

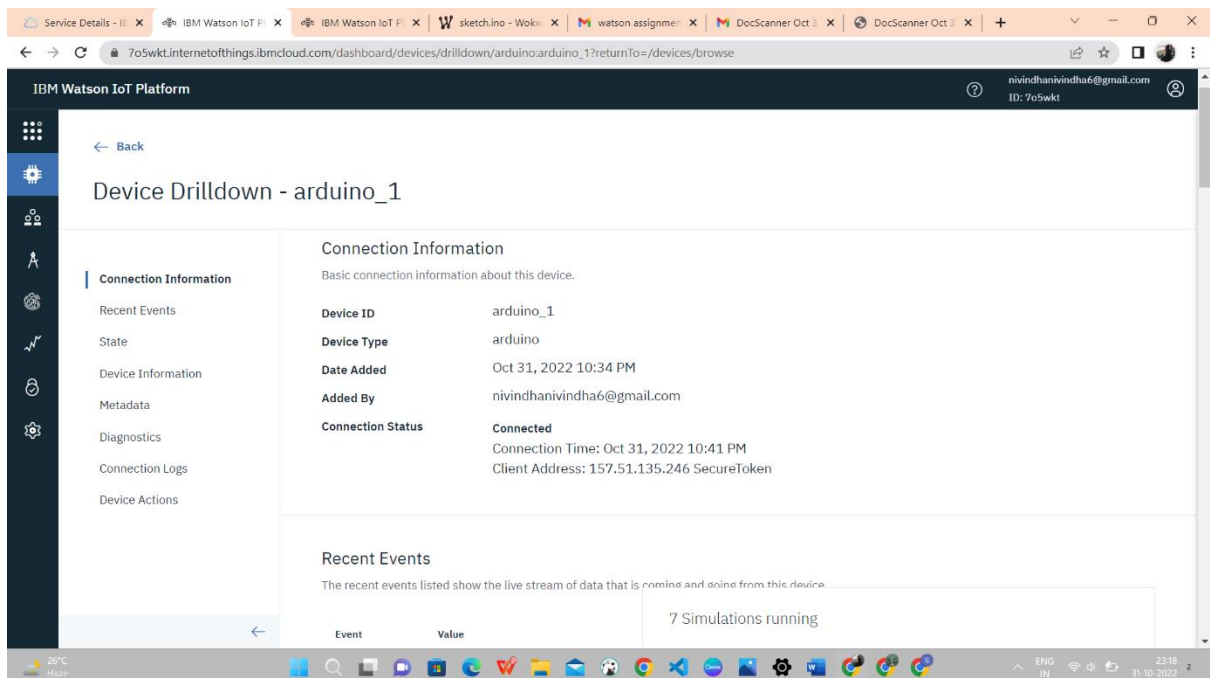
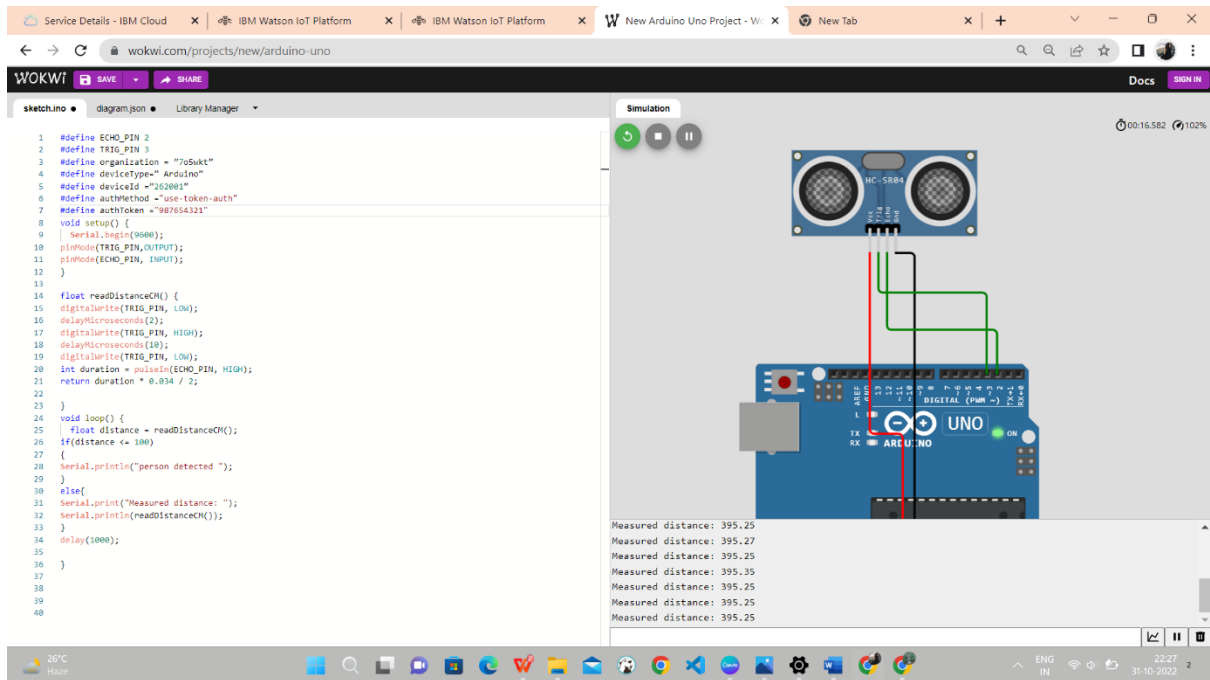
## ASSIGNMENT 4:

### 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 ="7o5wkt"
#define deviceType="Arduino"
#define deviceId ="262001"
#define authMethod ="use-token-auth"
#define authToken ="987654321"
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/347054190560805460>



Service Details - IBM Cloud

IBM Watson IoT Platform

IBM Watson IoT Platform

sketch.ino - Wokwi Arduino a

New Tab

7o5wkt.internetofthings.ibmcloud.com/dashboard/devices/drilldown/arduino.arduino\_1?returnTo=/devices/browse

IBM Watson IoT Platform

nivindhanivindha6@gmail.com  
ID: 7o5wkt

Back

Device Drilldown - arduino\_1

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":"nivindha","editor":"wokwi"...	json	a few seconds ago
event_1	{"version":1,"author":"nivindha","editor":"wokwi"...	json	a few seconds ago
event_1	{"version":1,"author":"nivindha","editor":"wokwi"...	json	a few seconds ago
event_1	{"version":1,"author":"nivindha","editor":"wokwi"...	json	a few seconds ago
event_1	{"version":1,"author":"nivindha","editor":"wokwi"...	json	a few seconds ago

7 Simulations running

29°C  
Haze

Search

Microsoft Edge

Google Chrome

Firefox

Opera

Vivaldi

Brave

Chromium

Opera GX

Opera Mini

Opera Touch

Opera Mobile

Opera Desktop

Opera Tablet

Opera TV

Opera Wear

Opera Watch

Opera Fold

Opera Flip

Opera Fold 2

Opera Fold 3

Opera Fold 4

Opera Fold 5

Opera Fold 6

Opera Fold 7

Opera Fold 8

Opera Fold 9

Opera Fold 10

Opera Fold 11

Opera Fold 12

Opera Fold 13

Opera Fold 14

Opera Fold 15

Opera Fold 16

Opera Fold 17

Opera Fold 18

Opera Fold 19

Opera Fold 20

Opera Fold 21

Opera Fold 22

Opera Fold 23

Opera Fold 24

Opera Fold 25

Opera Fold 26

Opera Fold 27

Opera Fold 28

Opera Fold 29

Opera Fold 30

Opera Fold 31

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Opera Fold 83

Opera Fold 84

Opera Fold 85

Opera Fold 86

Opera Fold 87

Opera Fold 88

Opera Fold 89

Opera Fold 90

Opera Fold 91

Opera Fold 92

Opera Fold 93

Opera Fold 94

Opera Fold 95

Opera Fold 96

Opera Fold 97

Opera Fold 98

Opera Fold 99

Opera Fold 100

ENG  
IN

22:35  
31-10-2022