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// Define the pins for the HC-SR04

int trigPin = 5; // Trigger pin (GPIO5 for NodeMCU or GPIO23 for ESP32)

int echoPin = 4; // Echo pin (GPIO4 for NodeMCU or GPIO22 for ESP32)

long duration;

int distance;

void setup() {

    // Initialize serial communication

    Serial.begin(115200);

    // Set the trigPin as output and echoPin as input

    pinMode(trigPin, OUTPUT);

    pinMode(echoPin, INPUT);

}

void loop() {

    // Ensure the trigger pin is low initially

    digitalWrite(trigPin, LOW);

    delayMicroseconds(2);

    // Send a 10-microsecond pulse to trigger the HC-SR04

    digitalWrite(trigPin, HIGH);

    delayMicroseconds(10);

    digitalWrite(trigPin, LOW);

    // Measure the duration of the pulse on the echoPin

    duration = pulseIn(echoPin, HIGH);

    // Calculate the distance in centimeters

    distance = duration * 0.0344 / 2; // Speed of sound = 0.0344 cm/us, divide by 2 for round trip

    // Print the distance to the Serial Monitor

    Serial.print("Distance: ");

    Serial.print(distance);
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Serial.println(" cm");
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delay(500); // Delay between measurements
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}
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