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#define TRIG_PIN 8
#define ECHO_PIN 9
#define TIME_OUT 5000
#define IN1 7
#define IN2 6
#define IN3 5
#define IN4 4
void tien ()
{
digitalWrite(IN1,HIGH);
digitalWrite(IN2,LOW);
digitalWrite(IN3,HIGH);
digitalWrite(IN4,LOW);
}

void dung ()
{
digitalWrite(IN1,LOW);
digitalWrite(IN2,LOW);
digitalWrite(IN3,LOW);
digitalWrite(IN4,LOW);
}

void retrai ()
{
digitalWrite(IN1,HIGH);
digitalWrite(IN2,LOW);
digitalWrite(IN3,LOW);
digitalWrite(IN4,LOW);
}

void rephai ()
{
digitalWrite(IN1,LOW);
digitalWrite(IN2,LOW);
digitalWrite(IN3,HIGH);
digitalWrite(IN4,LOW);
}
void lui ()
{
digitalWrite(IN1,LOW);
digitalWrite(IN2,HIGH);
digitalWrite(IN3,LOW);
digitalWrite(IN4,HIGH);
}
float GetDistance()
{
    long duration, distanceCm;

    digitalWrite(TRIG_PIN, LOW);

```

```

    delayMicroseconds(2);
    digitalWrite(TRIG_PIN, HIGH);
    delayMicroseconds(10);
    digitalWrite(TRIG_PIN, LOW);

    duration = pulseIn(ECHO_PIN, HIGH, TIME_OUT);

    // convert to distance
    distanceCm = duration / 29.1 / 2;

    return distanceCm;
}

void setup() {
    Serial.begin(9600);

    pinMode(TRIG_PIN, OUTPUT);
    pinMode(ECHO_PIN, INPUT);
    pinMode(IN1, OUTPUT);
    pinMode(IN2, OUTPUT);
    pinMode(IN3, OUTPUT);
    pinMode(IN4, OUTPUT);
}

void loop() {
    long distance = GetDistance();

    if (distance <= 20)
    {
        Serial.println(" không có vật cản hoặc vật cản quá nhỏ");
        lui();
        delay(500);
        retrain();
        delay(500);
        tien();
    }
    if( distance > 20)
    {
        tien();
        Serial.print("Khoảng cách vật gần nhất là: ");
        Serial.print(distance);
        Serial.println("cm");
    }
    delay(1000);
}

```