LAMPIRAN

Lampiran 1 – Rincian Biaya Skripsi

No	Rincian	Frekuensi (Kali)	Volume (Unit)	Satuan (Rp)	Jumlah (Rp)
(1)	(2)	(3)	(4)	(5)	(6) = (3) × (4) × (5)
1	Akrilik Purwarupa	1	1	Rp1,200,000.00	Rp1,200,000.00
2	Arduino Uno	1	1	Rp105,000.00	Rp105,000.00
3	MQ-135	1	1	Rp45,000,00	Rp45,000.00
4	DHT-22	1	1	Rp70,000.00	Rp70,000.00
5	L298N	1	1	Rp40,000.00	Rp40,000.00
6	ESP-8266-01	1	1	Rp45,000,00	Rp45,000.00
7	AirHumadifier	1	1	Rp100,300.00	Rp100,300.00
8	Adaptor 12 Volt	1	1	Rp55,000.00	Rp55,000.00
9	Karbon Aktif	1	1 Kg	Rp50,000.00	Rp50,000.00
10	Kipas 12 Volt	1	4	Rp20,000.00	Rp80,000.00
Jumlah					**Rp1,790,300.00**

Lampiran 2 – Program Arduino

```
#define REMOTEXY_MODE__ESP8266_HARDSERIAL_POINT

#include <RemoteXY.h>

// RemoteXY connection settings
#define REMOTEXY_SERIAL Serial
#define REMOTEXY_SERIAL_SPEED 115200
#define REMOTEXY_WIFI_SSID "MOHD IBNU MUCHTAR"
#define REMOTEXY_WIFI_PASSWORD "12345678"
#define REMOTEXY_SERVER_PORT 6377


// RemoteXY configurate
#pragma pack(push, 1)
uint8_t RemoteXY_CONF[] =
  { 255,0,0,36,0,57,1,8,243,5,
  131,1,2,6,20,7,1,34,31,72,
  111,109,101,0,131,0,2,17,20,7,
  2,13,31,69,110,118,0,131,0,2,
  29,20,7,3,7,31,84,111,111,108,
  115,0,129,0,5,62,53,5,1,8,
  65,105,114,32,81,117,97,108,105,116,
  121,32,77,111,110,105,116,111,114,105,
  110,103,0,129,0,2,72,26,4,1,
  6,77,111,104,100,46,32,73,98,110,
  117,32,77,117,99,104,116,97,114,0,
  129,0,2,78,18,4,1,6,49,53,
  53,50,52,48,53,54,0,67,5,7,
  52,31,7,2,2,26,11,67,5,7,
  70,31,7,2,2,26,11,67,5,7,
  87,31,7,2,2,26,11,65,9,8,
  49,9,9,3,65,9,8,68,9,9,
  3,65,9,9,87,9,9,3,129,0,
  8,49,14,3,2,17,80,80,77,32,
  71,97,115,0,129,0,7,67,19,3,
  2,17,84,101,109,112,101,114,97,116,
  117,114,101,0,129,0,8,84,13,3,
  2,17,72,117,109,105,100,105,116,121,
  0,129,0,42,52,18,6,2,17,112,
  112,109,0,129,0,41,71,18,6,2,
  17,194,176,67,0,129,0,41,88,18,
  6,2,17,37,0,129,0,25,51,18,
  6,3,17,75,105,112,97,115,32,65,
  0,129,0,25,69,18,6,3,17,75,
  105,112,97,115,32,66,0,129,0,24,
  89,35,5,3,17,65,105,114,32,72,
  117,109,97,100,105,102,105,101,114,0 };

// this structure defines all the variables of your control interface
struct {

    // output variable
```

```
  char text_1[11];  // string UTF8 end zero
  char text_2[11];  // string UTF8 end zero
  char text_3[11];  // string UTF8 end zero
  uint8_t led_1_b; // =0..255 LED Blue brightness
  uint8_t led_2_b; // =0..255 LED Blue brightness
  uint8_t led_3_b; // =0..255 LED Blue brightness

    // other variable
  uint8_t connect_flag;  // =1 if wire connected, else =0

} RemoteXY;
#pragma pack(pop)

#include <DHT.h>;
#define DHTPIN 3
#define DHTTYPE DHT22
DHT dht(DHTPIN, DHTTYPE);

const int relay = 2;


int chk;
int hum;
int temp;

int mqInput = A0;
int mqR = 1000;
long rO = 42844.17;
float a = 110.4933;
float b = -2.732421;

int in1 = 6;
int in2 = 7;
int ConA = 10;

int in3 = 5;
int in4 = 4;
int ConB = 9;

int pwm_A = 0;
int pwm_B = 0;
int pwm_C = 0;
void setup()
{
  pinMode(mqInput, INPUT);
  RemoteXY_Init ();
  Serial.begin(115200);

  dht.begin();

  pinMode(relay,OUTPUT);

  pinMode(in1, OUTPUT);
  pinMode(in2, OUTPUT);
  pinMode(ConA, OUTPUT);
```

```
}

void TurnMotorA()
{
  digitalWrite(in1, HIGH);
  digitalWrite(in2, LOW);
  analogWrite(ConA, 255);
}

void TurnOFFA()
{
 digitalWrite(in1, LOW);
 digitalWrite(in2, LOW);
 analogWrite(ConA, 0);
}

void TurnMotorB()
{
  digitalWrite(in3, HIGH);
  digitalWrite(in4, LOW);
  analogWrite(ConB, 255);
}

void TurnOFFB()
{
 digitalWrite(in3, LOW);
 digitalWrite(in4, LOW);
 analogWrite(ConA,0);
}
void loop()
{
  RemoteXY_Handler ();
  int adcRaw = analogRead(mqInput);
  long rS = ((1024.0 * mqR) / adcRaw) - mqR;
  Serial.print("Rs: ");
  Serial.println(rS);
  float rSrO = (float)rS / (float)rO;
  Serial.print("Rs/Ro: ");
  Serial.println(rSrO);

 int ppm = a * pow((float)rS / (float)rO, b);
 Serial.print("ppm: ");
 Serial.println(ppm);
 itoa (ppm, RemoteXY.text_1, 10);

delay(2000);

    hum = dht.readHumidity();
    temp= dht.readTemperature();

    Serial.print("Humidity: ");
    Serial.print(hum);
    Serial.print(" %, Temp: ");
    Serial.print(temp);
    Serial.println(" Celsius");
```

```
  itoa (temp, RemoteXY.text_2, 10);
  itoa (hum, RemoteXY.text_3, 10);


 if (ppm > 1500 && temp > 27)
 {
  TurnMotorA();
  TurnMotorB();
  RemoteXY.led_1_b = 255;
  RemoteXY.led_2_b = 255;
 }
 else if (ppm > 1500 && temp <= 27)
 {
  TurnMotorA();
  TurnMotorB();
  RemoteXY.led_1_b = 255;
  RemoteXY.led_2_b = 255;
 }
 else if (ppm <= 1500 && temp > 27)
 {
  TurnMotorA();
  TurnMotorB();
  RemoteXY.led_1_b = 255;
  RemoteXY.led_2_b = 255;
 }
 else
 {
  TurnOFFA();
  TurnOFFB();
  RemoteXY.led_1_b = 0;
  RemoteXY.led_2_b = 0;
 }
  if (hum >= 75)
{
 digitalWrite(relay, HIGH);
  RemoteXY.led_3_b = 0;

else
{    digitalWrite(relay, LOW);
 RemoteXY.led_3_b = 255;
}
```