

#### **Assignment -4**

##### **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 ");
```

```
}
```

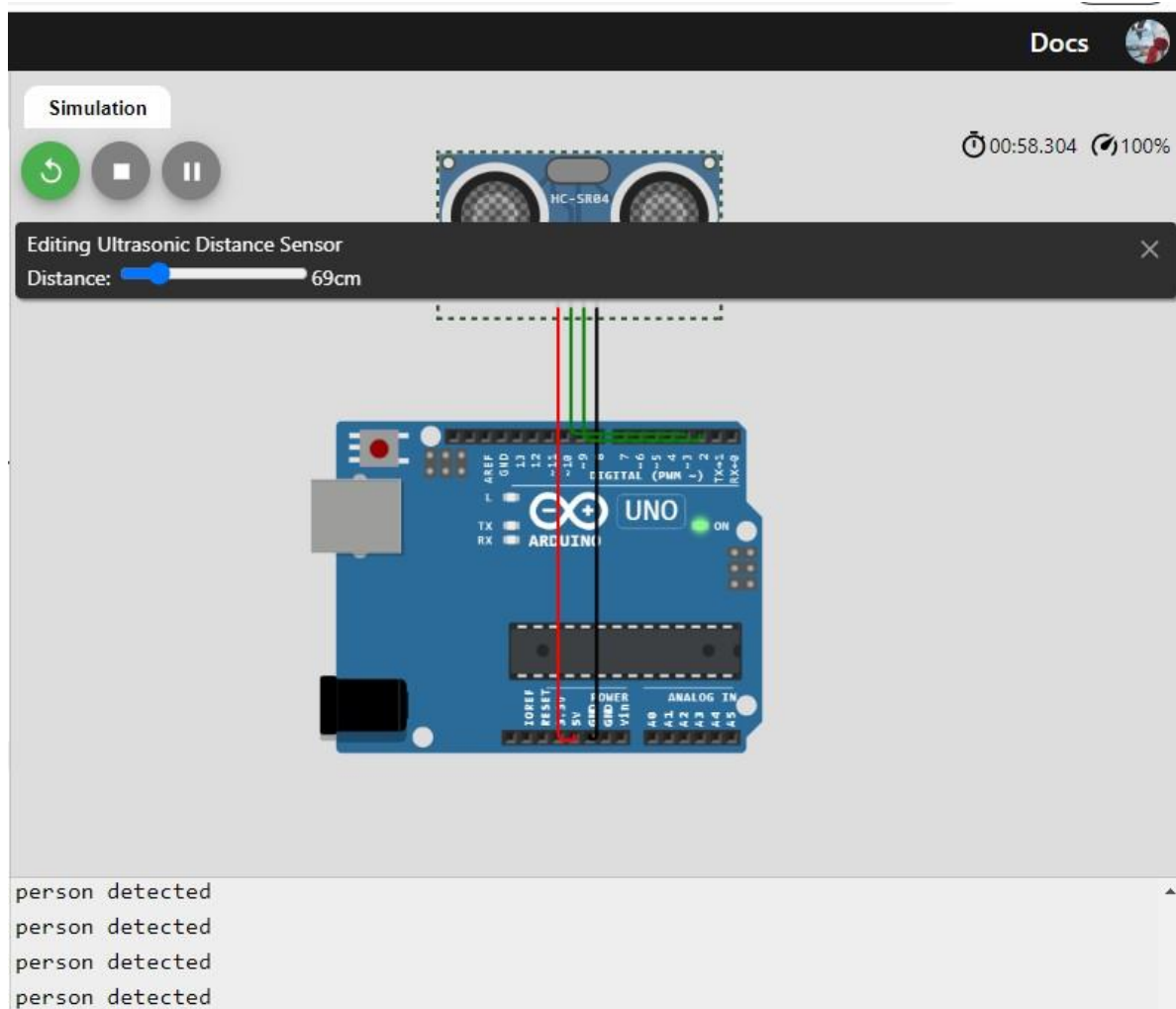
```
else{
```

```
Serial.print("Measured distance: ");
```

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

```
}
```

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



## IBM Cloud

### Device Recent Events

The screenshot displays the IBM Watson IoT Platform web interface. At the top, the header shows the user's email (820419205063@smartinternz.com) and ID (a09qmv). The main navigation bar includes links for Browse, Action, Device Types, and Interfaces, along with an 'Add Device' button. A sidebar on the left contains various icons for navigation. The central content area features a search bar labeled 'Search by Device ID' and a 'Device Simulator' toggle. Below this is a table listing devices. The first device, with ID 1234, is shown in a detailed view. This view includes tabs for Identity, Device Information, Recent Events, State, and Logs. The 'Device Information' tab is currently selected, displaying details such as Device ID, Device Type, Date Added, Added By, and Connection Status. At the bottom of the interface, there is a Windows taskbar with a search bar and several application icons, and a system tray showing the date and time (1:12 PM, 10/26/2022).

IBM Watson IoT Platform

820419205063@smartinternz.com  
ID: a09qmv

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

Items per page 50 | 1-1 of 1 item

1 of 1 page

Type here to search

ENG 1:12 PM  
IN 10/26/2022

