# IBM ASSIGNMENT-4

| Assignment Date | 24 October 2022 |
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**ASSIGNMENT DETAILS:**

Technology: IOT

**Domain: Signs with smart connectivity for better road safety**

**ASSIGNMENT QUESTION:-**

Write a 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.

**Note: I couldn't complete the assignment as told due to some issues in IBM cloud. I have mentioned my query in both rocket chat and chat with mentor.**
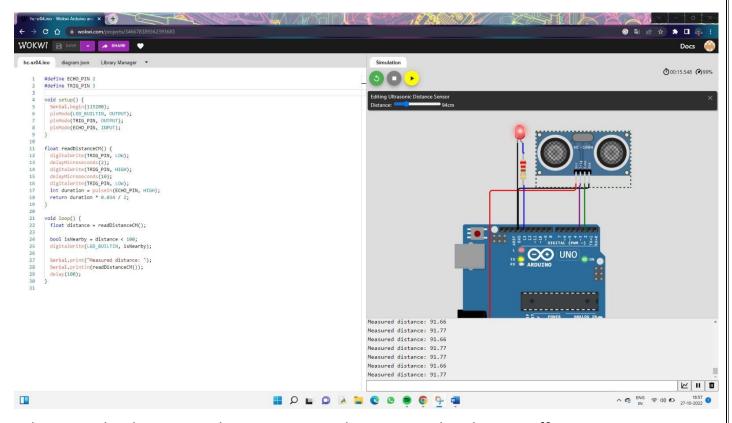
**CODE:**

```
#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);
}
```

**OUTPUT:**

When the distance is less than 100cms LED glows as an alert



Whenever the distance is above 100cms it shows normal and LED is off