Yogeshwari C 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.

Solutions

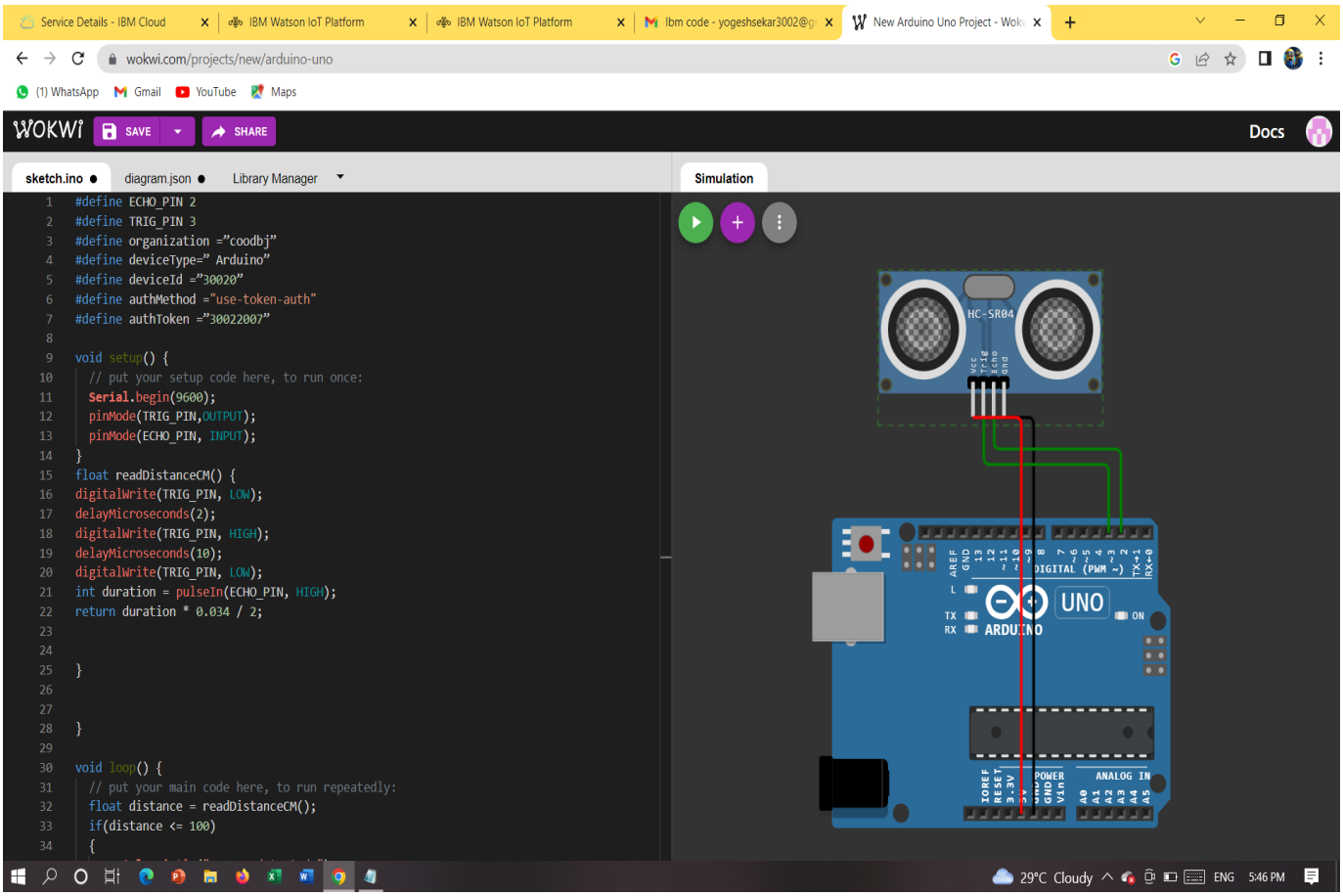
```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization =”coodbj”
#define deviceType=” Arduino”
#define deviceId =”30020”
#define authMethod ="use-token-auth"
#define authToken =”30022007”
```

```
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: ");
```

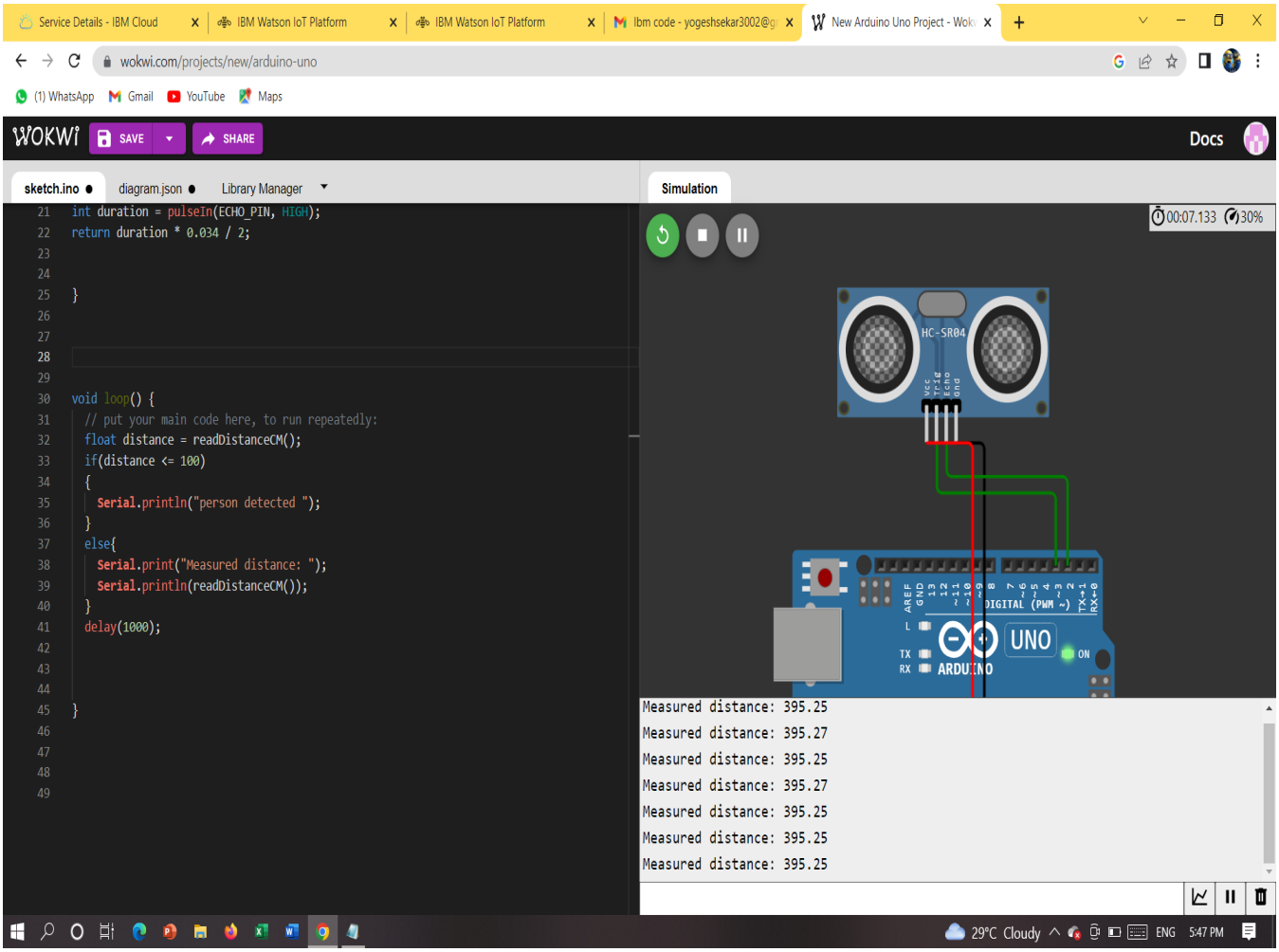
```
    Serial.println(readDistanceCM())}
  delay(1000);
```

}

Input:



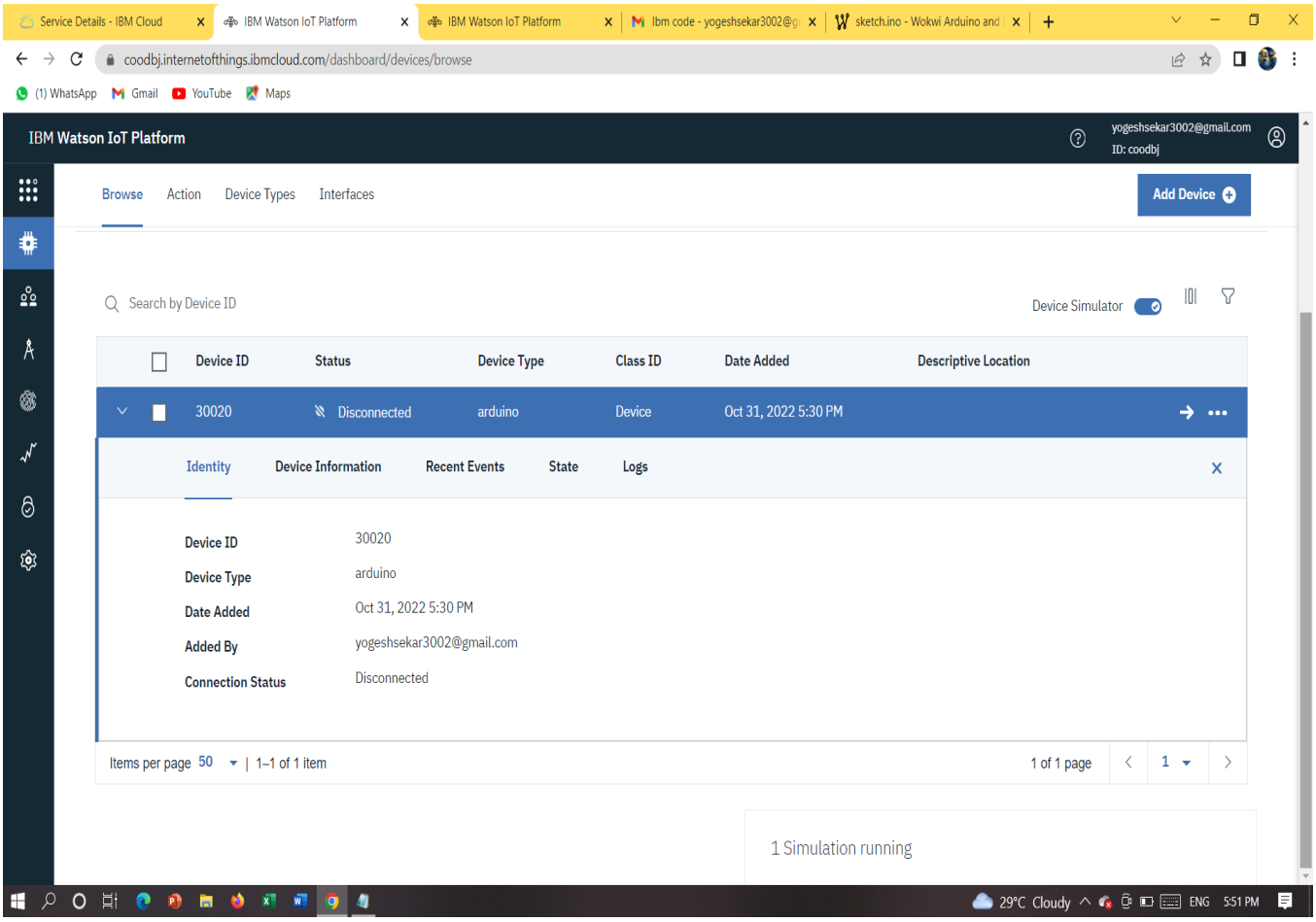
Output:

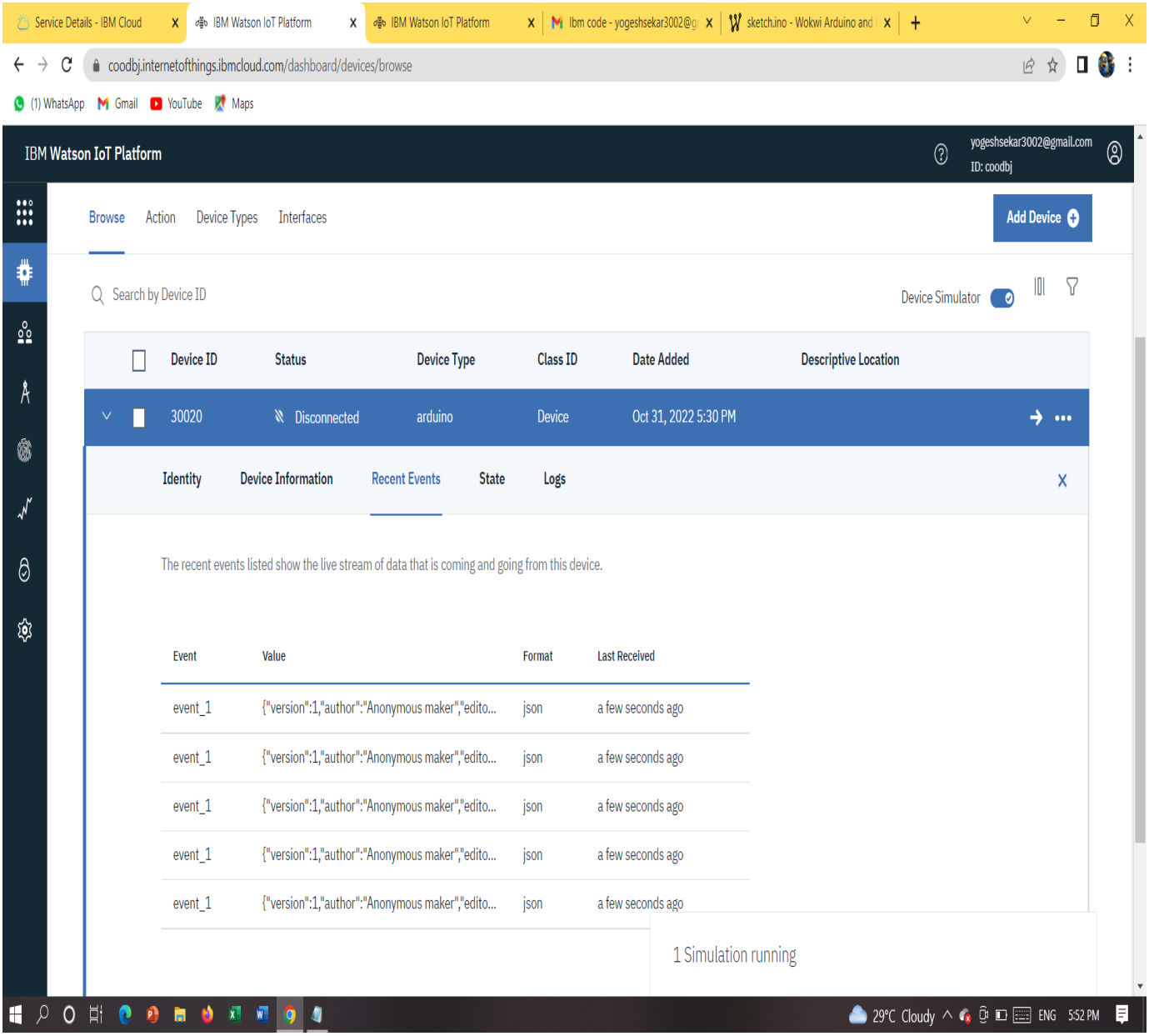


Wokwi Link : https://wokwi.com/projects/347036538679329362

IBM CLOUD

Device Recent Events




Service Details - IBM Cloud
IBM Watson IoT Platform
IBM Watson IoT Platform
Ibm code - yogeshsekar3002@g
sketch.ino - Wokwi Arduino and
coodbj.internetofthings.ibmcloud.com/dashboard/devices/browse
(1) WhatsApp
Gmail
YouTube
Maps
IBM Watson IoT Platform
yogeshsekar3002@gmail.com
ID: coodbj
Browse
Action
Device Types
Interfaces
Add Device
Search by Device ID
Device Simulator
Device ID
Status
Device Type
Class ID
Date Added
Descriptive Location
30020
Disconnected
arduino
Device
Oct 31, 2022 5:30 PM
Identity
Device Information
Recent Events
State
Logs
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
29°C Cloudy
ENG
5:52 PM