

ASSIGNMENT 4

Date	28 October 2022
Team ID	PNT2022TMID45401
Roll No	E1194023

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 IDE interface for an Arduino Uno simulation. The code editor on the left contains the following C++ code:

```
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 window on the right shows an Arduino Uno board connected to an HC-SR04 ultrasonic sensor. The sensor's VCC pin is connected to the 5V pin on the Arduino, and its GND pin is connected to a GND pin. The TRIG pin is connected to digital pin 6, and the ECHO pin is connected to digital pin 2. The simulation is running, as indicated by the play button and the timer showing 00:16.038 at 85% completion.

The serial monitor output shows the following sequence of events:

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