

## A. Abitha 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 ="hiwdgt"
#define deviceType=" arduino"
#define deviceId ="1824"
#define authMethod ="use-token-auth"
#define authToken ="Tixp03!p&ZgcmrCbD2"

void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
  pinMode(TRIG_PIN,OUTPUT);
  pinMode(ECHO_PIN, INPUT);
}

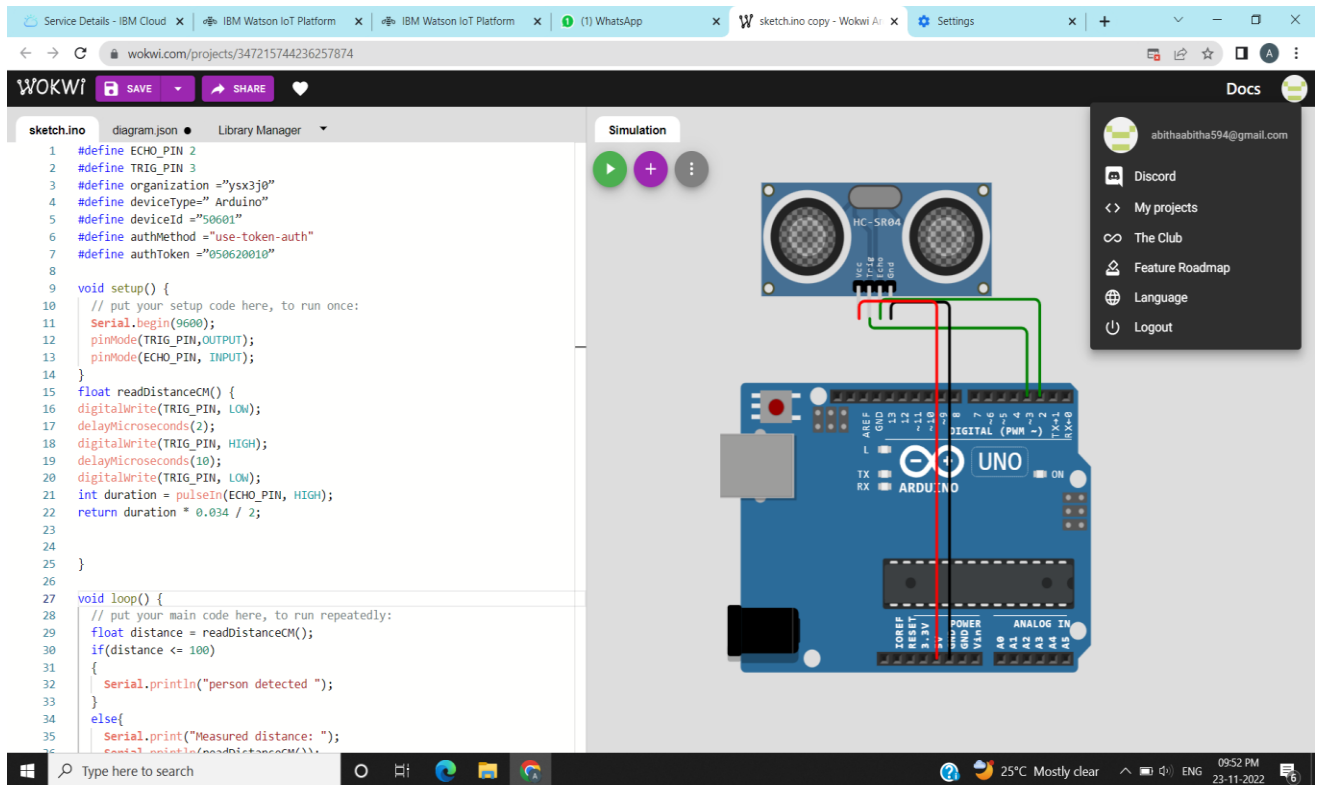
float readDistanceCM() {
  digitalWrite(TRIG_PIN, LOW);
  delayMicroseconds(2);
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
```

```
int duration = pulseIn(ECHO_PIN, HIGH);  
return duration * 0.034 / 2;
```

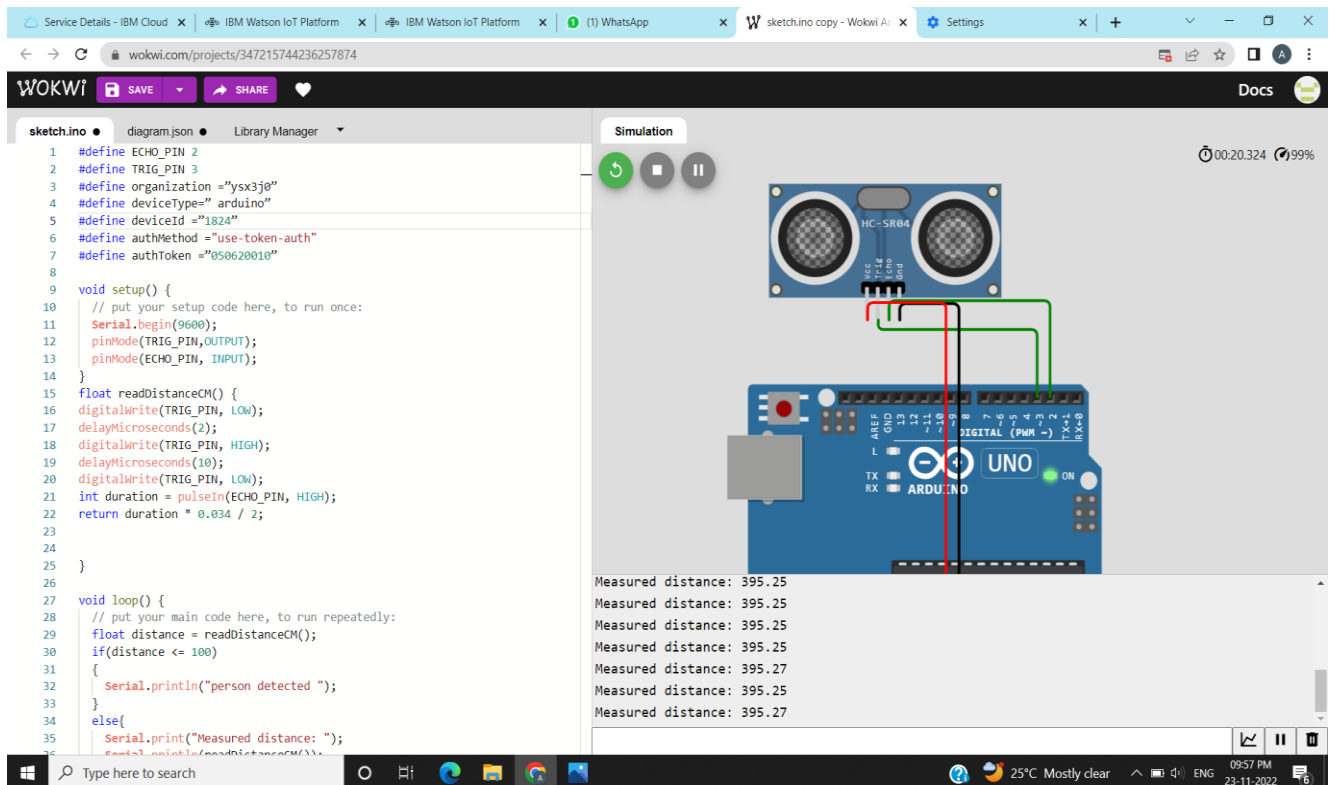
```
}
```

```
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/347215744236257874>

## IBM CLOUD

### Device Recent Events

Service Details - IBM Cloud x IBM Watson IoT Platform x IBM Watson IoT Platform x (1) WhatsApp x sketchino copy - Wokwi A x Settings x +

hiwdgt.internetofthings.ibmcloud.com/dashboard/devices/drilldown/arduino:1824?returnTo=/devices/browse

abithavctw6002@gmail.com ID: hiwdgt

### Device Drilldown - 1824

← Back

- 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	1824
Device Type	arduino
Date Added	Nov 23, 2022 9:43 PM
Added By	abithavctw6002@gmail.com
Connection Status	Disconnected

#### 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
-------	-------	--------	---------------

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#### 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

#### State

This table shows a list of data points that are reported by this device.

2 Simulations running

