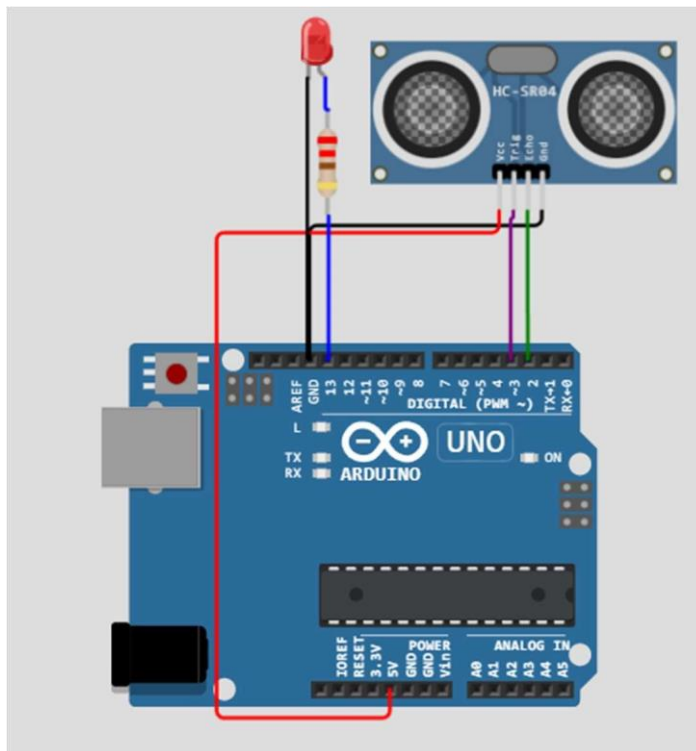


# ASSIGNMENT 4

```
/*  
  HC-SR04 Ultrasonic Sensor Example.  
  
  Turn the LED on when an object is within 100cm range.  
  
*/
```



```
#define ECHO_PIN 2  
#define TRIG_PIN 3  
  
void setup() {  
  Serial.begin(115200);  
  pinMode(LED_BUILTIN, OUTPUT);  
  pinMode(TRIG_PIN, OUTPUT);  
  pinMode(ECHO_PIN, INPUT);  
}
```

```

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() {
    float distance = readDistanceCM();

    bool isNearby = distance < 100;
    digitalWrite(LED_BUILTIN, isNearby);

    Serial.print("Measured distance: ");
    Serial.println(readDistanceCM());

    delay(100);
}

```

```

Measured distance: 177.24
Measured distance: 177.26
Measured distance: 177.24
Measured distance: 177.26
Measured distance: 177.24
Measured distance: 177.16
Measured distance: 177.24

```

Link: <https://wokwi.com/projects/347042511360885330>