

- Map Functionality:
 - Vehicles overlaid on a map
 - The map must be able to display roads and street names
 - The vehicles must vary in colour depending on the speed at which they are going
- Server Functionality:
 - Receive data from the servers
 - Data will consist of individual vehicles and their speeds
 - This will happen periodically
 - In between data pickups the cars will move on their own according to their last known speed
 - If the data pickups are too slow then we may have to adjust the speeds of the cars a little bit for better estimations
 - At a new data pick up the vehicles should go to their “correct” positions
 - All the data read from the server should be stored in an SQL database
 - When the user clicks two nodes it will also display a graph that will display the travel times for each weekday and make a corresponding table out of the data (travel time will get data every 5 minutes)
 - We will have to be able to export this data into a comma-delimited file that can be imported into a spreadsheet
- User Interaction:
 - The user should be able to click two nodes on a map and receive the time it would take to travel between the two spots based on the current speeds
 - User can also click an option to view estimated travel times throughout the day based on database info to determine best time of day for travel
 - The user should be able to zoom into and out of the page and have the cars move with the map
 - When zoomed in the user should be able to pan around the map
- Additional Specifications: (Pick one)
 - First Choice: Allow you to choose a time you are going to leave and show the best path based off of that information
 - These points will be intersections/exits on the freeways
 - You can choose the best choice by amount of time, shortest physical distance, or avoiding highways
 - Show what the traffic snapshot at that time on a map based on that time chosen
 - You can also choose a middle point to stop at a place for a certain amount of time (10 minutes for example) then continue on your way
 - Second Choice: Make it so you can click on a car and it will show 2-3 alternate routes and the time it would take on those
 - Shortest physical distance
 - Avoid highways
 - Avoid tolls (?)
 - Third Choice: Vehicle to infrastructure communication to eliminate the need for stop signs

and lights (I am not sure if we can do this based on the data we get)

- Bunches of cars will take turns to cross the streets
 - This is determined by the traffic on the streets (roads with more traffic will get a higher priority to cross the street)