Planning Document – Nicolas Sanchez Assignment 5: Word Sorting, Searching

Planning Phase
The planning phase for this assignment didn't really exist. I was already pretty confident with my understanding of binary trees because of their similarity to linked lists. Because of this, I just got started with part 1.

Assistance Received
No assistance was received when doing this assignment.

Debugging Phase.
I managed to setup my tree and have it printed inorder without any major/notable bugs. Most of my bugs came from my merge function. I thought I'd be able to create it pretty much the same way as my merge function from assignment 4 without having to do any major changes, but I was wrong. I realized after long periods of confusion that there was a period when start and mid would equal the same values. This would cause an infinite loop. I solved this by removing the while loop (start < mid) from the main while loop and adding it after. It was essentially the same thing as before but now that it's outside of the main loop, we won't be stuck forever.

Testing Phase
I didn't create a program to create test cases for me, I just created my test cases by hand. I created 2 test cases to test for specific events to see if the program would still function properly. The first case is just 1 word repeated with 1 query. The second case is all queries. They both had expected outputs.

After making my code look nice and removing any nonsense whitespace, I went through my program like usual and traced it all to reinforce my understanding of my own code. After this, I just did a final test to make sure everything was working fine.