

```

// inialisasi pin sensor ultrasonic DEPAN KANAN
int durasi1, sensor1 = 0;
int pinT1 = A0; // pin Trigger
int pinE1 = A1; // pin Echo
// inialisasi pin sensor ultrasonic DEPAN KIRI

int durasi2, sensor2 = 0;
int pinT2 = A2; // pin Trigger
int pinE2 = A3; // pin Echo

// inialisasi pin sensor ultrasonic KANAN
int durasi3, sensor3 = 0;
int pinT3 = A4; // pin Trigger
int pinE3 = A5; // pin Echo

// inialisasi pin sensor ultrasonic KIRI
int durasi4, sensor4 = 0;
int pinT4 = 13; // pin Trigger
int pinE4 = 12; // pin Echo

// inialisasi pin motor dc

int motor3 = 5;
int motor4 = 4;

int pinSpeed = 10;

int Speed;

void setup()
{
    // inialisasi status I/O masing2 pin

    pinMode(motor3, OUTPUT);
    pinMode(motor4, OUTPUT);
    pinMode(pinSpeed, OUTPUT);

    //sensor1
    pinMode(pinT1, OUTPUT);
    pinMode(pinE1, INPUT);
    //sensor2
    pinMode(pinT2, OUTPUT);
    pinMode(pinE2, INPUT);
    //sensor3
    pinMode(pinT3, OUTPUT);
    pinMode(pinE3, INPUT);
    //sensor4
    pinMode(pinT4, OUTPUT);
    pinMode(pinE4, INPUT);

    Serial.begin(9600);

```

```

}

void loop()
{
    // pengaturan kecepatan
    // membatasi nilai speed 0 - 255
    (Speed, 0,255);

    // mengaktifkan sensor ultrasonik 1
    // mengaktifkan pin trigger 1
    digitalWrite(pinT1, LOW);
    delayMicroseconds(2);
    digitalWrite(pinT1, HIGH);
    // delay 10 mikrodetik
    delayMicroseconds(10);

    // mematikan pin trigger
    digitalWrite(pinT1, LOW);

    // mendapat data durasi pantulan gelombang ultrasonic
    durasi1 = pulseIn(pinE1, HIGH);
    sensor1 = durasi1* 0.034/2;

    // konversi durasi ke jarak dalam satuan centimeter(cm)
    Serial.print("sensor1: ");
    Serial.println(sensor1);
    delay(50);

    // mengaktifkan sensor ultrasonik 2
    // mengaktifkan pin trigger 2
    digitalWrite(pinT2, LOW);
    delayMicroseconds(2);
    digitalWrite(pinT2, HIGH);
    // delay 10 mikrodetik
    delayMicroseconds(10);

    // mematikan pin trigger 2
    digitalWrite(pinT2, LOW);

    durasi2 = pulseIn(pinE2, HIGH);
    sensor2 = durasi2* 0.034/2;

    // konversi durasi ke jarak dalam satuan centimeter(cm)
    Serial.print("sensor2: ");
    Serial.println(sensor2);
    delay(50);

    // mengaktifkan sensor ultrasonik 3
    // mengaktifkan pin trigger 3
    digitalWrite(pinT3, LOW);
    delayMicroseconds(2);
    digitalWrite(pinT3, HIGH);
    // delay 10 mikrodetik

```

```

delayMicroseconds(10);

// mematikan pin trigger 3
digitalWrite(pinT3, LOW);

durasi3 = pulseIn(pinE3, HIGH);
sensor3 = durasi3* 0.034/2;

// konversi durasi ke jarak dalam satuan centimeter(cm)
Serial.print("sensor3: ");
Serial.println(sensor3);
delay(50);

// mengaktifkan sensor ultrasonik 4
// mengaktifkan pin trigger 4
digitalWrite(pinT4, LOW);
delayMicroseconds(2);
digitalWrite(pinT4, HIGH);
// delay 10 mikrodetik
delayMicroseconds(10);

// mematikan pin trigger 4
digitalWrite(pinT2, LOW);

durasi4 = pulseIn(pinE4, HIGH);
sensor4 = durasi4* 0.034/2;

// konversi durasi ke jarak dalam satuan centimeter(cm)
Serial.print("sensor4: ");
Serial.println(sensor4);
delay(50);

// jika jarak lebih besar atau sama dengan 10 cm

if (sensor1 >= 90 && sensor2 >= 90 && sensor3 >= 30 && sensor4 >= 30){
analogWrite(pinSpeed, 0);
digitalWrite(motor3, LOW);
digitalWrite(motor4, LOW);

// SESOR DEPAN KANAN
}else if (sensor1 <= 90){
analogWrite(pinSpeed, 150);
digitalWrite(motor3, LOW);
digitalWrite(motor4, HIGH);
delay(1000);

digitalWrite(motor3, LOW);
digitalWrite(motor4, LOW);
delay(3000);

//roda berlawanan arah jarum jam
digitalWrite(motor3, HIGH);
digitalWrite(motor4, LOW);

```

```
delay(400);

digitalWrite(motor3, LOW);
digitalWrite(motor4, LOW);
delay(3000);

//SENSOR DEPAN KIRI
}else if (sensor2 <= 90){
  analogWrite(pinSpeed, 150);
  digitalWrite(motor3, HIGH);
  digitalWrite(motor4, LOW);
  delay(1000);

  digitalWrite(motor3, LOW);
  digitalWrite(motor4, LOW);
  delay(3000);

  //roda berlawanan arah jarum jam
  digitalWrite(motor3, LOW);
  digitalWrite(motor4, HIGH);
  delay(400);

  digitalWrite(motor3, LOW);
  digitalWrite(motor4, LOW);
  delay(3000);

  //SENSOR KIRI
}else if (sensor3 <= 30){
  analogWrite(pinSpeed, 150);
  digitalWrite(motor3, HIGH);
  digitalWrite(motor4, LOW);
  delay(1000);

  digitalWrite(motor3, LOW);
  digitalWrite(motor4, LOW);
  delay(3000);

  //roda berlawanan arah jarum jam
  digitalWrite(motor3, LOW);
  digitalWrite(motor4, HIGH);
  delay(400);

  digitalWrite(motor3, LOW);
  digitalWrite(motor4, LOW);
  delay(3000);

  //SENSOR KANAN
}else if (sensor4 <= 30){
  analogWrite(pinSpeed, 150);
  digitalWrite(motor3, LOW);
  digitalWrite(motor4, HIGH);
  delay(1000);

  digitalWrite(motor3, LOW);
```

```
digitalWrite(motor4, LOW);
delay(3000);

//roda berlawanan arah jarum jam
digitalWrite(motor3, HIGH);
digitalWrite(motor4, LOW);
delay(400);

digitalWrite(motor3, LOW);
digitalWrite(motor4, LOW);
delay(3000);

}

}
```