ASSIGNMENT-4

DISTANCE DETECTION USING ULTRASONIC SENSOR

Date	03.11.2022
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Mark	2Marks

Question1:

Write code and connections in wokwi for ultrasonic sensors. Whenever distance is less than 220 cms send "alert" to ibm cloud and display in device recent events

In my project wokwi link: https://wokwi.com/projects/290056311044833800

CODE:

wokwi.com/projects/290056311044833800 hc-sr04.ino 🧪 WOKWi **SAVE** → SHARE by urish hc-sr04.ino diagram.json • Library Manager 1 2 HC-SR04 Ultrasonic Sensor Example. 3 4 Turn the LED on when an object is within 100cm range. 5 6 Copyright (C) 2021, Uri Shaked 7 8 9 #define ECHO PIN 2 10 #define TRIG_PIN 3 11 12 void setup() { 13 Serial.begin(115200); 14 pinMode(LED_BUILTIN, OUTPUT); 15 pinMode(TRIG_PIN, OUTPUT); pinMode(ECHO_PIN, INPUT); 16 17 18 float readDistanceCM() { 19 digitalWrite(TRIG_PIN, LOW); 20 delayMicroseconds(2); 21 digitalWrite(TRIG_PIN, HIGH); 22 delayMicroseconds(10); 23 24 digitalWrite(TRIG_PIN, LOW); int duration = pulseIn(ECHO_PIN, HIGH); 25 26 return duration * 0.034 / 2; 27

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void loop() {

float distance = readDistanceCM();

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hc-sr04.ino
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  hc-sr04.ino
               diagram.json
                               Library Manager
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     3
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```

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              diagram.json
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   45
            [ "uno:3", "ultrasonic:TRIG", "purple", [ "*", "v4" ] ],
    46
             [ "uno:5V", "ultrasonic:VCC", "red", [ "v16", "h-96", "*", "v12" ] ],
    47
             [ "uno:GND.1", "led:C", "black", [] ],
    48
             [ "r1:1", "led:A", "blue", [] ],
    49
             [ "uno:13", "r1:2", "blue", [] ]
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    51
    52
```

→ SHARE WOKWI 🖪 SAVE Docs hc-sr04.ino diagram.json Library Manager 🔻 Simulation Ō 00:03.633 **(*)** "version": 1, "author": "Uri Shaked",
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