```
#include <Servo.h>
#define Lampu  A5
#define reset A0
Servo myservo;

int state = 0;
int LDR= A2;
int LDR1= A3;
int nilaiLDR;
int nilaiLDR1;

int mode1;
int mode2;
int mode3;
int mode;
int status1=0;
//int status1=0;

void setup(){
  Serial.begin(9600);
  myservo.attach(9);
  pinMode(Lampu, OUTPUT);
  pinMode(reset, OUTPUT);
  digitalWrite(Lampu,HIGH);
  digitalWrite(reset,LOW);

}
void loop(){
  baca1();
}
  void baca1()
  {
    if(Serial.available() > 0){ // Checks whether data is comming from the serial port
    state = Serial.read(); // Reads the data from the serial port
    }

if (state == 'M'){mode = 1;}
if (state == '0'){mode = 2;}

 if (mode == 1)
   {
     nilaiLDR= analogRead(LDR);
  nilaiLDR1= analogRead(LDR1);
  float Vout0 = nilaiLDR*0.0048828125;
```

```
  float Vout1 = nilaiLDR1*0.0048828125;
  int RLDR = (30.0*(5-Vout0))/Vout0;
  int RLDR1 = (30.0*(5-Vout1))/Vout1;
  delay (500);
if(Serial.available() > 0){ // Checks whether data is comming from the serial port
    state = Serial.read(); // Reads the data from the serial port
   }
        if (state == 'A') {
          digitalWrite(Lampu,LOW);
         //Serial.println(RLDR);
        Serial.println("BUKA");
        Serial.println("ON");
        Serial.println(state,BIN);
        delay(1000);
        buka_90_derajat();
        state = 0;
        }

        else if (state == 'B') {
         digitalWrite(Lampu,HIGH);
         //Serial.println(RLDR);
        Serial.println("BUKA");
        Serial.println("OFF");
        Serial.println(state,BIN);
         delay(1000);
        buka_90_derajat();
        state = 0;
         }

         else if (state == 'C') {
        digitalWrite(Lampu,LOW);
        //Serial.println(RLDR);
        Serial.println("TUTUP");
        Serial.println("ON");
        Serial.println(state,BIN);
         delay(1000);
        tutup_90_derajat();
        state = 0;
         }

          else if (state == 'D') {
          digitalWrite(Lampu,HIGH);

         //Serial.println(RLDR);
```

```
        Serial.println("TUTUP");
        Serial.println("OFF");
        Serial.println(state,BIN);
         delay(1000);
        tutup_90_derajat();
        state = 0;
         }
       if (state == 'O'){mode = 2;}

}
if (mode == 2)
 {
 nilaiLDR= analogRead(LDR);
 nilaiLDR1= analogRead(LDR1);
 float Vout0 = nilaiLDR*0.0048828125;
 float Vout1 = nilaiLDR1*0.0048828125;
 int RLDR = (30.0*(5-Vout0))/Vout0;
 int RLDR1 = (30.0*(5-Vout1))/Vout1;
 delay (500);

      if (RLDR >=20 && RLDR<=500)
        {
        //Serial.println(RLDR);
        digitalWrite(Lampu,HIGH);
        Serial.println("BUKA");
        Serial.println("OFF");
        Serial.println(RLDR,BIN);
        buka_90_derajat();
        while(true)
        {
                nilaiLDR=
analogRead(LDR);
                float Vout0 =
nilaiLDR*0.0048828125;
                int RLDR = (30.0*(5-
Vout0))/Vout0;
                //Serial.print("LUX= ");
                //Serial.println(RLDR);
   if(Serial.available() > 0){ // Checks
whether data is comming from the serial
port
   state = Serial.read(); // Reads the data
from the serial port
   }
     if (state == 'E') {
        Serial.println("    ");
        Serial.println("    ");
        Serial.println(state,BIN);
```

```
        digitalWrite(reset,HIGH);
        delay(5000);
        digitalWrite(reset,HIGH);
        delay(3000);
        state = 0;
        }
        delay (500);


       if (RLDR >=501 && RLDR
<=1000)
        {
        //Serial.println(RLDR);
        digitalWrite(Lampu,HIGH);
        Serial.println("BUKA");
        Serial.println("OFF");
        Serial.println(RLDR,BIN);
        buka_45_derajat();
        while(true)
        {
                nilaiLDR=
analogRead(LDR);
                float Vout0 =
nilaiLDR*0.0048828125;
                int RLDR = (30.0*(5-
Vout0))/Vout0;
                //Serial.print("LUX= ");
                //Serial.println(RLDR);
   if(Serial.available() > 0){ // Checks
whether data is comming from the serial
port
   state = Serial.read(); // Reads the data
from the serial port
   }
    if (state == 'E') {

        Serial.println("    ");
        Serial.println("    ");
        Serial.println(state,BIN);
        delay(5000);
        digitalWrite(reset,HIGH);
        delay(3000);
        state = 0;
        }
                delay (500);


        if (RLDR <=10)
        {
```

```
        //Serial.println(RLDR);
        Serial.println("TUTUP");
        Serial.println("ON");
       Serial.println(RLDR,BIN);
        buka_45_derajat();
        while(true)
        {
              digitalWrite(Lampu,LOW);

              nilaiLDR= analogRead(LDR);
              float Vout0 = nilaiLDR*0.0048828125;
              int RLDR = (30.0*(5-Vout0))/Vout0;
              //Serial.print("LUX= ");
             //Serial.println(RLDR);
  if(Serial.available() > 0){ // Checks whether data is comming from the serial port
  state = Serial.read(); // Reads the data from the serial port
  }
    if (state == 'E') {
Serial.println("  ");
Serial.println("  ");
Serial.println(state,BIN);
delay(5000);
digitalWrite(reset,HIGH);
delay(3000);
state = 0;
}
        delay (500);

if (RLDR >=20 && RLDR<=500)
{
 //Serial.println(RLDR);
 digitalWrite(Lampu,HIGH);
 Serial.println("BUKA");
 Serial.println("OFF");
 Serial.println(RLDR,BIN);
 tutup_90_derajat();
 while(true)
 {
        nilaiLDR= analogRead(LDR);
```

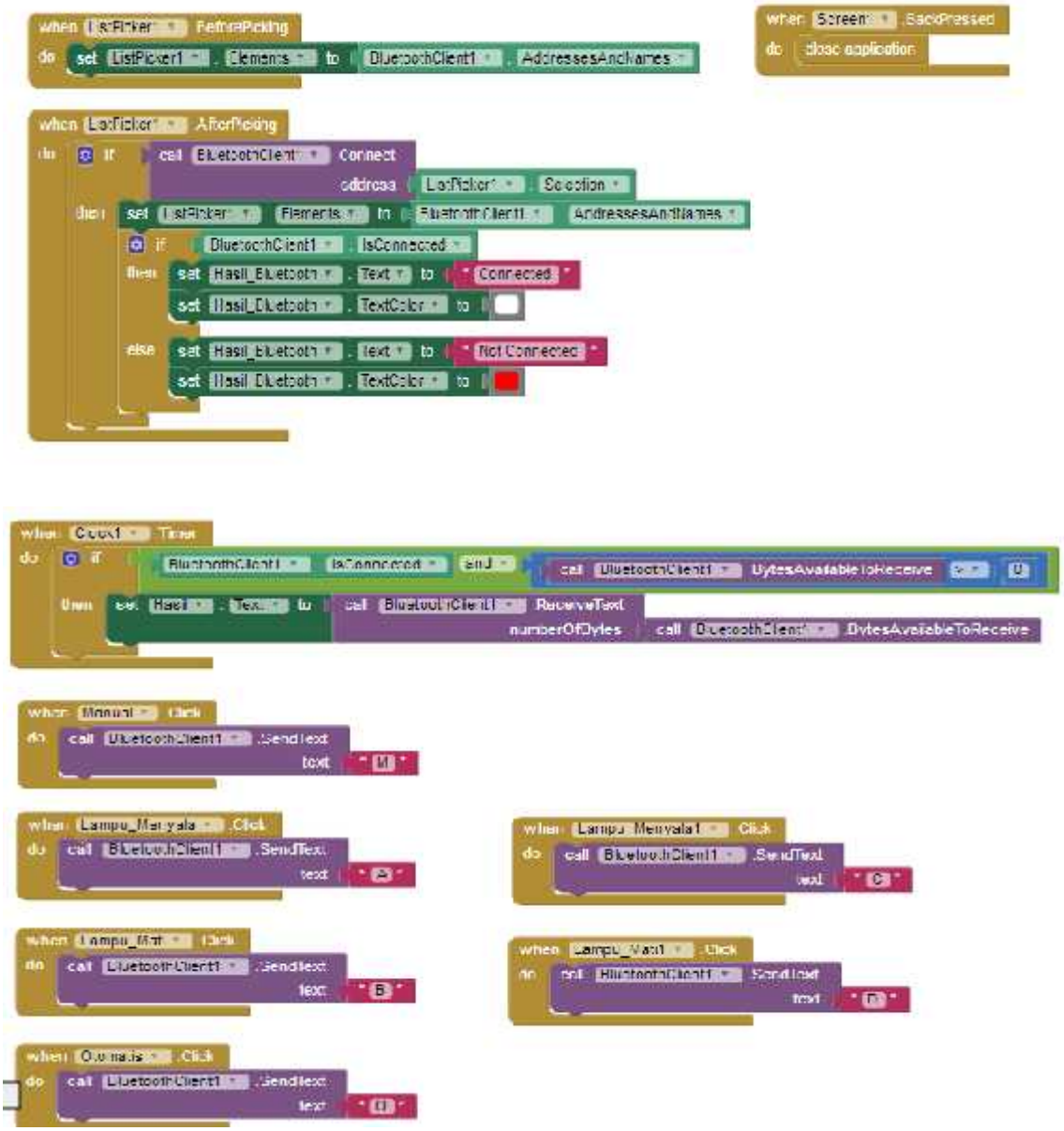
```
                float Vout0 =
nilaiLDR*0.0048828125;
                int RLDR = (30.0*(5-
Vout0))/Vout0;
                //Serial.print("LUX= ");
                //Serial.println(RLDR);
   if(Serial.available() > 0){ // Checks
whether data is comming from the serial
port
   state = Serial.read(); // Reads the data
from the serial port
   }
     if (state == 'E') {

        Serial.println("    ");
        Serial.println("    ");
        Serial.println(state,BIN);
        delay(5000);
        digitalWrite(reset,HIGH);
        delay(3000);
        state = 0;
        }
                delay (500);
        if (RLDR >=501 && RLDR
<=1000)
        {
          //Serial.println(RLDR);
          digitalWrite(Lampu,HIGH);
          Serial.println("BUKA");
          Serial.println("OFF");
          Serial.println(RLDR,BIN);
          tutup_45_derajat();
          while(true)
         {
                nilaiLDR=
analogRead(LDR);
                float Vout0 =
nilaiLDR*0.0048828125;
                int RLDR = (30.0*(5-
Vout0))/Vout0;
                //Serial.print("LUX= ");
                //Serial.println(RLDR);
   if(Serial.available() > 0){ // Checks
whether data is comming from the serial
port
   state = Serial.read(); // Reads the data
from the serial port
   }
     if (state == 'E') {
```

```
        Serial.println("    ");
        Serial.println("    ");
        Serial.println(state,BIN);
        delay(5000);
        digitalWrite(reset,HIGH);
        delay(3000);
        state = 0;
        }
                delay (500);

          if (RLDR <=10)
        {
          //Serial.println(RLDR);
          digitalWrite(Lampu,LOW);
          Serial.println("TUTUP");
          Serial.println("ON");
          Serial.println(RLDR,BIN);
          tutup_45_derajat();

          while(true)
        {
                nilaiLDR=
analogRead(LDR);
                float Vout0 =
nilaiLDR*0.0048828125;
                int RLDR = (30.0*(5-
Vout0))/Vout0;
                //Serial.print("LUX= ");
                //Serial.println(RLDR);
   if(Serial.available() > 0){ // Checks
whether data is comming from the serial
port
   state = Serial.read(); // Reads the data
from the serial port
   }
     if (state == 'E') {

          Serial.println("     ");
          Serial.println("     ");
          Serial.println(state,BIN);
          delay(5000);
          digitalWrite(reset,HIGH);
          delay(3000);
          state = 0;
          }
                delay (500);
  baca1();
```

```
        }
        }
        }
        }
        }
        }
        }
        }
        }
        }
}
  }
void tutup_45_derajat()
{
  myservo.attach(9);

  //tutup 45 derajat
  myservo.write(0);
  delay(5000);
  myservo.detach();
  delay(1000);
  myservo.write(0);
  delay(1000);
  myservo.detach();
  delay(1000);

 // myservo.write(0);
 // Serial.println("servo off 45");
}

void buka_45_derajat()
{
  myservo.attach(9);

  //buka 45 derajat
  myservo.write(500);
  delay(5000);
  myservo.detach();
  delay(1000);
  myservo.write(500);
  delay(1000);
  myservo.detach();
  delay(1000);
  //myservo.write(0);
```

```
 // Serial.println("servo buka 45");
}

void buka_90_derajat()
{
  myservo.attach(9);
  //buka 90 derajat
  myservo.write(500);
  delay(18000);
  myservo.detach();
  delay(1000);
  myservo.write(500);
  delay(1000);
  myservo.detach();
  delay(1000);
 // myservo.write(0);
  //Serial.println("servo buka 90");
}

void tutup_90_derajat()
{
  myservo.attach(9);
  //tutup 90 derajat
  myservo.write(0);
  delay(18000);
  myservo.detach();
  delay(1000);
  myservo.write(0);
  delay(1000);
  myservo.detach();
  delay(1000);
 // myservo.write(0);
  // Serial.println("servo off 90");
}
```

Program Aplikasi Android dengan MIT App Inventor



Tampilan Aplikasi Sistem Kendali Tirai Veritcal Blind dan Lampu Ruangan

Tombol Bluetooth Ditekan

Bluetooth dan Alat Tersambung

Tombol Manual Ditekan

Tombol Tirai Tertutup Lampu Hidup Diteka

BENTUK FISIK ALAT

TIRAI TERBUKA LAMPU HIDUP

TIRAI TERTUTUP LAMPU MATI

TIRAI TERBUKA LAMPU MATI

TIRAI TERTUTUP LAMPU HIDUP