

ASSIGNMENT 4

Date	28 October 2022
Team ID	PNT2022TMID45401
Roll No	E1194016

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 }
16
```

The simulation window on the right shows an Arduino Uno board connected to an HC-SR04 ultrasonic sensor. The sensor's output is visualized as a series of concentric circles representing the range-finding process. The output console at the bottom of the simulation window displays the following text:

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

The status bar at the bottom of the IDE indicates the system temperature is 30°C, the language is set to English (IN), and the date is 10/28/2022.