PANIMALAR ENGINEERING COLLEGE

Chennai – 600 123

Department of Computer Science & Engineering

CS 8811 - Project Work (2022-23)

FIRST REVIEW FORM

TITLE OF THE PROJECT

Automatic Speed Control in School and College Zones

1. MODULE DESCRIPTION

The system is made up of four main parts:

- Design and Development
- Installation of RFID Card and Readers
- Integration of IOT Platform
- Testing and Calibration
- Deployment

1.1 DESIGN AND DEVELOPMENT

The system architecture is designed, which involves selecting the hardware components such as RFID readers, RFID cards, and IoT platform, and designing the software algorithms that will regulate the speed of vehicles in private zones. The software is developed, which involves writing the code for the algorithms and integrating the different components of the system. This includes developing the user interface, data management systems, and communication protocols.

1.2 INSTALLATION OF RFID CARDS AND READERS

RFID readers are installed at the entry points of the private zone, and RFID cards are installed in the vehicles. The RFID readers and cards use radio frequency signals to communicate with each other and transmit data, such as the speed of the vehicle and the vehicle's identity. During installation, the RFID readers are strategically placed to ensure that they can detect the RFID cards in the vehicles as they enter and exit the private zone. The RFID cards are installed in the vehicles in a location that is easily accessible and visible to the RFID reader.

1.3 INTEGRATION OF IOT PLATFORMS

IoT platforms allow for real-time monitoring and control of the system, enabling system operators to remotely monitor and manage the system. During integration, the IoT platform is connected to the system's hardware and software components, such as the RFID readers and cards, data management system, and communication protocols. This allows for real-time data collection, analysis, and management, providing system operators with a comprehensive overview of the system's performance.

1.4 TESTING AND CALIBRATION

Testing involves evaluating the system's performance under different conditions, such as varying speeds and different types of vehicles, to ensure that the system accurately detects the RFID cards and regulates the speed of the vehicles. The testing also involves evaluating the system's communication protocols and data management capabilities.

Calibration involves adjusting the system's settings and parameters to ensure that it is functioning optimally. This may include adjusting the sensitivity of the RFID readers, adjusting the speed limits within the private zone, and configuring the communication protocols.

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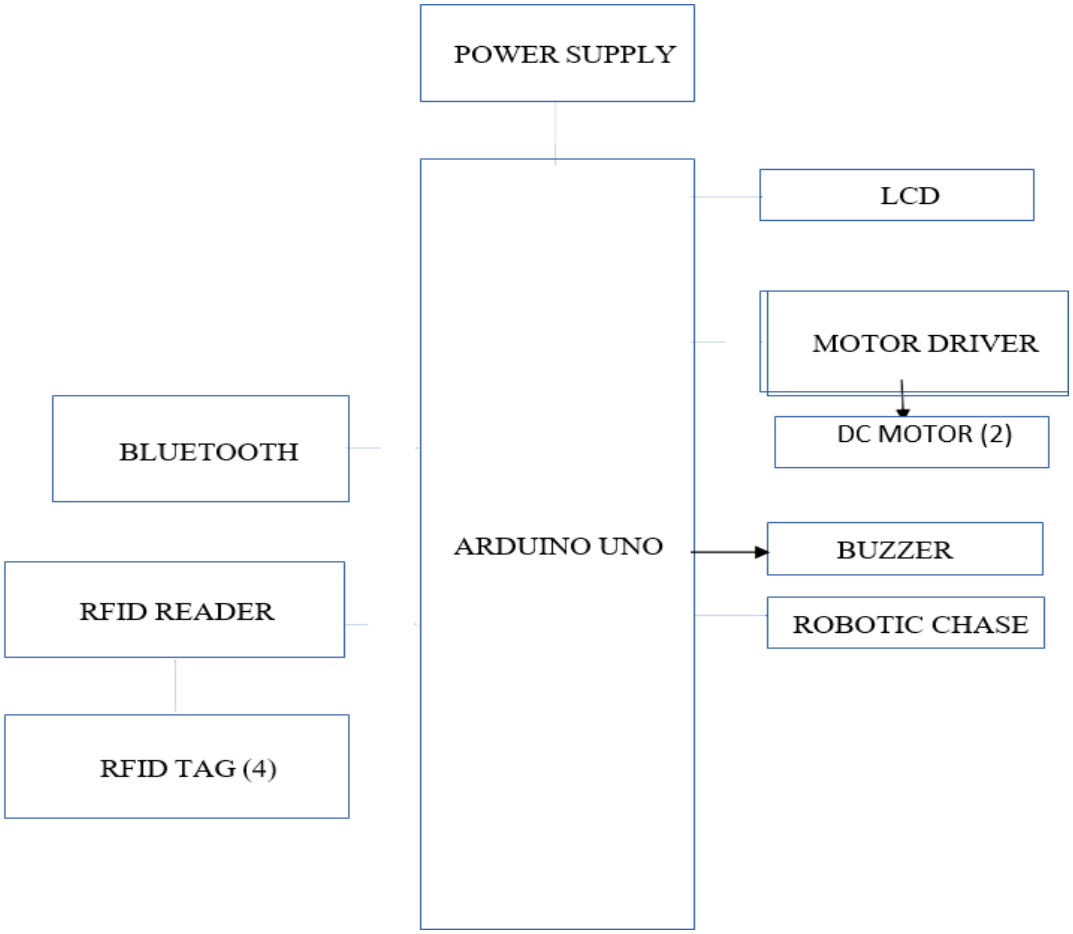
1.5 DEPLOYMENT

The deployment process typically involves working closely with the private zone owner or operator to ensure that the system is installed and configured to meet their specific requirements. This may involve conducting a site survey to assess the private zone's layout and identify any potential obstacles or challenges.

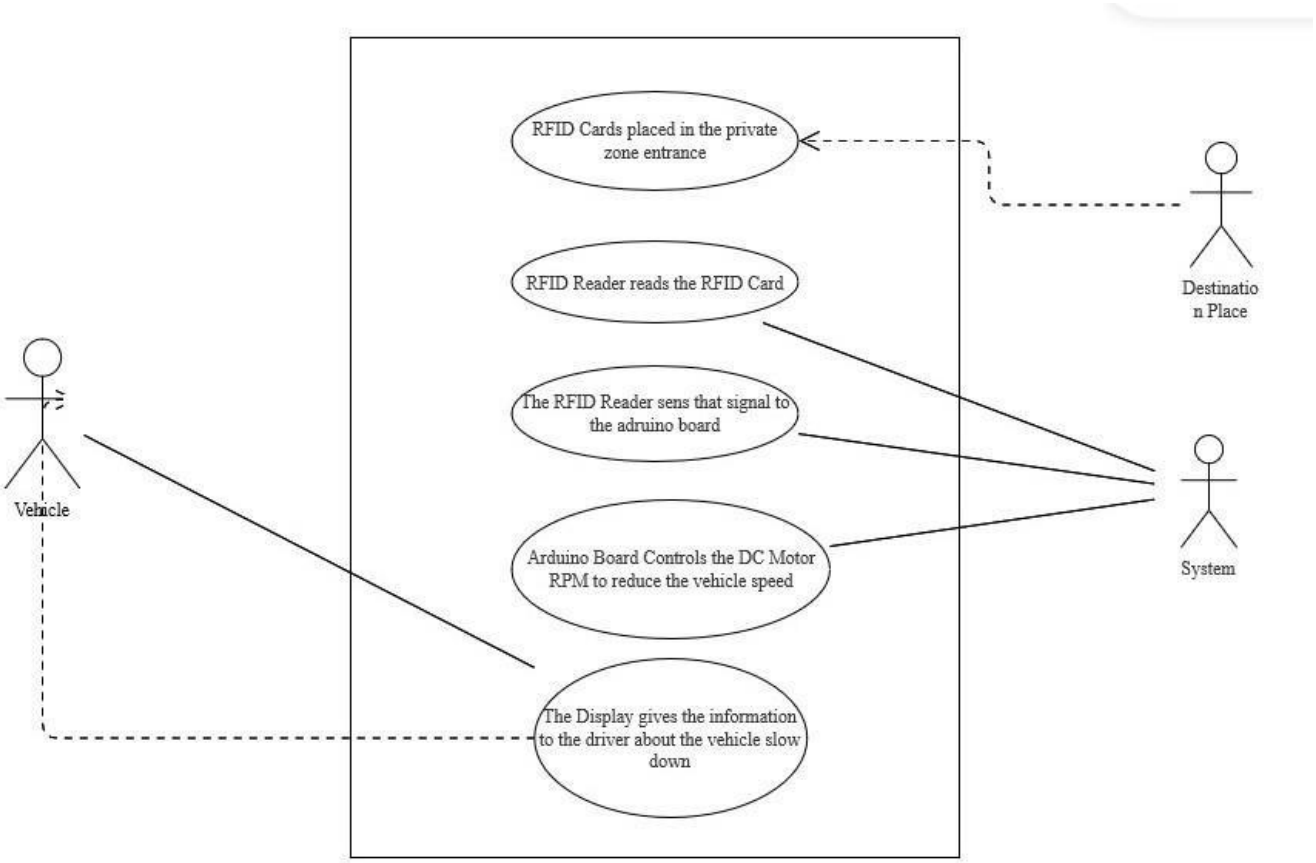
Once the system is deployed, it undergoes rigorous testing and calibration to ensure that it is functioning correctly and effectively regulating the speed of vehicles within the private zone. System operators are trained on how to use and manage the system, including monitoring and analyzing the system's data and making adjustments as necessary.

2. DIAGRAMS

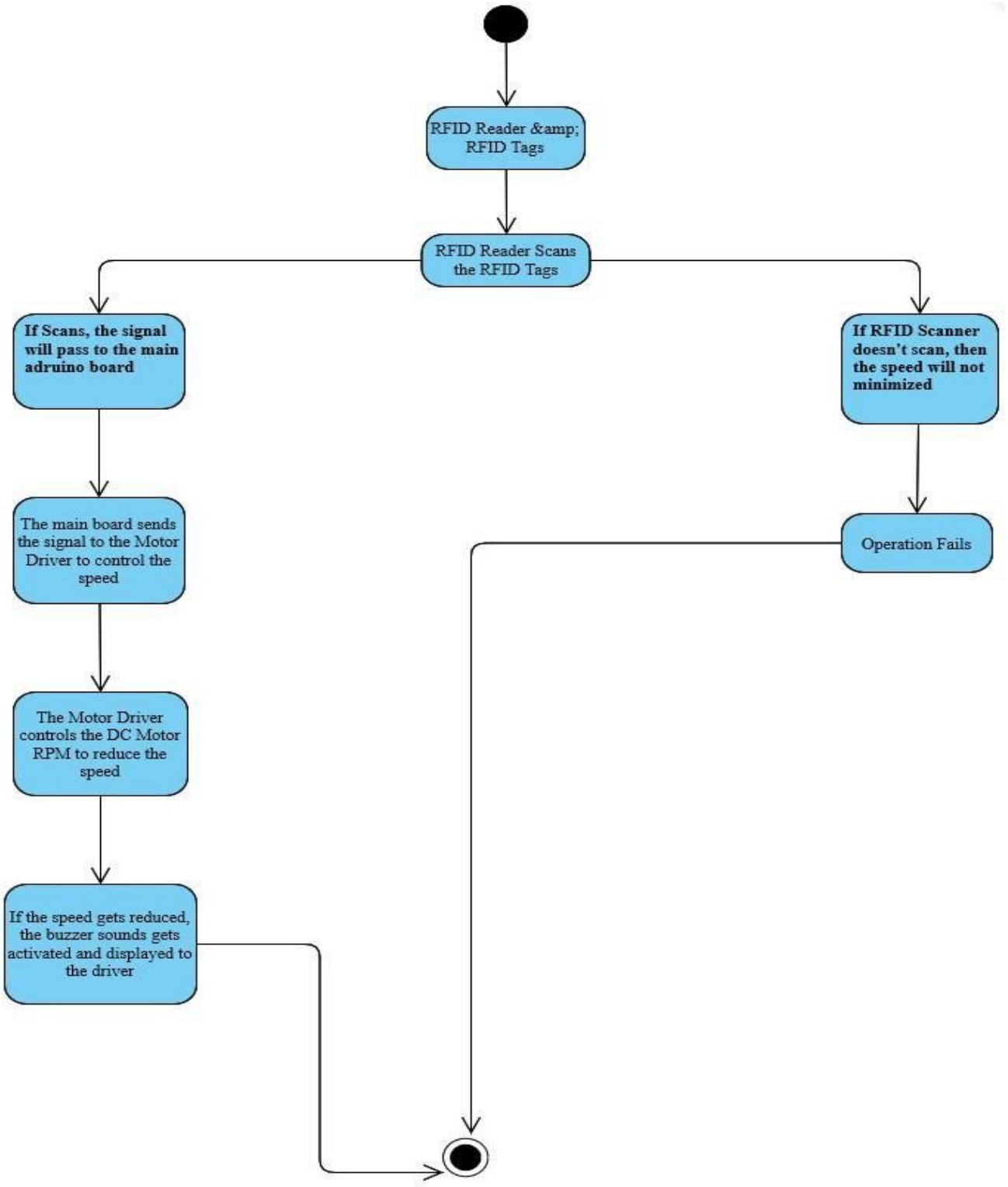
2.1 ARCHITECTURE DIAGRAM



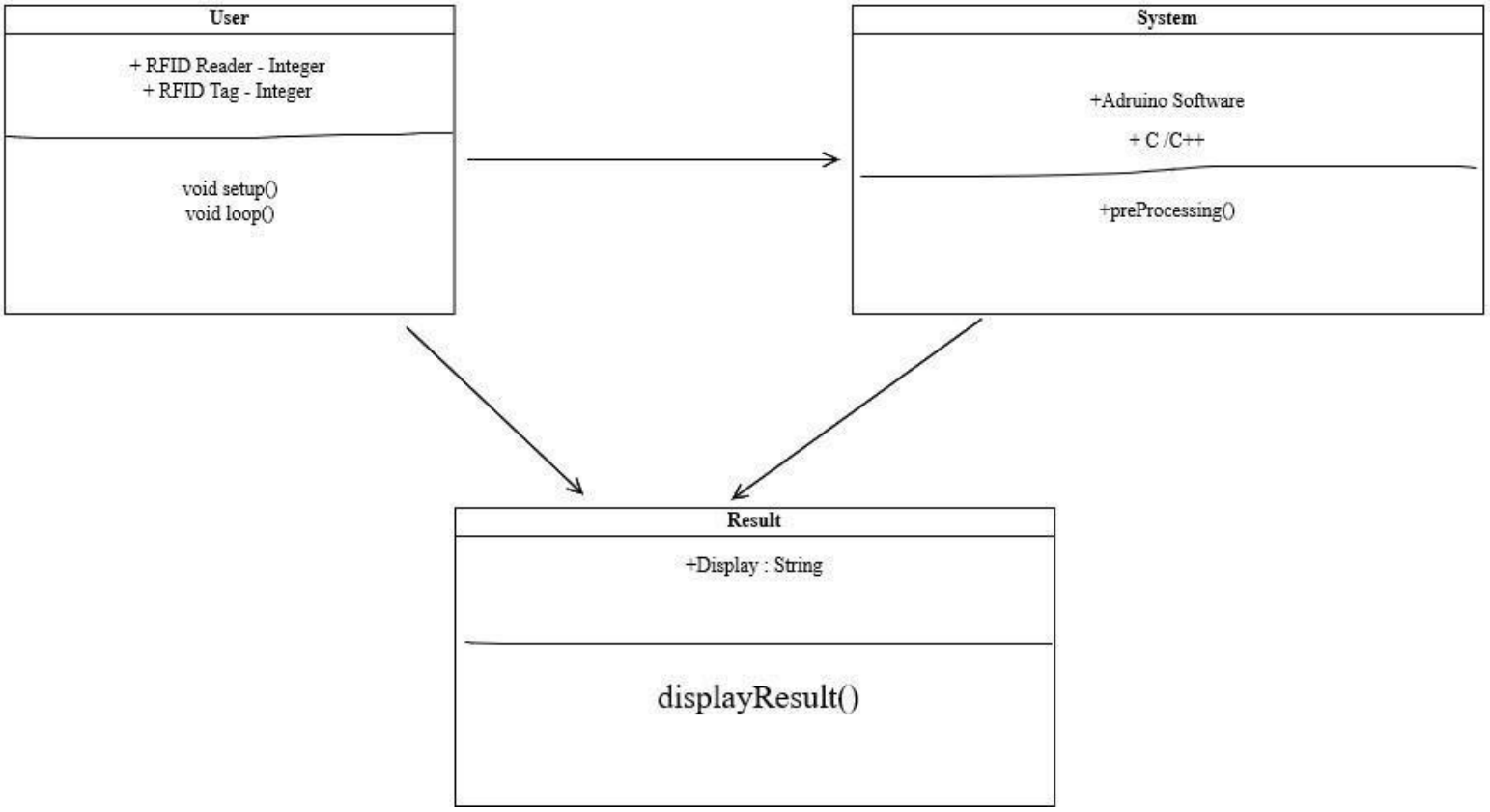
2.2 USE CASE DIAGRAM



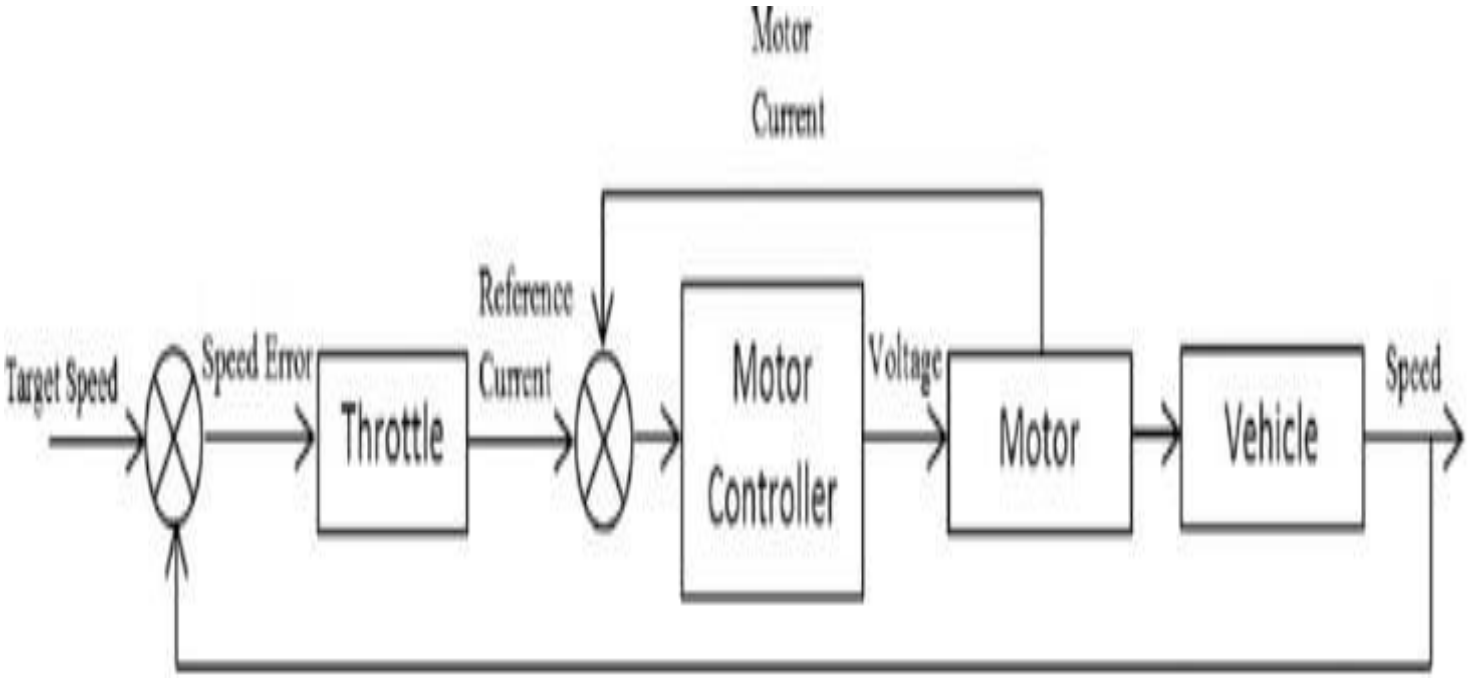
2.3 ACTIVITY DIAGRAM



2.4 CLASS DIAGRAM



2.5 STATE CHART DIAGRAM



2.6 DEPLOYMENT DIAGRAM