TRAFFIC MANAGEMENT BASED ON IOT

PHASE 2 SUBMISSION

Creating a traffic management system for an ESP32 on the Wokwi platform involves several steps, including setting up the hardware simulation, writing the code to detect and manage traffic, and controlling traffic signals on a virtual interface. Here's a high-level overview of the process:

Hardware Setup:

Wiring Components:

Connect the LEDs to the appropriate GPIO pins on the ESP32 to simulate traffic signals.

Ensure you have the necessary resistors in place to limit current flow through the LEDs.

Writing the Code:

```
//Define GPIO pins for traffic lights
const int redPin = 2;
const int yellowPin = 3;
const int greenPin = 4;
void setup() {
  // Initialize GPIO pins as OUTPUT
  pinMode(redPin, OUTPUT);
  pinMode(yellowPin, OUTPUT);
  pinMode(greenPin, OUTPUT);
}
void loop() {
  // Simulate traffic management logic here
  // For example, change traffic lights based on a timer or sensor input
  // Turn on red light
  digitalWrite(redPin, HIGH);
  digitalWrite(yellowPin, LOW);
  digitalWrite(greenPin, LOW);
  delay(5000);  // Red light for 5 seconds
// Turn on green light
  digitalWrite(redPin, LOW);
```

```
  digitalWrite(yellowPin, LOW);
  digitalWrite(greenPin, HIGH);
  delay(5000);  // Green light for 5 seconds

  // Simulate traffic management logic here
  // You can add more complex logic as needed
}
```