Project 3 Documentation

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The purpose of the program is to take in various names from a file and sort them by different standards. There can be no more than eight letters in a name and no more than ten names in a file. Once the program copies over the list of names, different functions will sort the names alphabetically and by length. The final task for the program is to print the data to the terminal and to an output file.

The design of my code is based around modularity. I first took the purpose of the program and then divided it into different objectives. The first objective was to read in the list of names. I then decided that this objective had only one step and therefore only one function needed to accomplish it, so I implemented a readFile() function. The next objective was to print the the list to the terminal which again only needed one function to finish, so I implemented a printToTerminal() function. The next objective was to sort the names alphabetically. For this module, I decided I needed to break it down further to accommodate its complexity. The sub-objectives included a swapping mechanism and a sorting mechanism. The swapping mechanism yielded the strcpy(), strcmpr(), and strlen() functions. The sorting mechanism yielded a selection sort function, combining the swapping mechanism with alphabetic specific ordering. Next I had the length sort objective. Here, I employed the previously created swapping mechanism and its functions to combine with a similarly formatted selection sort function, only this time based on length. The last objective for the program was to print to an output file. Like the printing to terminal objective, this is only one step and furthermore the same structure.

My biggest problem was passing the file information into my own data structures. This slowed me down as I continuously got segmentation faults or compiler errors due to this . I was unable to see if the rest of my code had errors because I could not get passed the first function. I had an issue with the zipcode being stored as an int array but I think my design worked, but have no way of knowing if the implementation was correct

If I had more time I would try and figure out why my file information was not passing and storing correctly into my data structures.