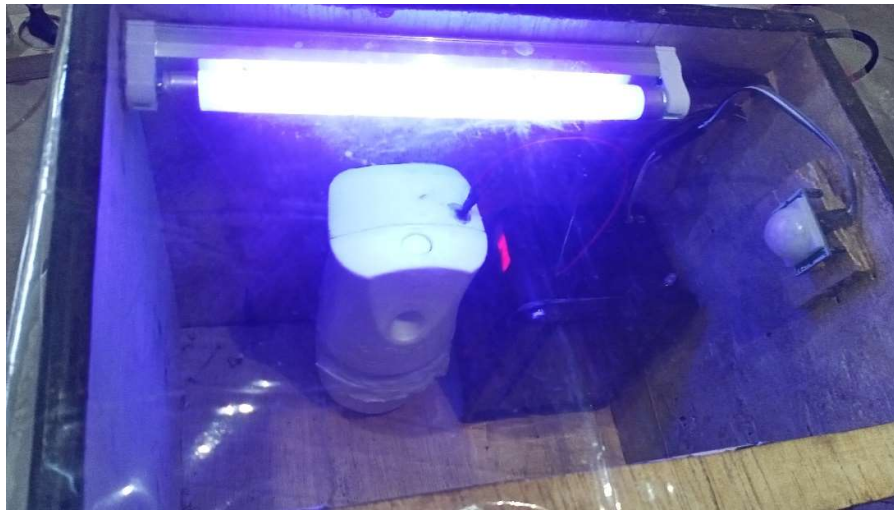


DAFTAR LAMPIRAN

Lampiran 1. Dokumentasi





Lampiran 2. Kode Program *Arduino Uno*

```

#define PIR_PIN 2    // PIR sensor connected to digital pin 2
#define RELAY_PIN 4  // Relay connected to digital pin 3
#define LED_PIN 5    // LED connected to digital pin 4

unsigned long relayOnTime = 200; // Duration for which the relay will be on
(200 ms)

unsigned long previousMillis = 0; // Stores the last time the relay was turned on
bool relayState = LOW;           // Stores the current state of the relay

int motionCount = 0;             // Count of detected motions
const int targetMotionCount = 10; // The target number of detected motions to
trigger the relay

void setup() {
  Serial.begin(9600);

  pinMode(PIR_PIN, INPUT); // Set PIR_PIN as input
  pinMode(RELAY_PIN, OUTPUT); // Set RELAY_PIN as output
  pinMode(LED_PIN, OUTPUT); // Set LED_PIN as output

  digitalWrite(RELAY_PIN, LOW); // Ensure relay is off initially
  digitalWrite(LED_PIN, LOW); // Ensure LED is off initially
}

void loop() {
  int pirState = digitalRead(PIR_PIN); // Read the PIR sensor state

```

```

unsigned long currentMillis = millis(); // Get the current time in milliseconds

if (pirState == HIGH) {
    motionCount++; // Increment the motion count
    Serial.print("Motion detected! Count: ");
    Serial.println(motionCount);

    // Check if the motion count matches the target
    if (motionCount == targetMotionCount && relayState == LOW) {
        Serial.println("Target motion count reached. Turning on relay!");
        digitalWrite(RELAY_PIN, HIGH); // Turn on the relay
        digitalWrite(LED_PIN, HIGH); // Turn on the LED
        previousMillis = currentMillis; // Store the time the relay was turned on
        relayState = HIGH; // Update the relay state
        motionCount = 0; // Reset the motion count
    }
}

// Check if the relay should be turned off
if (relayState == HIGH && (currentMillis - previousMillis >= relayOnTime)) {
    digitalWrite(RELAY_PIN, LOW); // Turn off the relay after 0.2 seconds
    digitalWrite(LED_PIN, LOW); // Turn off the LED
    relayState = LOW; // Update the relay state
}

// Add a small delay for stability
delay(300); // Optional, can be adjusted or removed if needed
}

```

Lampiran 3. Kode Program *Arduino Nano*

```

int led = 13;           // the pin that the LED is attached to
int sensor = 4;         // the pin that the sensor is attached to
int state = LOW;        // by default, no motion detected
int val = 0;            // variable to store the sensor status (value)
int motionValue = 0;    // variable to store the numeric motion value

void setup() {
  pinMode(led, OUTPUT); // initialize LED as an output
  pinMode(sensor, INPUT); // initialize sensor as an input
  Serial.begin(9600);    // initialize serial for UART communication
}

void loop(){
  val = digitalRead(sensor); // read sensor value
  if (val == HIGH) {         // check if the sensor is HIGH
    digitalWrite(led, HIGH); // turn LED ON
    delay(100);              // delay 100 milliseconds

    if (state == LOW) {
      Serial.println("Motion detected!");
      state = HIGH;          // update variable state to HIGH
      motionValue = 1;       // assign a numeric value for motion detected
      Serial.print("Motion Value: ");
      Serial.println(motionValue); // print the motion value
      Serial.write(motionValue); // send the motion value via UART
    }
  }
}

```

```
else {  
    digitalWrite(led, LOW); // turn LED OFF  
    delay(200);           // delay 200 milliseconds  
  
    if (state == HIGH){  
        Serial.println("Motion stopped!");  
        state = LOW;      // update variable state to LOW  
        motionValue = 0;  // assign a numeric value for motion stopped  
        Serial.print("Motion Value: ");  
        Serial.println(motionValue); // print the motion value  
        Serial.write(motionValue);  // send the motion value via UART  
    }  
}  
// delay(200);  
}
```