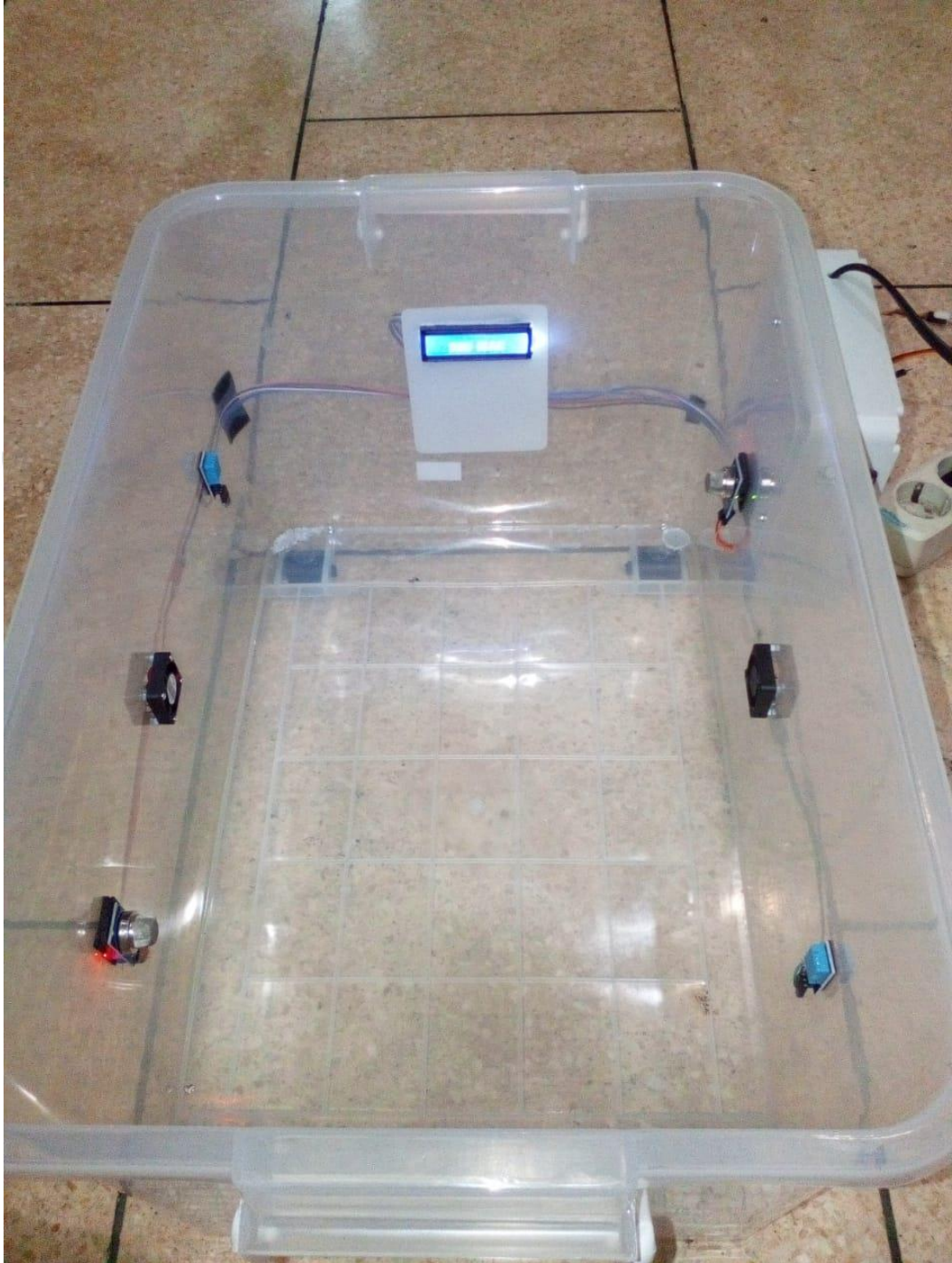


## DAFTAR LAMPIRAN

### 1. Gambar keseluruhan Alat



Gambar Ruangan Alat



Gambar Kotak Kontrol Alat

## 2. Program Keseluruhan Alat

```
#include <SoftwareSerial.h>
SoftwareSerial serial(4,3);
/////////////////////////////////////////////////////////////////
#include <Wire.h>
#include <LiquidCrystal_PCF8574.h>
LiquidCrystal_PCF8574 lcd(0x27);
/////////////////////////////////////////////////////////////////
#include "DHT.h"
#define DHTPIN1 6
#define DHTPIN2 7
#define DHTTYPE DHT11
DHT dht1 (DHTPIN1, DHTTYPE);
DHT dht2 (DHTPIN2, DHTTYPE);
float suhu1 ;
float suhu2 ;
float rata2suhu ;
#define kipas_SUHU 9
#define SETSUHU 30
/////////////////////////////////////////////////////////////////
int asap1 ;
int asap2 ;
int rata2asap ;
#define kipas_ASAP 8
#define SETASAP 35
/////////////////////////////////////////////////////////////////
#define waktu 30000
void setup() {
  // put your setup code here, to run once:
  Serial.begin(115200);
  serial.begin(115200);
  pinMode(kipas_ASAP, OUTPUT); // kipas asap rokok
  pinMode(kipas_SUHU, OUTPUT); // kipas suhu
  lcd.begin(16, 2);
  lcd.setBacklight(255);
  dht1.begin();
  dht2.begin();
  digitalWrite(kipas_SUHU,LOW);
```



```

digitalWrite(kipas_ASAP,LOW);
}
void loop() {
    // put your main code here, to run repeatedly:
    bacaSENSOR ();
    if (rata2suhu<=SETSUHU && rata2asap<=SETASAP )
    { lcd.setCursor(3,1);
      lcd.print("SUHU SEJUK");
      digitalWrite(kipas_SUHU,LOW);
      digitalWrite(kipas_ASAP,LOW);
      for (long x=0; x <waktu; x++) { // loop selama satu detik ( x
counting 1 )
        delay(1);
        //Serial.println(x);
        if (x==500) {
          serial.println(" SUHU SEJUK ");
          serial.println(" KONDISI RUANGAN BAIK TIDAK ADA POLUSI
");
        }
        if (x==15500) {
          bacaSENSOR ();
        }
        if (x==20500) {
          bacaSENSOR ();
        }
      }
      return;
    }
    if (rata2suhu>=SETSUHU && rata2asap<=SETASAP )
    { lcd.setCursor(3,1);
      lcd.print("SUHU PANAS");
      digitalWrite(kipas_SUHU,HIGH);
      digitalWrite(kipas_ASAP,LOW);
      for (long x=0; x <waktu; x++) { // loop selama satu detik ( x
counting 1 )
        delay(1);
        //Serial.println(x);
        if (x==500) {
          serial.println(" SUHU PANAS ");
          serial.println(" RUANGAN TIDAK NYAMAN KARENA PANAS
TETAPI TIDAK ADA POLUSI ASAP ");
        }
      }
    }
  }
}

```

```

    if (x==15500) {
        bacaSENSOR ();
    }
    if (x==20500) {
        bacaSENSOR ();
    }
}
return;
}
if (rata2suhu<=SETSUHU && rata2asap>=SETASAP )
{
    lcd.setCursor(3,1);
    lcd.print("SUHU SEJUK");
    digitalWrite(kipas_SUHU,LOW);
    digitalWrite(kipas_ASAP, HIGH);
    for (long x=0; x <waktu; x++) { // loop selama satu detik ( x
counting 1 )
        delay(1);
        //Serial.println(x);
        if (x==500) {
            serial.println(" SUHU SEJUK ");
            serial.println("KONDISI RUANGAN KURANG BAIK
DIKARENAKAN ADANYA POLUSI ASAP");
        }
        if (x==15500) {
            bacaSENSOR ();
        }
        if (x==20500) {
            bacaSENSOR ();
        }
    }
}
return;
}
if (rata2suhu>=SETSUHU && rata2asap>=SETASAP )
{
    lcd.setCursor(3,1);
    lcd.print("SUHU PANAS");

    digitalWrite(kipas_SUHU,HIGH);
    digitalWrite(kipas_ASAP,HIGH);
    for (long x=0; x <waktu; x++) { // loop selama satu detik ( x
counting 1 )

```

```

delay(1);
//Serial.println(x);
if (x==500) {
  serial.println(" SUHU PANAS ");
  serial.println("KONDISI RUANGAN KURANG BAIK
DIKARENAKAN SUHU MELEBIHI BATAS NORMAL DAN
BERPOLUSI ASAP ");
}
if (x==15500) {
  bacaSENSOR ();
}
if (x==20500) {
  bacaSENSOR ();
}
}
return;
}
{
void bacaSENSOR ()
{lcd.clear();
  asap1= analogRead(A0);
  asap2= analogRead(A1);
  rata2asap=(asap1+asap2)/2;
  suhu1= dht1.readTemperature();
  suhu2= dht2.readTemperature();
  rata2suhu=(suhu1+ suhu2)/2 ;
/*
  lcd.setCursor(0, 0);
  lcd.print("sh1:");
  lcd.setCursor(4, 0);
  lcd.print(suhu1);
  lcd.setCursor(0, 1);
  lcd.print("sh2:");
  lcd.setCursor(4, 1);
  lcd.print(suhu2);
*/
  lcd.setCursor(0, 0);
  lcd.print("SH:");
  lcd.setCursor(3, 0);
  lcd.print(rata2suhu);
  lcd.setCursor(9, 0);
  lcd.print("SM:");

```

```
lcd.setCursor(12, 0);  
lcd.print(rata2asap);  
delay(100);  
}
```

