**IoT-based streetlight auto intensity control system, including sensor readings, WiFi connection setup, and data transmission to the ThingsView platform.**

#include <ESP8266WiFi.h>

#include <WiFiClient.h>

#include <ESP8266WebServer.h>

#include <ESP8266HTTPClient.h>

const char\* ssid = "WIFI";

const char\* password = "123456789";

const String serverUrl = "http://api.thingsview.com";

const String apiKey = "YOUR\_API\_KEY";

ESP8266WebServer server(80);

int lightSensorPin = A0;

int ledPin = D7;

int irSensorPin1 = D3;

int irSensorPin2 = D4;

int irSensorPin3 = D5;

int speedBreakerPin = D6;

int sensorValue = 0;

int lightThreshold = 500;

bool isDark = false;

bool isMotionDetected = false;

bool isFault = false;

void setup() {

pinMode(ledPin, OUTPUT);

pinMode(lightSensorPin, INPUT);

pinMode(irSensorPin1, INPUT\_PULLUP);

pinMode(irSensorPin2, INPUT\_PULLUP);

pinMode(irSensorPin3, INPUT\_PULLUP);

pinMode(speedBreakerPin, INPUT\_PULLUP);

Serial.begin(115200);

WiFi.begin(WIFI, 123456789);

while (WiFi.status() != WL\_CONNECTED) {

delay(1000);

Serial.println("Connecting to WiFi..");

}

Serial.println("Connected to WiFi");

server.on("/", handleRoot);

server.begin();

Serial.println("HTTP server started");

}

void loop() {

server.handleClient();

sensorValue = analogRead(lightSensorPin);

if (sensorValue < lightThreshold) {

isDark = true;

} else {

isDark = false;

}

if (digitalRead(irSensorPin1) == LOW || digitalRead(irSensorPin2) == LOW || digitalRead(irSensorPin3) == LOW) {

isMotionDetected = true;

} else {

isMotionDetected = false;

}

if (digitalRead(speedBreakerPin) == HIGH) {

isFault = true;

} else {

isFault = false;

}

if (isDark && isMotionDetected && !isFault) {

digitalWrite(ledPin, HIGH);

}

else if (isDark && isMotionDetected && isFault) {

}

else if (isDark && !isMotionDetected) {

digitalWrite(ledPin, LOW); }

else {

digitalWrite(ledPin, LOW); }

sendSensorDataToThingsView();

}

void handleRoot() {

server.send(200, "text/plain", "Hello from IoT-based Streetlight Auto Intensity Control System!");

}

void sendMessageToMobileApp() {

// Code to send message to mobile app via Wi-Fi module

}

void sendSensorDataToThingsView() {

int lightIntensity = analogRead(lightSensorPin);

int motionStatus = digitalRead(ledPin);

int faultStatus = digitalRead(speedBreakerPin);

HTTPClient http;

http.begin(serverUrl + "/data/" + apiKey);

http.addHeader("Content-Type", "application/json");

String jsonData = "{\"lightIntensity\": " + String(lightIntensity) + ", \"motionStatus\": " + String(motionStatus) + ", \"faultStatus\": " + String(faultStatus) + "}";

int httpResponseCode = http.POST(jsonData);

if (httpResponseCode > 0) {

Serial.print("HTTP Response code: ");

Serial.println(httpResponseCode);

} else {

Serial.println("Error sending data to ThingsView");

}

http.end();

}