# **CP2406 Assignment Task 1**

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# **USER STORIES**

User Story 1:

As a user, I want to be able to decide which vehicle is most suitable for me to be used on road.

Priority: High

Estimate: 1 hour

Test: to know which vehicle is suitable for me to use

User Story 2:

As a user, I want to know when the speed of each vehicle when they are on the road.

Priority: Low

Estimate: 2 hours

Test: ask user to calculate speed of each vehicle

User Story 3:

As a user, I want to know the relationship between the amount of vehicle on lane and the duration of time limits of traffic lights.

Priority: Medium

Estimate: 2 hours

Test: how long does the traffic lights takes to turn from red to green

User Story 4:

As a user, I want to know which direction of my vehicle is going.

Priority: Low

Estimate: 2 hours

Test: check which direction to go

**User:**

* Decide which vehicle to use on the road
* The type of vehicle will determine the speed of each vehicle on road
* The amount of vehicle on lane determine the duration of time limits of traffic lights
* Determine which direction should the vehicle go (North, East, West, South)

**System:**

* There are 3 road intersection shapes: straight, 4-way, and 3-way
* A road is at least twice the length of a bus (at most five times)
* The only vehicle types are: Car, Bus and Motorbike
  + The length of a car determines the length all other vehicle types
  + Breadth of a car is half its length
  + len(motorbike) = 0.5 \* len(car)
  + len(bus) = 3 \* len(car)
* The length of a car is the only vehicle configuration
* Vehicles are self-driving
* Traffic lights are only available at the beginning or at the end of the lane
* There are 2 main modes in the application:
  + city editing
  + simulation
* In city edit mode you can: create a new city, edit a city, open a city, save a city
* In simulation mode you can: set the update rate, run the simulator, stop the simulator, set the vehicle spawn rate – popup dialog boxes are used to enter rate values