

#### **Assignmen-4**

Assignment Date	09 November 2022
Student Name	MOHAMED I
Team ID	PNT2022TMID01763
Project Name	<b>Smart Waste Management System For Metropolitan Cities</b>
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 organisation =
"a09qmv" #define deviceType
= "device1"
#define deviceId ="1234"
#define authMethod ="use-token-auth"
#define authToken ="12345678"

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:
```

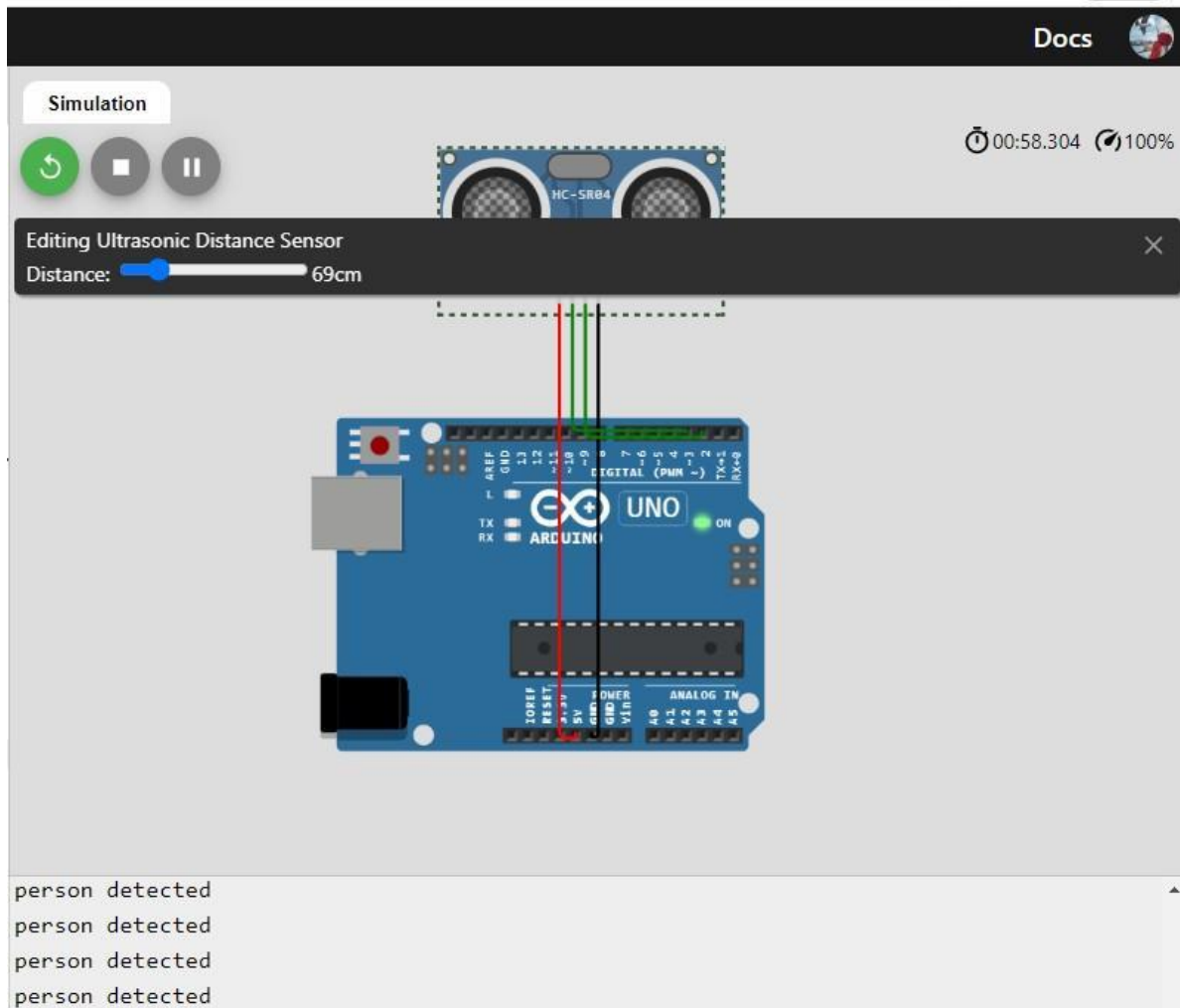
```
");
```

```
Serial.println(readDistanceCM())
```

```
;
```

```
}
```

```
delay(1000); }
```



<https://wokwi.com/projects/346567584774095442>  
Wokwi Link

## IBM Cloud

### Device Recent Events

IBM Watson IoT Platform

820419205063@smartinternz.com  
ID: a09qmw

Browse Action Device Types Interfaces

Add Device +

criteria. To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By
1234	Disconnected	device1	Device	Oct 26, 2022 1:15 PM		820419205063@smartinternz.com

Identity Device Information Recent Events State Logs

Device ID 1234

Device Type device1

Date Added Oct 26, 2022 1:15 PM

Added By 820419205063@smartinternz.com

Connection Status Disconnected

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