

D.Sathiya 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 ="a3vyes"
```

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

```
#define deviceId ="1998"
```

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

```
#define authToken ="hPQY8rVRsrSQxqbv5a"
```

```
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{
```

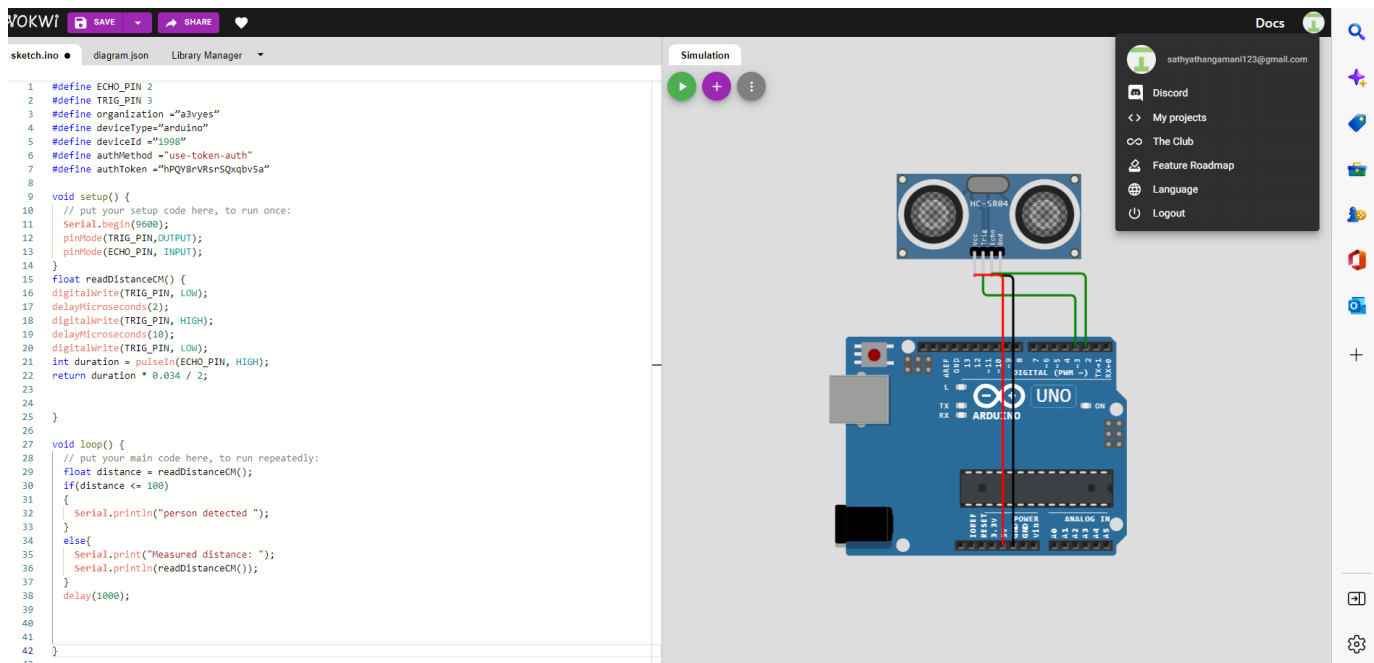
```
        Serial.print("Measured distance: ");
```

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

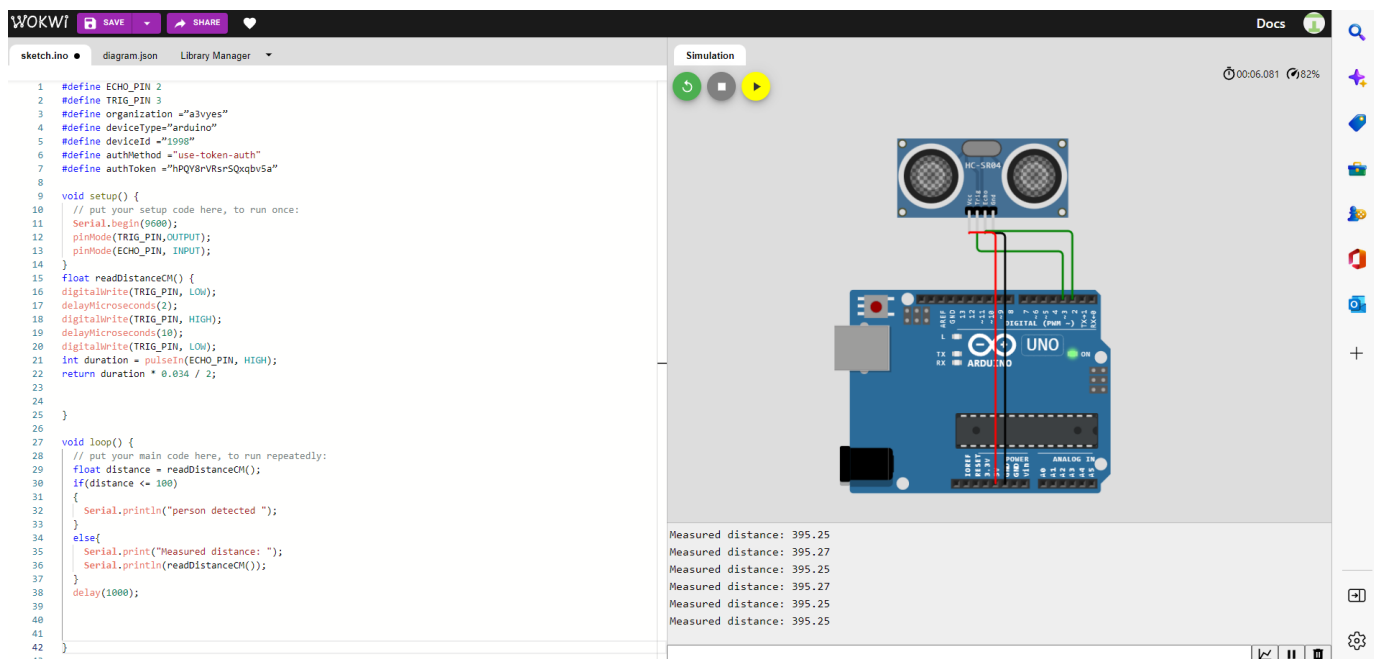
```
    }
```

```
    delay(1000);
```

```
}
```



Output:



Wokwi Link: <https://wokwi.com/projects/347742695155827284>

IBM CLOUD

Device Recent Events

IBM Watson IoT Platform

sathyathangamani123@gmail.com
ID: a3vyes

Browse

Action

Device Types

Interfaces

Add Device +

1998

Disconnected

arduino

Device

Nov 8, 2022 12:33 PM

→ ...

Identity

Device Information

Recent Events

State

Logs

×

Device ID

1998

Device Type

arduino

Date Added

Nov 8, 2022 12:33 PM

Added By

sathyathangamani123@gmail.com

Connection Status

Disconnected

IBM Watson IoT Platform

sathyathangamani123@gmail.com
ID: a3vyes

Browse

Action

Device Types

Interfaces

Add Device +

1998

Disconnected

arduino

Device

Nov 8, 2022 12:33 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

2 Simulations running