

ASSIGNMENT 4

Date	27 October 2022
Team ID	PNT2022TMID14476
Project Name	Real time River water Quality Monitoring and Control system
Name & Roll No	Shankarmaresh A - 711320ECL15

Write code and connections in wokwi for ultrasonic sensor. Whenever distance is less than 100cm send “ALERT” to IBM cloud and display in device recent events.

PROGRAM CODE:

```
#define echopin 7
#define trigpin 8
long duration;
int distance;
void setup(){
    pinMode(trigpin,OUTPUT);
    pinMode(echopin,INPUT);
    Serial.begin(9600);
}
void loop(){
    digitalWrite(trigpin,HIGH);
    delayMicroseconds(10);
    digitalWrite(trigpin,LOW);
    duration=pulseIn(echopin,HIGH);
    distance = duration*0.034/2;
    Serial.print(" MEASURED DISTANCE : ");
    Serial.println(distance);
    if (distance < 100)
        Serial.print(" ALERT ");
        Serial.println();
        delay(10000);
}
```

OUTPUT:

WOKWI

SAVE

SHARE

Docs

S

sketch.ino

diagram.json

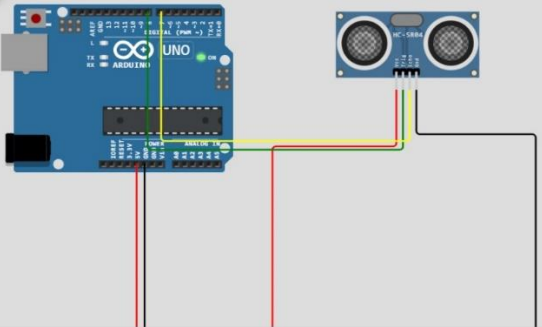
libraries.txt

Library Manager

```
1 #define echopin 7
2 #define trigpin 8
3 long duration;
4 int distance;
5 void setup(){
6   pinMode(trigpin,OUTPUT);
7   pinMode(echopin,INPUT);
8   Serial.begin(9600);
9 }
10 void loop(){
11   digitalWrite(trigpin,HIGH);
12   delayMicroseconds(10);
13   digitalWrite(trigpin,LOW);
14   duration=pulseIn(echopin,HIGH);
15   distance = duration*0.034/2;
16   Serial.print(" MEASURED DISTANCE : ");
17   Serial.println(distance);
18   if (distance < 100)
19     Serial.print(" ALERT ");
20   Serial.println();
21   delay(10000);
22 }
```

Simulation

00:21.762 100%



MEASURED DISTANCE : 349

MEASURED DISTANCE : 162

MEASURED DISTANCE : 27

ALERT

