#include <Wire.h>

#include <LiquidCrystal\_I2C.h>

#include <Adafruit\_Sensor.h>

#include <DHT.h>

#include <Servo.h>

#define DHTPIN 2

#define DHTTYPE DHT11

DHT dht(DHTPIN, DHTTYPE);

LiquidCrystal\_I2C lcd(0x27, 16, 2);

int greenLedPin = 3;

int yellowLedPin = 4;

int redLedPin = 5;

int buzzerPin = 6;

int servoPin = 7;

Servo servo;

void setup() {

lcd.begin(16, 2);

lcd.backlight();

pinMode(greenLedPin, OUTPUT);

pinMode(yellowLedPin, OUTPUT);

pinMode(redLedPin, OUTPUT);

pinMode(buzzerPin, OUTPUT);

servo.attach(servoPin);

dht.begin();

}

void loop() {

float temperature = dht.readTemperature();

float humidity = dht.readHumidity();

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("Temp: ");

lcd.print(temperature);

lcd.print("C");

lcd.setCursor(0, 1);

lcd.print("Humidity: ");

lcd.print(humidity);

lcd.print("%");

if (humidity < 28) {

digitalWrite(greenLedPin, HIGH);

digitalWrite(yellowLedPin, LOW);

digitalWrite(redLedPin, LOW);

noTone(buzzerPin);

servo.write(0);

} else if (humidity >= 29 && humidity < 61) {

digitalWrite(greenLedPin, LOW);

blinkLED(yellowLedPin);

digitalWrite(redLedPin, LOW);

noTone(buzzerPin);

servo.write(0);

} else if (humidity >= 30 && humidity < 62) {

digitalWrite(greenLedPin, LOW);

digitalWrite(yellowLedPin, LOW);

blinkLED(redLedPin);

tone(buzzerPin, 1000);

servo.write(90);

} else {

digitalWrite(greenLedPin, LOW);

digitalWrite(yellowLedPin, LOW);

digitalWrite(redLedPin, LOW);

noTone(buzzerPin);

servo.write(0);

}

delay(1000);

}

void blinkLED(int pin) {

digitalWrite(pin, HIGH);

delay(50);

digitalWrite(pin, LOW);

delay(50);

}