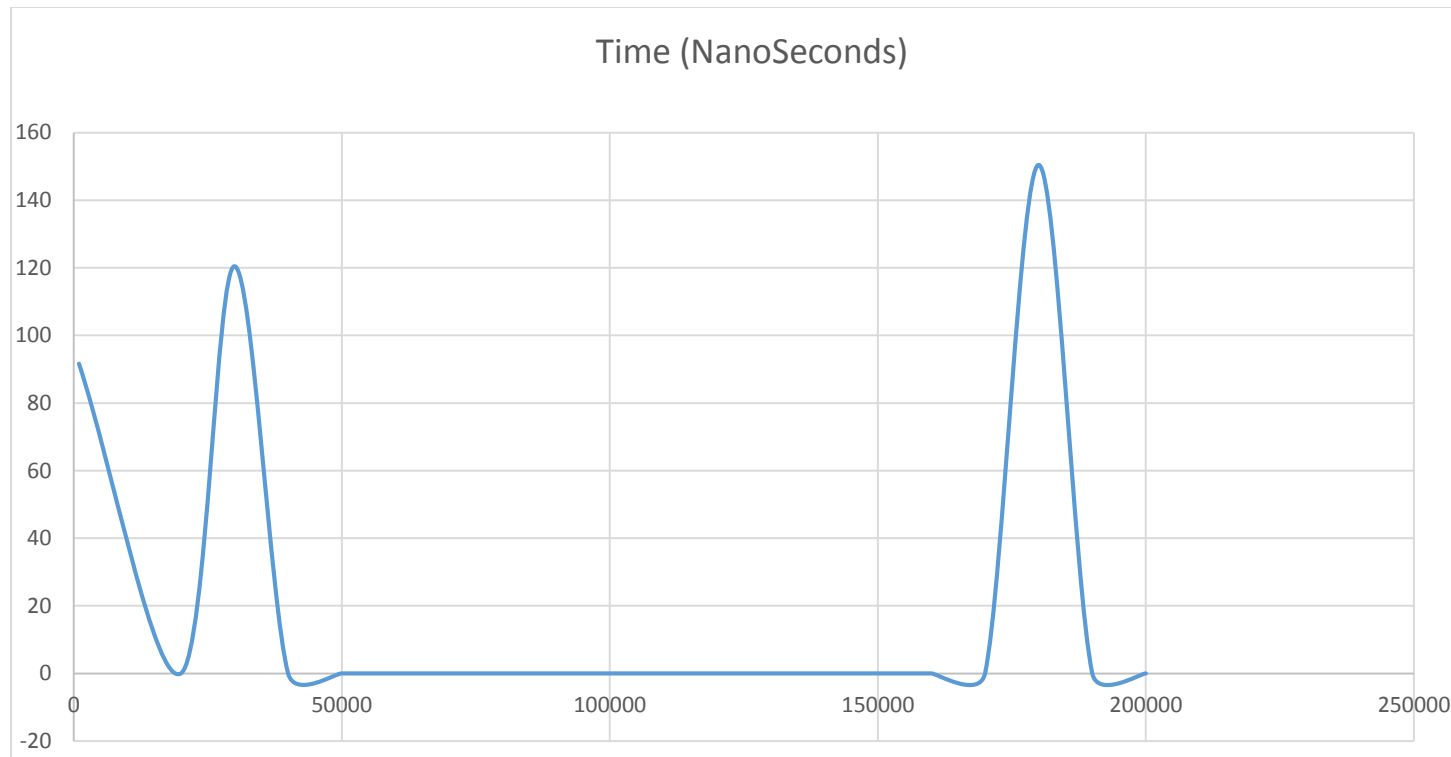


1. My programming partner was Thomas Glenn Madsen and he submitted the source code.
2. We switched fairly often when one of us had an idea or was on a roll with coding, however I would have liked to maybe switch a bit more just to get that little extra understanding of the program I seem to get from being behind the wheel. All in all however, we were an effective team.
3. He is a competent programmer and easy to work with. We don't always approach the problems/methods in the same manner, but that isn't always a bad thing as it allows us to prevent bugs or notice things that the other misses. I do plan on working with him again.
4. Using a Java list such as an ArrayList would have simplified the code a little bit. It wouldn't change what we had to do drastically, but we wouldn't have to worry about growing the array if the size limit was met and methods like "clear" or "addAll" or "contains" would already be given for us which would both simplify what we had to do and cut down on the time spent on the project greatly. I would also speculate that the given Java lists methods would be more time efficient as they were written by experts and not students with varying amounts of experience.
5. I would expect it to be in or around the order of  $N \log N$  because it implements a binary search to look for the desired item.
6. The chart below is for the contains method. The x-axis is the Set size and the Y axis is the time in nanoseconds. This data did not directly follow what I had predicted in question 5. Also I am not entirely sure that I inputted the data correctly



7. I was unable to make it to the add method before the deadline.
8. I spent roughly 16 hours on this assignment