Project Overview:
In my home city, the traffic jams are everywhere, it's a city with a lot of busy intersections. So, in this project, I want to build a simulated traffic flow at various intersections over time, each time period = 1 hour. Cars, buses, and bikes move through intersections, and sometimes traffic lights malfunction or accidents happen, slowing down the flow. The simulation will show how these changes and incidents will affect our traffic in the city.

Implementation:
I plan to use an std::map to represent different intersections. And I will use some std::list to represent the vehicle passing through each intersection, such as a list of cars, a list of buses and a list of bikes.

Simulated events:
For each time period (which is 1 hour, because I want to simulate a whole day which is 24 hours, so 1 hour seems to be a good time interval to choose), the traffic light malfunctions or accidents might occur at some intersections, slowing down certain types of vehicles. New vehicles enter the intersections, and some leave as they pass through. Initial traffic data will load from an external file, and the program will display what incident happened, the changes in traffic flow for each hour, and the vehicles waiting in each intersection.

Pseudocode and Mockup code are in my Github Repo.
https://github.com/muster-Wugui/210_Lab29-31_Project_XZ.git