

# REAL-TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

## ASSIGNMENT – 4

Team ID	PNT2022TMID12856
Name	KAVI ARASAN K
Roll No.	718019L221

1. Write Code and connections in wokwi for ultrasonic sensor. Whenever distance is less than 100 centimetres send an '*alert*' to the ibm cloud and display in device recent events.

### Program:

```
#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);
}

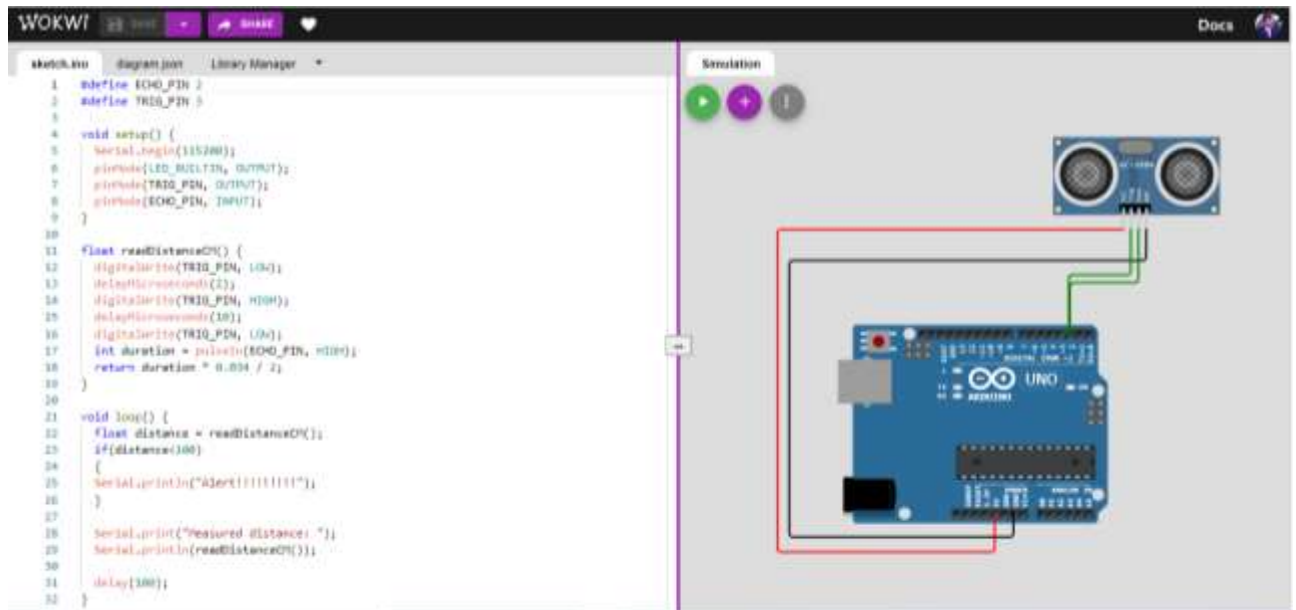
float readDistanceCM() {
  digitalWrite(TRIG_PIN, LOW);
  delayMicroseconds(2);
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
  int duration = pulseIn(ECHO_PIN, HIGH);
  return duration * 0.034 / 2;
}

void loop() {
  float distance = readDistanceCM();
  if(distance<100)
  {
    Serial.println("Alert!!!!!!!!!!");
  }

  Serial.print("Measured distance: ");
  Serial.println(readDistanceCM());

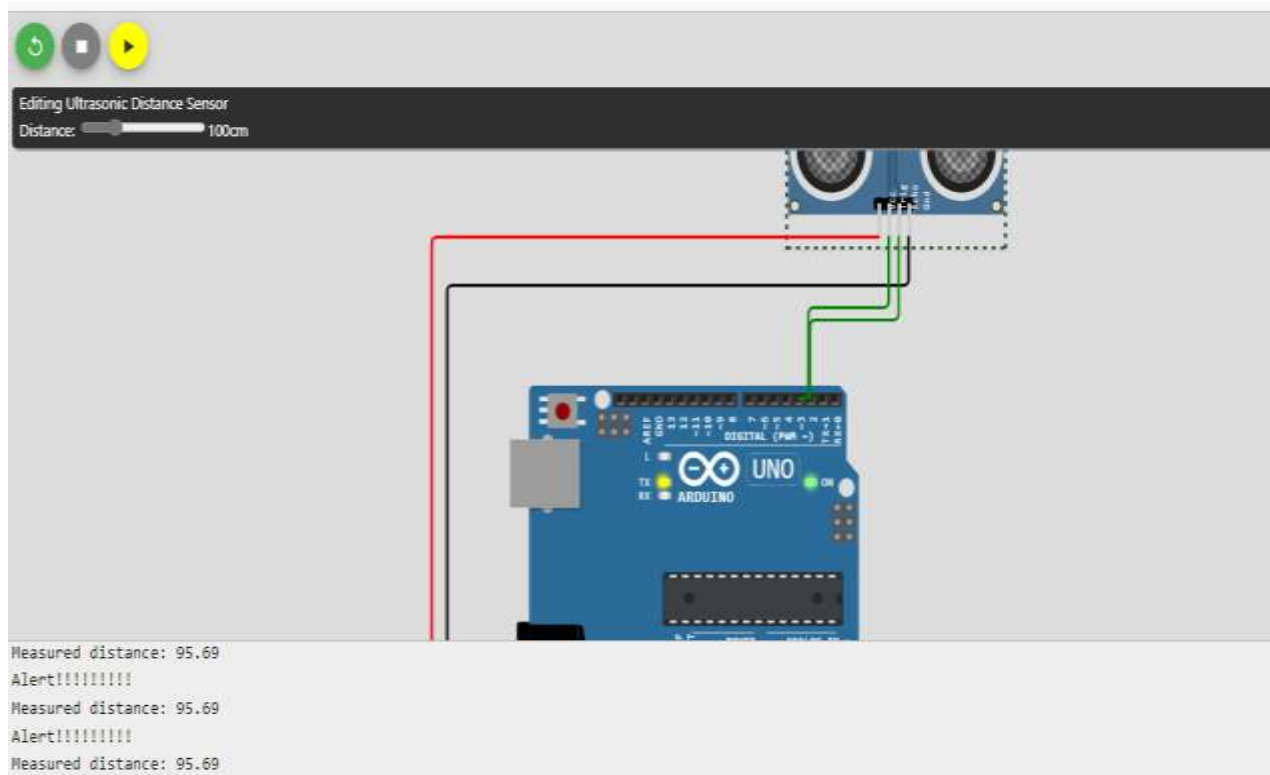
  delay(100);
}
```

## Wokwi Editor window:

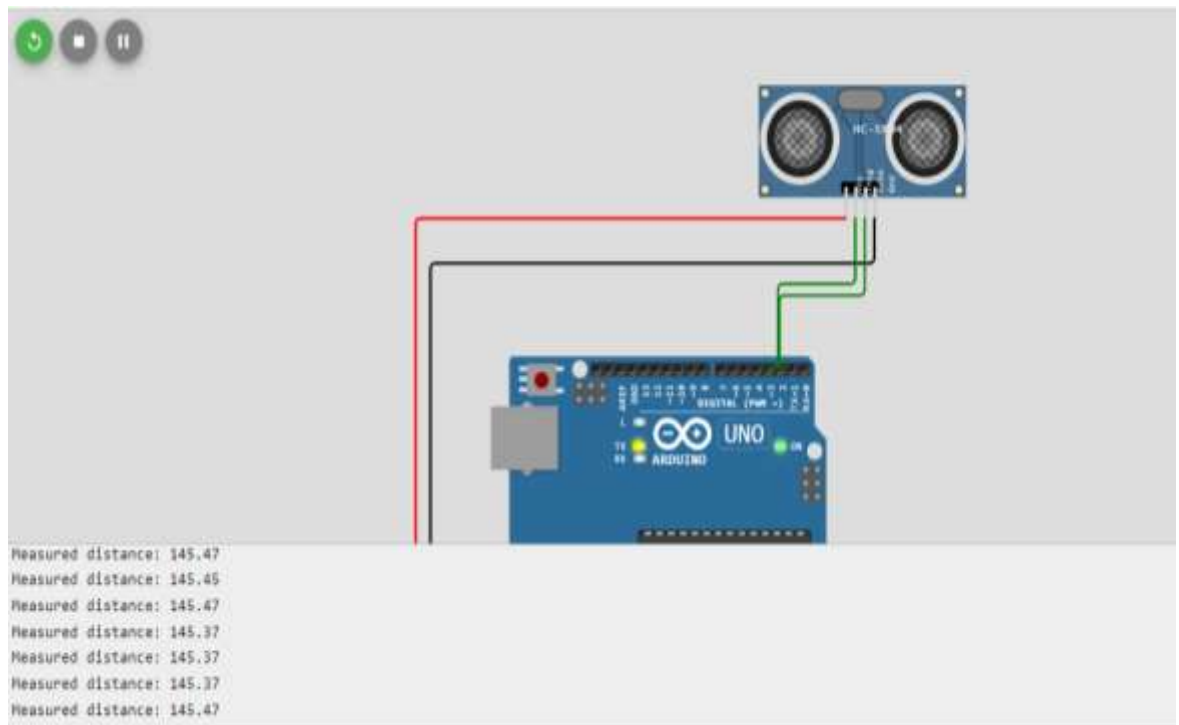


## Results:

1. The measured distance is less than 100 centimetres, it gives alert message



2. The measured distance is more than 100 centimetres, it will not give alert message



**Wokwi Link:**

<https://wokwi.com/projects/328451800839488084>