

```
void pick_timbangan(){ servo1.write(100);
servo2.write(80);//capit besar nutup
servo3.write(100);//di belakang capit besar naik
servo4.write(180);// servo bawah // tinggi naik
delay(600); maju(100,100); delay(300);
berhenti(); delay(300); servo2.write(160);
delay(300); servo3.write(110); delay(300);
mundur(100,100); delay(500); berhenti(); }
void hold1() { servo1.write(100);
servo2.write(80);//capit besar nutup
servo3.write(100);//di belakang capit besar naik
servo4.write(180);// servo bawah // tinggi naik
}
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void hold()
{
servo1.write(100);
servo2.write(120);
servo3.write(80);
servo4.write(180);
}
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void drop() { servo1.write(80);
servo2.write(80);//capit besar nutup
servo3.write(150);//di belakang capit besar naik
servo4.write(140);// servo bawah // tinggi naik
}
```

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void linesensor()
{
  int sp;
  sp=300;
  if (analogRead(0)<=sp) {s1=1;} else {s1=0;}
  if (analogRead(1)<=sp) {s2=1;} else {s2=0;} if
(analogRead(2)<=sp) {s3=1;} else {s3=0;} if
(analogRead(3)<=sp) {s4=1;} else {s4=0;} if
(analogRead(4)<=sp) {s5=1;} else {s5=0;}

  sensor_data=(s5*1)+(s4*2)+(s3*4)+(s2*8)+(s1*16);
  sensor_data&=0b11111;

  // Serial.print(15);
  // Serial.print(" ");
  // Serial.print(14);
  // Serial.print(" ");
  // Serial.print(13);
  // Serial.print(" ");
  // Serial.print(12);
  // Serial.print(" ");
  // Serial.print(11);
  // Serial.println('\t');
  Serial.println(sensor_data);
  Serial.print(analogRead(0));
  Serial.print(" ");
  Serial.print(analogRead(1));
  Serial.print(" ");
  Serial.print(analogRead(2));

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Serial.print(" ");
Serial.print(analogRead(3));
Serial.print(" ");
Serial.print(analogRead(4));
Serial.println('\t');
}

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void linefollowing()

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{
  linesensor();
  switch(sensor_data)
  {
    case 0b00001: l=0; r=1; maju(255,0); break;
    case 0b00111: l=0; r=1; kanan(170,160); break;
    case 0b00011: l=0; r=1;
    kanan(170,120); break;
    case 0b00010: l=0; r=1; maju(160,120); break;
    case 0b00110: l=0; r=1; maju(155,145); break;

    case 0b00100: l=1; r=1; maju(150,150); break;

    case 0b01100: l=1; r=0; maju(145,155); break;
    case 0b01000: l=1; r=0; maju(120,160); break;
    case 0b11000: l=1; r=0; kiri(120,160); break;
    case
    0b11100: l=1; r=0; kiri(160,170); break;
    case
    0b10000: l=1; r=0; maju(0,200); break;

    case
    0b11111:
      if (i==1 && counter==0) {maju(130,130); delay(50);
      kiri(120,200); delay(500); do{kiri(150,150);} while (analogRead(A0) > 500 &&
      analogRead(A1) > 500); counter=1; break;}

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        else if (i==4 && counter==0) {maju(130,130); delay(50);
kiri(120,200); delay(500); do{kiri(150,150);} while (analogRead(A0) > 500 &&
analogRead(A1) > 500); counter=1; break;}

        else if (i==7 && counter==0) {maju(130,130); delay(50);
kiri(120,200); delay(500); do{kiri(150,150);} while (analogRead(A0) > 500 &&
analogRead(A1) > 500); counter=1; break;}

        else if (i==2 && counter==0) {maju(180,150); delay(200);
counter=1; break;}

        else if (i==5 && counter==0) {maju(180,150); delay(200);
counter=1; break;}

        else if (i==8 && counter==0) {maju(180,150); delay(200);
counter=1; break;}

        else if (i==3 && counter==0) {maju(130,130); delay(50);
kanan(220,120); delay(500); do{kanan(150,150);} while (analogRead(A4) > 500
&& analogRead(A3) > 500); counter=1; break;}

        else if (i==6 && counter==0) {maju(130,130); delay(50);
kanan(220,120); delay(500); do{kanan(150,150);} while (analogRead(A4) > 500
&& analogRead(A3) > 500); counter=1; break;}

        else if (i==9 && counter==0) {maju(130,130); delay(50);
kanan(220,120); delay(500); do{kanan(150,150);} while (analogRead(A4) > 500
&& analogRead(A3) > 500); counter=1; break;}

        if (i<=3 && counter==1) {
                berhenti(); delay(300); drop();
delay(1000); hold1(); delay(1000);
                mundur(180,180); delay(450);
kiri(220,220); delay(400);
                do{kiri(200,200);}while(analogRead(A0) > 500
&& analogRead(A1) > 500);
                counter=2; break;
        }

        else if (i>=4 && i<=6 && counter==1)
        {
                berhenti(); delay(300); drop();
delay(1000); hold1(); delay(1000);

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                                mundur(180,180); delay(450);
kiri(220,220); delay(400);
                                do{kiri(200,200);}while(analogRead(A0) > 500
&& analogRead(A1) > 500);
                                counter=2; break;
                                }
else if (i>=7 && counter==1) {
                                berhenti(); delay(300); drop();
delay(1000); hold1(); delay(1000);
                                mundur(180,180); delay(450);
                                kiri(220,220); delay(400);
                                do{kiri(200,200);}while(analogRead(A0) > 500
&& analogRead(A1) > 500);
                                counter=2; break;
                                }
if (i==1 && counter==2) {kanan(220,120); delay(600);
do{kanan(150,150);} while (analogRead(A2) > 500); counter=3; break;}
else if (i==4 && counter==2) {kanan(220,120); delay(600);
do{kanan(150,150);} while (analogRead(A2) > 500); counter=3; break;}
else if (i==7 && counter==2) {kanan(220,120); delay(600);
do{kanan(150,150);} while (analogRead(A2) > 500); counter=3; break;}
else if (i==2 && counter==2) {maju(180,150); delay(200); counter=3;
break;}
else if (i==5 && counter==2) {maju(180,150); delay(200);
counter=3; break;}
else if (i==8 && counter==2) {maju(180,150); delay(200);
counter=3; break;}
else if (i==3 && counter==2) {kiri(120,200); delay(600);
do{kiri(150,150);} while (analogRead(A2) > 500); counter=3; break;}
else if (i==6 && counter==2) {kiri(120,200); delay(600);
do{kiri(150,150);} while (analogRead(A2) > 500); counter=3; break;}
else if (i==9 && counter==2) {kiri(120,200); delay(600);

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do{kiri(150,150);} while (analogRead(A2) > 500); counter=3; break;}
if (i>=1 && i<=3 && counter==3)
    {
        mundur(150,150); delay(300);
berhenti(); delay(500); resetFunc();
break;
    }
else if (i>=4 && i<=6 && counter==3)
    {
        mundur(150,150); delay(300);
berhenti(); delay(500);
resetFunc(); break;
    }
else if (i>=7 && i<=9 && counter==3)
    {
        mundur(150,150);
delay(300); berhenti();
delay(500); resetFunc();
break;
    }

case 0b00000: if (l==0 && r==1) {kanan(230,230); break;}
else if (l==1 && r==0) {kiri(230,230); break;}
}

void loop() {
// drop();

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```

// pick_timbangan(); delay(10000);
hold1(); //delay(1000);      s =
hc11.read();
//pick();
//Serial.println(analogRead(A0));
berhenti();
//maju(150,150);
i=counter=0;
  if (s=='1')
    {
      i=1; counter=0;
pick_timbangan();      kiri(250,250);
delay(500);
      do{kiri(150,150);} while (analogRead(A2) > 500);
while(1) {linefollowing();}
    } else
if (s=='2')
    {      i=2; counter=0;
pick_timbangan();
kiri(250,250);  delay(500);
      do{kiri(150,150);} while (analogRead(A2) > 500);
while(1) {linefollowing();}
    } else
if (s=='3')
    {      i=3; counter=0;
pick_timbangan();
kiri(250,250);  delay(500);

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        do{kiri(150,150);} while (analogRead(A2) > 500);
while(1) {linefollowing();}
    }

else if (s=='4')
    {        i=4; counter=0;
pick_timbangan();
kiri(250,250);    delay(500);
do{kiri(150,150);} while
(analogRead(A2) > 500);
while(1) {linefollowing();}
    } else
if (s=='5')
    {        i=5; counter=0;
pick_timbangan();
kiri(250,250);    delay(500);
        do{kiri(150,150);} while (analogRead(A2) > 500);
while(1) {linefollowing();}
    } else
if (s=='6')
    {        i=6; counter=0;
pick_timbangan();
kiri(250,250);    delay(500);
        do{kiri(150,150);} while (analogRead(A2) > 500);
while(1) {linefollowing();}
    } else
if (s=='7')

```



```

        {          i=7; counter=0;
pick_timbangan();
kiri(250,250);   delay(500);
        do{kiri(150,150);} while (analogRead(A2) > 500);
while(1) {linefollowing();}

        }

else if (s=='8')
        {          i=8; counter=0;
pick_timbangan();
kiri(250,250);   delay(500);
        do{kiri(150,150);} while (analogRead(A2) > 500);
while(1) {linefollowing();}

        }

else if (s=='9')
        {          i=9; counter=0;
pick_timbangan();
kiri(250,250);   delay(500);
        do{kiri(150,150);} while (analogRead(A2) > 500);
while(1) {linefollowing();}

        }
}

void loop() {

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```

Serial.println(digitalRead(10));
//Serial.println(digitalRead(11)); //Serial.println(digitalRead(12));
int tombol_menu = digitalRead(9); if (tombol_menu == LOW){
mode = mode+1; if(mode>=4){ mode=0;
}
Serial.println(mode);
delay(1000);
lcd.clear(); }
// delay(100);
// lcd.clear();

if (mode==0){
// Serial.println(hc11.read());
// lcd.setCursor(15,1); //
lcd.print(hc11.read());
lcd.setCursor(0,0);
lcd.print("Pilih Mode Kerja");
lcd.setCursor(0,1);
lcd.print(" ");
}
if (mode==1){
lcd.setCursor(0,0);
lcd.print("-> Mode ");
lcd.setCursor(0,1); lcd.print("
Antar Makanan");

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    if (digitalRead(10)==LOW){delay(300); hc11.write('1');}    if
(digitalRead(11)==LOW){delay(300); hc11.write('2');}        if
(digitalRead(12)==LOW){delay(300); hc11.write('3');}
}
if (mode==2){
lcd.setCursor(0,0);
lcd.print("-> Mode      ");
lcd.setCursor(0,1);  lcd.print("
Ambil Sampah ");
    if (digitalRead(10)==LOW){delay(300); hc11.write('4');}
if (digitalRead(11)==LOW){delay(300); hc11.write('5');}    if
(digitalRead(12)==LOW){delay(300); hc11.write('6');}
}
if (mode==3){
//      lcd.setCursor(0,0); //
lcd.print("->          Mode");
lcd.setCursor(0,1);  lcd.print("
Penimbangan ");  timbang();
    if (berat<=50 && digitalRead(8)==LOW)          {delay(300);
hc11.write('7');}
    if (berat>50 && berat<=100 && digitalRead(8)==LOW) {delay(300);
hc11.write('8');}
    if (berat>100 && digitalRead(8)==LOW)          {delay(300);
hc11.write('9');}
}
}
}

```