

Assignment - 4
C Programming

Assignment Date	31 October 2022
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Maximum Marks	4 Marks

QUESTION 1 :

Write code and connections in wokwi for ultrasonic sensor. Whenever distance is less than 100cms, send “alert” to IBM Cloud and display in device recent events.

CODE :

```
#include "Ultrasonic.h"
Ultrasonic ultrasonic (12, 13);
int distance ;
void setup(){
    serial.begin(9600);
}
void loop(){
    distance = ultrasonic.red(CM);
    Serial.print("Distance in CM: ");
    Serial.println(distance);
    if (distance < 100)
        Serial.println();
    delay(1000);
}
```

OUTPUT:

sketch.ino

diagram.json

Ultrasonic.h

Ultrasonic.cpp

Library Manager

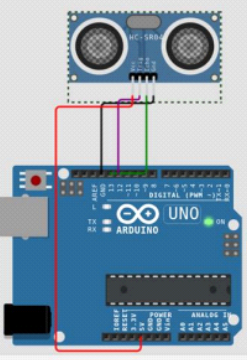
```
1 {
2   "version": 1,
3   "author": "Brinda",
4   "editor": "wokwi",
5   "parts": [
6     {
7       "type": "wokwi-arduino-uno",
8       "id": "uno",
9       "top": 255.31,
10      "left": 31.06,
11      "rotate": 0,
12      "hide": false,
13      "attrs": {}
14    },
15    {
16      "type": "wokwi-hc-sr04",
17      "id": "ultrasonic",
18      "top": 86.99,
19      "left": 109.89,
20      "rotate": 0,
21      "hide": false,
22      "attrs": { "distance": "100" }
23    }
24  ],
25  "connections": [
26    [ "uno:GND.1", "ultrasonic:GND", "black", [ "v-8", "+", "v8" ] ],
27    [ "uno:13", "ultrasonic:ECHO", "green", [ ] ],
28    [ "uno:12", "ultrasonic:TRIG", "purple", [ "+", "v4" ] ],
29    [ "uno:5V", "ultrasonic:VCC", "red", [ "v10", "h-90", "+", "v12" ] ]
30  ]
31 }
```

Simulation

00:18.34s 99%

Editing Ultrasonic Distance Sensor

Distance: 67cm



alert
Distance in CM: 70
alert
Distance in CM: 70
alert
Distance in CM: 70
alert