

## ASSIGNMENT-4

Team Id: PNT2022TMID3942

|                     |                               |
|---------------------|-------------------------------|
| Assignment date     | 25 <sup>th</sup> October 2022 |
| Student Name        | B.Hemaranjani                 |
| Student Roll number | 510119106003                  |
| Maximum marks       | 2marks                        |

### Question:

Write code and connections in wokwi for ultrasonic sensor. Whenever distance is less than 100cms send “alert” to ibm cloud and display in device recent events.

### Coding:

```
#define ECHO_PIN 2
#define TRIG_PIN 3
void setup() {
    Serial.begin(115200);
    pinMode(LED_BUILTIN, OUTPUT);
    pinMode(TRIG_PIN, OUTPUT);
    pinMode(ECHO_PIN, INPUT);
}
float readDistanceCM() {
    digitalWrite(TRIG_PIN, LOW);
    delayMicroseconds(2);
    digitalWrite(TRIG_PIN, HIGH);
    delayMicroseconds(10);
    digitalWrite(TRIG_PIN, LOW);
    int duration = pulseIn(ECHO_PIN, HIGH);
    return duration * 0.034 / 2;
}
```

```
void loop() {  
    float distance = readDistanceCM();  
    bool isNearby = distance < 100;  
    digitalWrite(LED_BUILTIN, isNearby);  
    Serial.print("Measured distance: ");  
    Serial.println(readDistanceCM());  
    delay(100);  
}
```

**Design Link:**

<https://wokwi.com/projects/346478359345103442>