

V.Sakthi 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 =" n9tbr1"
```

```
#define deviceType=" arduino"
```

```
#define deviceId ="57823"
```

```
#define authMethod ="use-token-auth"
```

```
#define authToken ="258741987"
```

```
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{
```

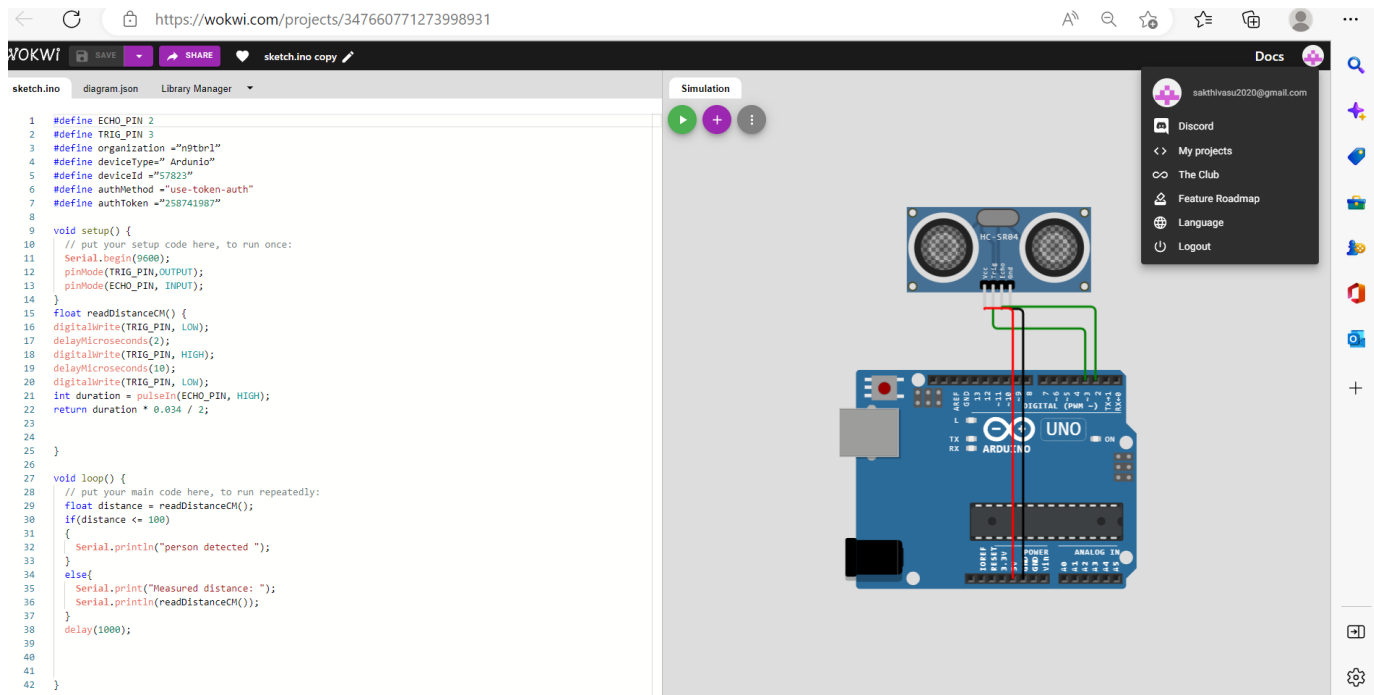
```
        Serial.print("Measured distance: ");
```

```
        Serial.println(readDistanceCM());
```

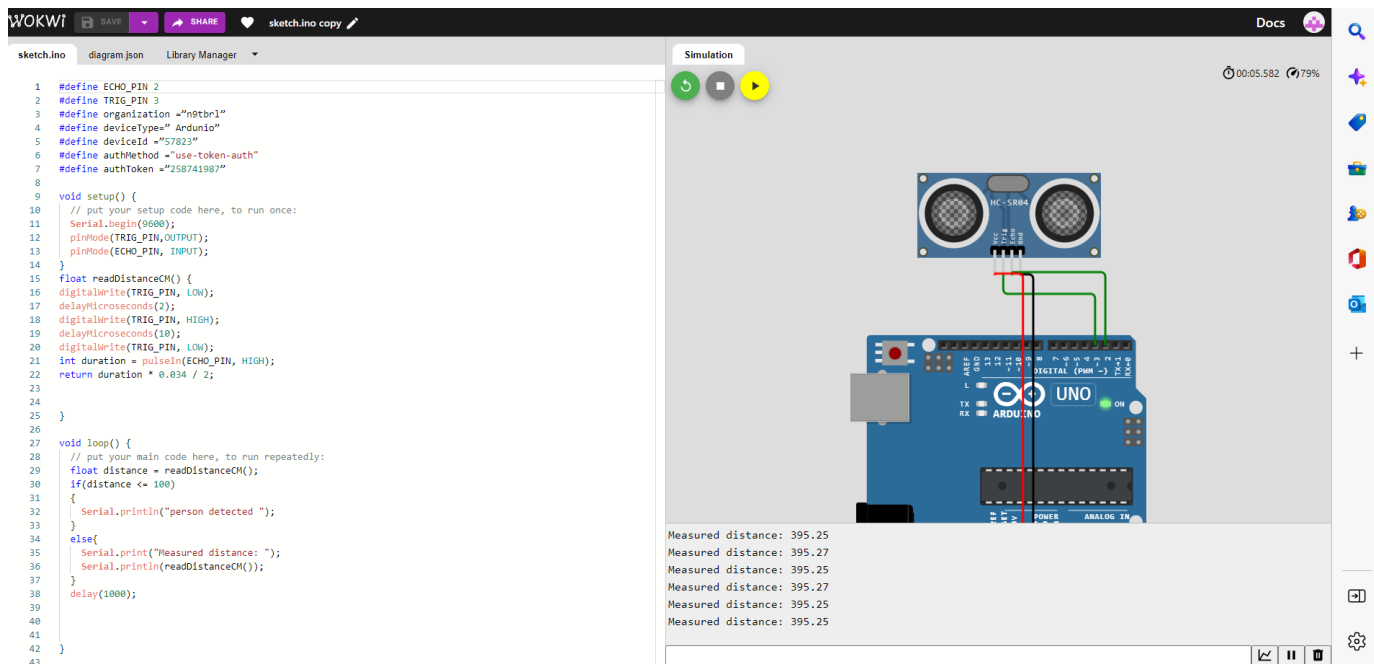
```
    }
```

```
    delay(1000);
```

```
}
```



Output:



Wokwi Link: <https://wokwi.com/projects/347660771273998931>

IBM CLOUD

Device Recent Events

IBM Watson IoT Platform

?

sakthivasu2020@gmail.com

ID: n9tbrl

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Device Drilldown - 57823

Connection Information

Recent Events

State

Device Information

Metadata

Diagnostics

Connection Logs

Device Actions

Connection Information

Basic connection information about this device.

Device ID

57823

Device Type

ardunio

Date Added

Nov 7, 2022 2:44 PM

Added By

sakthivasu2020@gmail.com

Connection Status

Disconnected

IBM Watson IoT Platform

?

sakthivasu2020@gmail.com

ID: n9tbrl

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Device Drilldown - 57823

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

2 Simulations running

