

Reflection Report

1. A problem I came along was trying to fix data that was inconsistent and contained numerous errors and discrepancies. To address this issue, I developed a data cleaning and validation process that involved ignoring lines with trailing commas and lines with leading and trailing blanks, this line validation functionality was implemented greatly by the use of if statement and while loops. Overall, this process was time-consuming and required significant attention to detail. I decided to store most of my data in arraylists and arrays due to its high levels of efficiency and flexibility, more specifically ArrayLists, automatically resize themselves to accommodate new elements, which makes them a more flexible option. Arrays and arraylists are also easy to iterate over which makes it simple to perform a wide variety of operations on all of the elements in the data structure such as sorting and searching. I decided to use a bubble sort due to its simple implementation also it was able to deal with the large amounts of data in the assignment relatively quickly. Searching algorithm that was used were binary and sequential.
2. Learned and implemented bubble sort of Dr Andy wicks video: https://www.youtube.com/watch?v=RqfWvlsYmsc&ab_channel=Dr.AndyWicks learned binary search and implemented it from this site: <https://webrewrite.com/implement-binary-search-in-java/> implemented sequential search from this site: <https://www.jbktutorials.com/java-technical-tutorials/sequential-search-in-java.php#gsc.tab=0>
3. I learned a lot about data structures and algorithms as a whole and their uses to solve a variety of problem, this assignment exposed me to some real life scenarios where DSA's would be used to solve problems in industry, I also learned a lot on how data is managed in industry and the amount of testing and validation that is needed to keep everything in check. Overall, I would say this assignment is a good glimpse as to what is out there in the software engineering world.
4. If I had more time I would definitely improve on writing cleaner code I feel as if some of my code was a bit messy and I hard coded a lot of things which could have been made cleaner with the appropriate uses of classes and methods, I would also improve on my output formatting and make sure my results are getting outputted neatly,