

Assignment-4

Assignment Date	31 October 2022
Student Name	AKILAN K
Team ID	PNT2022TMID01438
Project Name	SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES
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:
```

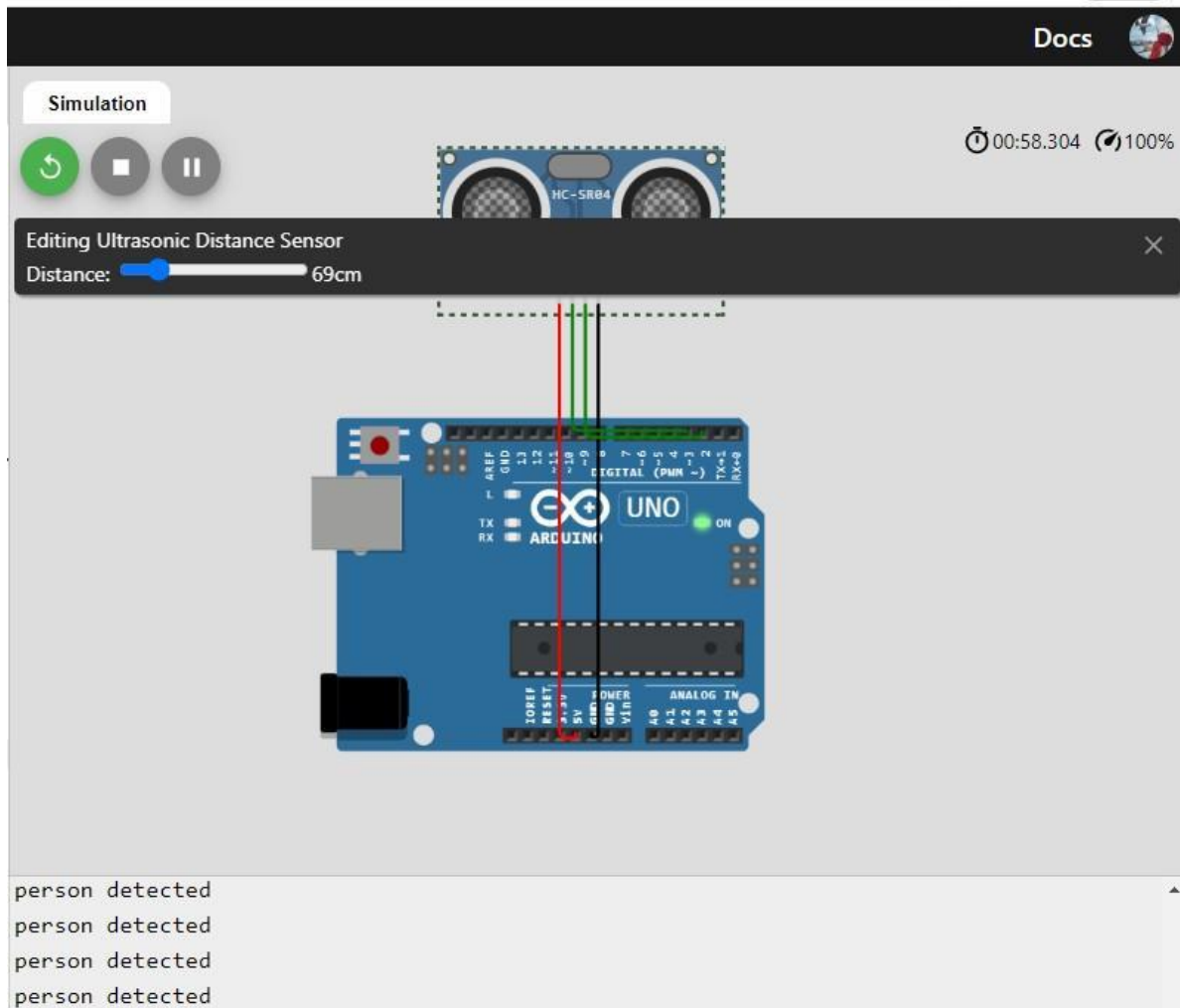
```
");
```

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

```
;
```

```
}
```

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



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

IBM Cloud

Device Recent Events

The screenshot displays the IBM Watson IoT Platform interface. At the top, the header shows the user's email (820419205063@smartinternz.com) and ID (a09qmw). The main navigation bar includes tabs for Browse, Action, Device Types, and Interfaces, along with an 'Add Device' button. Below the navigation bar, a search bar is labeled 'Search by Device ID'. A table lists devices, with one device (ID: 1234, Status: Disconnected, Device Type: device1) selected. A modal window titled 'Identity' is open, showing details for the selected device: Device ID (1234), Device Type (device1), Date Added (Oct 26, 2022 1:15 PM), Added By (820419205063@smartinternz.com), and Connection Status (Disconnected). The bottom of the interface shows a Windows taskbar with various application icons and the system clock (1:12 PM, 10/26/2022).

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			

