

ASSIGNMENT-4
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Qn: Write code and connections in wokwi for the ultrasonic sensor.

Whenever the distance is less than 100 cms send an "alert" to the IBM cloud
and display in the device recent events.

Upload document with wokwi share link and images of IBM cloud

LINK:

<https://wokwi.com/projects/new/arduino-uno>

CODE:

```
long int echoPin=7;
long int trigPin=5;
void setup()

    Serial.begin(9600);
    pinMode(7,OUTPUT);
    pinMode(5,INPUT);

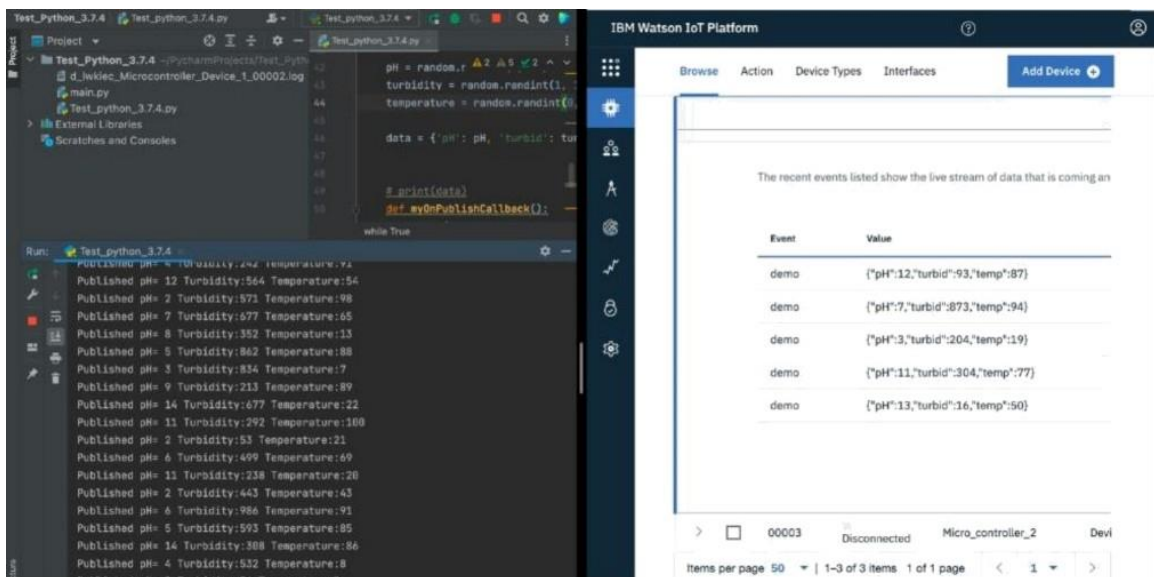
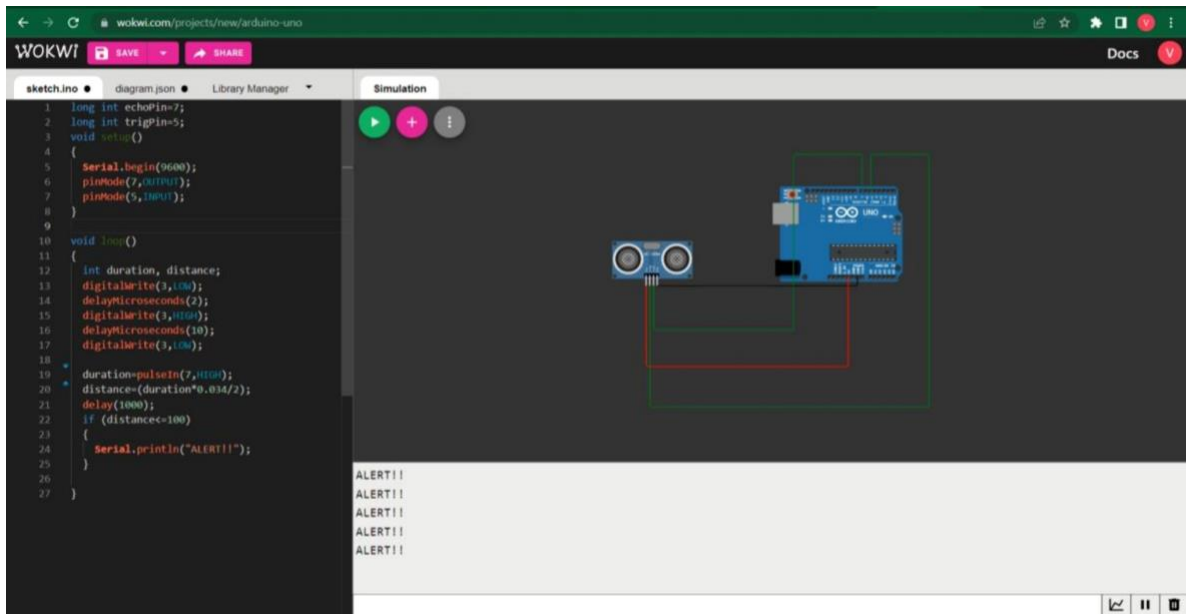
void loop()

    int duration, distance;
    digitalWrite(3,LOW);
    delayMicroseconds(2);
    digitalWrite(3,HIGH);
    delayMicroseconds(10);
    digitalWrite(3,LOW);

    duration=pulseIn(7,HIGH);
    distance=(duration*0.034/2);
    delay(1000);
    if (distance<=100)

        Serial.println("ALERT!!");
```

SIMULATIONS:



The screenshot displays the ThingsBoard web application. On the left is a dark blue sidebar with icons for home, devices, events, rules, widgets, settings, and users. The main area has a top navigation bar with tabs: Browse, Action, Device Types, Interfaces, and an Add Device button. Below the tabs, a message states: "The recent events listed show the live stream of data that is coming an". A table lists recent events:

Event	Value
demo	{"pH":12,"turbid":93,"temp":87}
demo	{"pH":7,"turbid":873,"temp":94}
demo	{"pH":3,"turbid":204,"temp":19}
demo	{"pH":11,"turbid":304,"temp":77}
demo	{"pH":13,"turbid":16,"temp":50}

At the bottom, there's a status bar showing a refresh icon, ID "00003", status "Disconnected", device name "Micro_controller_2", and "Dev1". Below this is a pagination control: "Items per page 50 | 1-3 of 3 items 1 of 1 page" with navigation arrows.