

ASSISGNMENT 4

Team ID : PNT2022TMID16026

Write a code and connections in wokwi for ultrasonic sensor. Whenever distance is less than 100 cm "send" alert to IBM Cloud and display in device recent events.

SIMULATION CODE

```
/*
  Ultrasonic Simple
  Prints the distance read by an ultrasonic sensor in
  centimeters. They are supported to four pins ultrasound
  sensors (like HC-SC04) and three pins (like PING)))
  and Sseed Studio sensors).

  The circuit:
  * * Module HC-SC04 (four pins) or PING))) (and other with
    three pins), attached to digital pins as follows:

  -----
  | HC-SC04 | Arduino |   | 3 pins | Arduino |
  -----
  | Vcc      | 5V      |   | Vcc      | 5V      |
  | Trig      | 12      | OR | SIG      | 13      |
  | Echo      | 13      |   | Gnd      | GND      |
  | Gnd       | GND     |   | -----
  -----

  */
#include "Ultrasonic.h"
/*
  Pass as a parameter the trigger and echo pin, respectively,
  or only the signal pin (for sensors 3 pins), like:
  Ultrasonic ultrasonic(13);
  */
Ultrasonic ultrasonic(12, 13);
int distance;

void setup() {
  Serial.begin(9600);
}

void loop() {
  // Pass INC as a parameter to get the distance in inches
```

```
distance = ultrasonic.read(CM);

Serial.print("Distance in CM: ");
Serial.println(distance);

distance = ultrasonic.read(INC);

Serial.print("Distance in Inches: ");
Serial.println(distance);

delay(1000);
}

{
  "version": 1,
  "author": "Anonymous maker",
  "editor": "wokwi",
  "parts": [
    { "type": "wokwi-arduino-uno", "id": "uno", "top": 70.66, "left": 3.33,
"attrs": {} },
    { "type": "wokwi-hc-sr04", "id": "ultrasonic1", "top": -63.9, "left":
40.33, "attrs": {} }
  ],
  "connections": [
    [ "ultrasonic1:VCC", "uno:5V", "red", [ "v25.9", "h-126.44", "v238",
"h182.67" ] ],
    [ "ultrasonic1:GND", "uno:GND.1", "black", [ "v33.9", "h-16.11" ] ],
    [ "ultrasonic1:ECHO", "uno:13", "purple", [ "v0" ] ],
    [ "ultrasonic1:TRIG", "uno:12", "yellow", [ "v21.23", "h21.67" ] ]
  ]
}
```

SIMULATION

WOKWI

SAVE SHARE

Docs SIGN UP

sketch.ino diagram.json libraries.txt Library Manager

```
19 //
20 #include "Ultrasonic.h"
21 /*
22  * Pass as a parameter the trigger and echo pin, respectively,
23  * or only the signal pin (for sensors 3 pins), like:
24  * Ultrasonic ultrasonic(13);
25  */
26 Ultrasonic ultrasonic(12, 13);
27 int distance;
28
29 void setup() {
30   Serial.begin(9600);
31 }
32
33
34 void loop() {
35   // Pass INC as a parameter to get the distance in inches
36
37   distance = ultrasonic.read(CM);
38   Serial.print("Distance in CM: ");
39   Serial.println(distance);
40
41   distance = ultrasonic.read(INC);
42   Serial.print("Distance in Inches: ");
43   Serial.println(distance);
44
45   delay(1000);
46 }
47
48
49
50
51
```

Simulation

WOKWI

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45   delay(1000);
46 }
47
48
49
50
51
```

Simulation

00:08.198 100%

Restart the simulation

Distance in Inches: 22
Distance in CM: 357
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Distance in Inches: 22