

20BCE10471 | VIT Bhopal Campus

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Assignment : 1

In Wokwi platform, if the distance is less than 100 cms for ultrasonic sensor, glow a LED

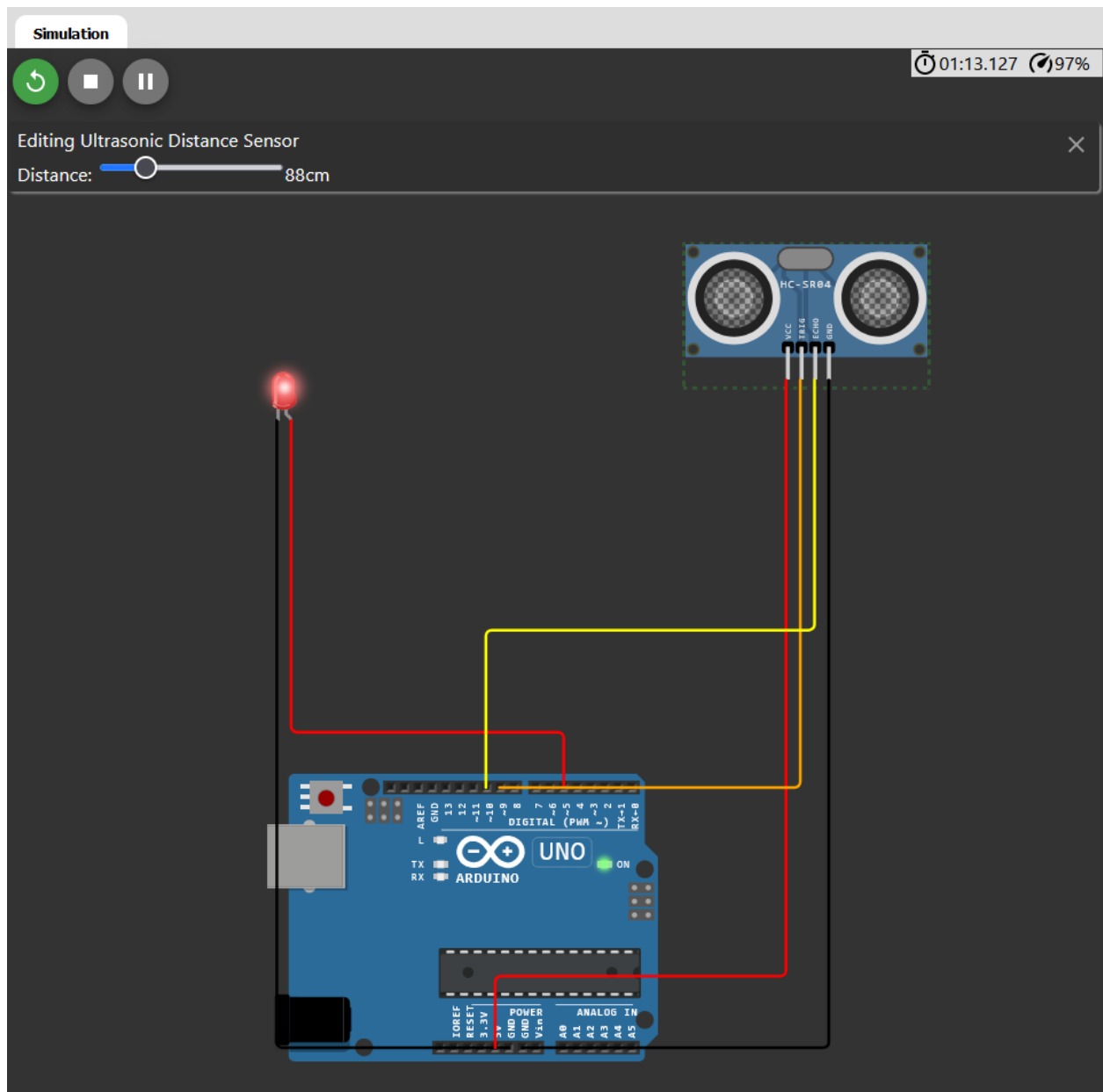
Implementation

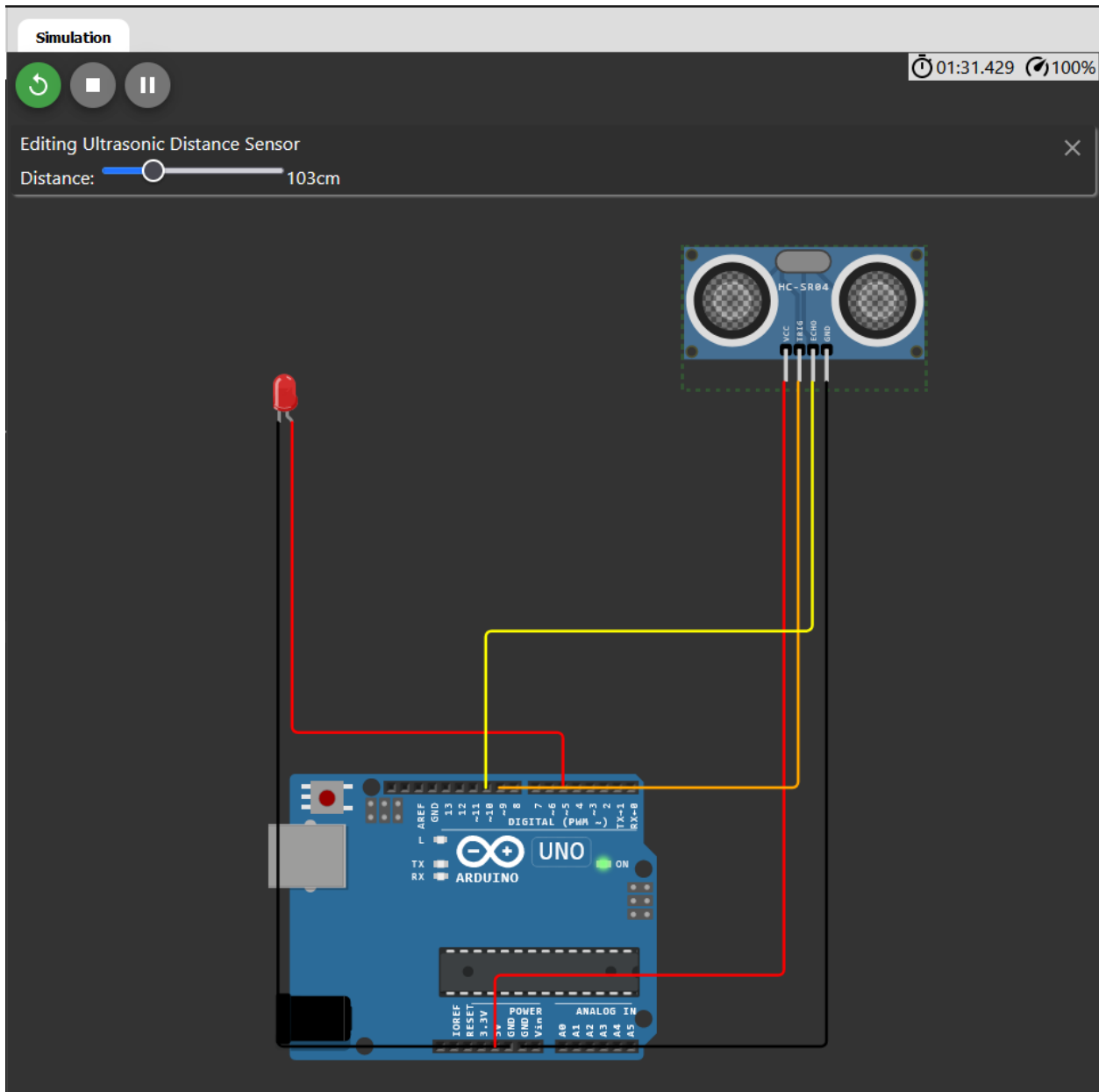
Code :

The image shows a screenshot of the Wokwi web-based IDE. At the top, there's a dark header with the 'WOKWI' logo, a 'SAVE' button, and a 'SHARE' button. Below the header, a tab bar shows 'sketch.ino' as the active file, with 'diagram.json' and 'Library Manager' as inactive tabs. The main area is a dark-themed code editor displaying a C++ sketch. The code defines three pins: led (5), trig (9), and echo (10). In the setup function, it configures the pins as OUTPUT or INPUT. The loop function sends a HIGH pulse to the trig pin, waits 10 microseconds, sends a LOW pulse, and then reads the echo pin. It calculates the distance using the formula $\text{distance} = \text{duration} \times 0.034 / 2$. If the distance is less than 100, it turns the LED on (HIGH); otherwise, it turns the LED off (LOW).

```
1  int led=5;
2  int trig=9;
3  int echo=10;
4
5  void setup() {
6      pinMode(led,OUTPUT);
7      pinMode(trig,OUTPUT);
8      pinMode(echo,INPUT);
9      // put your setup code here, to run once:
10
11 }
12
13 void loop() {
14     digitalWrite(trig,HIGH);
15     delayMicroseconds(10);
16     digitalWrite(trig,LOW);
17     long duration = pulseIn(echo,HIGH);
18     int distance=duration*0.034/2;
19     if(distance < 100){
20         digitalWrite(led,HIGH);
21     }
22     else{
23         digitalWrite(led,LOW);
24     }
25
26 }
```

Simulation:





Wokwi Link

Assignemnt Open link : [Link](#)

