

TEAM ID: PNT2022TMID15063

PROJECT NAME: GAS LEAKAGE MONITORING AND ALERTING SYSTEM FOR INDUSTRIES

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Write code and connections in working 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 = "mmbh4c"

#define deviceType = "Ultrasonic"

#define deviceId = "1112"

#define authMethod = "use-token-auth"

#define authToken = "123456789"

void setup() {

    Serial.begin(9600);

    pinMode(TRIG_PIN, OUTPUT);

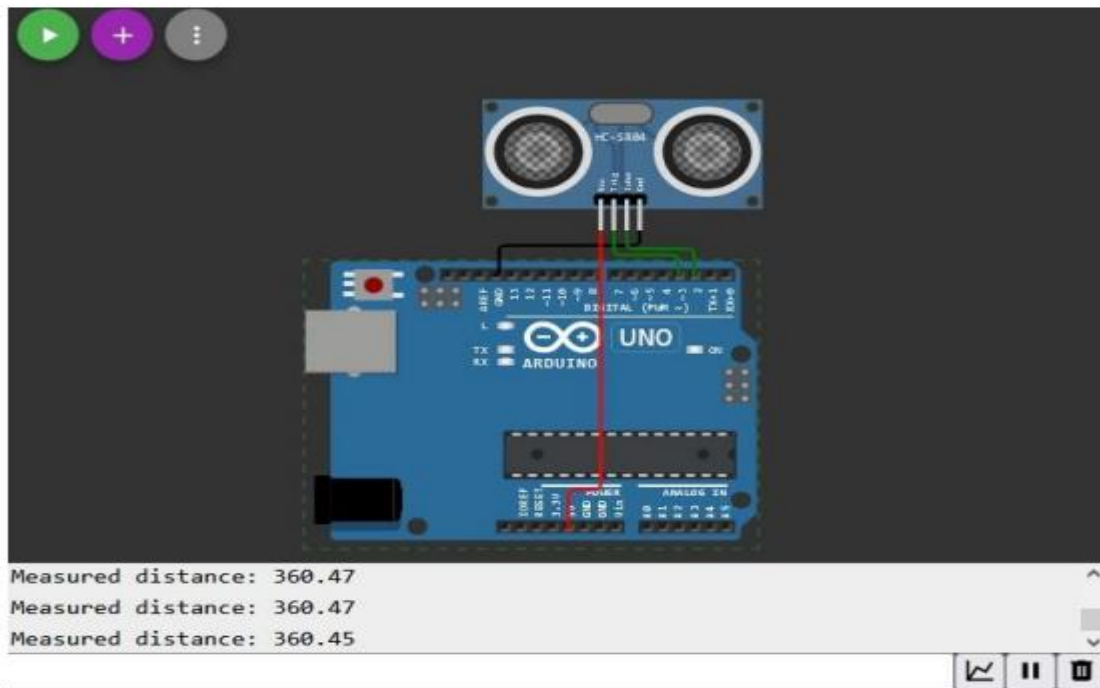
    pinMode(ECHO_PIN, INPUT);

}

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);  
}
```



IBM Cloud Device Recent Events

IBM Cloud IoT Platform interface showing the 'Recent Events' tab for a device named 'Ultrasonic_1'.

Device: Ultrasonic_1, Status: Connected, Last Received: Oct 26, 2022 7:54 PM

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