# Assignment -4

| Assignment Date | 25 October 2022 |
|---|---|
| Student Name | Mathumitha R |
| Team ID | PNT2022TMID31424 |
| Project Name | Project-Smart Farmer-IoT Enabled Smart Farming Application |
| Maximum Marks | 2 Marks |

**Question-1:**

**Write code and connections in wokwi for ultrasonic. Whenever distance is less than 100 cms send "alert" to ibm cloud and display in device recent events.**
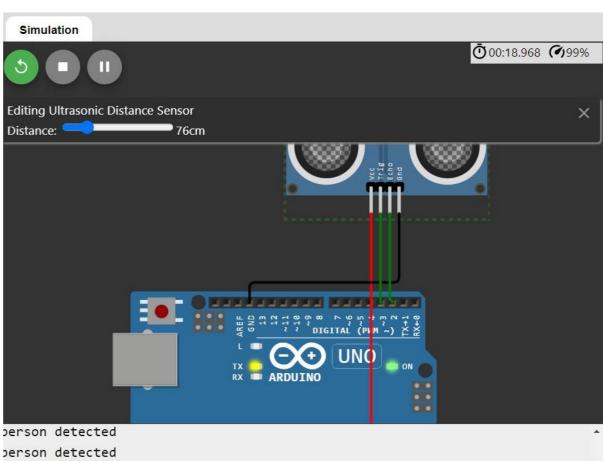
**Solution:**

```
#define ECHO_PIN 2

#define TRIG_PIN 3

#define organization = "mmbh4c"

#define deviceType = "Ultrasonic"

#define deviceId = "pga460_sensor"

#define authMethod = "use-token-auth"

#define authToken = "123456789"

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(1000);
}
```



Editing Ultrasonic Distance Sensor

Distance: 76cm

person detected
person detected
person detected

**Wokwi Link:** https://wokwi.com/projects/346094692918624851

## IBM Cloud
Device Recent Events