**PROPOSED SYSTEM :**

The proposed system consists of an Arduino board, specifically the Arduino Uno model, as the central control unit. This microcontroller will be programmed to manage a simulated traffic signal system. The system includes three LEDs of different colours (red, yellow, and green) to represent the typical signals in a traffic light. These LEDs will be connected to the Arduino board using a breadboard and jumper wires, allowing for a neat and organized circuit assembly. The entire setup, including the Arduino board, LEDs, and wiring, will be housed within a dedicated traffic signal housing or a custom enclosure to simulate a real-world traffic signal environment. The power supply for the system will be provided to ensure continuous and stable operation. Through the programmed logic in the Arduino, the LEDs will be controlled to mimic the standard traffic signal sequence, showcasing the functionalities of a traffic light system in a controlled and educational environment. This hands-on project can serve as an engaging way to learn about microcontroller programming, electronics, and traffic signal operations.

**EXISTING SYSTEM :**

To further enhance the system, it's possible that additional features could be integrated, such as sensors for detecting vehicle presence or pedestrian crossing buttons to initiate signal changes.

It's essential to consider factors like synchronization with adjacent traffic lights, emergency vehicle prioritization, and compliance with local traffic regulations during the development and implementation of such systems.