Planning Document – Nicolas Sanchez Assignment 4: Scholarly Reader

Planning Phase

During the planning phase of this assignment I spent most of my time learning quick and merge sorts. Because of the special cases involved with quick sorting, I decided to go with merge. Also, because it is easier. Figuring out the merge sort was pretty much all the time I needed because everything after was pretty easy to figure out.

Assistance Received

The only assistance received was from google. When writing my test case generator, I ran into the problems when trying to use rand().

Debugging Phase.

Because this code was short and fairly simple, I managed to have zero notable bugs. I did have 1 really stupid mistake though. I had put my return 0 inside of my case loop. Because of this I spent some time seeing if I missed something in my main code and my test case generator. Turns out, everything was fine.

Testing Phase

The testing phase was pretty short. I ran the sample test case without any issues and because of how fast I completed the assignment I decided to create a test case generator (at the time I didn't realize it was a requirement). My test case generator is super simple. It just generates random numbers (within the set limitations) for each line of input. The set limitations I applied were limiting the random number generation for the page limit and book limit. I set certain limits in order to meet the deliverable requirements. The first one was permanently setting the number of books to 10^5. The second was setting rand() to return a number between 10^ 11 and 10^14. Then it outputs the test case into a file called "randomcase.in". This allows me to quickly try different test cases.

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.