

ASSIGNMENT-1

(Build a smart home in Wokwi with minimum 2 sensors, Led, buzzer)

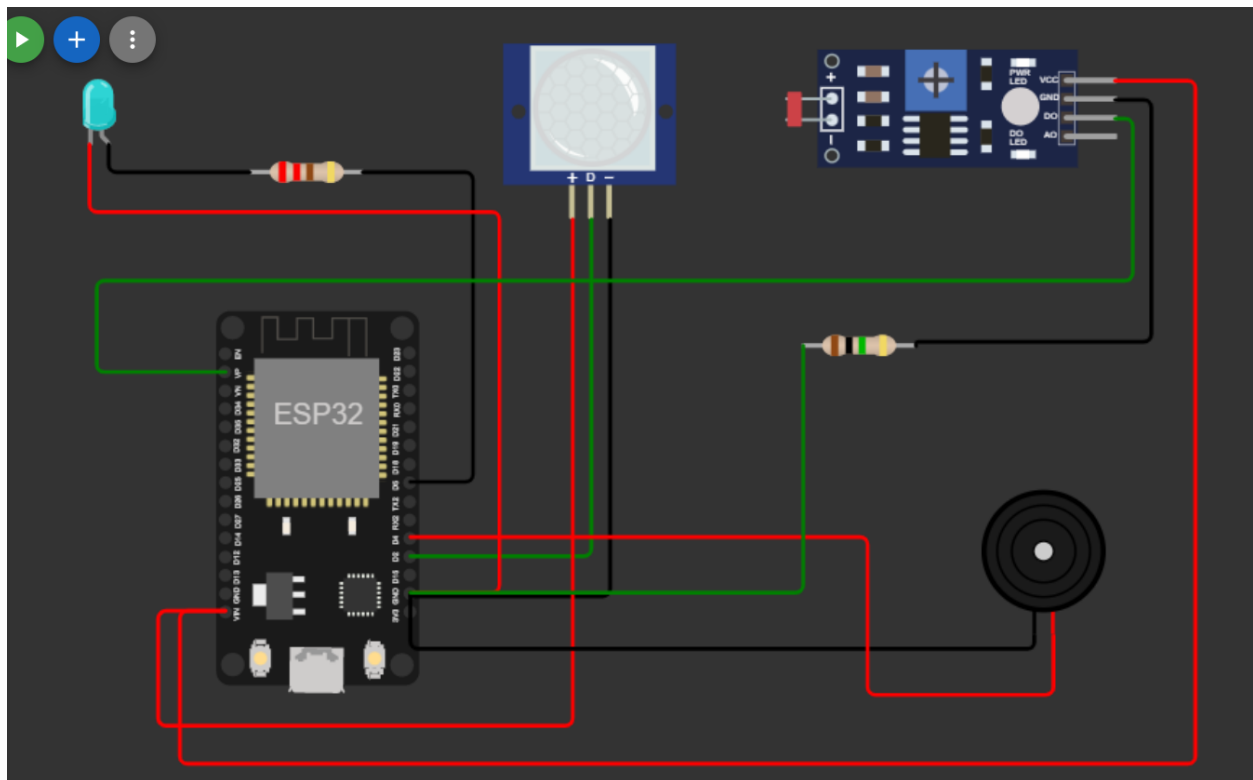
Wokwi Simulation Link:

<https://wokwi.com/projects/363352175776976897>

Components Used:

- ESP32
- LDR SENSOR
- PIR SENSOR
- LED
- BUZZER

Circuit Diagram:



Code:

```
const int pirPin = 2;
const int ldrPin = 36;
const int ledPin = 5;
const int buzzerPin = 4;
const int ledBrightness = 255;

void setup() {
  pinMode(pirPin, INPUT);
  pinMode(ledPin, OUTPUT);
  pinMode(buzzerPin, OUTPUT);
  Serial.begin(9600);
}

void loop() {
  int pirValue = digitalRead(pirPin);
  int ldrValue = analogRead(ldrPin);
  int lightIntensity = map(ldrValue, 0, 4095, 0, 100);

  //the led will glow and the buzzer is triggered when motion is detected
  if (pirValue == HIGH) {
    digitalWrite(ledPin, ledBrightness);
    digitalWrite(buzzerPin, HIGH);
    delay(500);
    digitalWrite(buzzerPin, LOW);
  }

  //otherwise the led will glow depending on the intensity from the LDR sensor
  else {
```

```
    digitalWrite(ledPin, (lightIntensity * ledBrightness) / 100);  
}  
  
Serial.print("Light Intensity: ");  
Serial.print(lightIntensity);  
Serial.println("%");  
delay(1000);  
}
```