

## Daily Log

### Monday September 11

I asked Mr. Kosek about my JavaScript/Handlebars issue and determined that I could move the JSON file parsing from the server side to the client-side JavaScript. I started working on moving my JSON file parsing, but it is giving me an error when I try to use *fs* in the client-side JavaScript.

### Tuesday September 12

I continued working on implementing the new data transfer system. Initially, I considered using the *FileReader* class. After attempting to use it, I decided that it was too much of a hassle since it would require me to manually navigate to the folder and select all of the files that I wanted to upload. As a result, it doesn't seem possible for the client-side JavaScript to programmatically read files on the user's computer. I may have to revert back to the old system of reading the files on the server-side and sending the data to the client.

### Thursday September 14

I finished an improved version of my file loading system. It loads data for frames only when it is needed. Previously, it loaded the data for all of the frames at the start, which caused some start-up lag. I used Ajax to make server requests for certain files, when they are needed. I also reorganized most of the initialization code into separate methods, in order to account for the asynchronous nature of Ajax. I added a start and stop button that iterates through the frames.

## Timeline

Date	Goal	Met
10/14/19 - 10/27/19	Fix the DTD navigation bug. I also want to try to create a GUI, which would be useful for debugging and overall visualization of this project.	Yes, I fixed the bug and began working on the GUI.
10/28/19 - 11/10/19	I would like to add functions to my GUI that would allow me to see the history of <i>Events</i> and <i>Cars</i> . It would also allow me to see overall stats of the run as the program is executed in real-time.	I decided to spend time on reformatting how I printed the data in order to scale better as I progressed through the project. As a result, I did not pursue the original goal for these two weeks
11/11/19 - 11/17/19	Add the ability to see the history of <i>Events</i> and <i>Cars</i> . Add real-time viewing of the simulation. Ask Mr. Kosek about JavaScript/Handlebars issue	No, I did not finish adding the ability to see the history of <i>Events</i> and <i>Cars</i> . However, I did ask Mr. Kosek about the JavaScript/Handlebars issue. I found a better way to load the data from the output files.
11/18/19 - 11/24/19	Add the ability to see the history of <i>Cars</i> .	
11/25/19 - 12/1/19	Add the ability to see the history of <i>Events</i> .	
Winter Break	I want to show a significant difference in time between my DTD/non-DTD cars for multiple types of maps (basic, Manhattan-style, rural, dense). These should be displayed on a JavaScript Web server, which can be interacted with by user (start/pause/click on objects to access current variables given a frame number).	

## Reflection

This week, I implemented a new way to load data from the output files (the third goal of this week). My original idea turned out to not be possible with client-side JavaScript due to security issues. However, I was still able to improve my data transfer system by incorporating Ajax. Since I spent a significant amount of time attempting to read files with client-side JavaScript, which turned out to not be possible, I wasn't able to complete the first goal that I had set for this week, which was to see the history of *Events* and *Cars*.

Next week, I would like to add the ability to see the history of *Cars*. Implementing the ability to see the history of *Cars* and *Events* will require significant changes to my output format, so I have spread the task across two weeks. Also, the second goal of this week was real-time viewing, but I have decided that it is not quite useful to my project, so I won't try to pursue it.

I wasn't able to fulfill all of my goals for this week, but I can meet my Winter Break goal. So far, my JavaScript web server can play and pause the frames based on user input.