```
//~listing program oleh @justsholih
//set relay
int maju1 = 2; //inisialisasi pin relay maju untuk roda kiri
int maju2 = 3; //inisialisasi pin relay maju untuk roda kanan
int mundur12 = 4; //inisialisasi pin untuk relay mundur
//set ultrasonic
int echoPin = 6; //inisialisasi pin echo sensor ultrasonic
int trigPin = 7; //inisialisasi pin trigger sensor ultrasonic
int stopRangeMax = 30; //jarak maks sensor untuk mengirim sinyal relay stop
int stopRangeMin = 5; //jarak min sensor untuk mengirim sinyal relay stop
long duration, cm, distance; //waktu kalkulasi jarak

void setup() {
  Serial.begin(9600);
  Serial.println("Program siap dimulai");
  //deklarasi pin relay
  pinMode(maju1, OUTPUT);
  pinMode(maju2, OUTPUT);
  pinMode(mundur12, OUTPUT);
  //deklarasi pin ultrasonic
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
}

void loop() {
//kirim pulsa LOW dahulu untuk memastikan pulsa HIGH bersih
  digitalWrite(trigPin, LOW);delayMicroseconds(5);
  digitalWrite(trigPin, HIGH);delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  pinMode(echoPin, INPUT);
//duration adalah waktu (dalam mikrodetik)
    duration = pulseIn(echoPin, HIGH);
    distance = duration/58.2;//perhitungan untuk dijadikan jarak
      Serial.print(distance);
      Serial.print("cm");
      Serial.println();
        if (distance <= stopRangeMax && distance >= stopRangeMin)
          {
          stop();
          }
  delay(200); //waktu tunda 50mS
  while (Serial.available())
  {
    delay(10);
    String Direction = Serial.readString();
```

```
    if (Direction == "maju")
    {
      Serial.println("majuu");
      digitalWrite(maju1, HIGH);
      digitalWrite(maju2, HIGH);
    }
    else if (Direction == "mundur")
    {
      Serial.println("mundurr");
      digitalWrite(mundur12,HIGH);
      digitalWrite(maju1, LOW);
      digitalWrite(maju2, LOW);
      delay(2000);
      digitalWrite(maju1, HIGH);
      digitalWrite(maju2, HIGH);
    }
    else if (Direction == "kiri")
    {
      Serial.println("kirii");
      digitalWrite(maju2, HIGH); //roda kanan
    }
    else if (Direction == "kanan")
    {
      Serial.println("kanann"); //roda kiri
      digitalWrite(maju1, HIGH);
    }
    else if (Direction == "stop")
    {stop();}
  }
}
void stop()
  {
  digitalWrite(maju1, LOW);
  digitalWrite(maju2, LOW);
  digitalWrite(mundur12, LOW);
  Serial.println("stopp");
  }
```