

ASSIGNMENT- 4

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|----------------------------|------------------------|
| Assignment Date | 22 October 2022 |
| Student Name | Vigneshwar J |
| Student Roll Number | 311019205044 |
| Maximum Mark | 2 Marks |

Question:

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

Program:

```
#define ECHO_PIN 2
#define TRIG_PIN 3

void setup() {
  Serial.begin(9600);
  pinMode(TRIG_PIN, OUTPUT);
  pinMode(ECHO_PIN, INPUT);
}

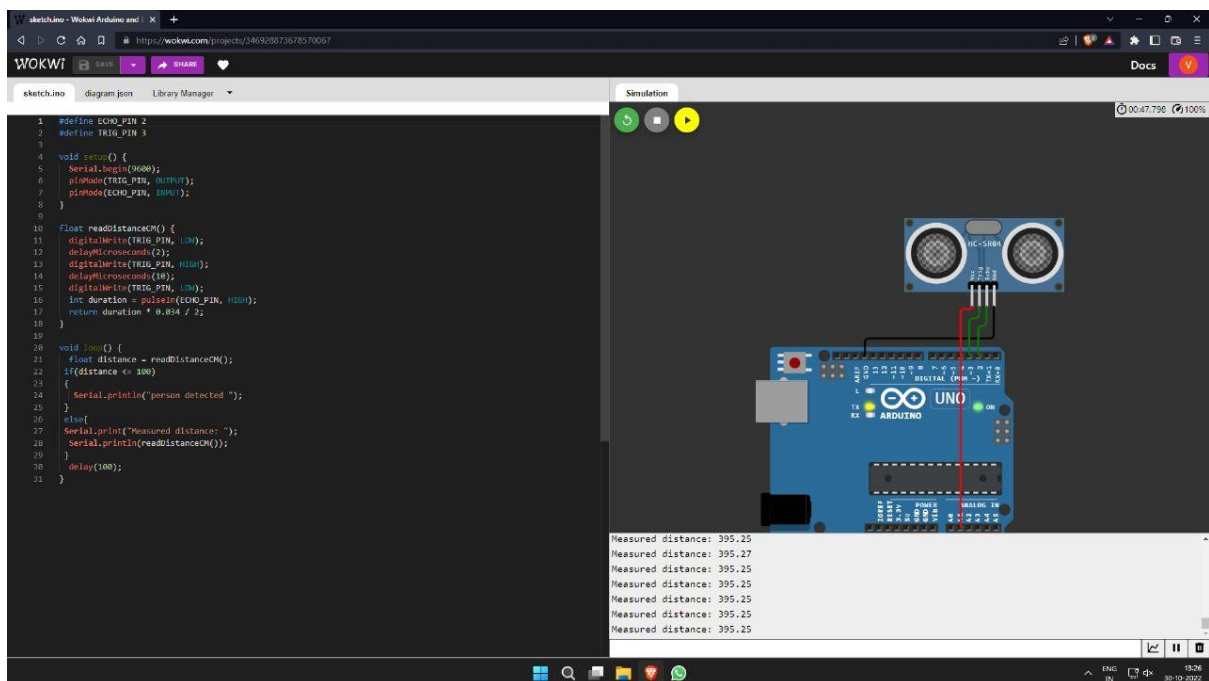
float readDistanceCM() {
  digitalWrite(TRIG_PIN, LOW);
  delayMicroseconds(2);
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
  int duration = pulseIn(ECHO_PIN, HIGH);
  return duration * 0.034 / 2;
}

void loop() {
  float distance = readDistanceCM();
  if(distance <= 100)
  {
    Serial.println("person detected ");
  }
}
```

```

else{
Serial.print("Measured distance: ");
Serial.println(readDistanceCM());
}
delay(100);
}

```



Wokwi Link: <https://wokwi.com/projects/346928873678570067>

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Device Simulator ☒

| <input type="checkbox"/> | Device ID | Status | Device Type | Class ID |
|--------------------------|--|--------------|-------------|--------------|
| > | <input type="checkbox"/> 1234 | Disconnected | SmartFarmer | Device |
| v | <input checked="" type="checkbox"/> Ultrasonic_1 | Disconnected | Ultrasonic | Device → ... |

| Identity | Device Information | Recent Events | State | Logs |
|-------------------|--|---------------|-------|------|
| Device ID | Ultrasonic_1 | | | |
| Device Type | Ultrasonic | | | |
| Date Added | Oct 25, 2022 4:25 PM | | | |
| Added By | 820419205501@smartintenz.com | | | |
| Connection Status | Disconnected Last Connected: Oct 25, 2022 4:28 PM Client Address: 42.109.148.176 SecureToken Duration: 2 minutes Data Transferred: 2.7 KB | | | |

| | | | | |
|---|--|--------------|------------|--------|
| > | <input type="checkbox"/> pga460_sensor | Disconnected | Ultrasonic | Device |
|---|--|--------------|------------|--------|