#include <SoftwareSerial.h>

#include "DHT.h"

// Define pins for sensors

#define MQ2\_PIN A0

#define MQ7\_PIN A1

#define DHTPIN 2

#define DHTTYPE DHT11

// Initialize DHT sensor

DHT dht(DHTPIN, DHTTYPE);

// Set up software serial for communication with ESP8266

SoftwareSerial esp8266(10, 11); // RX, TX

void setup() {

pinMode(MQ2\_PIN, INPUT);

pinMode(MQ7\_PIN, INPUT);

// Initialize serial communication

Serial.begin(9600);

esp8266.begin(9600);

// Initialize DHT sensor

dht.begin();

}

void loop() {

// Read data from sensors

int mq2Value = analogRead(MQ2\_PIN);

int mq7Value = analogRead(MQ7\_PIN);

float temperature = dht.readTemperature();

float humidity = dht.readHumidity();

// Check if DHT readings are valid

if (isnan(temperature) || isnan(humidity)) {

Serial.println("Failed to read from DHT sensor!");

return;

}

// Format data as a single string

String data = String(mq2Value) + "," + String(mq7Value) + "," +

String(temperature) + "," + String(humidity);

// Send data to ESP8266

esp8266.println(data);

// Debugging on serial monitor

Serial.println("Sent to ESP8266: " + data);

delay(2000); // 2-second interval between readings

}