

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 a Wokwi simulation of an Arduino Uno microcontroller board connected to an HC-SR04 ultrasonic sensor. The code in the editor is as follows:

```
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 }
```

The simulation output shows the following sequence of printed values:

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

The sensor is connected to the Arduino Uno with the following wiring: VCC to 5V, GND to GND, Trig to digital pin 6, and Echo to digital pin 2. The simulation interface includes a 'Simulation' tab with play, stop, and reset buttons, and a status bar at the bottom showing the temperature (30°C) and time (7:38 PM, 10/28/2022).