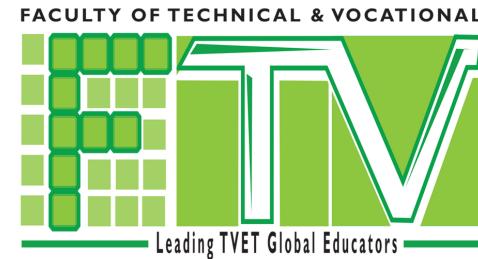




UNIVERSITI  
PENDIDIKAN  
SULTAN IDRIS  
اونیورسٹی فنديديقين سلطان ادريس  
SULTAN IDRIS EDUCATION UNIVERSITY



RISE @UPSI  
Research, Innovation, Society and Entrepreneurship

## MODUL PEMBELAJARAN ELEKTRONIK DENGAN KEFUNGSIAN PENDERIA

### 2.0 PENDERIA /SENSOR

#### 2.7 FORCE SENSOR

MULAKAN



DI SEDIAKAN OLEH AMIN, DR IRDAYANTI

**STEP 1:**

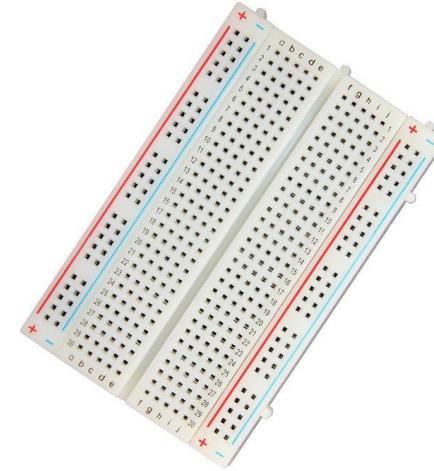
**SEDIAKAN SEMUA KOMPONEN**



4 RED LED



ARDUINO UNO R3



BREADBOARD



5 1KOHM  
RESISTOR



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



USB CABLE B

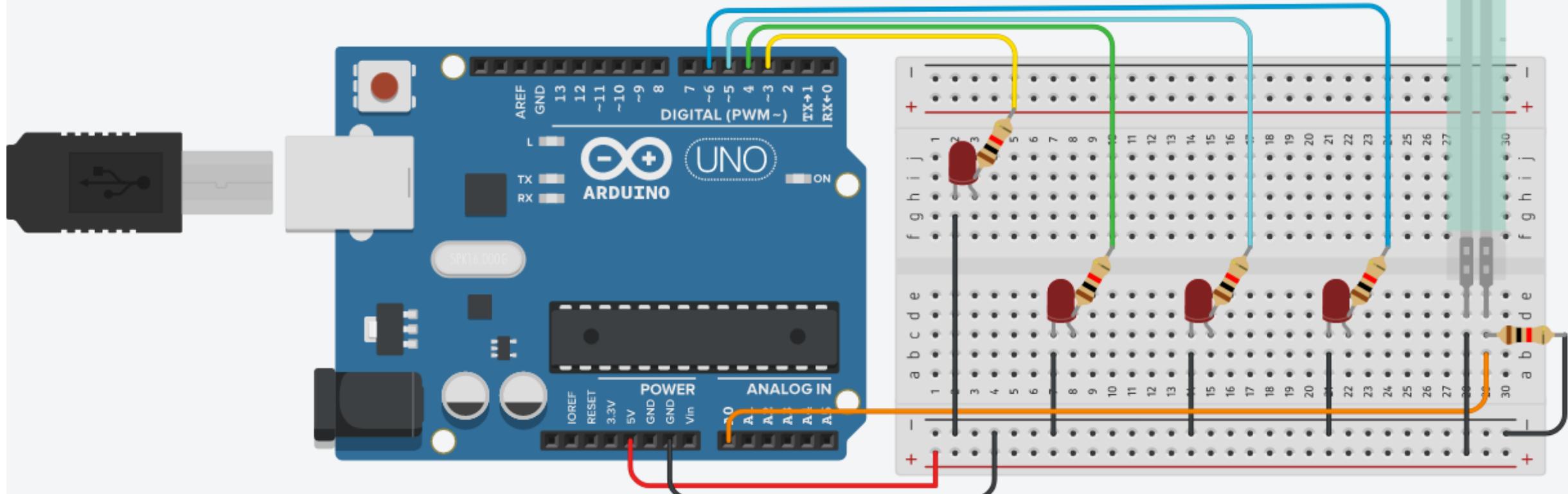


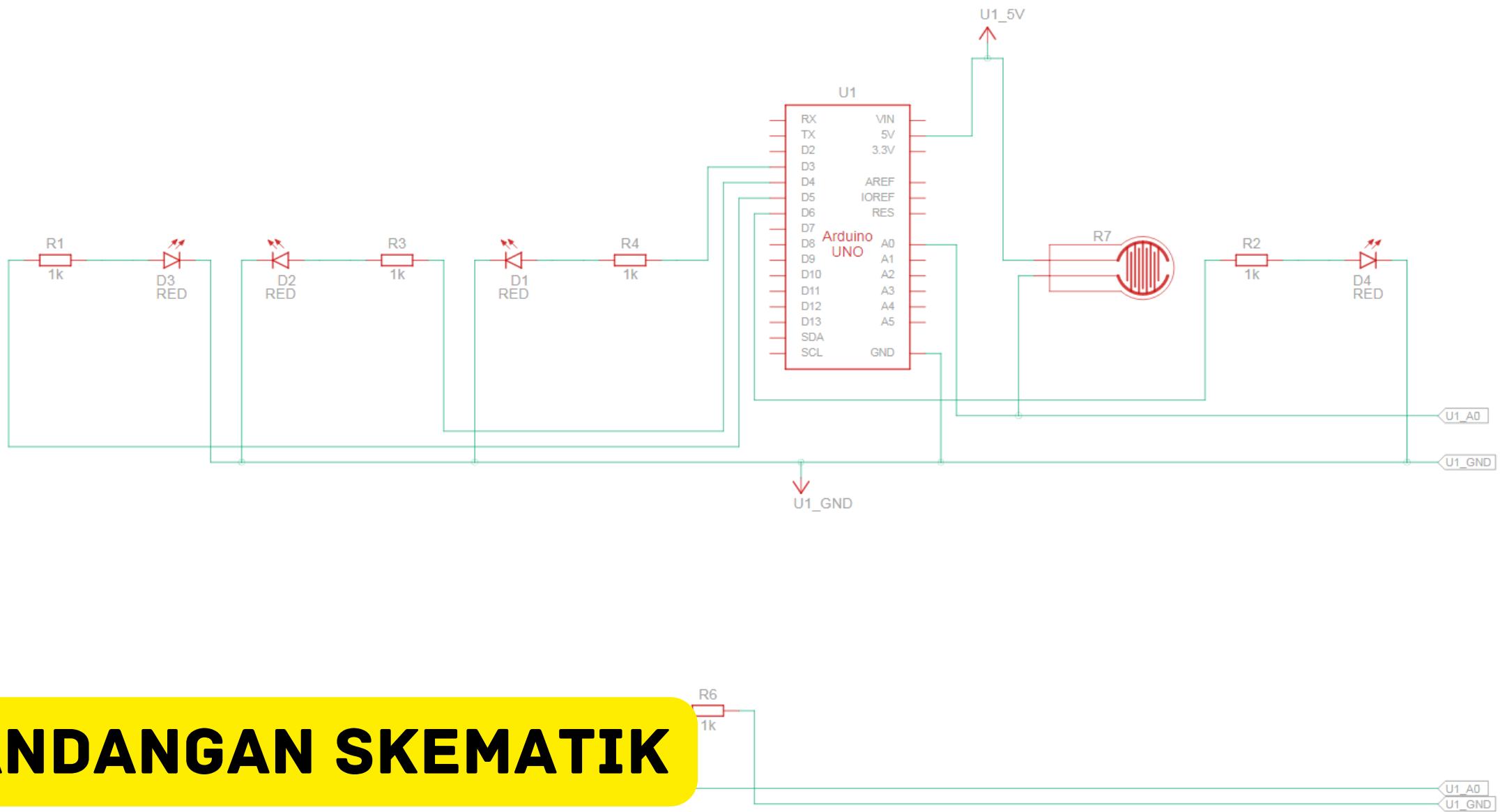
FORCE SENSOR

**STEP 2 :**

**GAMBAR RAJAH SAMBUNGAN**

FORCE SENSOR





PANDANGAN SKEMATIK

# **STEP 3 :**

# **CODDING ARDUINO UNO**

```

int fsrpin = 0;// Define FSR pin
const int analogIn = A0;
// Defining Variables
int LEDa = 3;
int LEDb = 4;
int LEDc = 5;
int LEDd = 6;

void setup()
{
    Serial.begin(9600);
    pinMode(LEDa, OUTPUT);
    pinMode(LEDb, OUTPUT);
    pinMode(LEDc, OUTPUT);
    pinMode(LEDd, OUTPUT);
    pinMode(fsrpin, INPUT);
}

void loop()
{
    int value = analogRead(analogIn);
    if (value <50 && value>= 0) {
        Serial.println(" - No pressure");
        delay(500);
    }
    if(value <100 && value > 50){
        Serial.print(" Light touch = ");
        Serial.print(value); // display
        temperature value
        Serial.print(" ");
        Serial.println();
        digitalWrite(LEDa,HIGH);
        digitalWrite(LEDb,LOW);
        digitalWrite(LEDc,LOW);
        digitalWrite(LEDd,LOW);
        delay(500);
    }
}

```

```

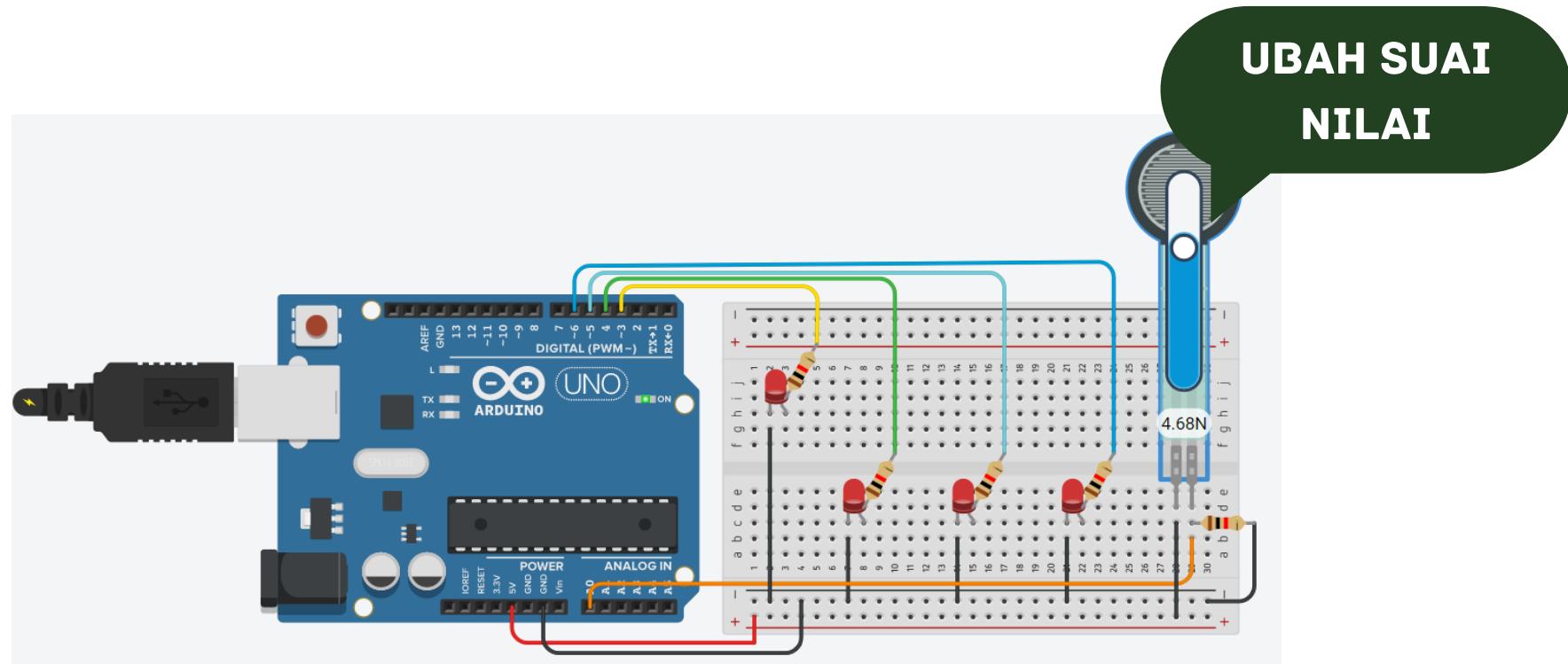
else if(value <200 && value > 100){
    Serial.print("Light squeeze = ");
    Serial.print(value); // display temperature value
    Serial.print(" ");
    Serial.println();
    digitalWrite(LEDa,HIGH);
    digitalWrite(LEDb,HIGH);
    digitalWrite(LEDc,LOW);
    digitalWrite(LEDd,LOW);
    delay(500);
}
else if(value <300 && value > 200){
    Serial.print("Medium squeeze = ");
    Serial.print(value); // display temperature value
    Serial.print(" ");
    Serial.println();
    digitalWrite(LEDa,HIGH);
    digitalWrite(LEDb,HIGH);
    digitalWrite(LEDc,HIGH);
    digitalWrite(LEDd,LOW);
    delay(500);
}
else if(value <400 && value > 300){
    Serial.print("Big squeeze = ");
    Serial.print(value); // display temperature value
    Serial.print(" ");
    Serial.println();
    digitalWrite(LEDa,HIGH);
    digitalWrite(LEDb,HIGH);
    digitalWrite(LEDc,HIGH);
    digitalWrite(LEDd,HIGH);
    delay(500);
}
}

```

TEXT

# **STEP 4 :**

# **SIMULASI**



UBAH SUAI  
NILAI



### Serial Monitor

- No pressure  
Light squeeze = 161  
Big squeeze = 314  
Big squeeze = 314

**ENTER**

LINK  
TINKERCAD