Assignment - 4
Ultrasonic Sensor in Wokwi

Assignment Date	01NOVEMBER 2022
Student Name	AYYAPPAN M
Student Roll Number	920319106006
Maximum Marks	2 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:
Sketch.ino

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

The circuit:
* * Module HR-SC04 (four pins) or PING))) (and other withthree 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  | --------------------

   ----------------------------
                                            */
```
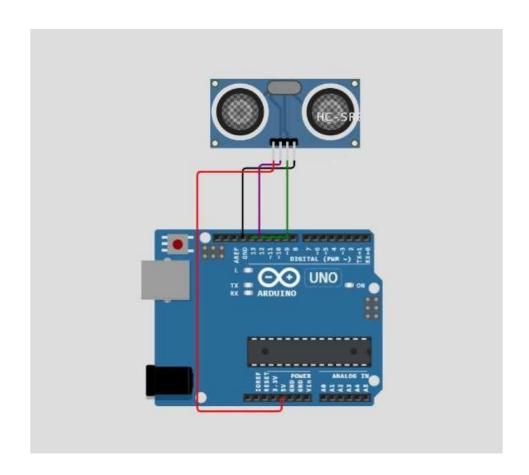
```cpp
#include "Ultrasonic.h"
/*
Pass as a parameter the trigger and echo pin, respectively,or only
the signal pin (for sensors 3 pins), like: Ultrasonic ultrasonic(13);
*/
Ultrasonic ultrasonic(12, 13);int distance;
void setup() { Serial.begin(9600);
}
void loop() {
// Pass INC as a parameter to get the distance in inchesdistance =
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);
}
```

Diagram.json

```json
{
"version": 1,
"author": "Rozen Berg","editor": "wokwi", "parts": [
{
"type": "wokwi-arduino-uno","id": "uno",
"top": 259.31,
"left": 31.06,
"rotate": 0,
"hide": false,
"attrs": {}
},
```

```
                    {
        "type": "wokwi-hc-sr04",
          "id": "ultrasonic",
            "top": 86.99,
             "left": 109.89,
              "rotate": 0,
               "hide": false,
          "attrs": { "distance": "100" }
                    }
                    ],
              "connections": [
 [ "uno:GND.1", "ultrasonic:GND", "black", [ "v-8", "*", "v8" ] ],[
          "uno:13", "ultrasonic:ECHO", "green", [] ],
     [ "uno:12", "ultrasonic:TRIG", "purple", [ "*", "v4" ] ],
 [ "uno:5V", "ultrasonic:VCC", "red", [ "v16", "h-96", "*", "v12" ] ]
                    ]
                    }
```

Circuit Diagram