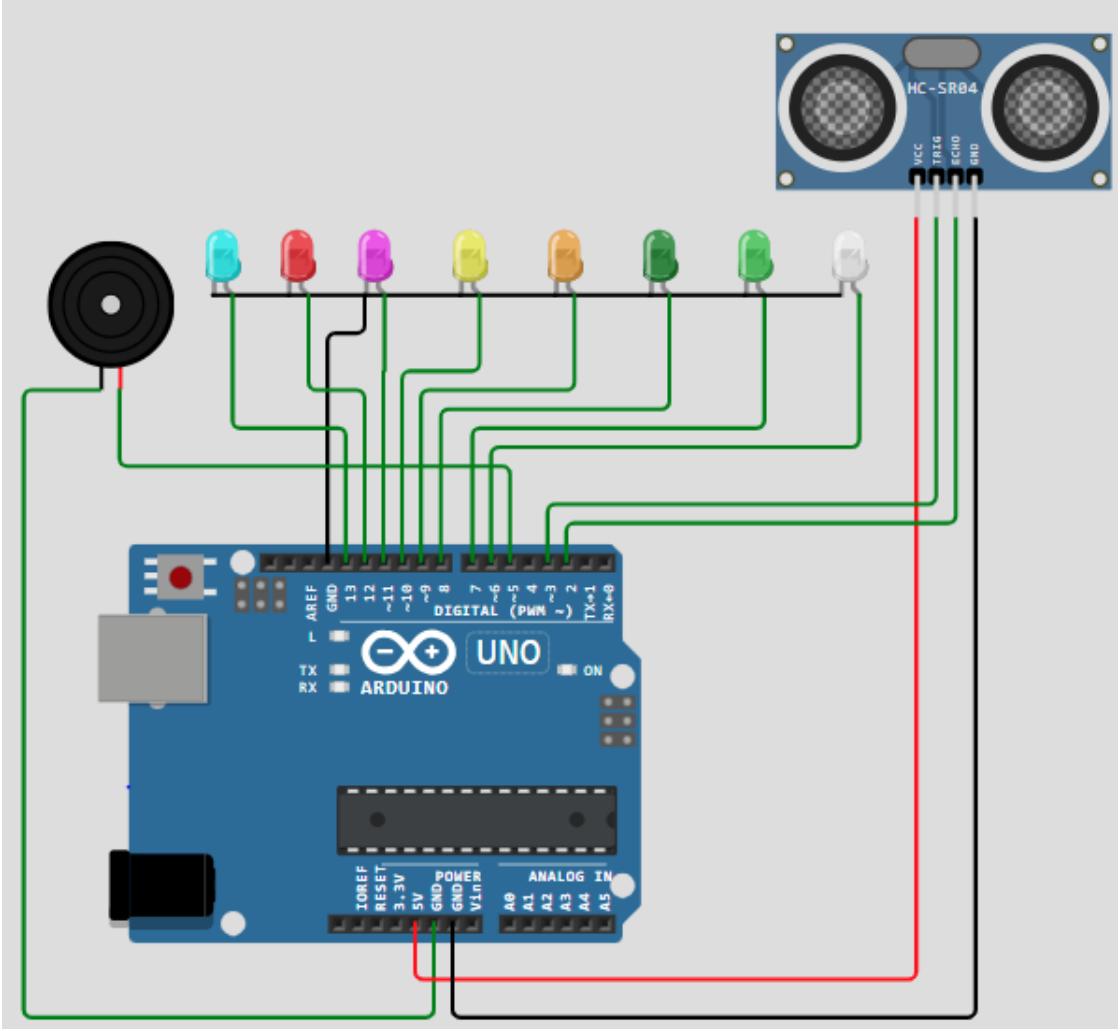
WEEK – 2 Ultra Sonic Sensor




```
int led1 = 6;
int led2 = 7;
int led3 = 8;
int led4 = 9;
int led5 = 10;
int led6 = 11;
int led7 = 12;
int led8 = 13;
#define ECHO_PIN 2
#define TRIG_PIN 3
float buzzer = 5;

void setup() {
  Serial.begin(115200);
  pinMode(TRIG_PIN, OUTPUT);
  pinMode(ECHO_PIN, INPUT);
  pinMode(led1, OUTPUT);
}
float readDistanceCM() {
  digitalWrite(TRIG_PIN, LOW);
  delayMicroseconds(2);
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
  int duration = pulseIn(ECHO_PIN, HIGH);
  return duration * 0.034 / 2;
}
void loop() {
  Serial.print("Measured distance: ");
  Serial.println(readDistanceCM());
  if (readDistanceCM() < 50) {
    digitalWrite(buzzer, HIGH);
    delay(500);
  } else {
    digitalWrite(buzzer, LOW);
    delay(500);
  }
  if (readDistanceCM() <= 400 &&
readDistanceCM() > 350) {
    digitalWrite(led1, HIGH);
```

```
    digitalWrite(led2, HIGH);
    digitalWrite(led3, HIGH);
    digitalWrite(led4, HIGH);
    digitalWrite(led5, HIGH);
    digitalWrite(led6, HIGH);
    digitalWrite(led7, HIGH);
    digitalWrite(led8, HIGH);
  }
  if (readDistanceCM() <= 350 &&
readDistanceCM() > 300) {
    digitalWrite(led1, LOW);
    digitalWrite(led2, HIGH);
    digitalWrite(led3, HIGH);
    digitalWrite(led4, HIGH);
    digitalWrite(led5, HIGH);
    digitalWrite(led6, HIGH);
    digitalWrite(led7, HIGH);
    digitalWrite(led8, HIGH);
  }
  if (readDistanceCM() <= 300 &&
readDistanceCM() > 250) {
    digitalWrite(led1, LOW);
    digitalWrite(led2, LOW);
    digitalWrite(led3, HIGH);
    digitalWrite(led4, HIGH);
    digitalWrite(led5, HIGH);
    digitalWrite(led6, HIGH);
    digitalWrite(led7, HIGH);
    digitalWrite(led8, HIGH);
  }
  if (readDistanceCM() <= 250 &&
readDistanceCM() > 200) {
    digitalWrite(led1, LOW);
    digitalWrite(led2, LOW);
    digitalWrite(led3, LOW);
    digitalWrite(led4, HIGH);
    digitalWrite(led5, HIGH);
    digitalWrite(led6, HIGH);
    digitalWrite(led7, HIGH);
    digitalWrite(led8, HIGH);
  }
  if (readDistanceCM() <= 200 &&
readDistanceCM() > 150) {
    digitalWrite(led1, LOW);
    digitalWrite(led2, LOW);
    digitalWrite(led3, LOW);
    digitalWrite(led4, LOW);
    digitalWrite(led5, HIGH);
    digitalWrite(led6, HIGH);
    digitalWrite(led7, HIGH);
    digitalWrite(led8, HIGH);
  }
  if (readDistanceCM() <= 150 &&
readDistanceCM() > 100) {
    digitalWrite(led1, LOW);
    digitalWrite(led2, LOW);
    digitalWrite(led3, LOW);
    digitalWrite(led4, LOW);
    digitalWrite(led5, LOW);
    digitalWrite(led6, HIGH);
    digitalWrite(led7, HIGH);
    digitalWrite(led8, HIGH);
  }
  if (readDistanceCM() <= 100 &&
readDistanceCM() > 50) {
    digitalWrite(led1, LOW);
    digitalWrite(led2, LOW);
    digitalWrite(led3, LOW);
    digitalWrite(led4, LOW);
    digitalWrite(led5, LOW);
    digitalWrite(led6, LOW);
    digitalWrite(led7, HIGH);
    digitalWrite(led8, HIGH);
  }
  if (readDistanceCM() <= 50 &&
readDistanceCM() >= 0) {
    digitalWrite(led1, LOW);
    digitalWrite(led2, LOW);
    digitalWrite(led3, LOW);
    digitalWrite(led4, LOW);
    digitalWrite(led5, LOW);
    digitalWrite(led6, LOW);
    digitalWrite(led7, LOW);
    digitalWrite(led8, HIGH);
  }


  delay(100);
}
```