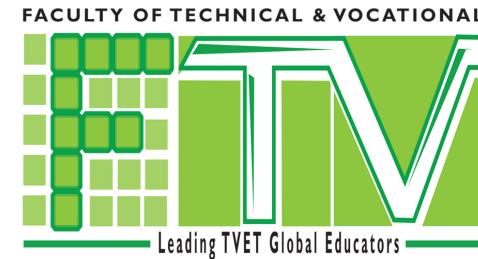




UNIVERSITI  
PENDIDIKAN  
SULTAN IDRIS  
اونیورسٹی فنديديقين سلطان ادريس  
SULTAN IDRIS EDUCATION UNIVERSITY



RISE @UPSI  
Research, Innovation, Society and Entrepreneurship

## MODUL PEMBELAJARAN ELEKTRONIK DENGAN KEFUNGSIAN PENDERIA

### 2.0 PENDERIA /SENSOR

#### 2.8 PIR SENSOR

MULAKAN



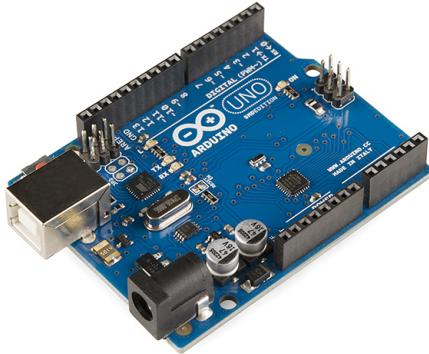
DI SEDIAKAN OLEH AMIN, DR IRDAYANTI

**STEP 1:**

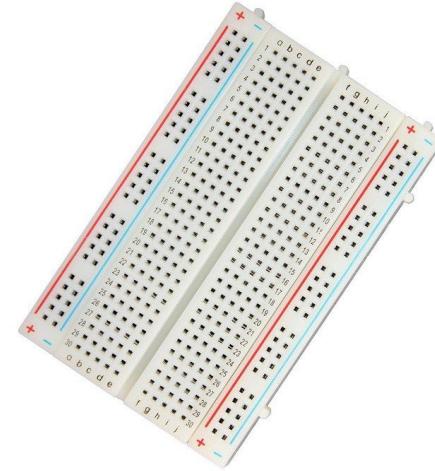
**SEDIAKAN SEMUA KOMPONEN**



4 RED LED



ARDUINO UNO R3



BREADBOARD



5 1KOHM  
RESISTOR



MALE TO MALE / FEMALE TO  
MALE JUMPER WIRES-10 PIECES



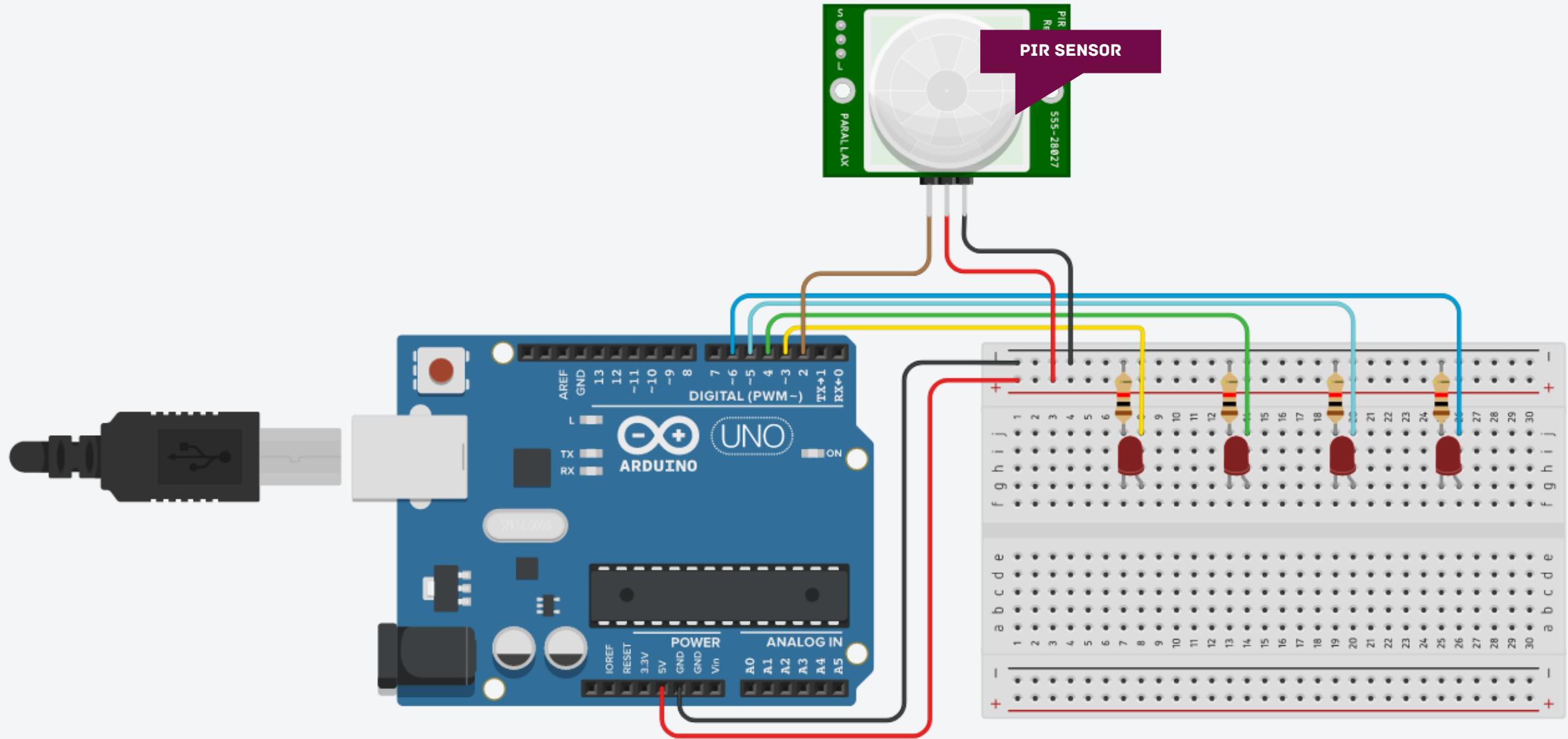
USB CABLE B

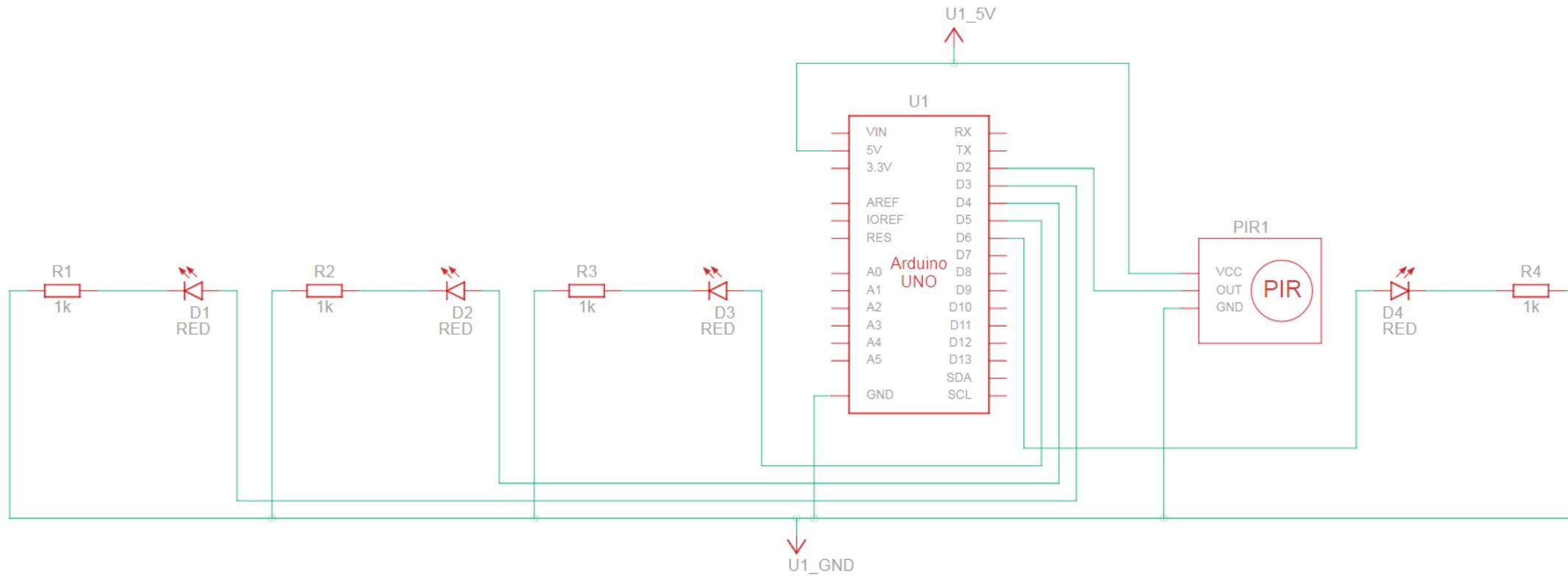


PIR SENSOR

**STEP 2 :**

**GAMBAR RAJAH SAMBUNGAN**





## PANDANGAN SKEMATIK

# **STEP 3 :**

# **CODDING ARDUINO UNO**

```

int ledAPin = 3;
int ledBPin = 4;
int ledCPin = 5;
int ledDPin = 6; // choose the pin for the LED
int inputPin = 2; // choose the input pin (for PIR sensor)
int pirState = LOW; // we start, assuming no motion detected
int val = 0; // variable for reading the pin status

void setup() {
    pinMode(ledAPin, OUTPUT);
    pinMode(ledBPin, OUTPUT); // declare LED as output
    pinMode(ledCPin, OUTPUT); // declare LED as output
    pinMode(ledDPin, OUTPUT); // declare LED as output
    pinMode(inputPin, INPUT); // declare sensor as input
    Serial.begin(9600);
}

```

```

void loop(){
    val = digitalRead(inputPin); // read input value

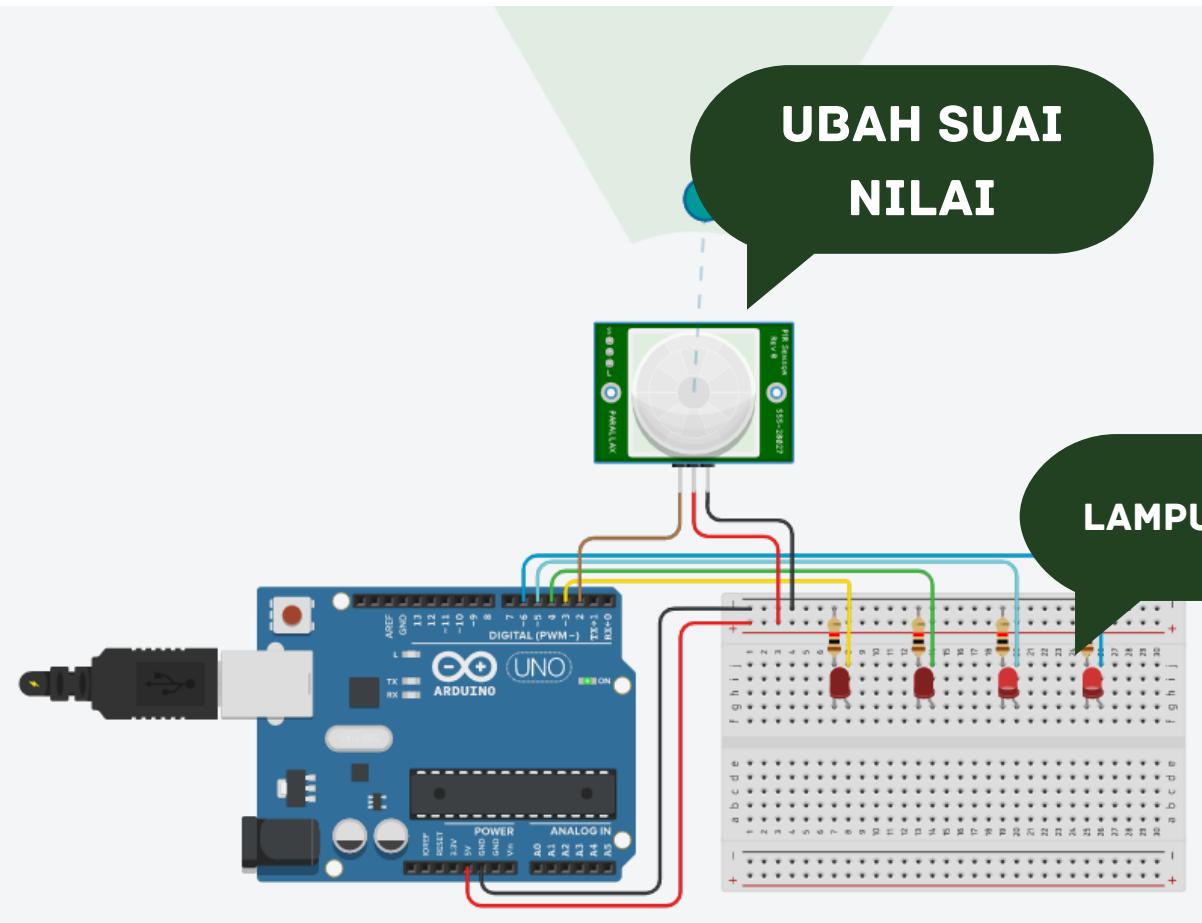
    if (val == HIGH) // check if the input is HIGH
    {
        digitalWrite(ledAPin, HIGH); // turn LED ON
        digitalWrite(ledBPin, HIGH);
        digitalWrite(ledCPin, LOW); // turn LED ON
        digitalWrite(ledDPin, LOW);
        if (pirState == LOW)
        {
            Serial.println("Motion detected!"); // print on output change
            pirState = HIGH;
            delay(100);
        }
    }
    else
    {
        digitalWrite(ledCPin, HIGH); // turn LED OFF
        digitalWrite(ledDPin, HIGH);
        digitalWrite(ledAPin, LOW); // turn LED ON
        digitalWrite(ledBPin, LOW);
        if (pirState == HIGH)
        {
            Serial.println("Motion ended!"); // print on output change
            pirState = LOW;
            delay(100);
        }
    }
}

```

TEXT

# **STEP 4 :**

# **SIMULASI**



Motion detected!  
Motion ended!  
Motion detected!  
Motion ended!

LINK  
TINKERCAD

ENTER