

## ASSIGNMENT 4

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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 output indicates that the distance measured by the sensor is 317 cm, then 162 cm, then 47 cm. Since 47 cm is less than the 100 cm threshold, the word "alert" is printed.