

#### Assignment -4

Assignment Date	6 <sup>TH</sup> NOVEMBER 2022
Student Name	G.SIVA
Team ID	PNT2022TMID25688
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 = “fkxdqs”
#define deviceType = “Arduino”
#define deviceId = “1200”
#define authMethod = “use-token-auth” #define
authToken = “000000000” 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
```

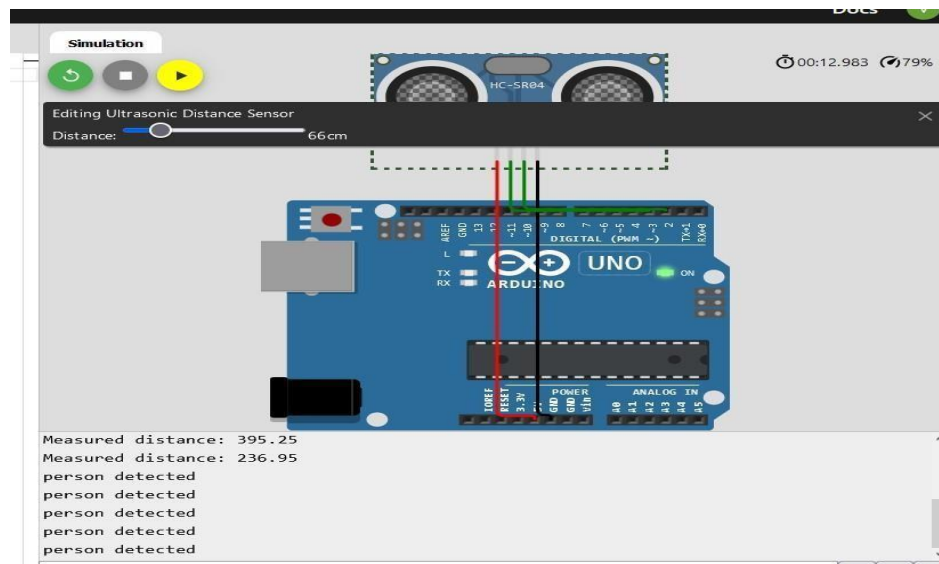
```

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);
}

```



**Wokwi Link:** <https://wokwi.com/projects/346567349532361298>



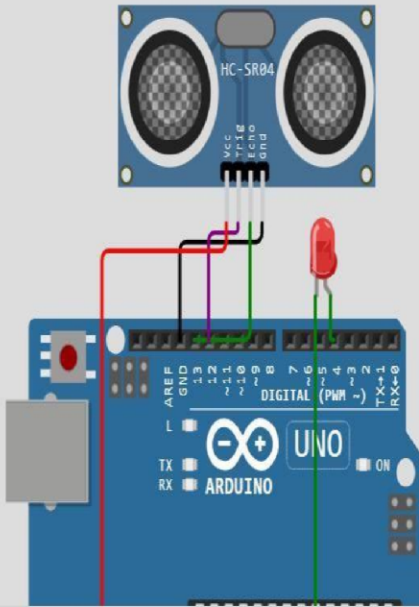
## WOWKI EXECUTION PART WITH ANOTHER CODE:

WOKWI SAVE SHARE ♥

hc-sr04-Ultrasonic-Simulation.ino • diagram.json Ultrasonic.h Ultrasonic.cpp Library Manager

```
1 #include "Ultrasonic.h"
2 Ultrasonic ultrasonic(12, 13);
3 int distance;
4
5 void setup() {
6   Serial.begin(9600);
7   pinMode(6, OUTPUT);
8 }
9
10 void loop() {
11   distance = ultrasonic.read(CM);
12   Serial.print("Distance in CM: ");
13   Serial.println(distance);
14   if(distance<=100)
15   {
16     Serial.println("alert!!!!");
17     digitalWrite(4, HIGH);
18   }
19
20
21   delay(1000);
22 }
```

Simulation



Distance in CM: 50  
alert!!!!  
Distance in CM: 50  
alert!!!!  
Distance in CM: 50  
alert!!!!