The purpose of this program was to imitate a rental car service, or in other words, assisting users who want to rent a car. The program prompts users to enter many options regarding renting a car, after first checking an input file that contains the inventory of cars. This file has year, make, model, price, and availability. These variables are stored within an array of structs. The program is able to print to the terminal the car information, print to an output file, sort cars by ascending price, print estimates for car rentals, and finally, let users choose from the available cars to rent. The program terminates when the user enters 7 for their option.

My design followed the instructions given, where the main function was quite short, but instead used functions to hold all the menu options. I have not had too much practice with this method of programming, but I found it to be quite useful and more modular. When debugging, it makes it easier to spot problems and fix them in one spot, rather than looking through copy-paste segments of code and changing all of it.

It is rare that I compile for the first time and find no errors. My program faced many problems which were all solved through debugging. My first errors included incorrectly passing in the array of structs into each and every one of my functions. It was a tedious fix, but not too complicated. The brunt of my other problems included infinite loops, particularly in option 6. The problem lied within how I read in my data, where I used one cin to read in the car number, and number of days. For some reason, it took me a very long time to figure this out, as I searched through all of my code for that function and related ones. Sometimes, the problem can be so simple, yet causes many problems.