Kobika G Assignment -4

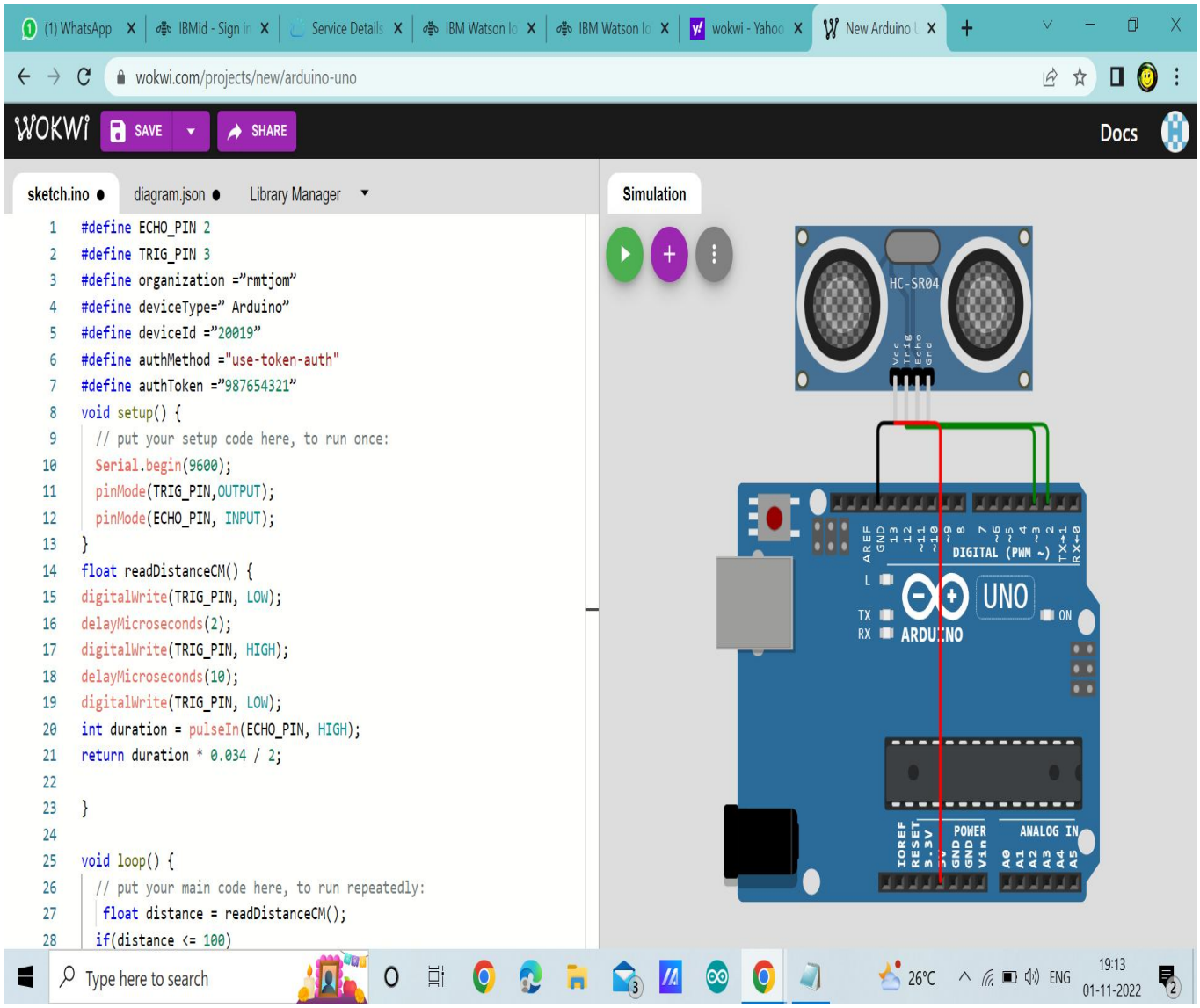
Question-1: Write code and connections in wokwi for ultrasonic sensor. Whenever distance is less than 100 cms send “alert” to ibm cloud and display in device recent events.

Solution:

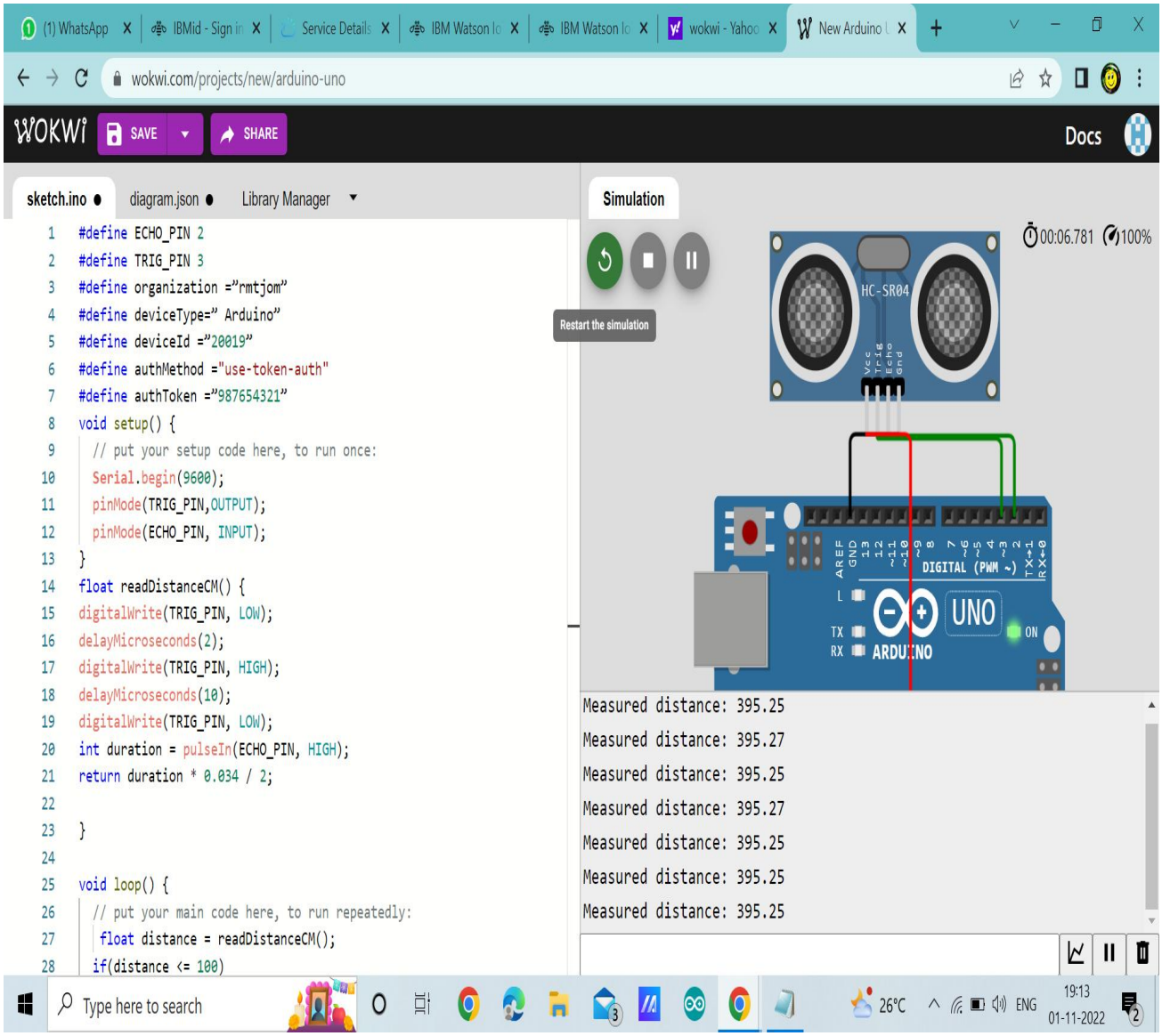
```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization =”rmtjom”
#define deviceType=” Arduino”
#define deviceId =”20019”
#define authMethod ="use-token-auth"
#define authToken =”987654321”
void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
  pinMode(TRIG_PIN,OUTPUT);
  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 :



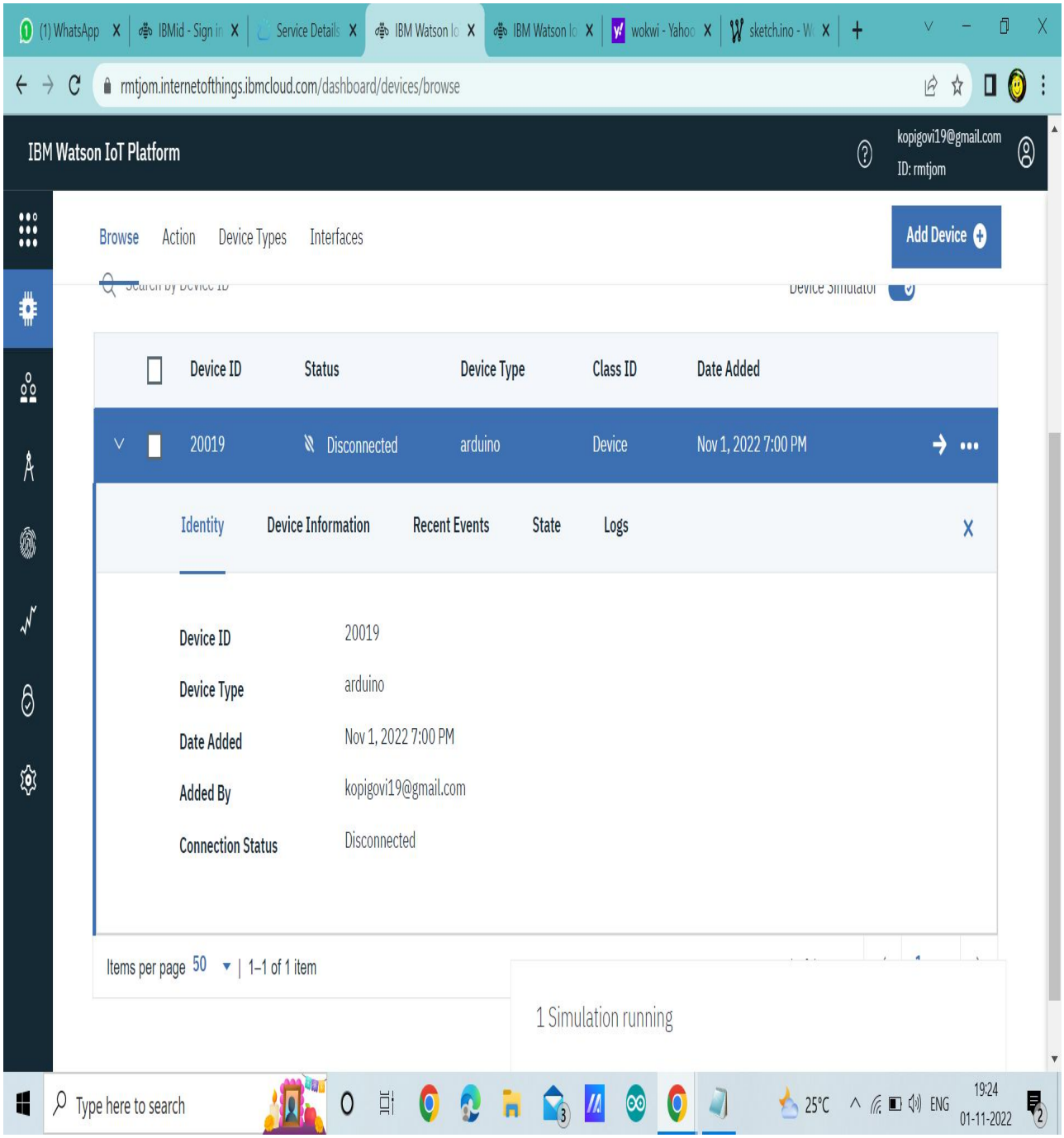
Output:

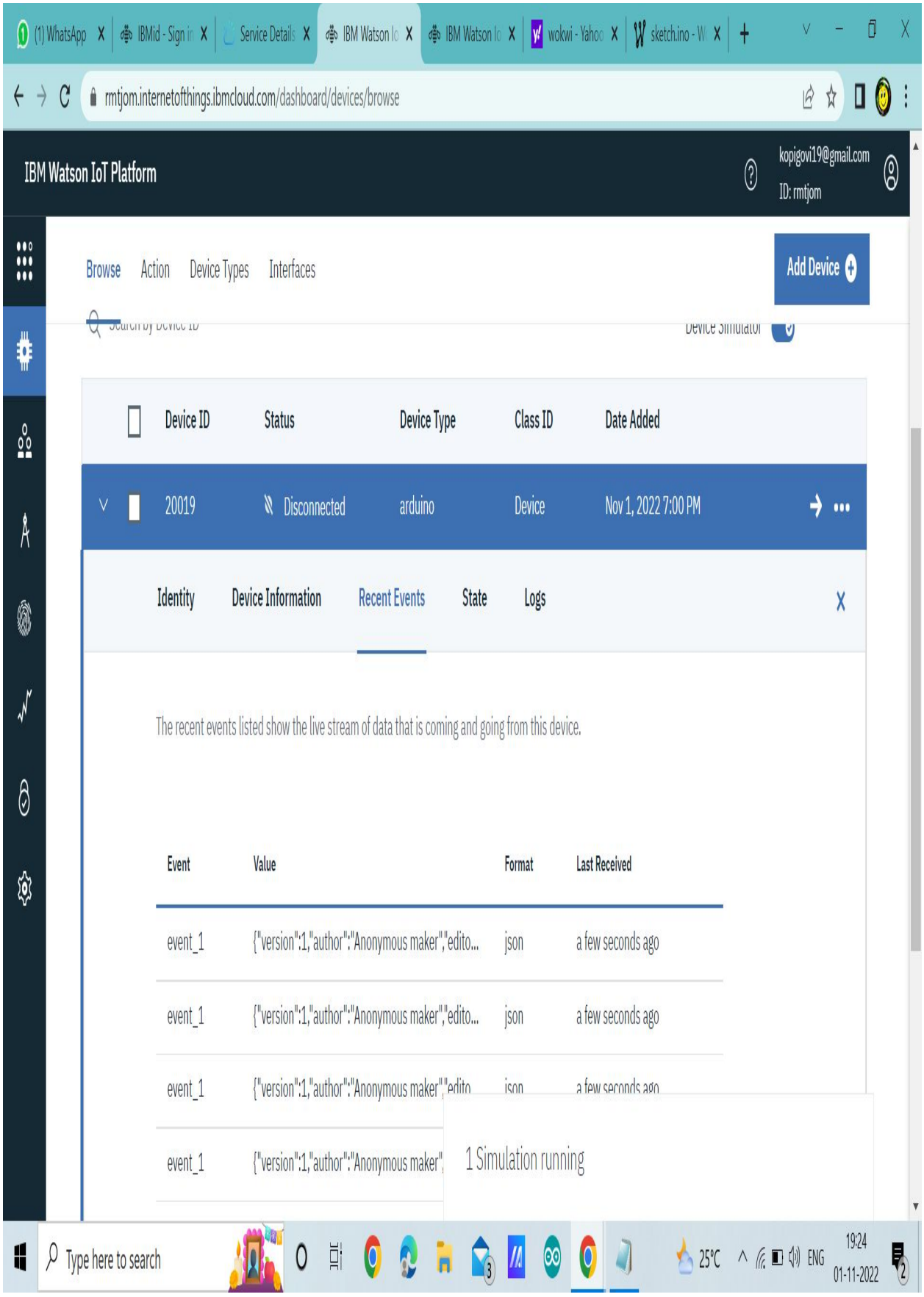


Wokwi Link: https://wokwi.com/projects/347132513452294738

IBM CLOUD

Device Recent Events




(1) WhatsApp
IBMid - Sign in
Service Details
IBM Watson Io
IBM Watson Io
wokwi - Yahoo
sketch.ino - W
rmtjom.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
kopigovi19@gmail.com
ID: rmtjom
Browse
Action
Device Types
Interfaces
Add Device
Device Simulator
Device ID
Status
Device Type
Class ID
Date Added
20019
Disconnected
arduino
Device
Nov 1, 2022 7:00 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",
1 Simulation running
Type here to search
25°C
ENG
19:24
01-11-2022