### User Stories

* User Story 1

As a user, I want to create a new city map in which I can setup vehicles’ configurations, add some different type of roads such as 4-way intersections and setup traffic lights on them so that I can simulate the traffic situation of the city with some randomly spawned vehicles.

Priority is High and estimate day is 4 days. For testing, create a new city map, add some streets, traffic lights, setup car’s length and speed and run the simulation.

* User Story 2

As a user, I want to keep my developed city maps, make sure they won’t disappear after my customized so that they could be used in the future.

Priority is High and estimate time is 2 days. For testing, after editing the city, press the save button to save the city with name.

* User Story 3

As a user, I want to reload my previous developed city map so that I can run simulation again with some different values like vehicles’ rates.

Priority is Medium and estimate time is 1 day. For testing, press open button to reload the saved city from database.

* User Story 4

As a user, I want to stop the simulation while vehicles moving on the roads so that I can terminate the simulation.

Priority is High and estimate time is 2 days. For testing, press stop button and watch all vehicles stopped.

* User Story 5

As a user, I want to setup the map’s update rate when I run simulation so that I can control vehicles’ spawn at the start.

Priority is Medium and estimate time is 2 days. For testing, click the set update rate button to change vehicles’ spawn rate.

* User Story 6

As a user, I want to setup vehicles’ speed when I run simulation so that I can control vehicles’ amount on roads by making them driving faster or slower.

Priority is High and estimate time is 2 days. For testing, click the set vehicle speed button to make vehicles moving faster or slower.

* User Story 7

As a user, I want to see the number of vehicles, traffic lights and average speed of vehicles during the simulation so that I can get data details of the simulation.

Priority is High and estimate time is 2 days. For testing, run the simulation and all data needed should be displayed on the status panel.

* User Story 8

As a user, I want to avoid car crash or overlying on the map so that I can run simulator without any problems.

Priority is High and estimation time is 3 days. For testing, running simulation and watch vehicles carefully.

### Developer User Stories

* Developer User story 1

As a developer, I want to automatically generate roads’ length and width by invoking car’s length so that there’s no need for setting up roads while running the simulation.

Priority is High and estimate time is 3 days. For testing, abstract the vehicles class and call some methods to generate roads.

* Developer User Story 2

As a developer, I want to automatically generate bus and motorbike by invoking car’s length so that there are not only cars but also buses and motorbikes moving on the map while running the simulation.

Priority is High and estimate time is 3 days. For testing, call the car class and some methods to generate buses and motorbikes.

* Developer User story 3

As a developer, I want to save all the data so that if customers missing data, everything could be restored.

Priority is Medium and estimate time is 2 days. For testing, save the all data as a file and load the data to view the map again.

<https://github.com/javalearning666/AssignmentCP2406>

