

ASSIGNMENT 4:

Question-1:

Write code and connections in wokwi for ultrasonic. Whenever distance is less than 100 cm's send "alert" to IBM cloud and display in device recent events.

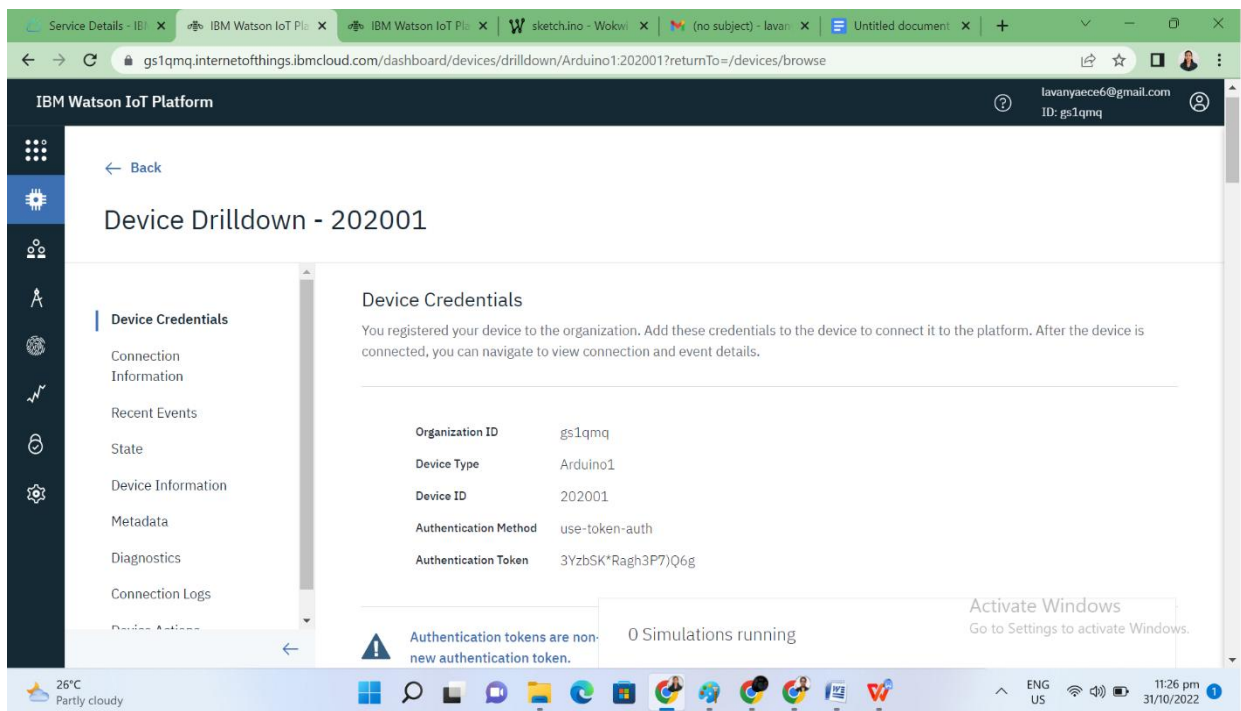
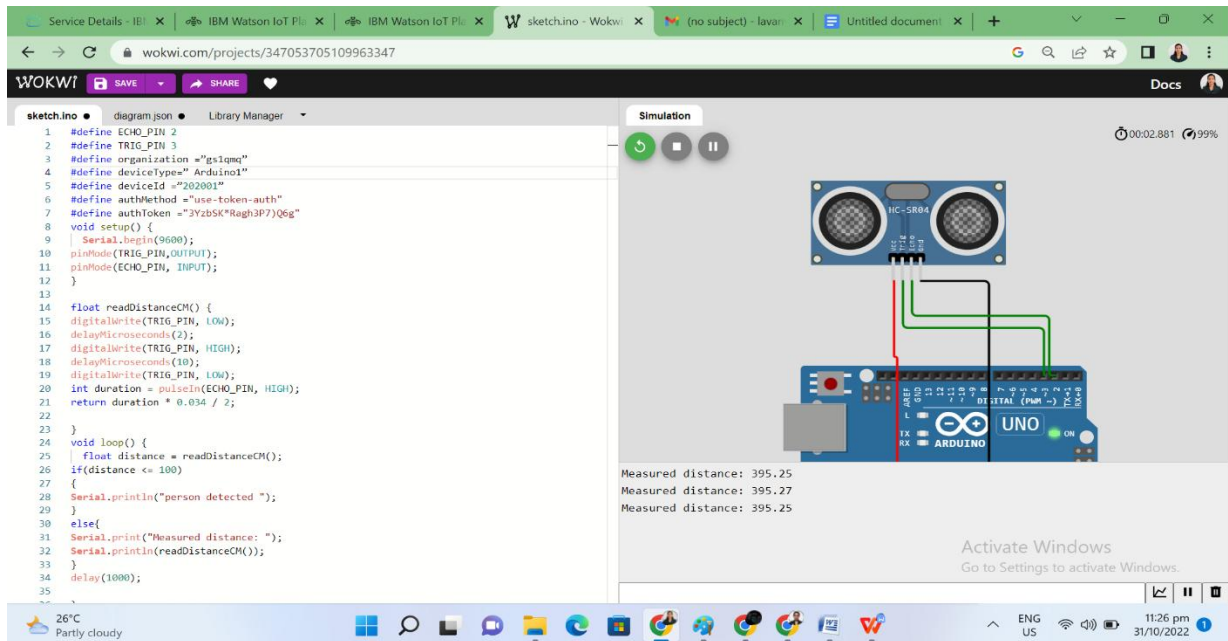
```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization ="gs1qmq"
#define deviceType=" Arduino1"
#define deviceId ="202001"
#define authMethod ="use-token-auth"
#define authToken ="3YzbSK*Ragh3P7)Q6g"
void setup() {
    Serial.begin(9600);
    pinMode(TRIG_PIN,OUTPUT);
    pinMode(ECHO_PIN, INPUT);
}

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() {
    float distance = readDistanceCM();
    if(distance <= 100)
    {
        Serial.println("person detected ");
    }
    else{
        Serial.print("Measured distance: ");
        Serial.println(readDistanceCM());
    }
    delay(1000);
}
```

WOKWI PROJECT LINK:

<https://wokwi.com/projects/346938247265387092>



Service Details - IBM Watson IoT Platform | gs1qmq.internetofthings.ibmcloud.com/dashboard/devices/drilldown/Arduino1:202001?returnTo=/devices/browse

Device Drilldown - 202001

Device Credentials

Connection Information

Recent Events

State

Device Information

Metadata

Diagnostics

Connection Logs

Device Actions

Connection Information

Basic connection information about this device.

Device ID	202001
Device Type	Arduino1
Date Added	Oct 31, 2022 11:25 PM
Added By	lavanyaace6@gmail.com
Connection Status	Disconnected

Recent Events

The recent events listed show the live s

0 Simulations running

Activate Windows

Go to Settings to activate Windows.

26°C Partly cloudy

ENG US 11:26 pm 31/10/2022

Service Details - IBM Cloud | gs1qmq.internetofthings.ibmcloud.com/dashboard/devices/drilldown/Arduino1:Arduino1_1?returnTo=/devices/browse

Device Drilldown - Arduino1_1

Connection Information

Recent Events

State

Device Information

Metadata

Diagnostics

Connection Logs

Device Actions

Connection Information

Basic connection information about this device.

Device ID	Arduino1_1
Device Type	Arduino1
Date Added	Nov 1, 2022 12:07 AM
Added By	lavanyaace6@gmail.com
Connection Status	Connected

Recent Events

The recent events listed show the live stream of data that is

6 Simulations running

24°C Raining now

ENG IN 00:08 01-11-2022

