const int trigPin = 4; // GPIO pin for the ultrasonic sensor trigger

const int echoPin = 5; // GPIO pin for the ultrasonic sensor echo

const int ledPin = 2; // GPIO pin for the LED

void setup() {

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

pinMode(ledPin, OUTPUT);

Serial.begin(9600);

}

void loop() {

long duration, distance;

// Send a short pulse to trigger the ultrasonic sensor

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

// Read the echo signal to calculate the distance

duration = pulseIn(echoPin, HIGH);

distance = (duration \* 0.0343) / 2; // Calculate the distance in cm

Serial.print("Distance: ");

Serial.print(distance);

Serial.println(" cm");

// Glow the LED based on the distance

if (distance < 20) {

analogWrite(ledPin, 255); // Glow the LED at full brightness

} else {

analogWrite(ledPin, 0); // Turn off the LED

}

delay(100); // Wait for 0.1 seconds before taking the next reading

}

