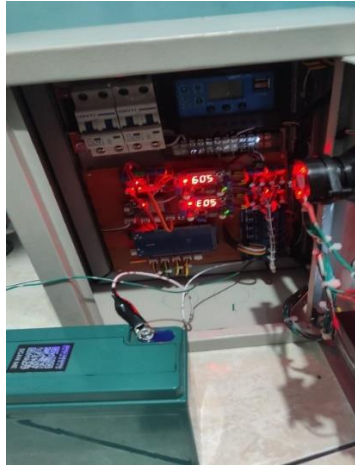


## LAMPIRAN A

(Foto kegiatan pembuatan tugas akhir)





## LAMPIRAN B

```
//#include <Wire.h>
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27, 16, 2);
int sensorvoltage = A0;
int nilai_ADC = 0;
float R1K = 30000.0;
float R2K = 7800.0;
float Voltage = 0.00;
float Vin = 0.00;
String FullData;
/// Variabel untuk mid point
float midPoint = 0.0;
bool midPointSet = false;
const float currentThreshold = 0.08;
unsigned MillisAwal = 0;
unsigned long Mi = 0;
float AcsValue;
float AcsValueF;
int R1 = 8;
int R2 = 9;
int R3 = 10;
```



```
//int R4 = 11;
//int R5 = 12;
//const int PIR1 = 3;
//const int PIR2 = 4;
//const int PIR3 = 5;
//const int PIR4 = 6;
//
//int pirState1;
//int pirState2;
//int pirState3;
//int pirState4;
//void setup() {
// // put your setup code here, to run once:
```

```
// pinMode(PIR1, INPUT);
// pinMode(PIR2, INPUT);
// pinMode(PIR3, INPUT);
// pinMode(PIR4, INPUT);
// Serial.begin(115200);
// Serial2.begin(115200);
// lcd.init();
// lcd.backlight();
// lcd.setCursor(0, 0);
// lcd.print("SISTEM PENGUSIR");
// lcd.setCursor(0, 1);
// lcd.print("  HAMA ");
// delay(3000);
// lcd.clear();
// lcd.setCursor(0, 0);
// lcd.print("BURUNG DAN TIKUS");
// lcd.setCursor(0, 1);
// lcd.print("by:AKMAL BINTANG S");
// delay(3000);
// lcd.clear();
// pinMode(R1, OUTPUT);
// pinMode(R2, OUTPUT);
```

```
// pinMode(R3, OUTPUT);
// pinMode(R4, OUTPUT);
// pinMode(R5, OUTPUT);
//
// digitalWrite(R1, HIGH);
// digitalWrite(R2, HIGH);
// digitalWrite(R3, HIGH);
// digitalWrite(R4, HIGH);
// digitalWrite(R5, HIGH);
// digitalWrite(pirState1, LOW);
// digitalWrite(pirState2, LOW);
// digitalWrite(pirState3, LOW);
// digitalWrite(pirState4, LOW);
//}
//
//void loop() {
//
//int pirState1 = digitalRead(PIR1);
//int pirState2 = digitalRead(PIR2);
//int pirState3 = digitalRead(PIR3);
//int pirState4 = digitalRead(PIR4);
// //-----Rumus Voltage Monitoring-----
```

```

// nilai_ADC = analogRead(sensorvoltage);

// Vin = (nilai_ADC * 5.0) / 1023.0;

// Voltage = (Vin * (R1K + R2K) / R2K)- 2.6;

////-----Rumus Arus Monitoring-----

// unsigned int x = 0;

// float AcsValue = 0.0, Samples = 0.0, AvgAcs = 0.0, AcsValueF =
0.0;

//

// for (x = 0; x < 150; x++) {

//   AcsValue = analogRead(A1);

//   Samples += AcsValue;

//   delay(3);

// }

//

// AvgAcs = (Samples / 150.0) ;

// Serial.print("AvgAcs: ");

// Serial.println(AvgAcs);

//

// if (!midPointSet) {

//   midPoint = AvgAcs;

//   midPointSet = true;

// }

//

```



```

// // Calculate AcsValueF with auto mid point
// float currentReading = AvgAcs - midPoint;
//
// // Check if currentReading is close to zero (within a small tolerance)
// if (fabs(currentReading) < currentThreshold) {
//   currentReading = 0.0; // Set current to 0 if it's very close to zero
// }
//
// // Calculate AcsValueF based on adjusted currentReading
// AcsValueF = (currentReading * (5.0 / 1023.0)) / 0.066;
//
// // Ensure AcsValueF is set to 0 if currentReading is within a small
tolerance
// if (fabs(currentReading) < currentThreshold) {
//   AcsValueF = 0.0;
// }
//
// // Send Voltage and Current data via Serial to ESP32
//// unsigned long MillisSekarang = millis();
//// if (MillisSekarang - MillisAwal >= 500) {
////   MillisAwal = MillisSekarang;
//   Serial.print("V:");
//   Serial.print(Voltage);

```

```

// Serial.print(",A:");
// Serial.println(AcsValueF);
// float Daya = (Voltage * AcsValueF);
// Serial2.print("V:");
// Serial2.print(Voltage);
// Serial2.print(",A:");
// Serial2.println(AcsValueF);
// lcd.setCursor(0, 0);
// lcd.print("VOLTAGE : ");
// lcd.setCursor(10,0 );
// lcd.print(Voltage);
// lcd.setCursor(14,0);
// lcd.print(" V");
//
// lcd.setCursor(0, 1);
// lcd.print("CURRENT : ");
// lcd.setCursor(10,1);
// lcd.print(AcsValueF);
// lcd.setCursor(14,1);
// lcd.print(" A");
//// }
//// Serial2.println("(" + String(Voltage) + "#" + String(AcsValueF) +
"#" + String (Daya) + ")");

```

```

//// Serial.println("(" + String(Voltage) + "#" + String(AcsValueF) + "#"
+ String (Daya) + ")");

//

// if (pirState1 == HIGH || pirState2 == HIGH || pirState3 == HIGH ||
pirState4==HIGH){

// lcd.clear();

// lcd.setCursor(0, 1);

// lcd.print("Motion detected!");

// Serial.println("Motion detected!");

// digitalWrite(R1, LOW);

// delay(5000);

// digitalWrite(R1, HIGH);

// delay(100);

//

// digitalWrite(R2, LOW);

// delay(5000);

// digitalWrite(R2, HIGH);

// delay(100);

//

// digitalWrite(R3, LOW);

// delay(5000);

// digitalWrite(R3, HIGH);

// delay(100);

```

```
//  
  
// digitalWrite(R4, LOW);  
// delay(5000);  
// digitalWrite(R4, HIGH);  
// delay(100);  
  
//  
// digitalWrite(R5, LOW);  
// delay(5000);  
// digitalWrite(R5, HIGH);  
// delay(100);  
  
// }  
  
// else{  
  
// Serial.println("No Motion detected!");  
// digitalWrite(R1, HIGH);  
// digitalWrite(R2, HIGH);  
// digitalWrite(R3, HIGH);  
// digitalWrite(R4, HIGH);  
// digitalWrite(R5, HIGH);  
  
// }  
  
//}
```