

A decorative graphic on the left side of the slide, consisting of a network of white lines and small circles on a blue gradient background, resembling a circuit board or a stylized tree structure.

EMERGENCY VEHICLE CLEARANCE SYSTEM FOR RURAL AND HIGHWAY ROADS

ABSTRACT

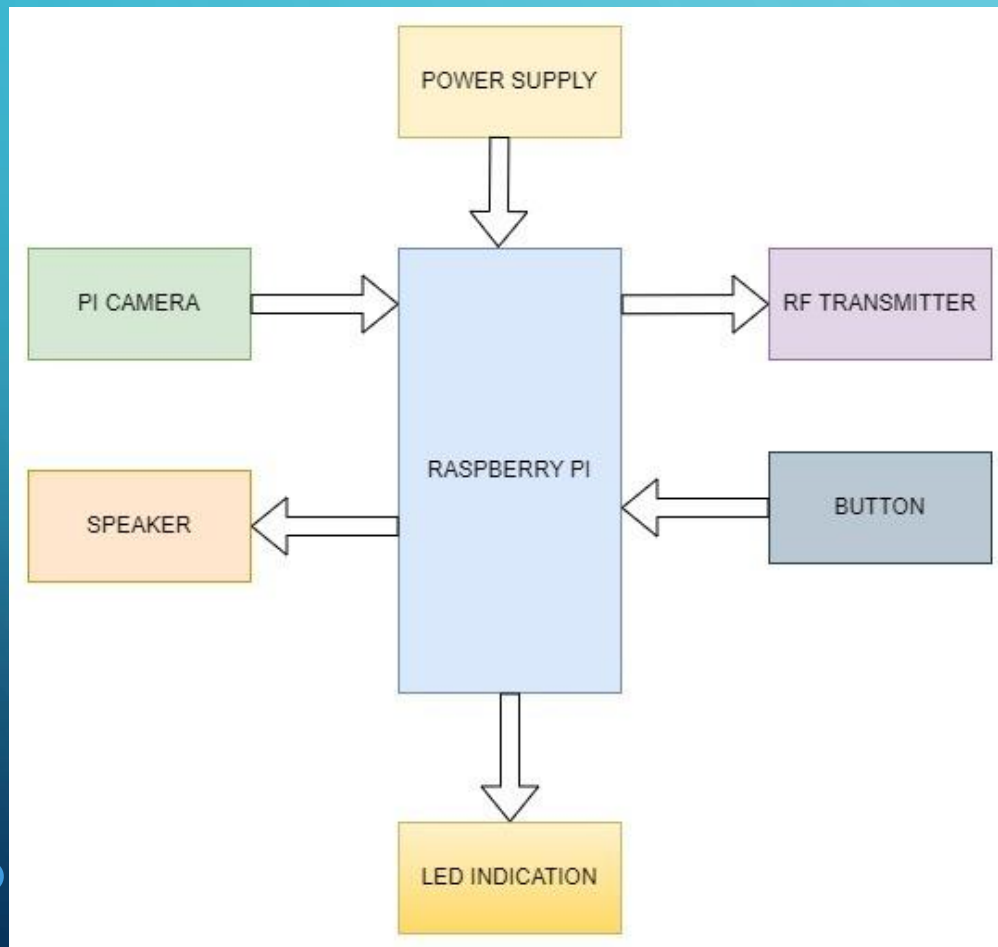
- Ensuring swift movement for emergency vehicles like ambulances is crucial, particularly in rural and highway areas where conventional traffic management solutions may be inadequate. This project proposes an intelligent system designed to facilitate the smooth passage of ambulances through traffic and enhance road safety. The system broadcasts a signal from the ambulance to vehicles within a 100 to 200-meter range, notifying them of the approaching emergency vehicle through a message or a beep sound. This pre-emptive alert allows vehicles to clear the path for the ambulance. If a vehicle obstructs the ambulance, a front-mounted camera captures the vehicle's number plate, and the system automatically registers a case with the Motor Vehicles Department (MVD) or Regional Transport Office (RTO).

INTRODUCTION

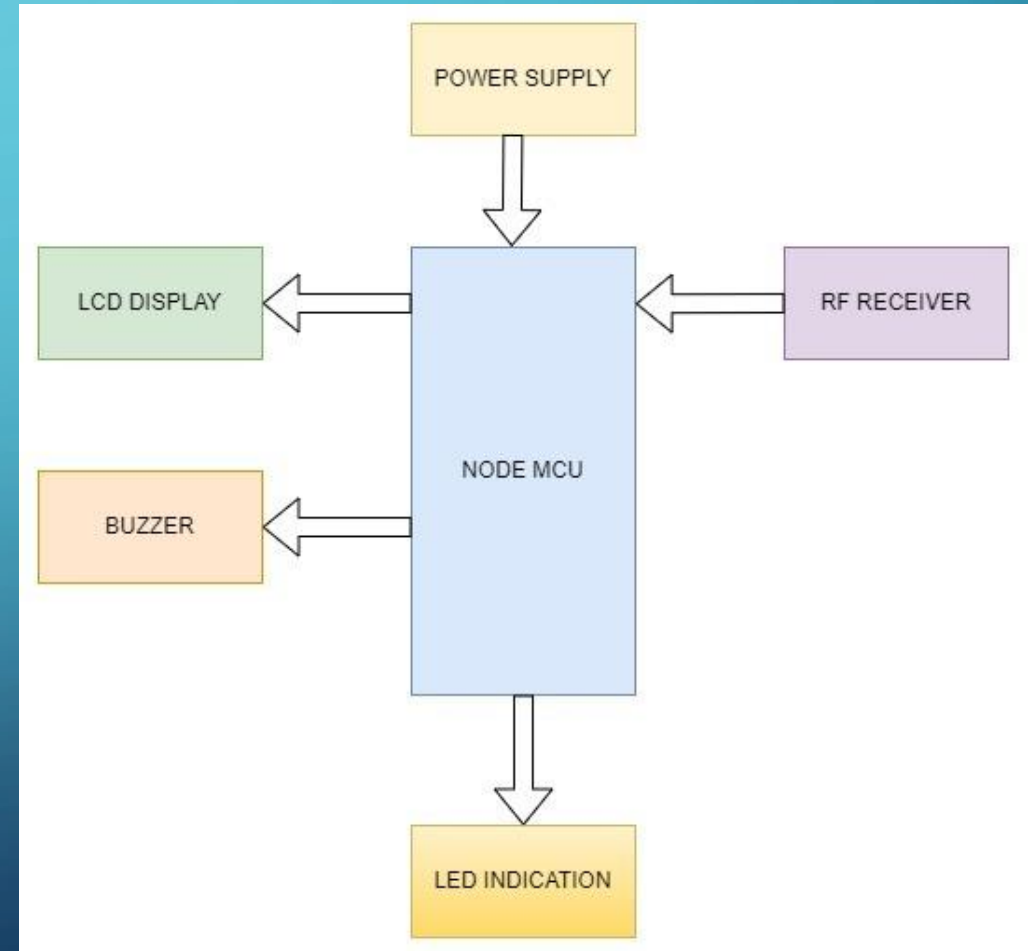
- Ensures swift and safe movement of ambulances, especially in rural and highway areas.
- Alerts nearby vehicles (100-200 meters) via signals to clear the path.
- Captures number plates of obstructing vehicles with a front camera.
- Automatically registers cases with the Motor Vehicles Department (MVD) or RTO.
- Enhances road safety and promotes responsible driving behavior.

BLOCK DIAGRAM

RASPBERRY PI



NODE MCU



HARDWARE REQUIREMENTS

AMBULANCE SIDE

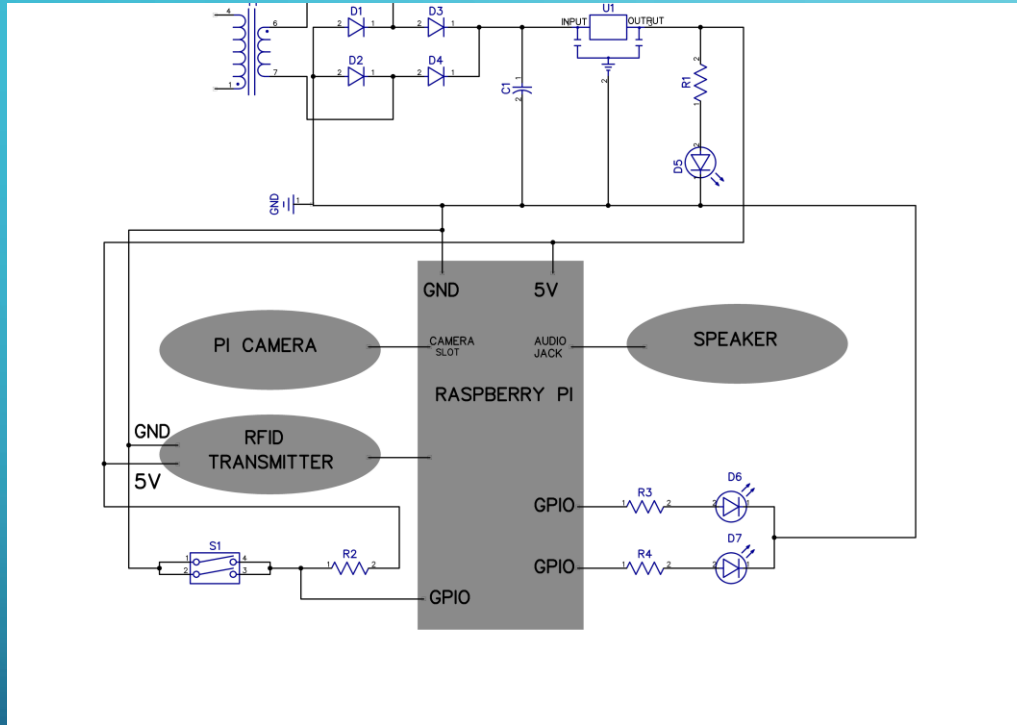
- 1.RASPBERRY PI
- 2.PI CAMERA
- 3.SPEAKER
- 4.RF TRANSMITTER
- 5.BUTTON
- 6.LED INDICATIONS

VEHICLE SIDE

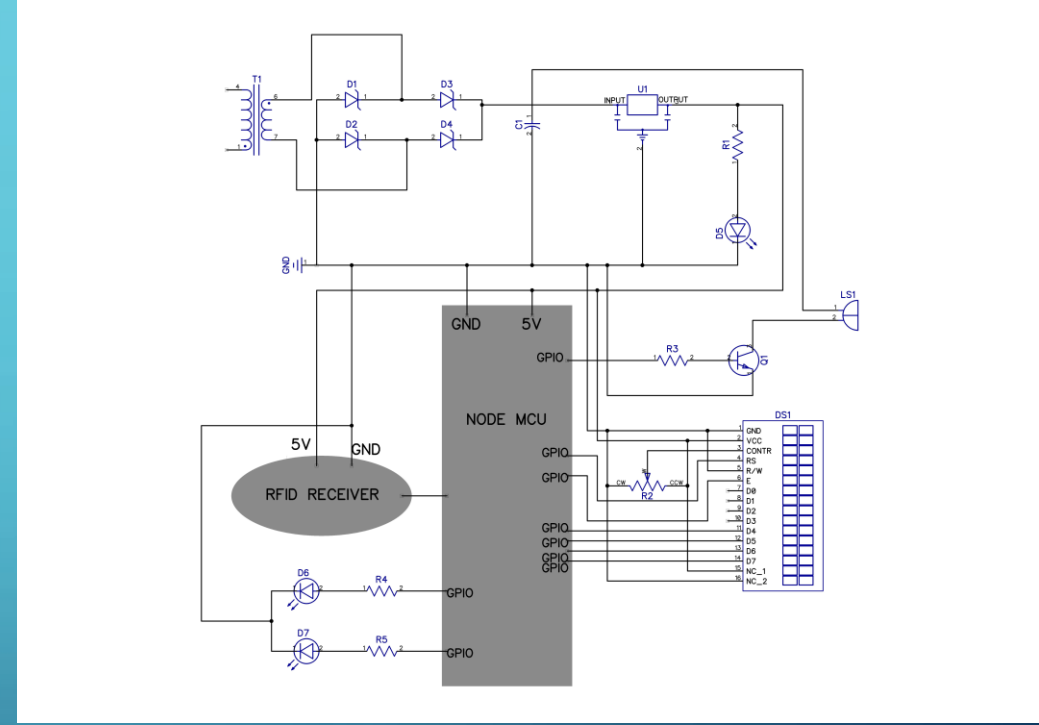
- 1.NODE MCU
- 2.LCD DISPLAY
- 3.BUZZER
- 4.RF RECEIVER
- 5.LED INDICATIONS

CIRCUIT DIAGRAMS

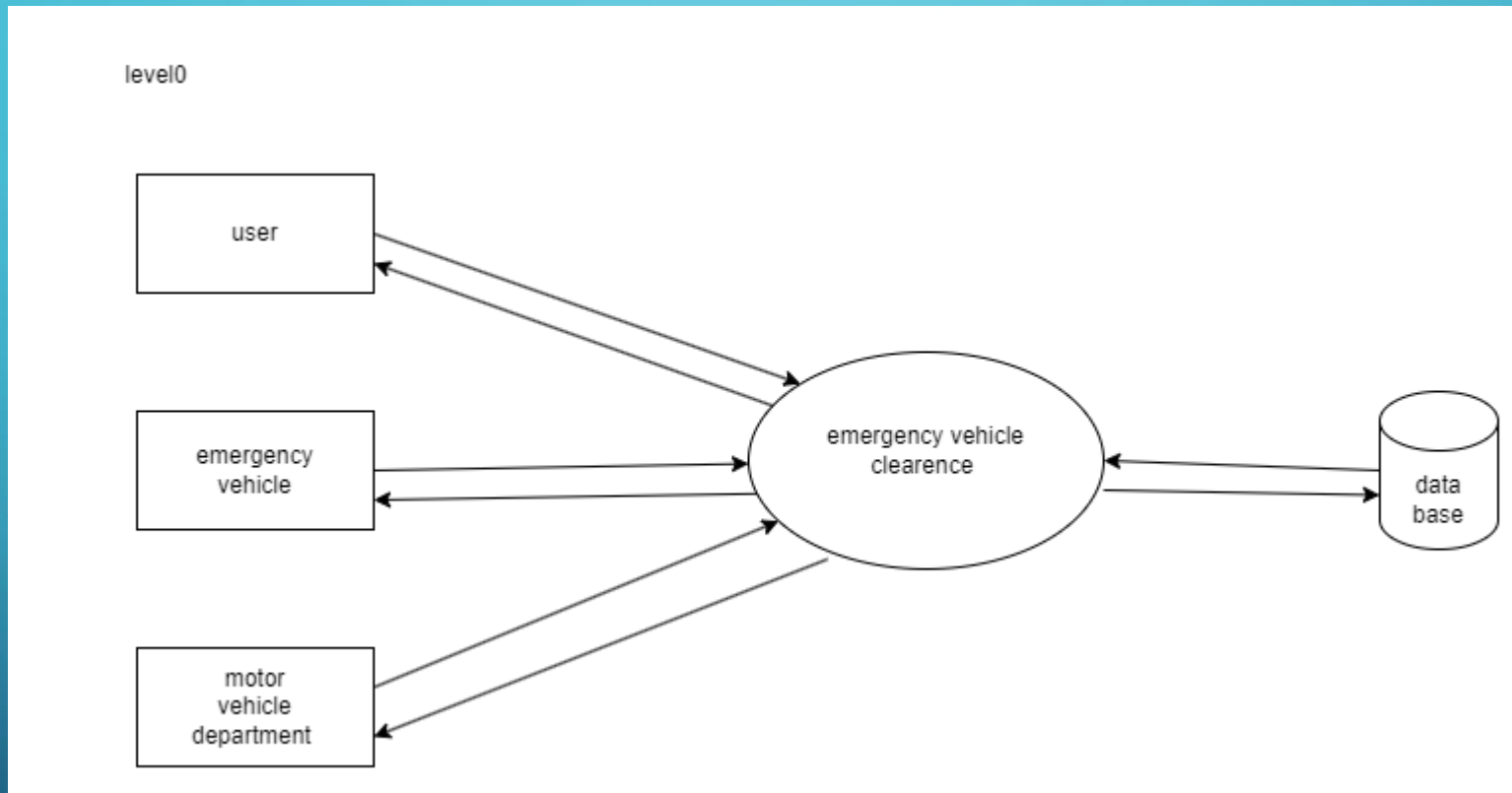
RASPBERRY PI



NODE MCU



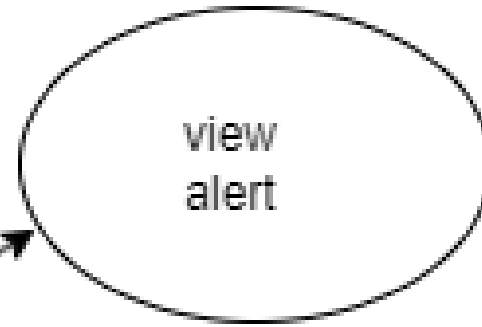
DFD



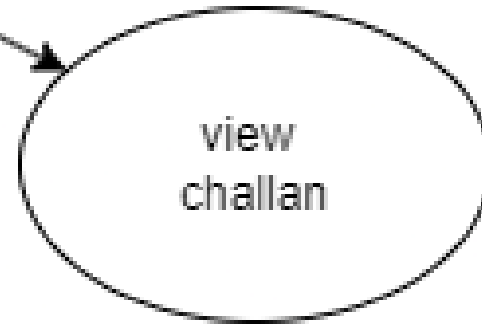
level 1.1



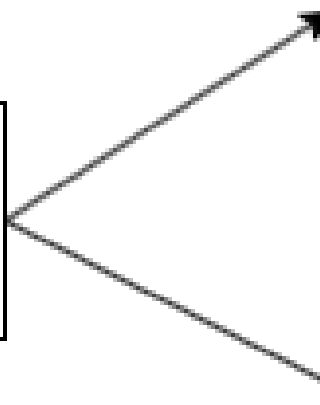
user



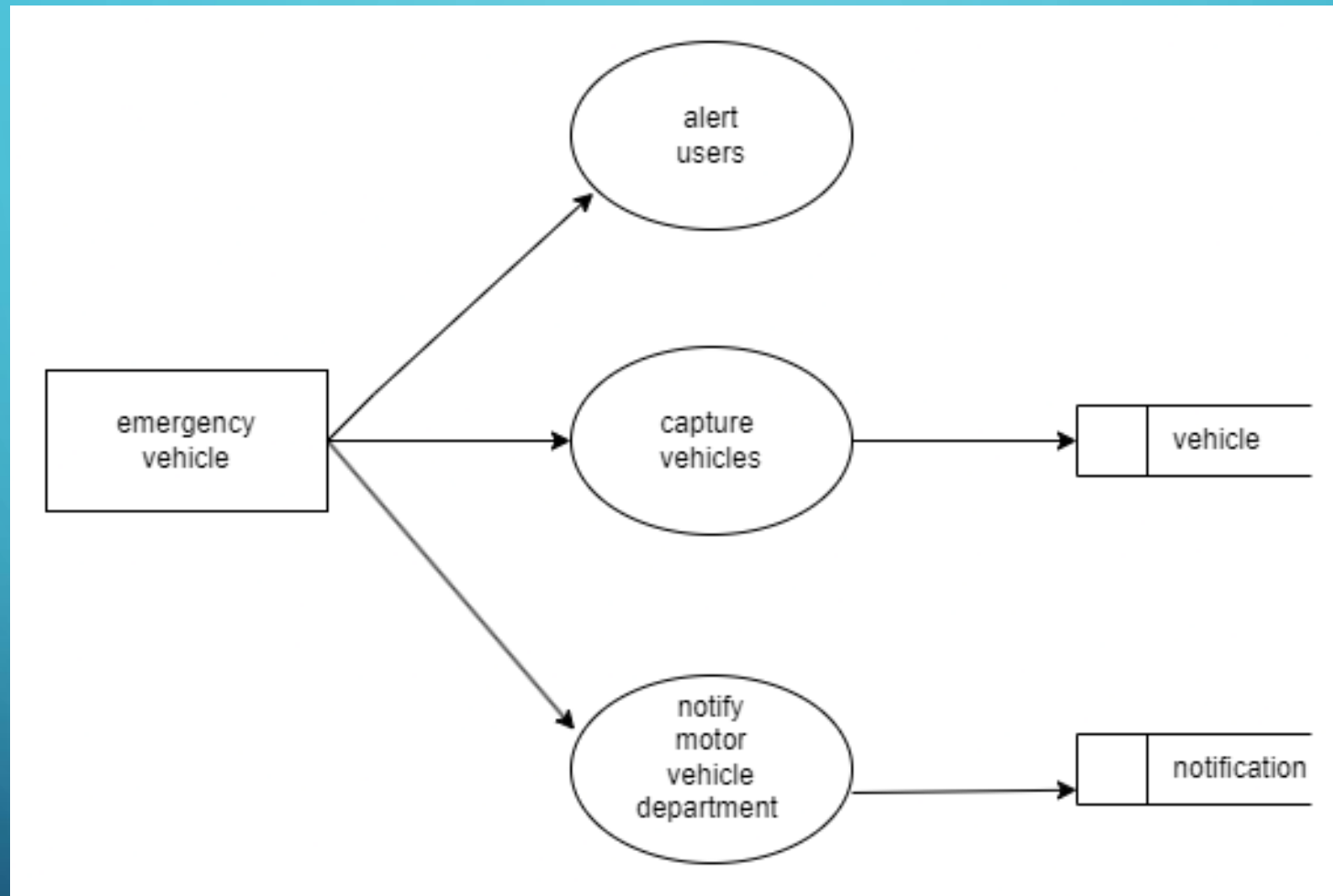
view
alert



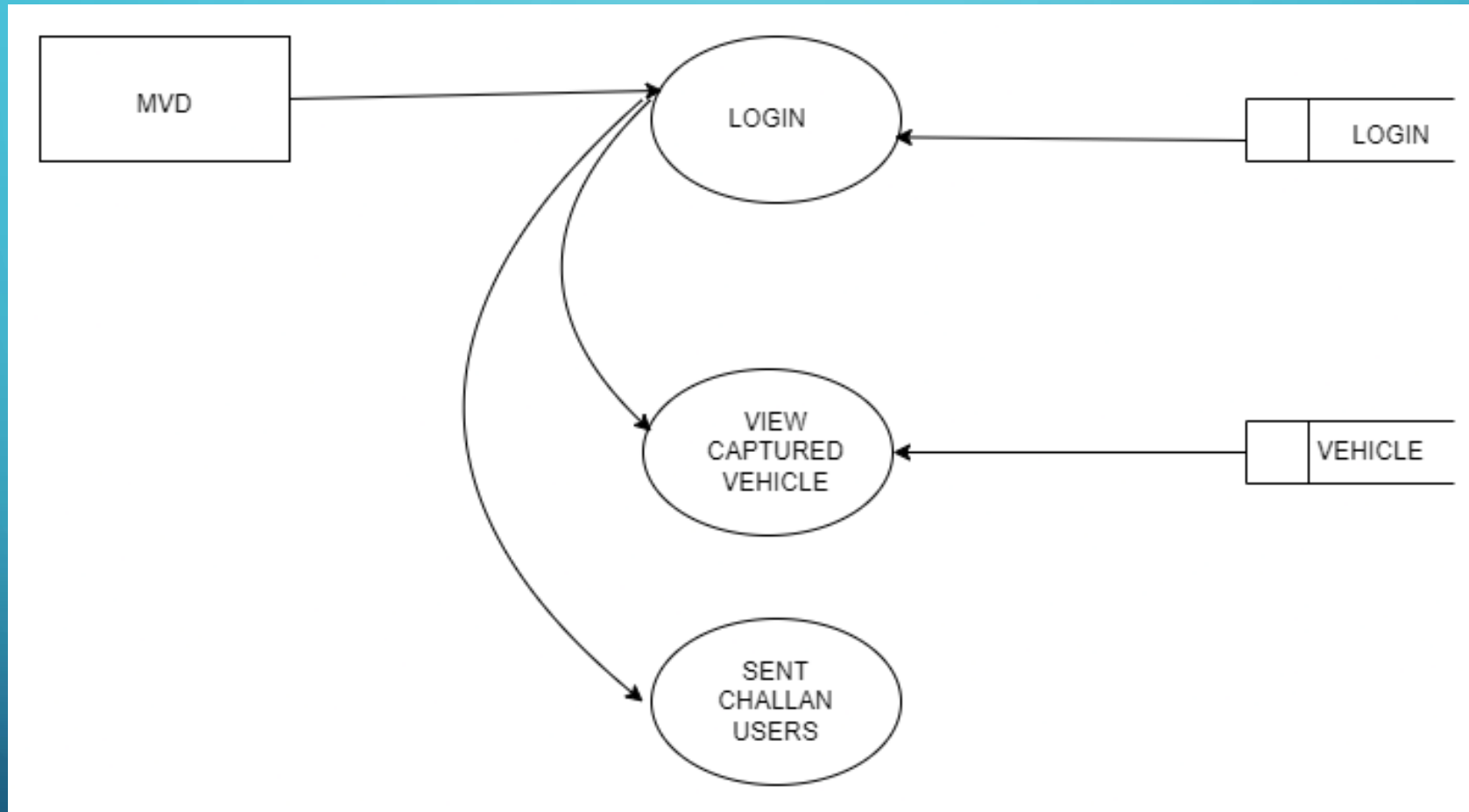
view
challan



LEVEL 1.2



LEVEL 1.3



The background is a blue gradient. In the corners, there are decorative white line art elements resembling circuit boards or neural networks, with lines and small circles.

THANK YOU...!

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AFTHAB HAROON
MUHAMMED ALI ZAEEM
HAMAD HAFIN