

# Vehicle Registration System - Week 4

Abdellah Sabhi  
Mario Ueseka  
Wenhao Xie



# Project Overview

- **Main Task:**

Developing a web-based vehicle registration system that allows users to register vehicles, license plate recognition, and manage cities and junctions.

- **Week 4 Objective:**

- Improve UMLs.
- Implement emergency notification feature.

# Features:

## User Interaction:

- Users can register vehicles through a form.
- The system selects vehicles from the registered database for simulation.
- Vehicles move between predefined junctions.

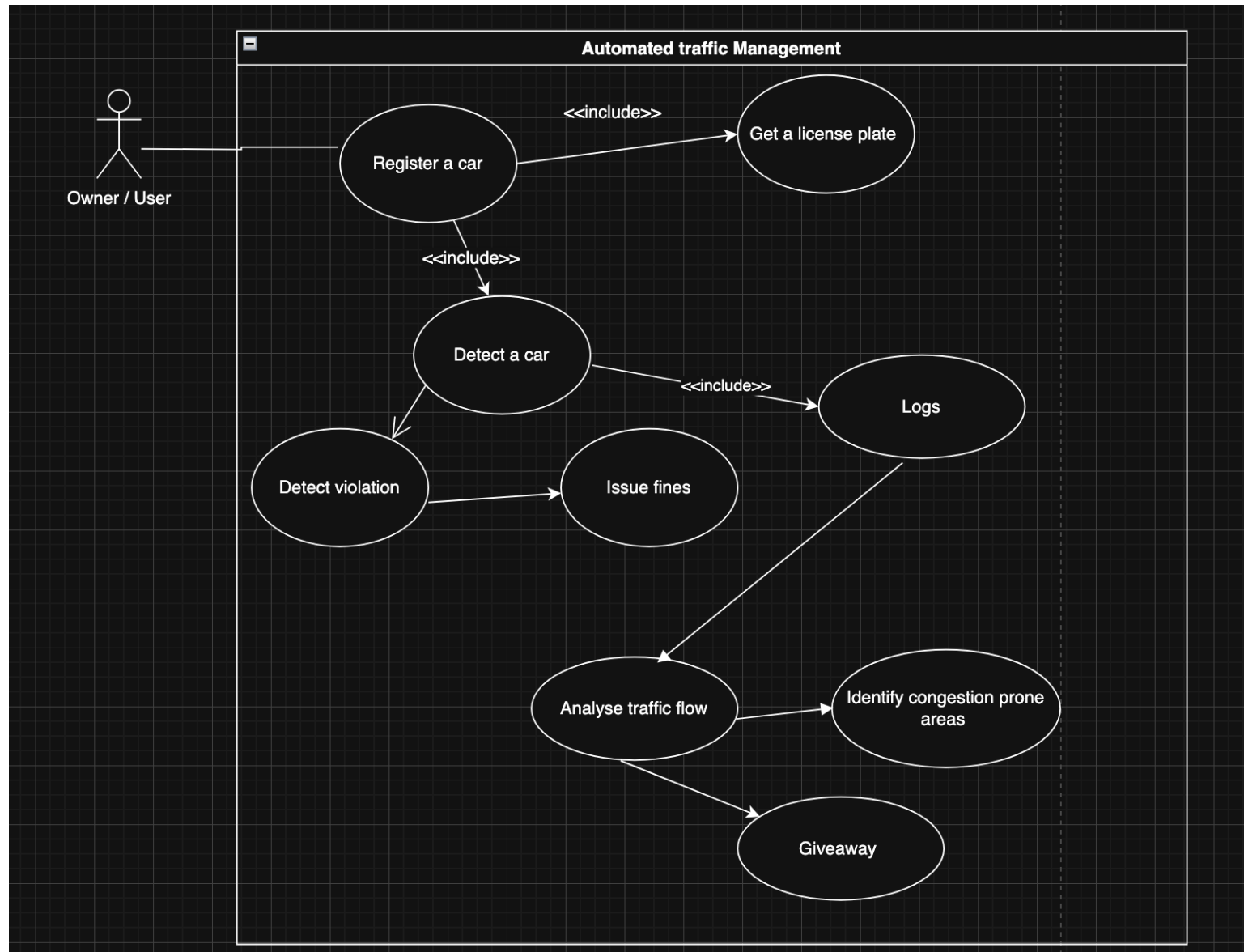
## Junction Selection and violation Logging:

- Junctions are predefined points in the map.
- The system detects when a vehicle crosses a junction and determines if a violation occurs.
- Violations are stored and displayed in a table.

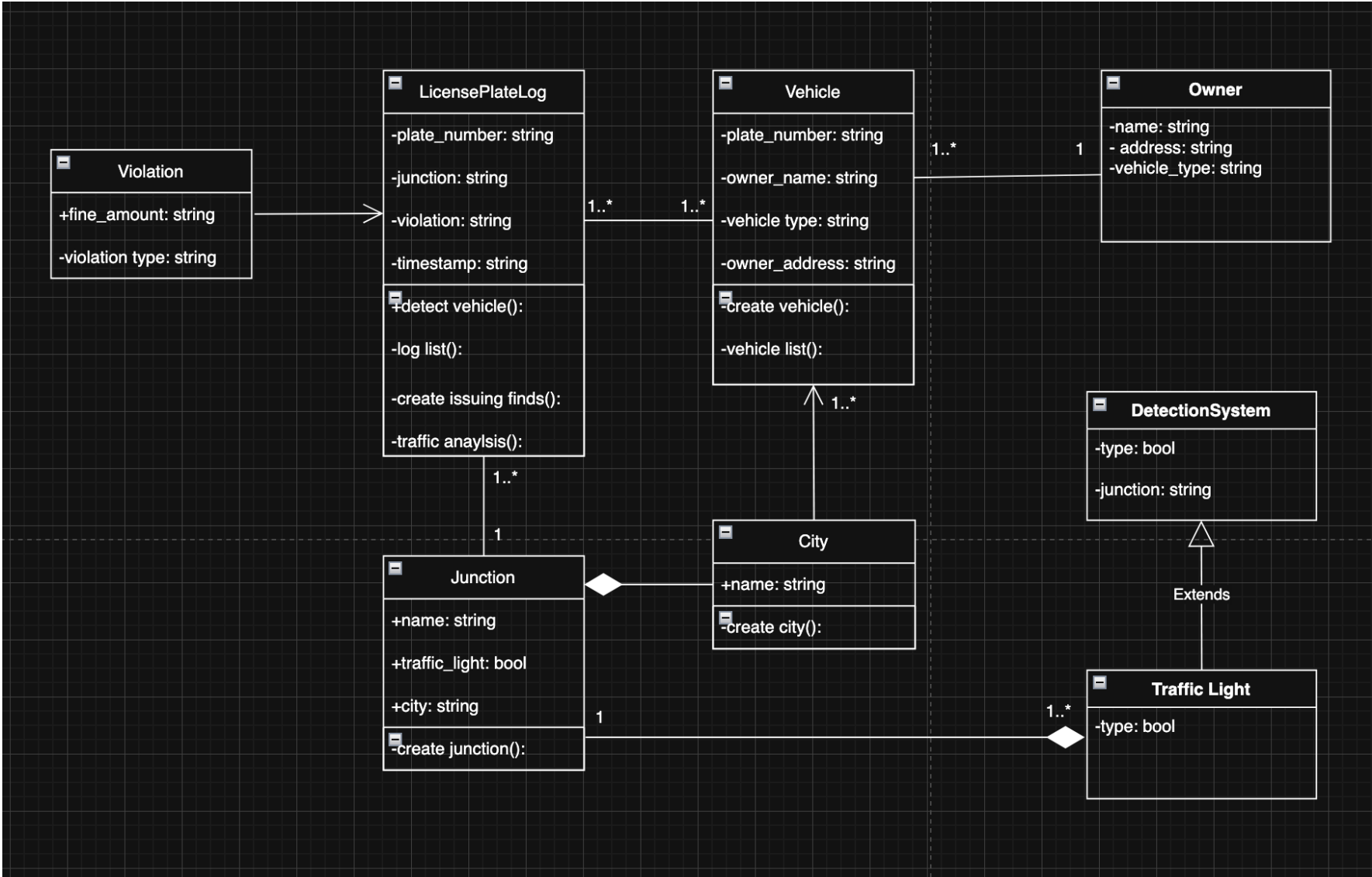
## Simulation Features:

- Vehicles move along a mapped path dynamically.
- Number plates are visible above moving vehicles.
- The system records violations in real-time.

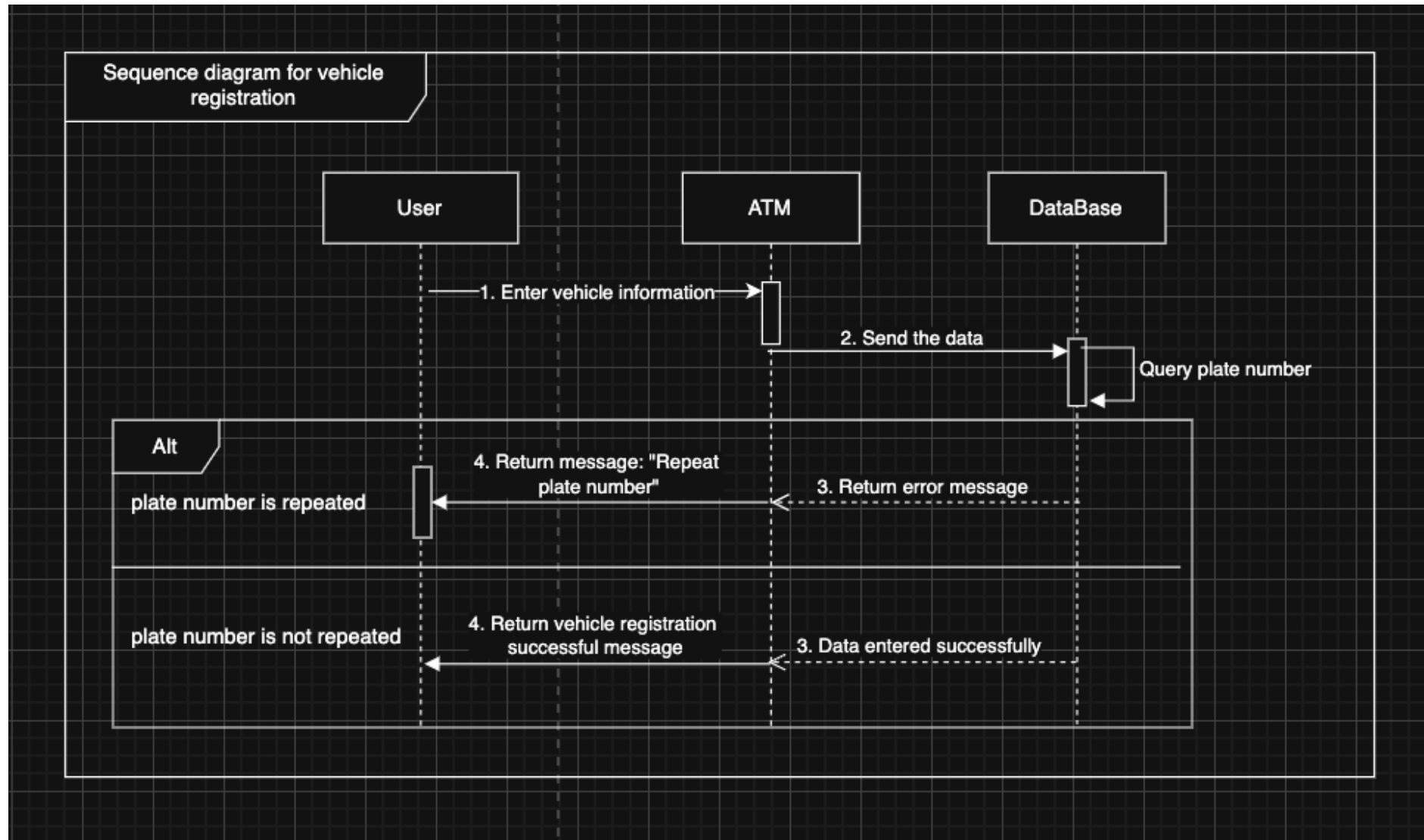
# Use case Diagram:



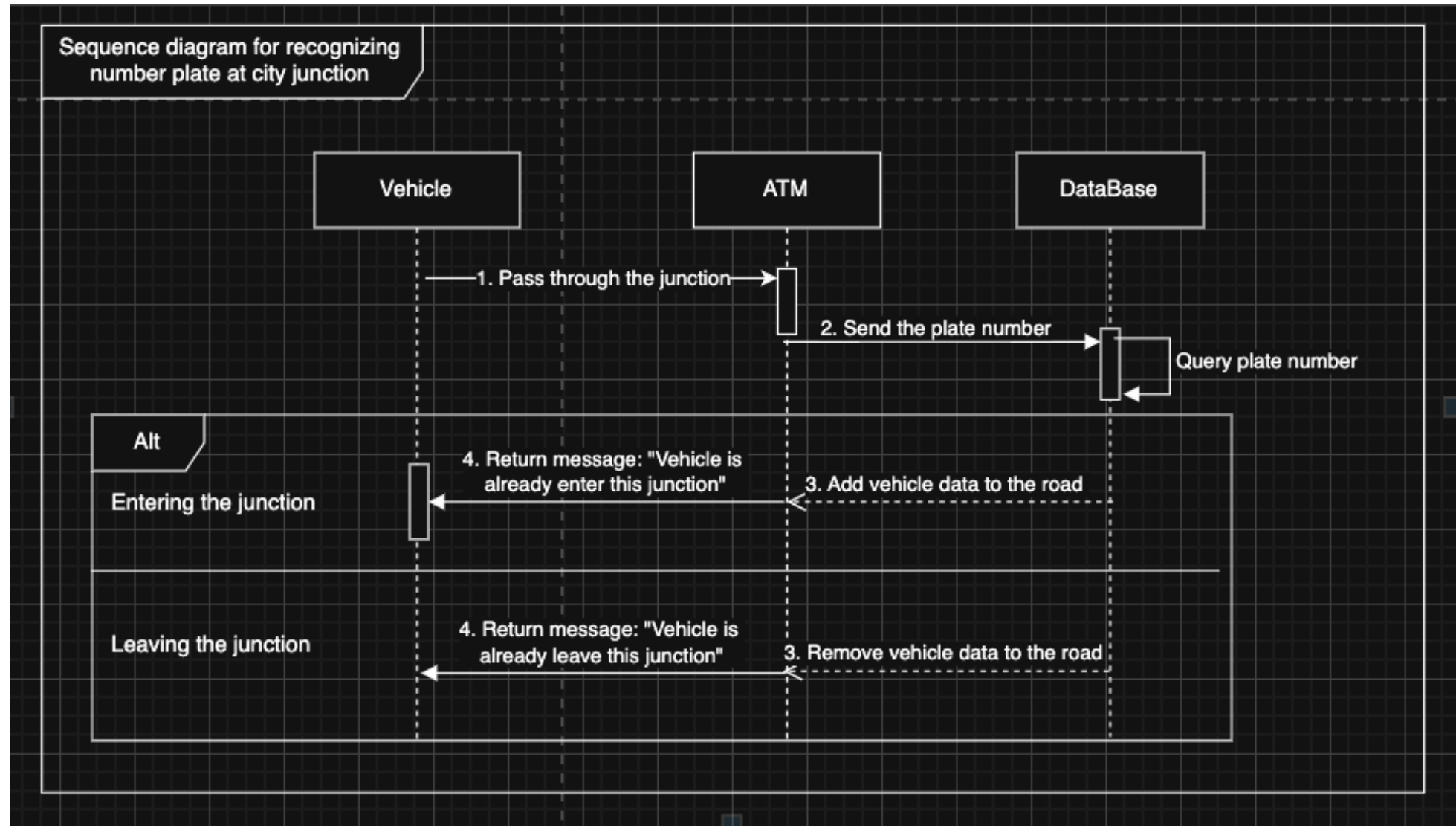
# Class diagram



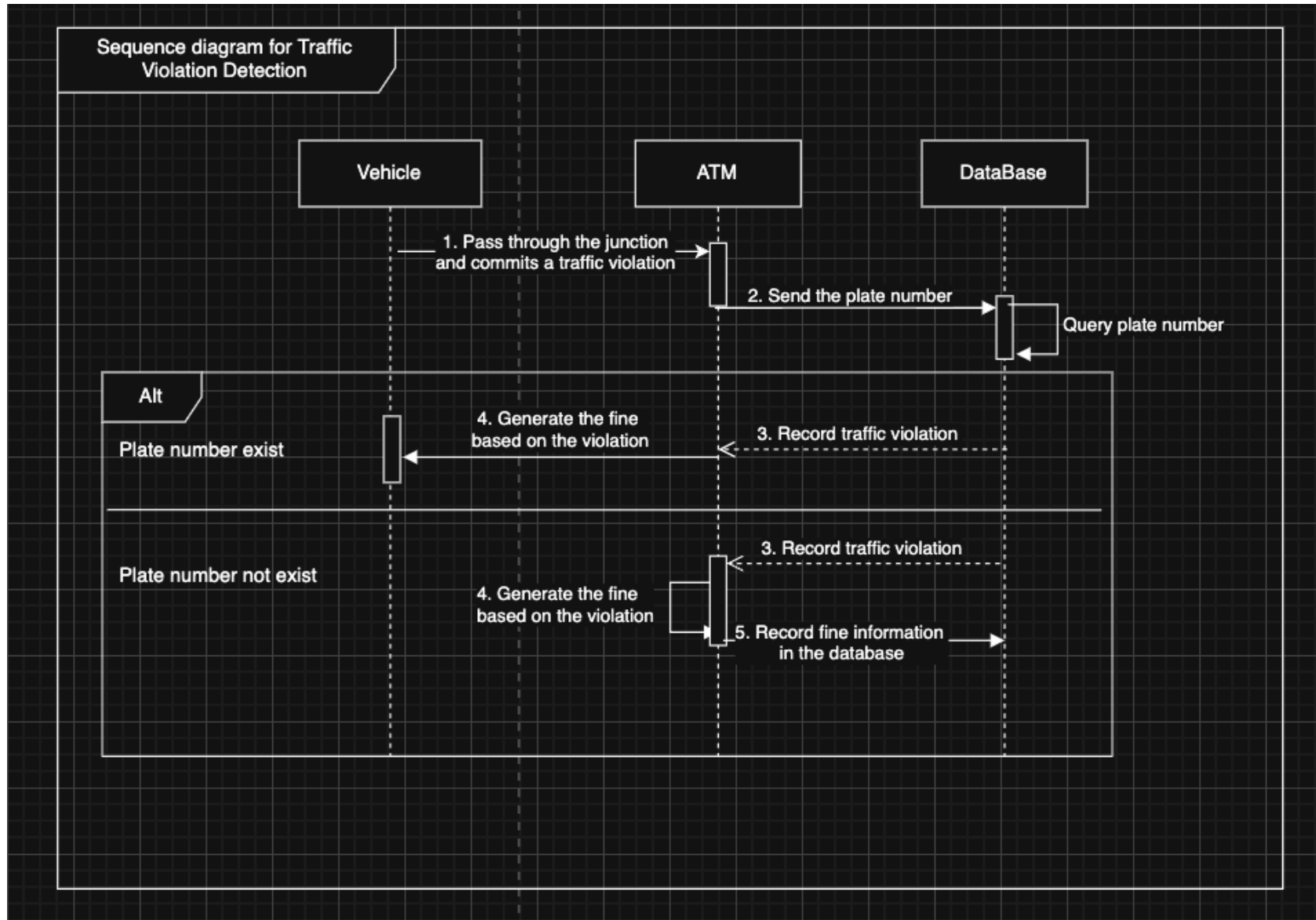
# Sequence diagram



# Sequence diagram

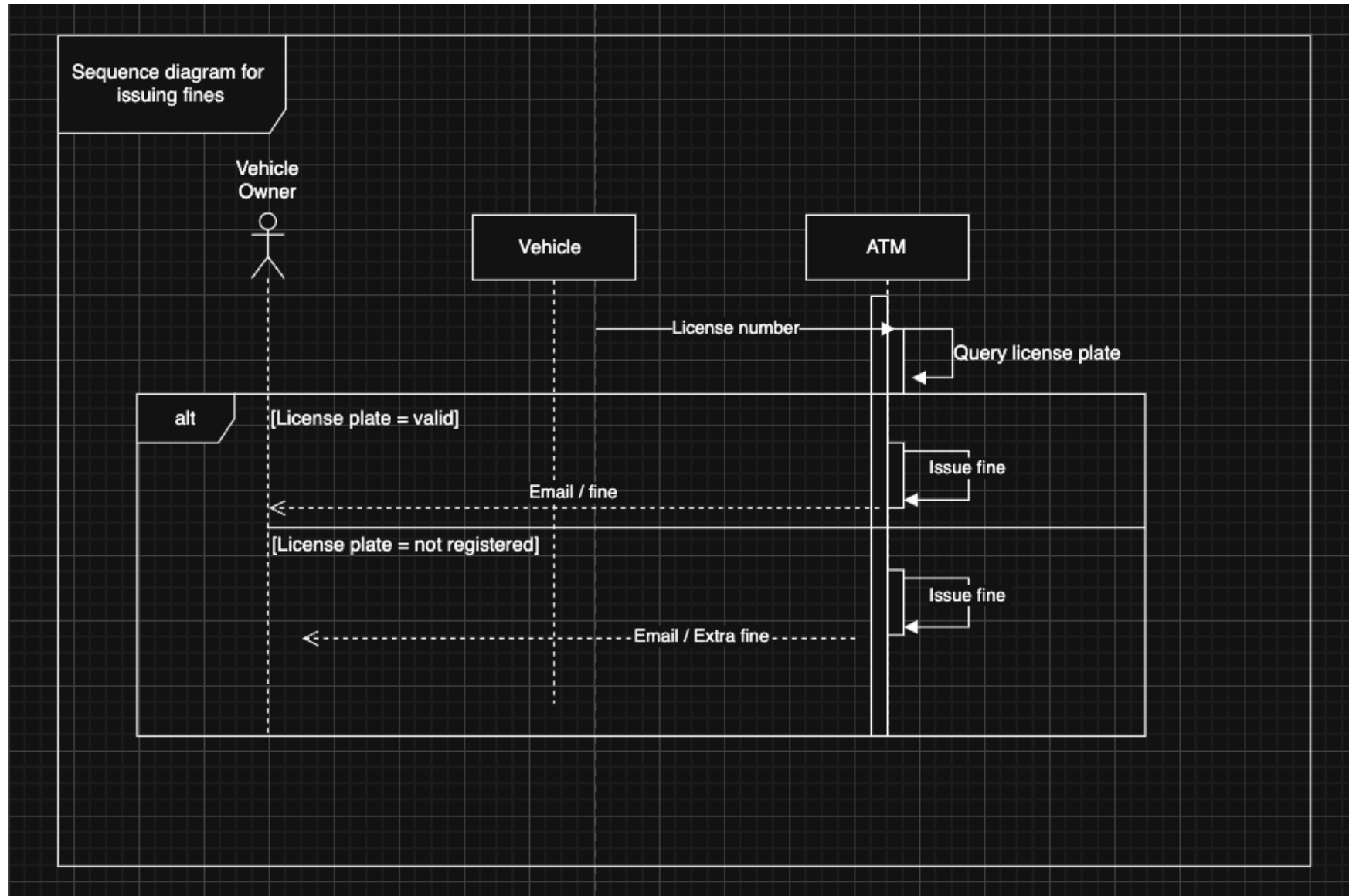


# Sequence diagram

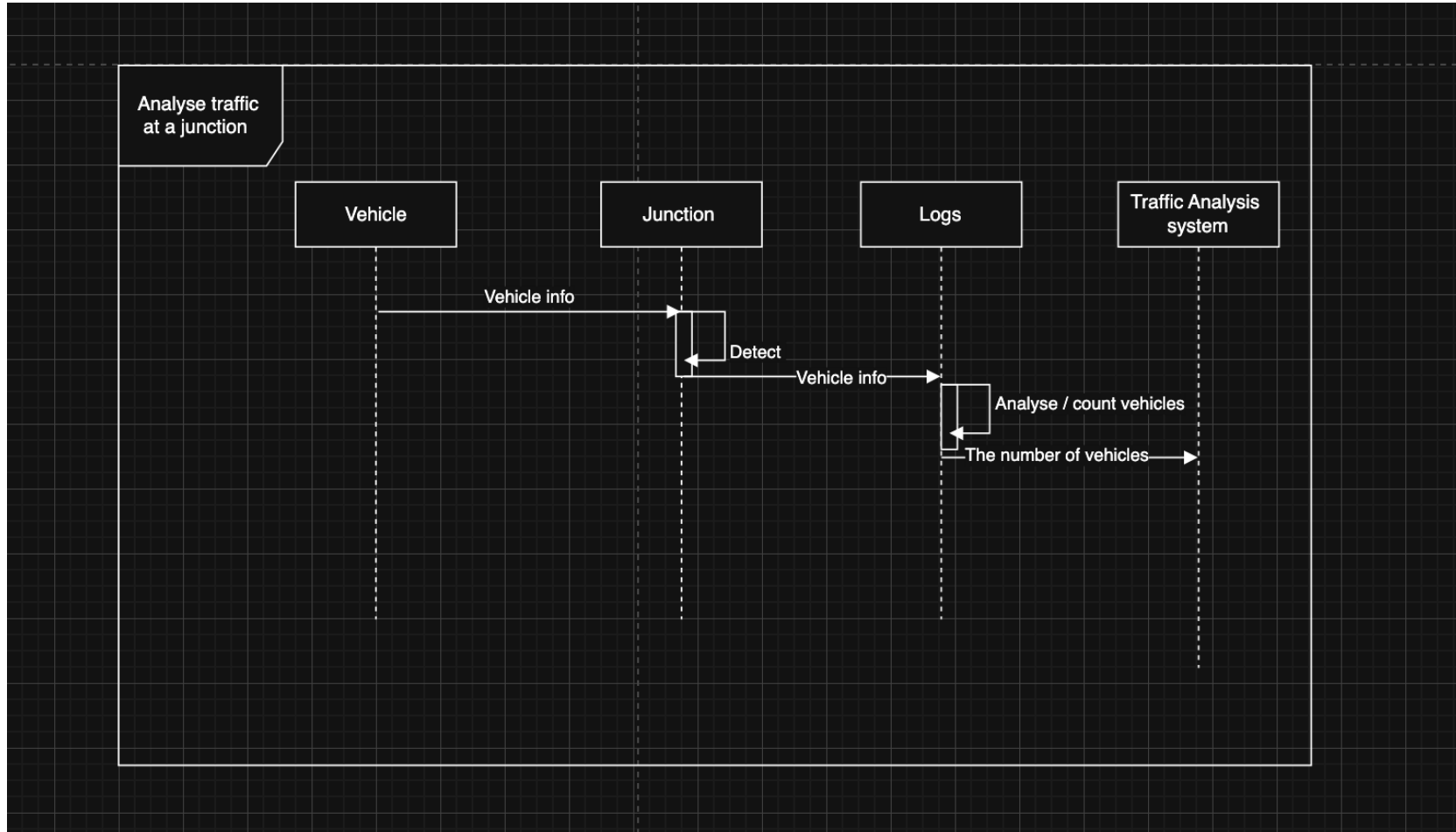




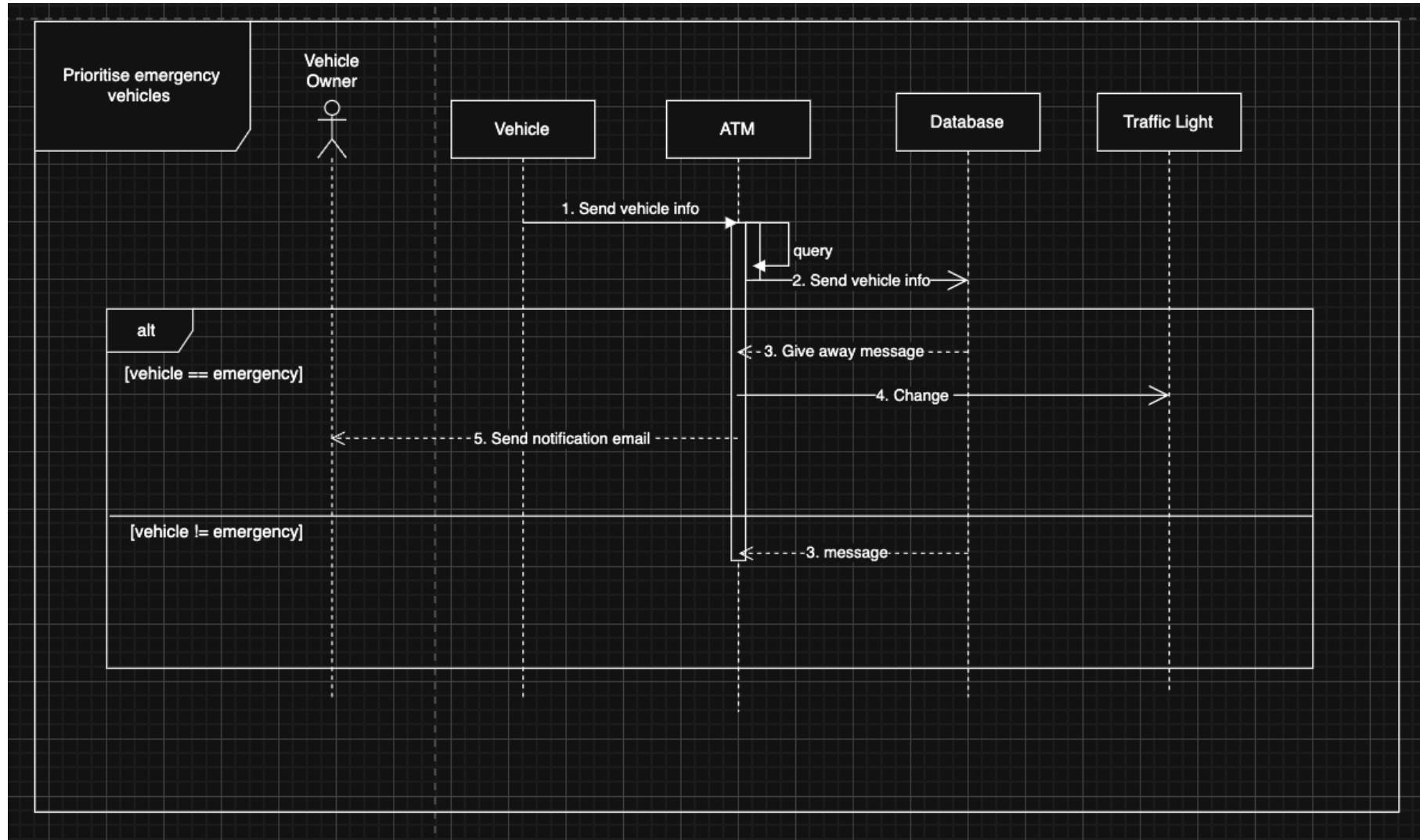
# Sequence diagram



# Sequence diagram



# Sequence diagram



# Challenges

- No challenges faced except some migration issues.

# Next Steps

- Implement congestion prone identification in the traffic in the code.
- Add filtering and search options for vehicles and logs.