J.PAVITHRA 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 =”ar6zly”
#definedeviceType=” Arduino1”
#definedeviceId =”56805”
#defineauthMethod ="use-token-auth"
#define authToken =”9159377012”

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);




}
```

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wokwi.com/projects/347192177134142036

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sketch.ino diagram.json Library Manager

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#define TRIG_PIN 3
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#define deviceType=" Arduino1"
#define deviceId ="56805"
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}

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delayMicroseconds(10);
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return duration * 0.034 / 2;

}void loop() {
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if(distance <= 100)
{
Serial.println("person detected ");
}
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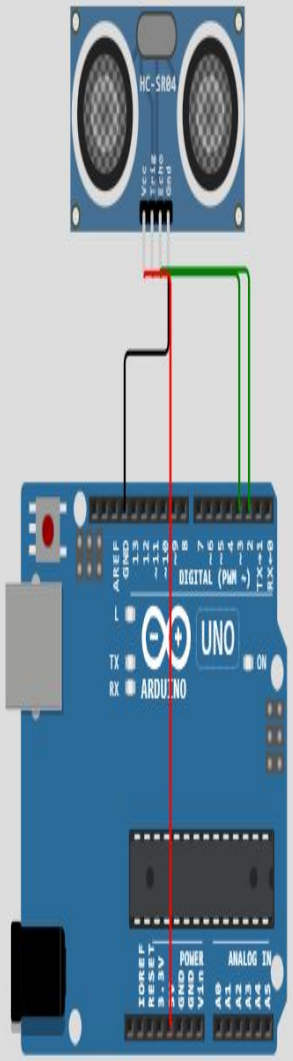
```

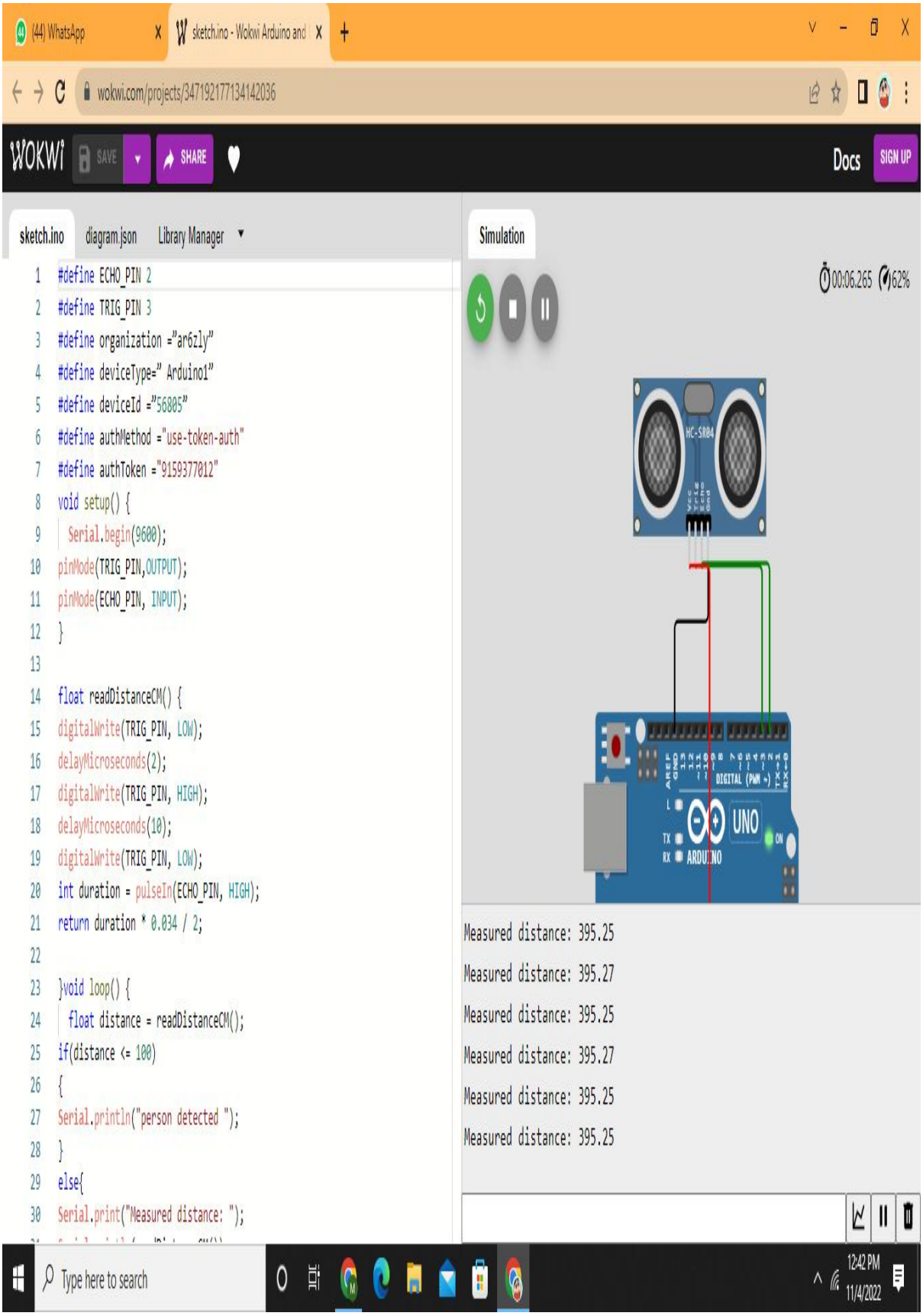
Simulation



Type here to search

12:42 PM
11/4/2022

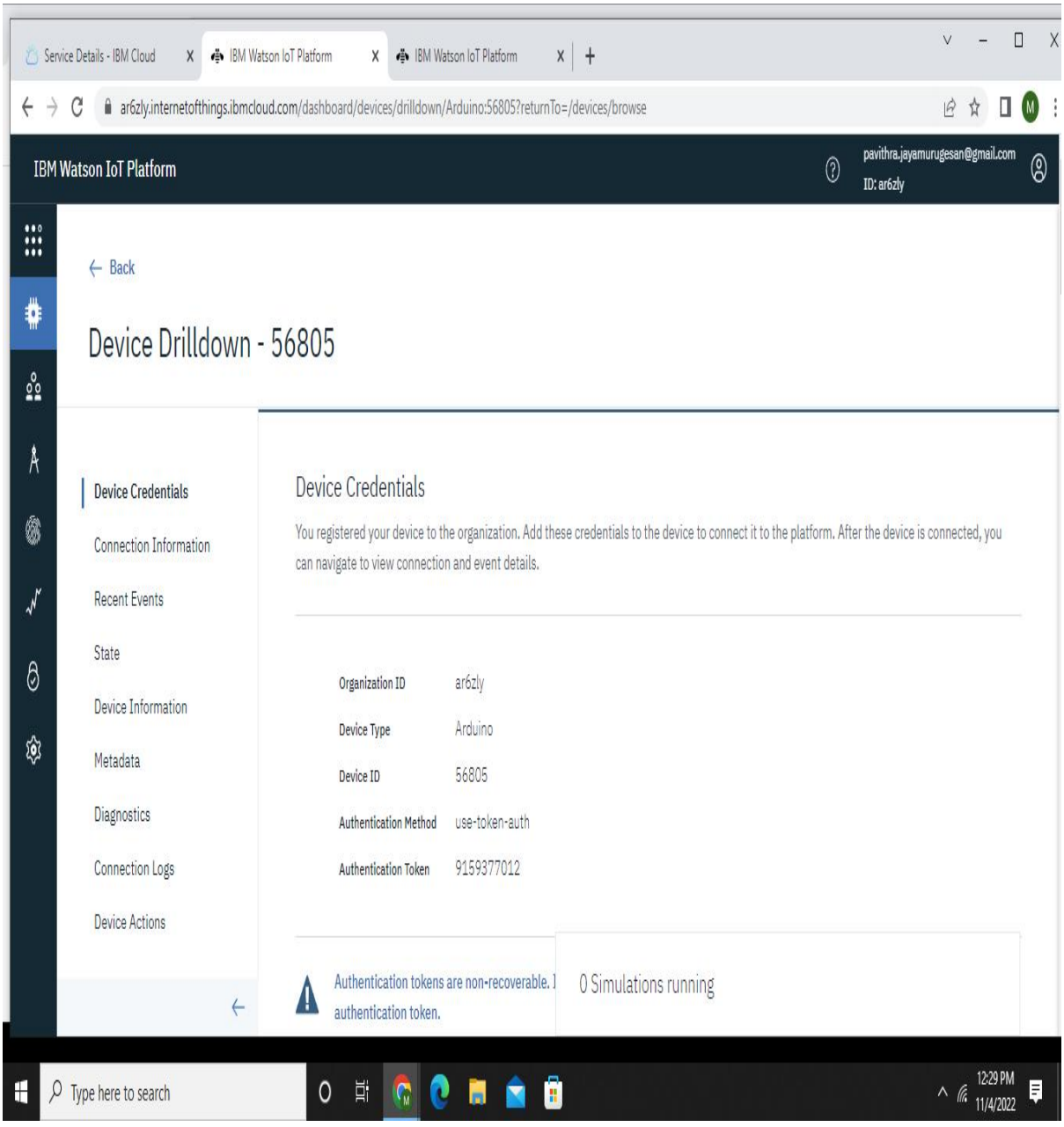
Output:

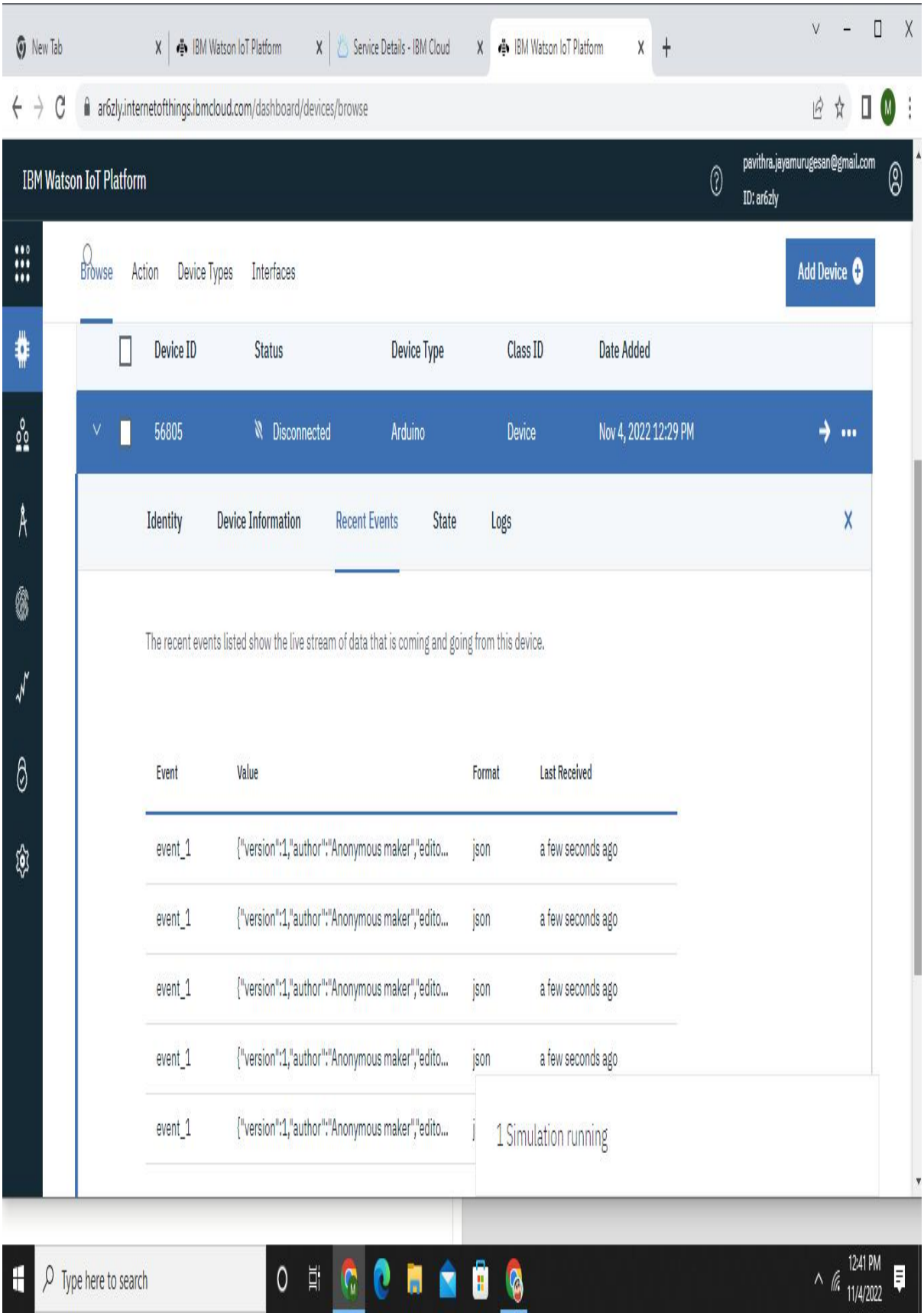


Wokwi link; https://wokwi.com/projects/347192177134142036

IBM CLOUD

Device Recent Events




New Tab
IBM Watson IoT Platform
Service Details - IBM Cloud
IBM Watson IoT Platform
ar6zly.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
pavithra.jayamurugesan@gmail.com
ID: ar6zly
Browse
Action
Device Types
Interfaces
Add Device
Device ID
Status
Device Type
Class ID
Date Added
56805
Disconnected
Arduino
Device
Nov 4, 2022 12:29 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
1 Simulation running
Type here to search
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