ASSIGNMENT 4 Ultrasonic sensor simulation in Wokwi

Question:

Write a code and connections in wokwi for the ultrasonic sensor. Whenever the distance is less than 100cms send an "Alert" to IBM cloud and display in the device recent events.

Wokwi simulation link:

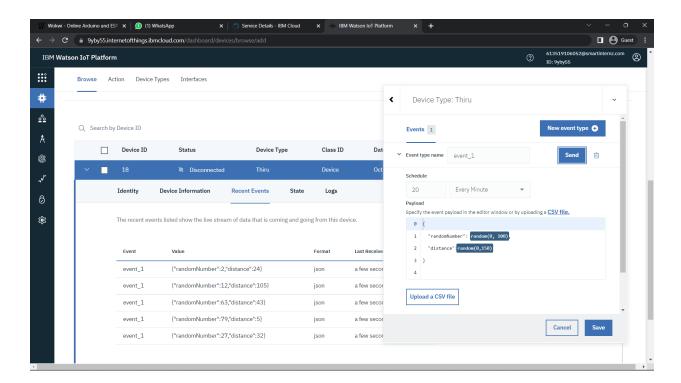
https://wokwi.com/projects/347021248667058770

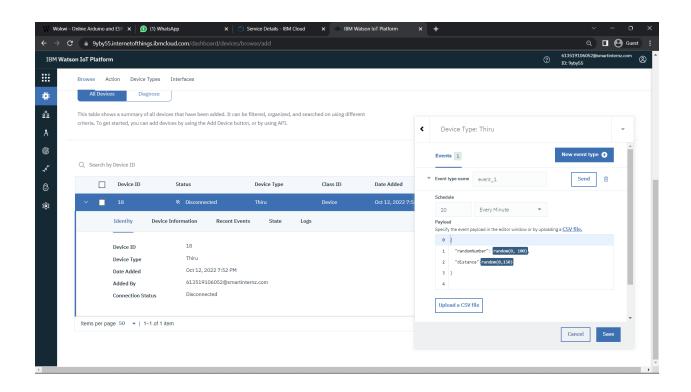
Code:

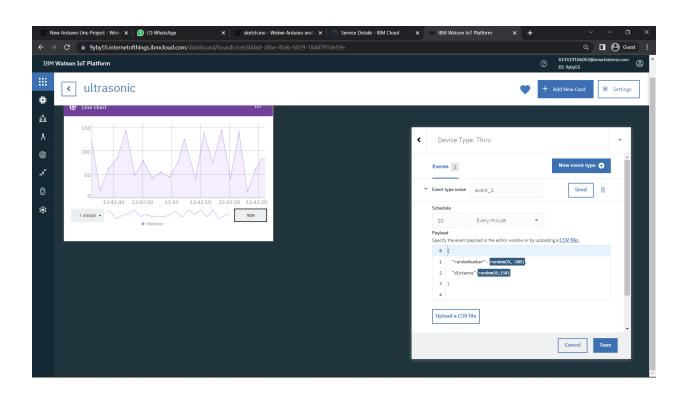
```
1 #define ECHO_PIN 2
2 #define TRIG_PIN 3
3 #define organization ="9yby55"
4 #define deviceType = "Thiru"
5 #define deviceId = "18"
6 #define authMethod = "token"
7 #define authToken = "12345678"
8
9 void setup(){
10
      Serial.begin(9600);
11
      pinMode(TRIG_PIN,OUTPUT);
      pinMode(ECHO_PIN,INPUT);
12
13 }
14
15 float readDistanceCM(){
16
       digitalWrite(TRIG_PIN,LOW);
17
       delayMicroseconds(2);
       digitalWrite(TRIG_PIN,HIGH);
18
19
       delayMicroseconds(10);
20
       digitalWrite(TRIG_PIN,LOW);
       int duration=pulseIn(ECHO_PIN,HIGH);
21
       return duration*0.034/2;
22
23 }
24 void loop(){
```

```
float distance=readDistanceCM();
25
        if(distance<=100)</pre>
26
27
            Serial.println("person detected");
28
29
        }
        else{
30
            Serial.print("Measured distance:");
31
            Serial.println(readDistanceCM());
32
33
        delay(1000);
34
35 }
```

IBM Cloud:







Wokwi Simulation:

