

ASSIGNMENT
4SUBMITTED
J Kanimozhi

AssignmentDate	26October 2022
Team ID	PNT2022TMID15087
Project Name	Gas leakage monitoring &Alerting system for industries
MaximumMarks	2Marks

Write code and connections in wokwi for ultrasonic. 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

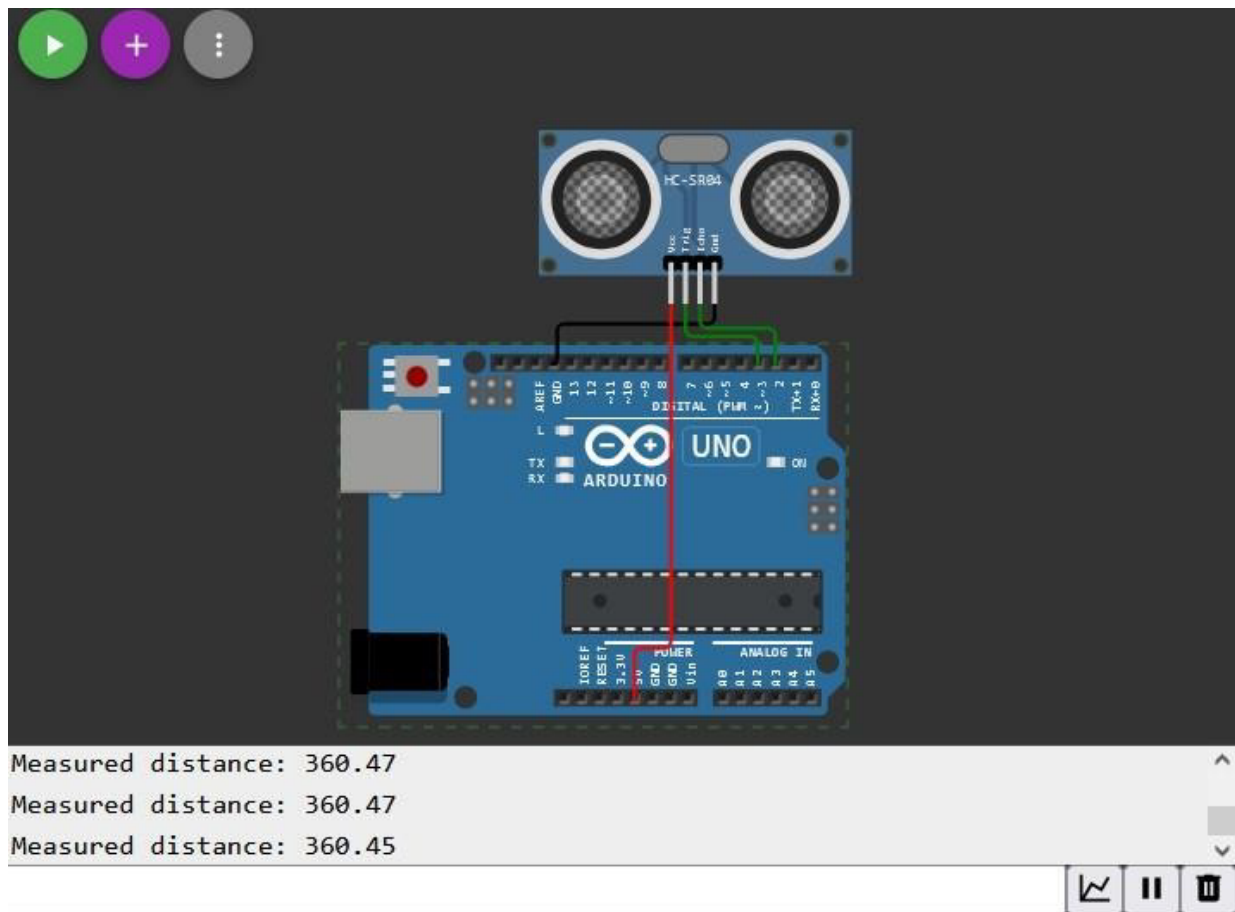
#define organization = "mmbh4c"
#define deviceType = "Ultrasonic"
#define deviceId = "1112"
#define authMethod = "use-token-auth"
#define authToken = "123456789"

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(100);
}
```



IBMCloud DeviceRecentEvents

167433912

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Ultrasonic_1 Connected Ultrasonic Device Oct 26, 2022 7:54 PM

Identity Device Information **Recent Events** State Logs X

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	{"status":"Person Detected"}	json	a few seconds ago
event_1	{"status":"Person Detected"}	json	a few seconds ago
event_1	{"status":"Person Detected"}	json	a few seconds ago
event_1	{"status":"Person Detected"}	json	a few seconds ago

1 Simulation running