

```

1.
int ldrPin = A0;
int ledPin = 9;
int threshold = 500;

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

void loop() {
    int ldrValue = analogRead(ldrPin);
    Serial.print("LDR Value : ");
    Serial.println(ldrValue);

    if (ldrValue < threshold) {
        digitalWrite(ledPin, HIGH);
        Serial.println("Light is LOW → LED ON");
    } else {
        digitalWrite(ledPin, LOW);
        Serial.println("Light is HIGH → LED OFF");
    }
    delay(500);
}

```

2.

```

int gasPin = A0;
int buzzer = 8;
int gasLimit = 400;

void Setup() {
    pinMode(buzzer, OUTPUT);
    Serial.begin(9600)
}

void loop() {
    int

```

```
if(gasValue > gasLimit) {  
    digitalWrite(buzzer, HIGH);  
    serial.println("Gas Detected! Buzzer ON");  
} else {  
    digitalWrite(buzzer, LOW);  
    serial.println("Safe Air");  
}  
delay(1000);  
}
```

3.

```
int trigPin = 9;  
int echoPin = 10;  
int led = 6;  
  
void setup() {  
    pinMode(trigPin, OUTPUT);  
    pinMode(echoPin, INPUT);  
    pinMode(led, OUTPUT);  
    serial.begin(9600);  
}
```

Void loop() {
 long duration;
 int distance;

 digitalWrite(trigPin, LOW);
 delayMicrosecond(2);
 digitalWrite(trigPin, HIGH);
 delayMicroseconds(10);
 digitalWrite(trigPin, LOW);

 duration = pulseIn(echoPin, HIGH);
 distance = duration * 0.034 / 2;

 serial.print("Distance:");
 serial.print(distance);
 serial.println("(cm)");

 if(distance < 10) {

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    serial.println("Object Near - LED ON");
} else {
    digitalWrite(led, low);
    serial.println("Object far - LED OFF");
}
delay(1000);
}
```

4.

```
int pirPin = 5;
int device = 11;

void setup() {
    pinMode(pirPin, INPUT);
    pinMode(device, OUTPUT);
    Serial.begin(1000)
}

void loop() {
    int motion = digitalRead(pirPin);
    if(motion == HIGH) {
        digitalWrite(device, HIGH);
        Serial.println("Motion Detected - Device ON");
    } else {
        digitalWrite(device, low);
        Serial.println("No Motion - Device off");
    }
    delay(1000)
}
```

Q
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