

Vehicle Tracking System with Accident Reporting

Project Brief Description:

Our project is about Vehicle Tracking System with Automatic Accident Reporting and Anti-Theft Feature, is designed to enhance vehicle safety and security. This innovative system employs multiple sensors to report the vehicle's status and location in case of accidents or theft.

The system utilizes a GSM module to send real-time location updates via SMS messages, ensuring that vehicle owners are informed and can take immediate action in critical situations. The system relies on its MQ7 sensor to detect CO gas levels and the vibration sensor to identify the impact in case of accidents. Once an accident is detected, the system instantly sends an SMS message containing the vehicle's status and precise location to preconfigured emergency contacts, facilitating prompt assistance.

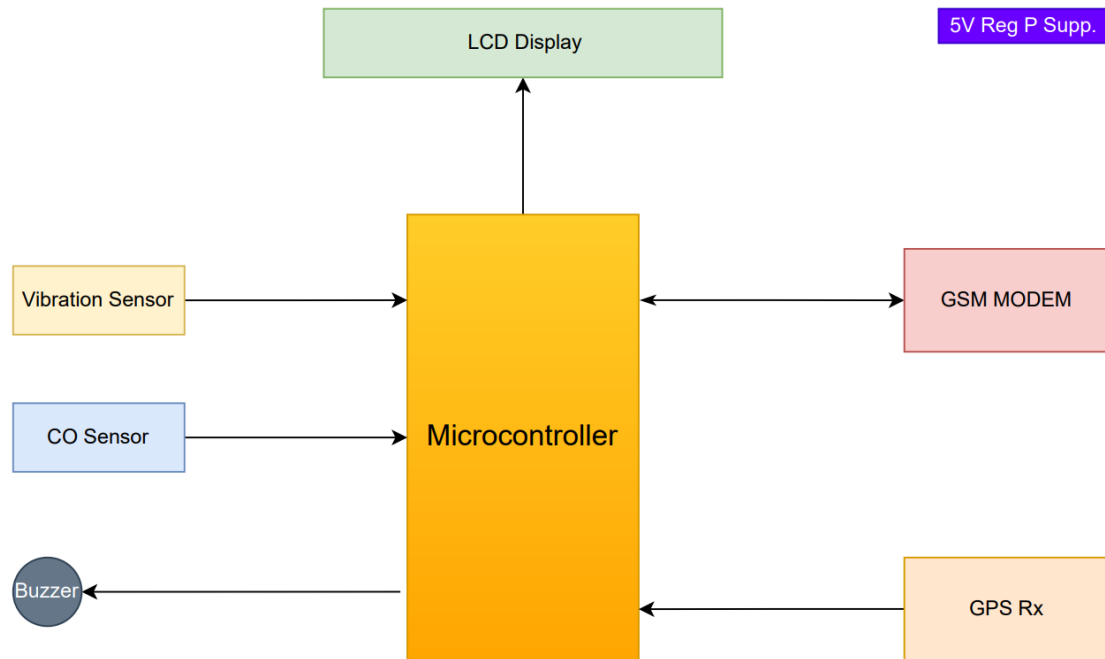
For anti-theft functionality, the system remains idle, awaiting incoming SMS messages with a special code from authorized phone number. Upon receiving a message, the system responds by sending the vehicle's current location, assisting owners in recovering their vehicle in case of theft. If an SMS with another special code is sent, then a loud buzzer is triggered.

The "Intelligent Vehicle Tracking System" is a comprehensive solution that provides both safety and security for vehicle owners. This system is a crucial step toward ensuring that vehicles remain protected.

Hardware Components:

- AVR Microcontroller
- SIM800L GPRS GSM Module
- GPS Receiver Module
- 16x2 LCD
- Vibration Sensor
- MQ7 Sensor
- Buzzer
- 5V Regulated Power Supply

Initial Block Diagram:



(software blocks will be added in the next project phases)