S.NITHYA

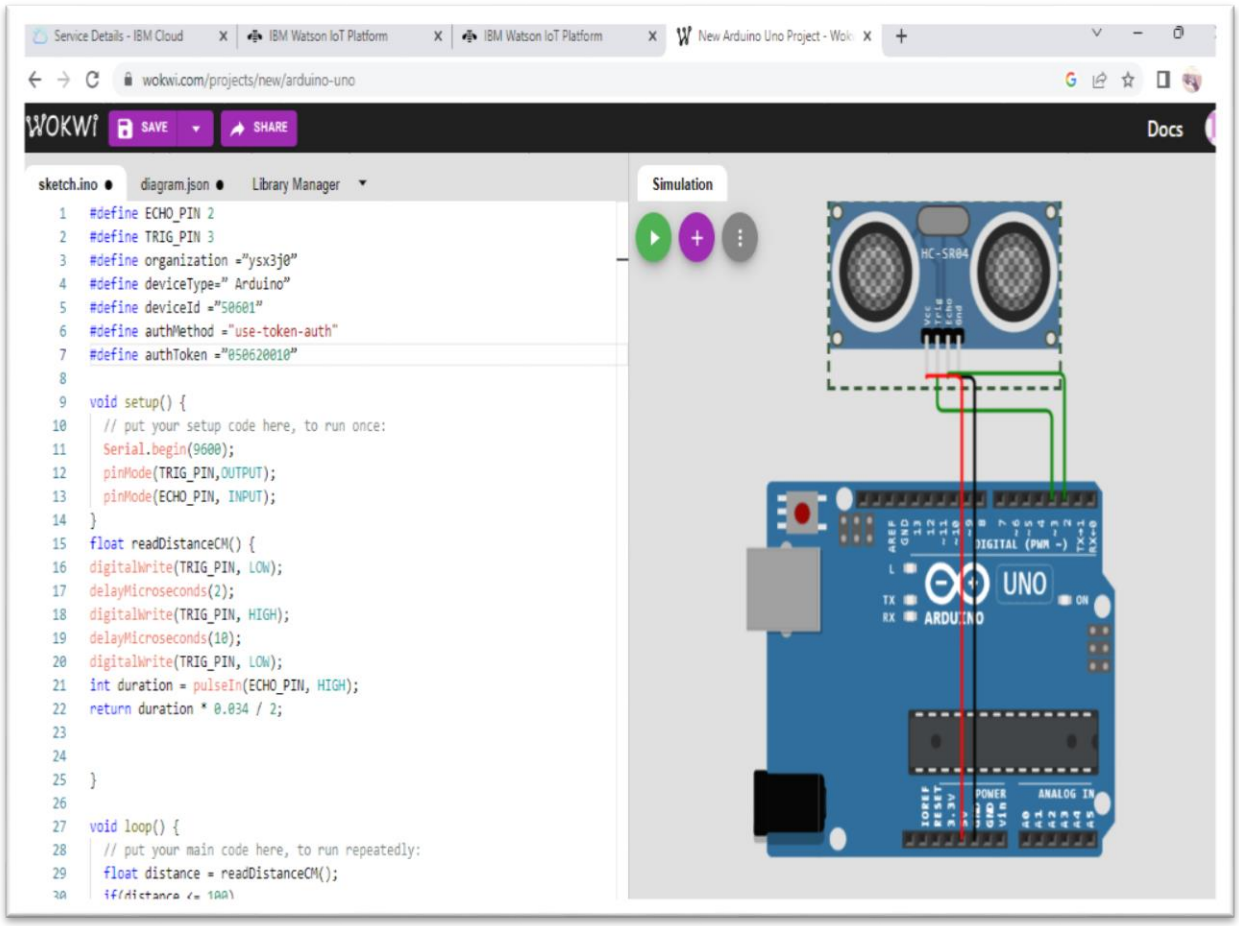
ASSIGNMENT-4

Question-1: 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.

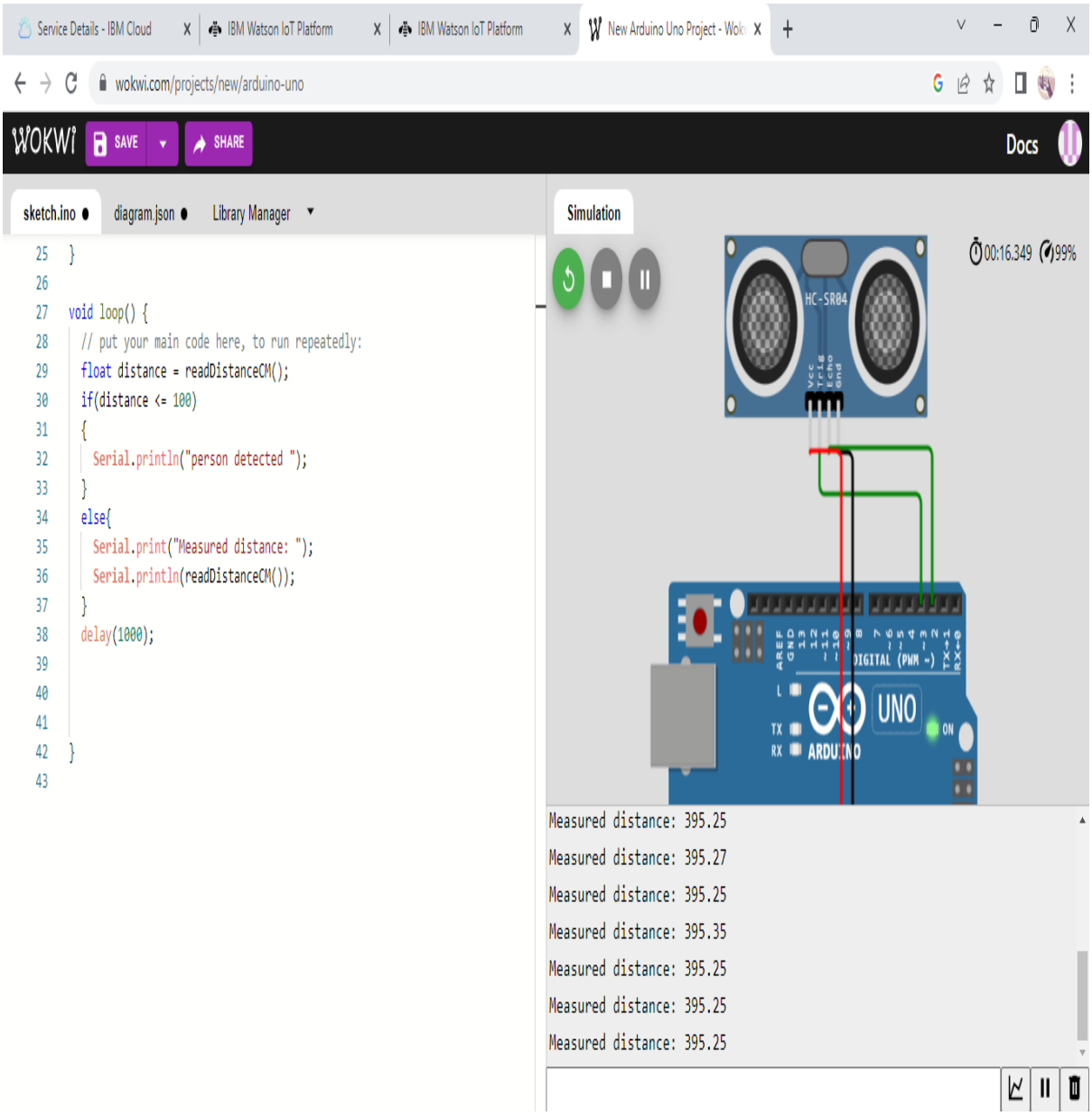
Solution:

```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization =”ysx3j0”
#define deviceType=” Arduino”
#define deviceId =”50601”
#define authMethod ="use-token-auth"
#define authToken =”050620010”

void setup() {
  // put your setup code here, to run once:
  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() {
  // put your main code here, to run repeatedly:
  float distance = readDistanceCM();
  if(distance <= 100)
  {
    Serial.println("person detected ");
  }
  else{
    Serial.print("Measured distance: ");
    Serial.println(readDistanceCM());
  }
  delay(1000);



}
```


Service Details - IBM Cloud
IBM Watson IoT Platform
IBM Watson IoT Platform
New Arduino Uno Project - Wok
wokwi.com/projects/new/arduino-uno
WOKWI
SAVE
SHARE
Docs
sketch.ino
diagram.json
Library Manager
Simulation
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization ="ysx3j0"
#define deviceType=" Arduino"
#define deviceId ="50601"
#define authMethod ="use-token-auth"
#define authToken ="85062010"
void setup() {
// put your setup code here, to run once:
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() {
// put your main code here, to run repeatedly:
float distance = readDistanceCM();
HC-SR04
UNO
ARDUINO

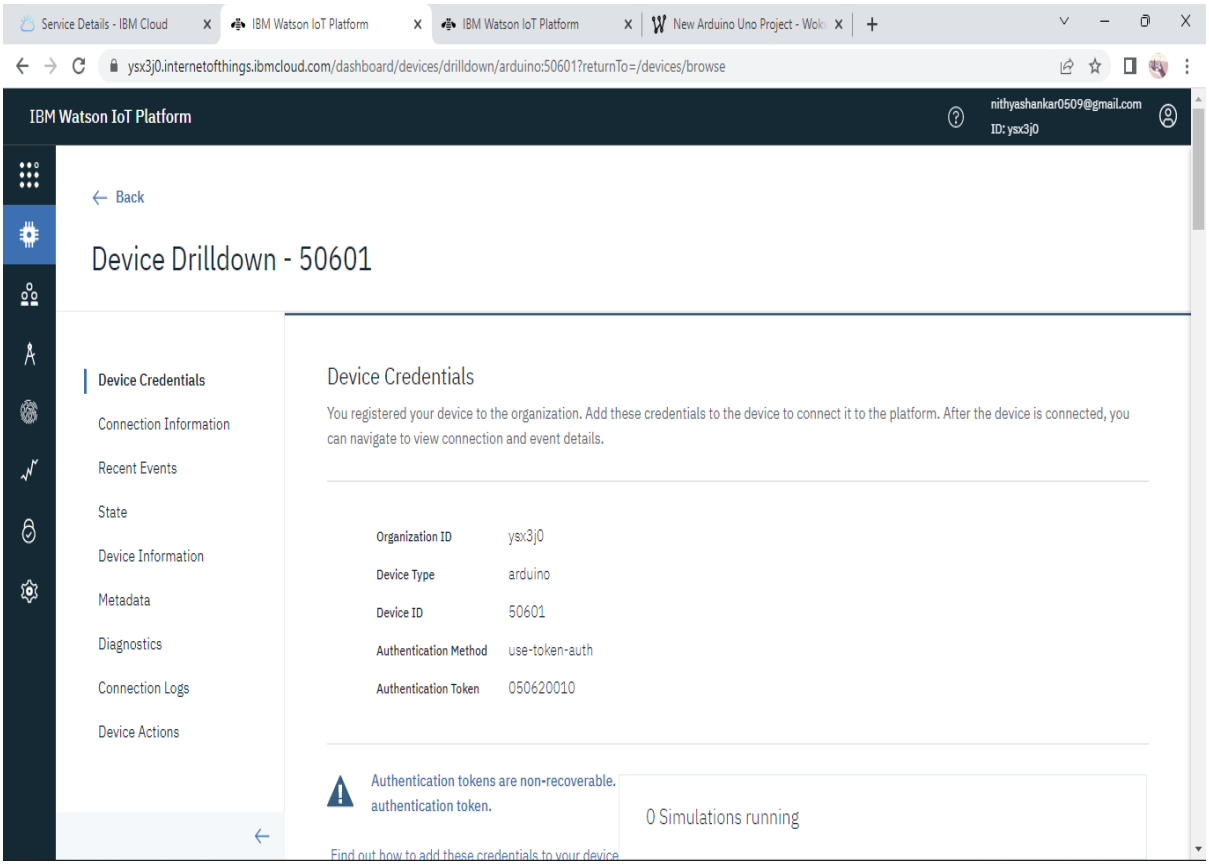
Output:

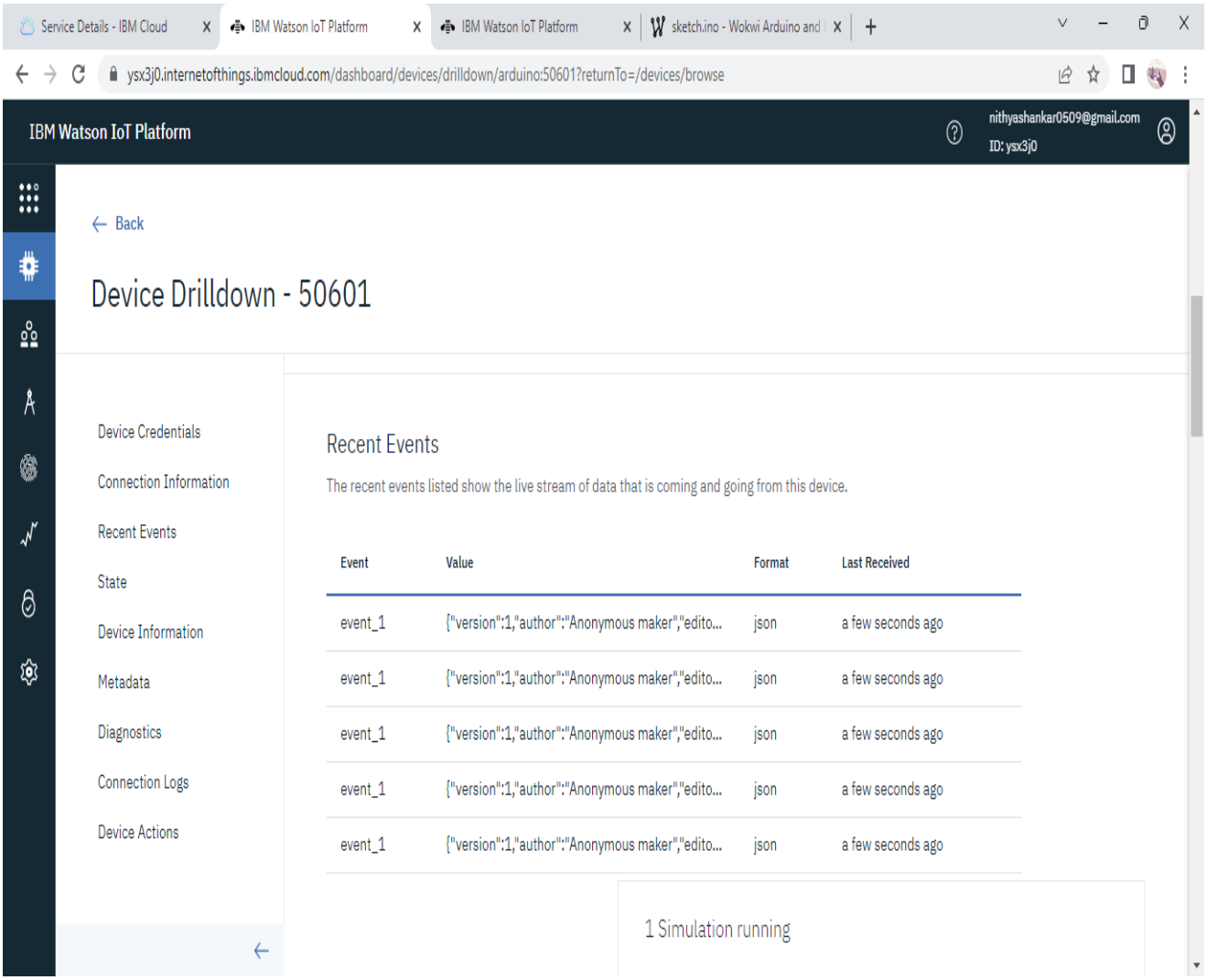


Wokwi Link: https://wokwi.com/projects/347041684263010899

IBM CLOUD

Device Recent Events




Service Details - IBM Cloud
IBM Watson IoT Platform
IBM Watson IoT Platform
sketch.ino - Wokwi Arduino and
ysx3j0.internetofthings.ibmcloud.com/dashboard/devices/drilldown/arduino:50601?returnTo=/devices/browse
IBM Watson IoT Platform
nithyashankar0509@gmail.com
ID: ysx3j0
Back
Device Drilldown - 50601
Device Credentials
Connection Information
Recent Events
State
Device Information
Metadata
Diagnostics
Connection Logs
Device Actions
Recent Events
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
event_1
{"version":1,"author":"Anonymous maker","edito...
json
a few seconds ago
event_1
{"version":1,"author":"Anonymous maker","edito...
json
a few seconds ago
event_1
{"version":1,"author":"Anonymous maker","edito...
json
a few seconds ago
event_1
{"version":1,"author":"Anonymous maker","edito...
json
a few seconds ago
event_1
{"version":1,"author":"Anonymous maker","edito...
json
a few seconds ago
1 Simulation running