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.

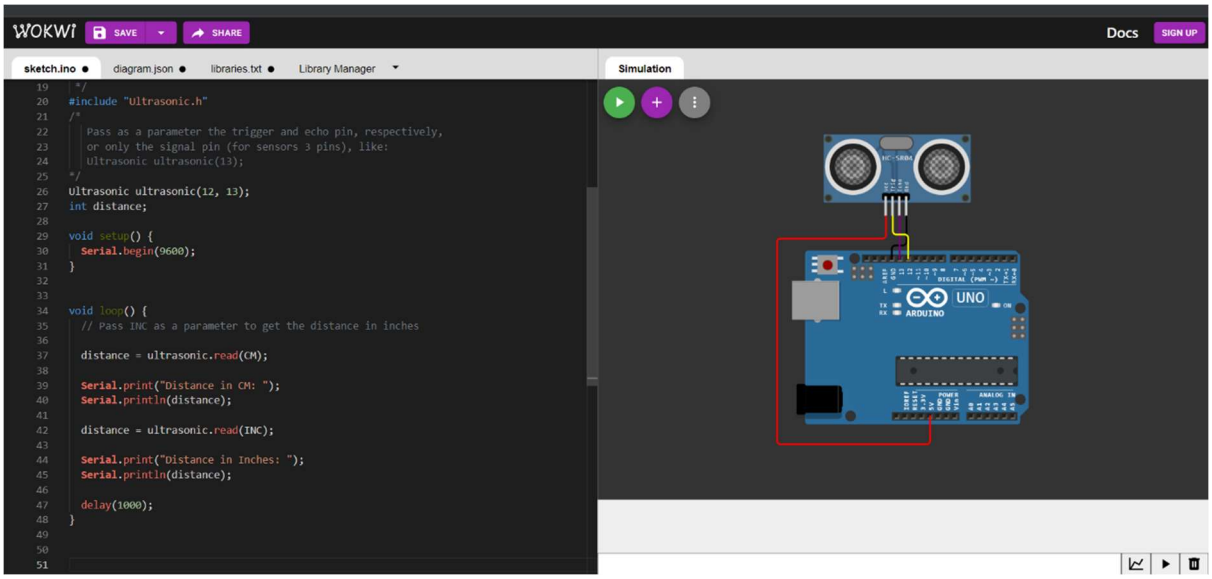
SIMULATION CODE

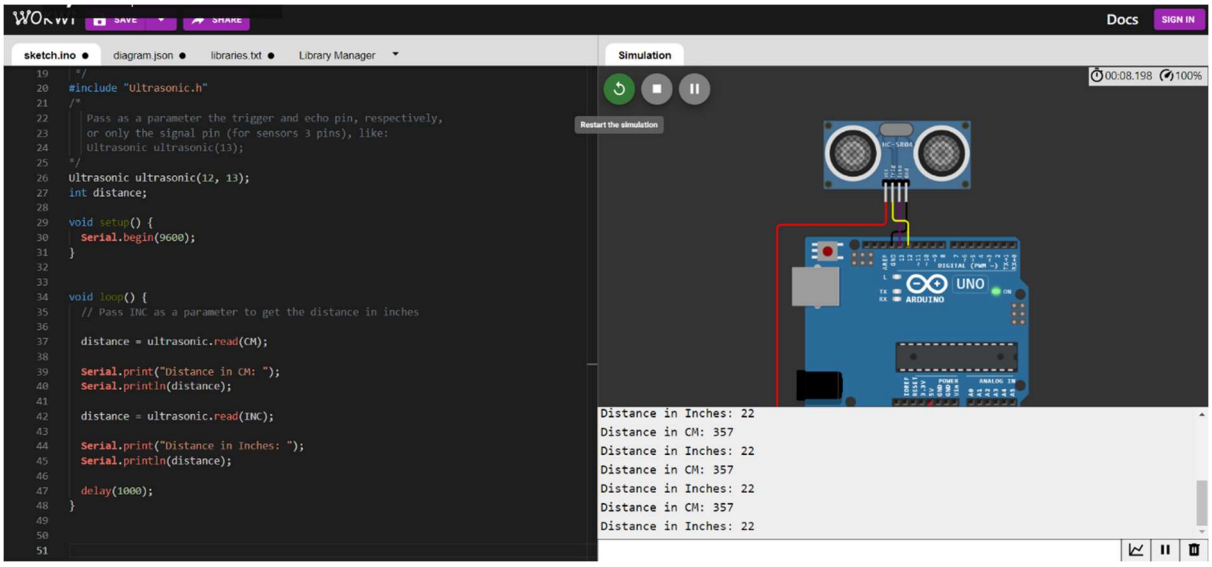
```
/*
   Ultrasonic Simple
   Prints the distance read by an ultrasonic sensor in
   centimeters. They are supported to four pins ultrasound
   sensors (liek HC-SC04) and three pins (like PING)))
   and Seeed Studio sensors).

   The circuit:
 * * Module HR-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
Simulation
*/
#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);
}
UNO
ARDUINO


Docs
SIGN IN
sketch.ino
diagram.json
libraries.txt
Library Manager
Simulation
Restart the simulation
00:08.198
100%
Distance in Inches: 22
Distance in CM: 357
Distance in Inches: 22
Distance in CM: 357
Distance in Inches: 22
Distance in CM: 357
Distance in Inches: 22
UNO
ARDUINO