

## **2.Blinking LED using Arduino Uno.**

Arduino pin 13 → Resistor → LED (Positive)  
LED (Negative) → GND

## **3.An experiment to implement digital input and output using Arduino.**

LED: pin 10 → resistor → LED(big) → GND  
Button: pin 12 → button → GND

## **4.Blink LED & Clap Control using KY-038**

Sound Sensor: VCC–5V, GND–GND, D0–Pin 2  
LED: Pin 13 → Resistor to big led pin → LED → GND

## **5.Ultrasonic Sensor HC-SR04**

VCC → 5V  
GND → GND  
TRIG → Pin 12  
ECHO → Pin 13

## **6.Ultrasonic Sensor HC-SR04 and buzzer.**

HC-SR04: VCC–5V, GND–GND, Trig–9, Echo–10  
Buzzer: +(big pin) → Pin 8, - → GND

## **7.Light control system using Ultrasonic Sensor HC-SR04 and buzzer.**

Ultrasonic: VCC–5V, GND–GND, TRIG–12, ECHO–13  
Buzzer: + -> Pin 7 → Buzzer - -> GND  
LED: Pin 10 → Resistor → LED → GND

## **8.Detect darkness using LDR.**

LDR: 5V → LDR → A0 → 10kΩ → GND  
LED: Pin 13 → Resistor → LED → GND

## **9.Detect gas leak detection**

**MQ-2: VCC–5V, GND–GND, AO–A0**  
**LED: Pin 13 → Resistor → LED → GND**  
**Buzzer: Pin 12 → Buzzer → GND**

## **10.Human movement using PIR motion**

PIR: VCC–5V, GND–GND, OUT–Pin 2  
LED: Pin 13 → Resistor → LED → GND

## **11.obstacles using IR Sensor.**

IR: VCC–5V, GND–GND, OUT–Pin 2  
LED: Pin 13 → Resistor → LED → GND