

ASSIGNMENT 4

Date	28 October 2022
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Write code and connections in wowki for ultrasonic sensor.

Whenever distance is less than 100cms send “alert” to IBM cloud and display in device recent events.

Program Code:

```
#include "Ultrasonic.h"
Ultrasonic ultrasonic(6,2);
int distance; void setup()
{
  Serial.begin(9600);
}
void loop() {
  distance = ultrasonic.read(CM);
  Serial.print("Distance in CM: ");
  Serial.println(distance); if
  (distance < 100)
```

```
Serial.print("alert");
```

```
Serial.println();
```

```
delay(3000);
```

```
}
```

OUTPUT:

The screenshot displays the Wokwi web-based IDE. On the left, the code for `hc-sr04-Ultrasonic-Simulation.ino` is shown:

```
1 #include "Ultrasonic.h"
2 Ultrasonic ultrasonic(6,2);
3 int distance;
4 void setup() {
5   Serial.begin(9600);
6 }
7 void loop() {
8   distance = ultrasonic.read(CM);
9   Serial.print("Distance in CM: ");
10  Serial.println(distance);
11  if (distance < 100)
12    Serial.print("alert");
13    Serial.println();
14    delay(3000);
15  }
```

On the right, the simulation shows an Arduino Uno with an HC-SR04 sensor connected. The serial monitor output is as follows:

```
Distance in CM: 317
Distance in CM: 162
Distance in CM: 47
alert
```

The bottom status bar indicates a temperature of 30°C, cloudiness, and a system clock of 7:38 PM on 10/28/2022.