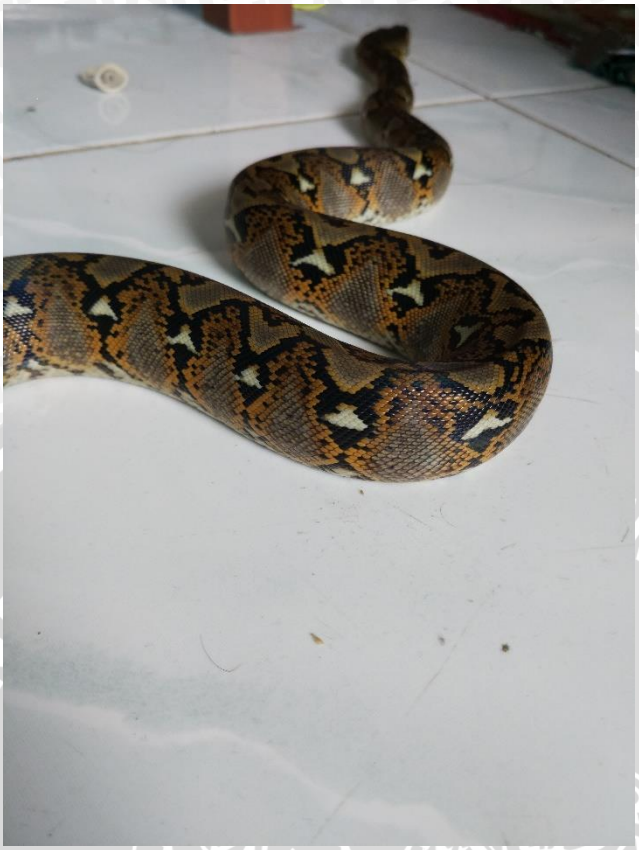
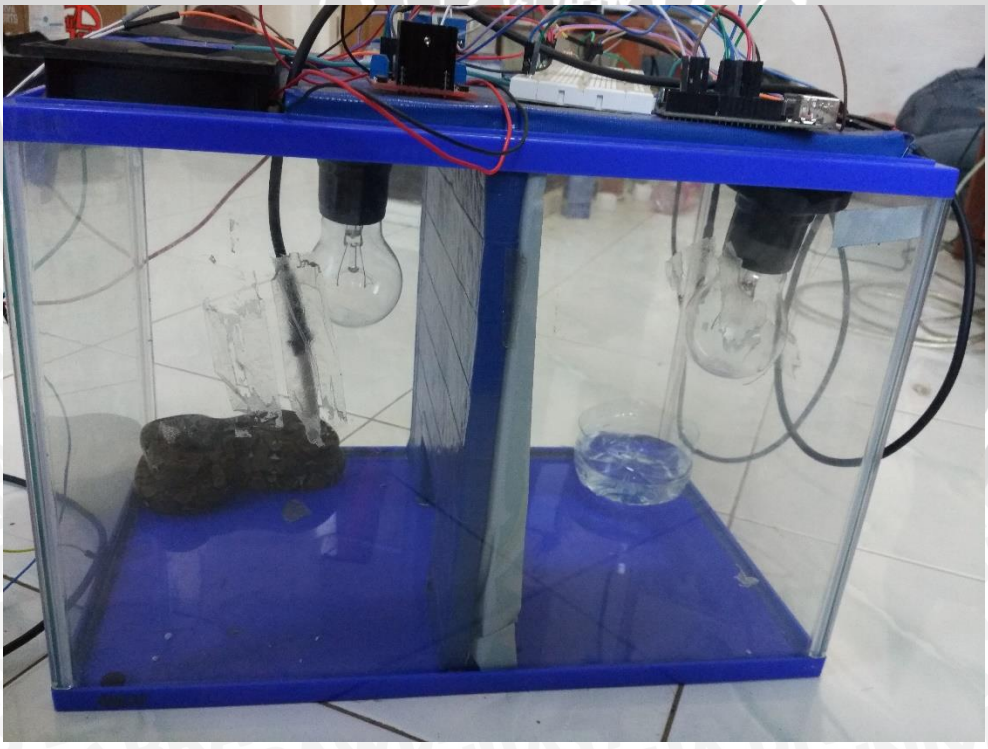
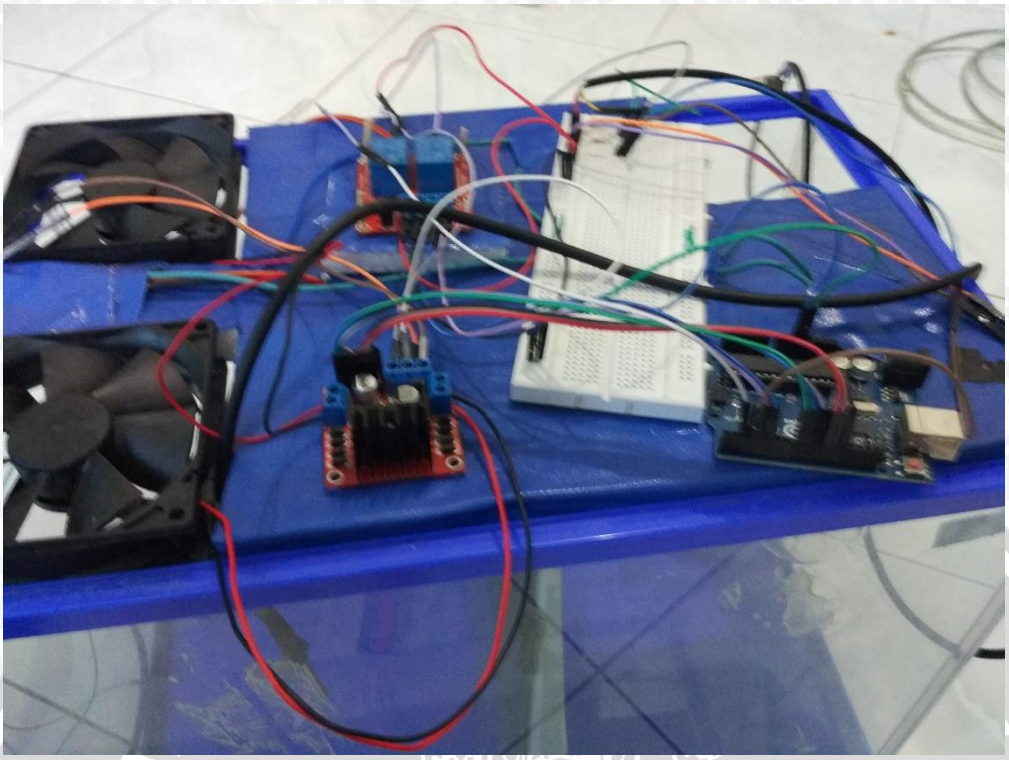


Gambar Ular Boa



Gambar alat tampak depan



Gambar alat tampak atas

LISTING PROGRAM ARDUINO

```
#include <LiquidCrystal.h>
#include <OneWire.h>
#include <DallasTemperature.h>
#define ONE_WIRE_BUS 2
#define ONE_WIRE_BUS2 3
OneWire oneWire(ONE_WIRE_BUS2);
OneWire oneWire2(ONE_WIRE_BUS);
DallasTemperature sensors(&oneWire2);
DallasTemperature sensors2(&oneWire);
LiquidCrystal lcd (42, 41, 40, 39, 38, 37);

//PWM KIPAS
int nilaiPWM1;
int nilaiPWM2;
int nilaiPWM3;
float kalibrasi1 = 2.55;
float kalibrasi2 = 2.55;
float kalibrasi3 = 2.55;
int cycle1;
int cycle2;
int cycle3;


//PIN KIPAS 1
int enA = 13;
int in1 = 12;
int in2 = 11;
```

```
//PIN KIPAS 2
int enB = 8;
int in3 = 10;
int in4 = 9;

//PIN KIPAS 3
int enC = 25;
int in5 = 26;
int in6 = 27;

//SENSOR SUHU LM35
float suhu1;
float suhu2;
float celcius1;
float celcius2;



//RELAY LAMPU 220V
int relay1=5;
int relay2=4;


void setup()
{
 Serial.begin(9600);
 sensors.begin();
 sensors2.begin();
```

```
  //PINMODE RELAY
  pinMode (relay1, OUTPUT);
  pinMode (relay2, OUTPUT);

  //PINMODE KIPAS
  pinMode (enA, OUTPUT);
  pinMode (enB, OUTPUT);
  pinMode (enC, OUTPUT);
  pinMode (in1, OUTPUT);
  pinMode (in2, OUTPUT);
  pinMode (in3, OUTPUT);
  pinMode (in4, OUTPUT);
  pinMode (in5, OUTPUT);
  pinMode (in6, OUTPUT);
}

void loop(){

  //RUMUS SUHU AREA 1
  sensors.requestTemperatures();
  float suhu1=sensors.getTempCByIndex(0);
  lcd.setCursor (0, 0);
  lcd.print ("Suhu area 1:");
  lcd.setCursor (13, 0);
  lcd.print (suhu1, DEC);
  lcd.print((char)223);
  lcd.print ("C");

  //RUMUS SUHU AREA 2
  sensors2.requestTemperatures();
```

```
float suhu2=sensors2.getTempCByIndex(0);
 lcd.setCursor (0, 2);
 lcd.print ("Suhu area 2:");
 lcd.setCursor (13, 2);
 lcd.print (suhu2, DEC);
 lcd.print((char)223);
 lcd.print ("C");

delay (1000);


 //TURN ON  KIPAS 1
 digitalWrite (in1, HIGH);
 digitalWrite (in2, LOW);
 digitalWrite (in3, HIGH);
 digitalWrite (in4, LOW);

 //SPEED PWM KIPAS 1
 nilaiPWM1=cycle1*kalibrasi1;
 analogWrite (enA,nilaiPWM1);
  //SPEED PWM KIPAS 2
 nilaiPWM2=cycle2*kalibrasi2;
 analogWrite (enB,nilaiPWM2);
 //SPEED PWM KIPAS 3
 nilaiPWM3=cycle3*kalibrasi3;
 analogWrite (enC,nilaiPWM3);

Serial.print(suhu1);
Serial.print("\t\t");
Serial.print(suhu2);
```

```
Serial.println("\t\t");

 //LOGIKA PWM KIPAS DENGAN SUHU 1
 if (suhu1 < 26.5){
    cycle1 = 0;
    cycle2 = 0;
    analogWrite (enA, nilaiPWM1);
    analogWrite (enB, nilaiPWM2);
    digitalWrite(5,HIGH);
 if (suhu1 > 27.5){
    cycle1 = 100;
    cycle2 = 100;
    analogWrite (enA, nilaiPWM1);
    analogWrite (enB, nilaiPWM2);
    digitalWrite(5,LOW);
   }
 if (suhu2 < 33.5){
    cycle3 = 0;
    analogWrite (enC, nilaiPWM3);
    digitalWrite(4,HIGH);
 if (suhu2 > 34.5){
    cycle3 = 100;
    analogWrite (enC, nilaiPWM3);
    digitalWrite(4,LOW);

}

 delay(1000);

 }
```