

ASSIGNMENT- 4

TEAM ID : PNT2022TMID00516

PROJECT NAME: REAL-TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

Problem Statement: Write code and connection in wokwi for ultrasonic sensor whenever distance is less than 100 cms send alert to ibm cloud and display in device recent events.

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:

