ASSIGNMENT-4

DISTANCE DETECTION USING ULTRASONIC SENSOR

Date	28 October 2022
Team ID	PNT2022TMID39931
Student Roll Number	511319106013
Maximum Marks	2 Marks

Question1 :

Write code and connections in wokwi for ultrasonic sensor. Whenever distance is less than 100 cms send "alert" to ibm cloud and display in device recent events.

WOKWI LINK :

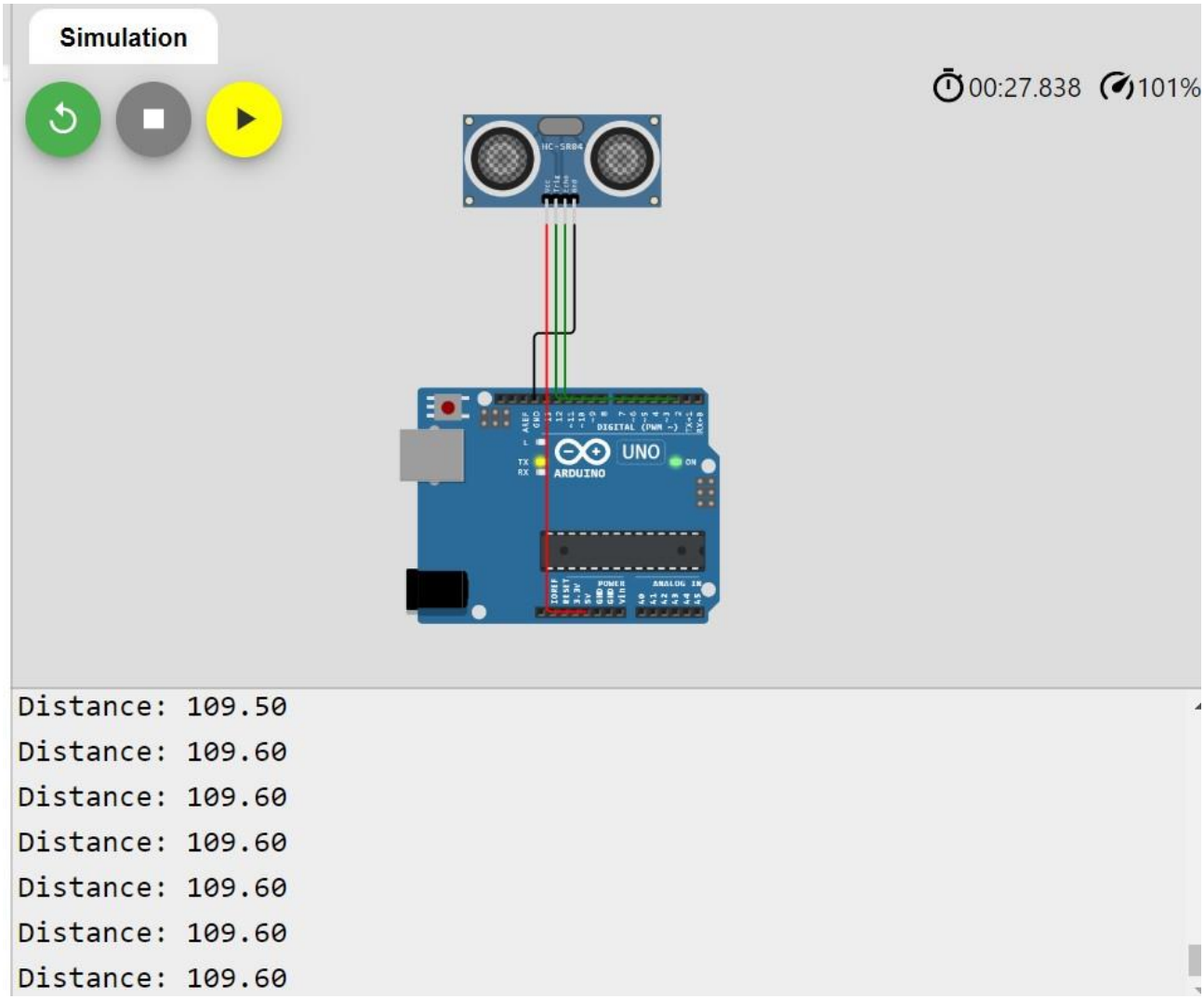
https://wokwi.com/projects/347231650370814548

CODE:

```
#define ECHO_PIN 2
#define TRIG_PIN 3


void setup() {
Serial.begin(9600);
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();   if (distance <=
100)
  {
    Serial.println("Movement detected ");
  }
else {
    Serial.print("Distance: ");
    Serial.println(readDistanceCM());
  }
delay(100);
}
```

OUTPUT:



Event	Value	Format	Last Received
event_1	{"Persondetected" }	json	a few seconds ago
event_1	{"Persondetected" }	json	a few seconds ago
event_1	{"Persondetected" }	json	a few seconds ago
event_1	{"Persondetected" }	json	a few seconds ago
event_1	{"Persondetected" }	json	a few seconds ago