**Proj2.cpp Documentation**

**Purpose:**

The purpose of this project was to be familiar with file I/O and array arithmetic and structs. The goal was to read from a file then print the contents out on the screen for the user to read as well as sort the data and place the data into a new named text file, sort the data, and change the data within the structs. There were no uses of string libraries which made it harder for me to understand how to do the arithmetic of the arrays and sort, swap, compare, etc.

**Design:**

The design of the project seemed difficult at first but I got the hang of it. I did have to reach out for help on the internet and one of my friends from class as well. I first started by wanting to be able to read the contents of Cars.txt and storing them into an array of structs then be able to manipulate the array for the contents to be displayed. I defined my functions at the top and then have my “main” function then I include all my functions at the bottom. This was to make everything easier to read. I also did not include the “using namespace std” because I read that it was bad practice, so I did not want to get in the habit of using it. There were a few other functions created in order to facilitate this project. For example a swap function, log into file function, read form file, and more. There were required functions that I did not use like stringlength and strcopy etc. I thought it was useless to include with project in the first place.

**Challenges:**

As I mentioned above, the array arithmetic and algorithms were the hardest part of this project. I could not remember how to iterate thought an array and compare every element of it. It was a pain not being able to use the string library. I understand that it is useful to understand the algorithm especially for job interviews but there isn’t a point to make your own functions when the libraries already exist. At first, I was struggling to get all the contents in Cars.txt into an array of structs. The methods I was using were very frustrating, so I had to reach out to a friend in class for help in order to understand how to do it. The hardest function with this project was the swap function that I created.

**Changes:**

I don’t really have any other changes in mind for this project. It was a good project and it was a challenge for me to overcome.