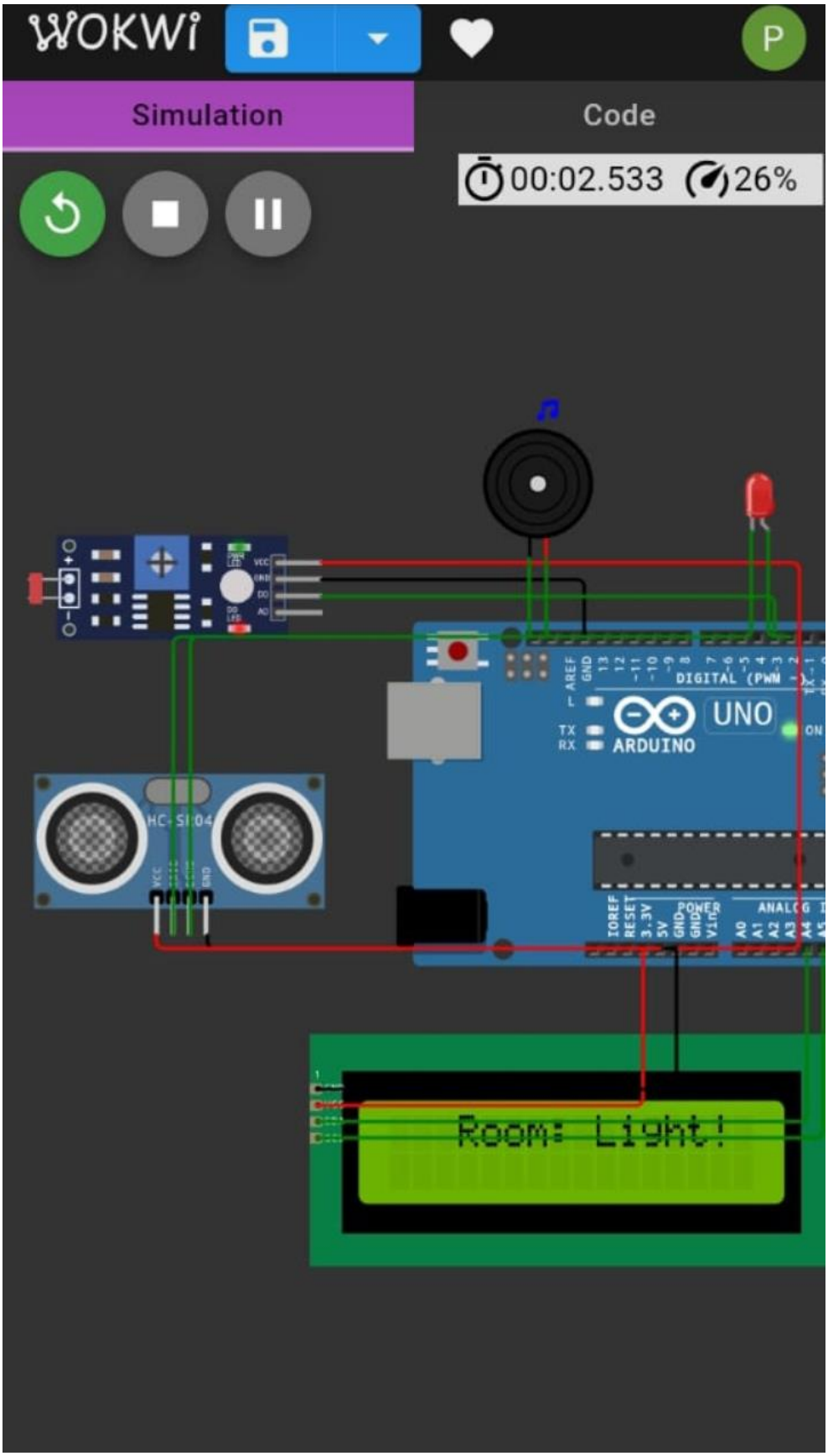
https://wokwi.com/projects/363239695320439809

```
#include <LiquidCrystal_I2C.h>
#define LDR_PIN 3
LiquidCrystal_I2C lcd(0x27, 20, 4);
//define variables
#define trigerPin 12
#define echoPin 13
#define ledPin 2
#define speakerPin 10
#define pitch 262
Double duration, distance;
Void setup() {
  pinMode(LDR_PIN, INPUT);
  lcd.init();
  lcd.backlight();
  //setp for sensor
  Serial.begin(9600);
  pinMode(trigerPin, OUTPUT);
  pinMode(echoPin, INPUT);
  //setup for LED
  pinMode(ledPin, OUTPUT);
  //setup for speaker
  pinMode(speakerPin, OUTPUT);
}
Void loop() {
  Lcd.setCursor(3, 0);
  Lcd.print(“Room: “);
  If (digitalRead(LDR_PIN) == LOW) {
```

```
  Lcd.print(“Light!”);
} else {
  Lcd.print(“Dark  “);
}
Delay(100);
//looping sensor(create sound wave)
digitalWrite(trigerPin, LOW);
delayMicroseconds(2);
digitalWrite(trigerPin, HIGH);
delayMicroseconds(10);
digitalWrite(trigerPin, LOW);
delayMicroseconds(2);
//get duration
Duration = pulseIn(echoPin, HIGH);
//calculate distance
Distance = (duration / 2) * 0.0343;
If (distance < 200) {
  digitalWrite(ledPin, HIGH);
  tone(speakerPin, pitch);
  delay(300);
  digitalWrite(ledPin, LOW);
  noTone(speakerPin);
  delay(300);
}
Else {
  digitalWrite(ledPin, LOW);
  noTone(speakerPin);
}
}
```


WOKWi
P
Simulation
Code
00:02.533
26%
UNO
ARDUINO
HC-SR04
Room: Light!