

#### **Assignment -4**

|                 |  |
|-----------------|--|
| Assignment Date | 19 Novamner 2022   |
| Team ID         | PNT2022TMID38150   |
| 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 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 ");
```

```
}
```

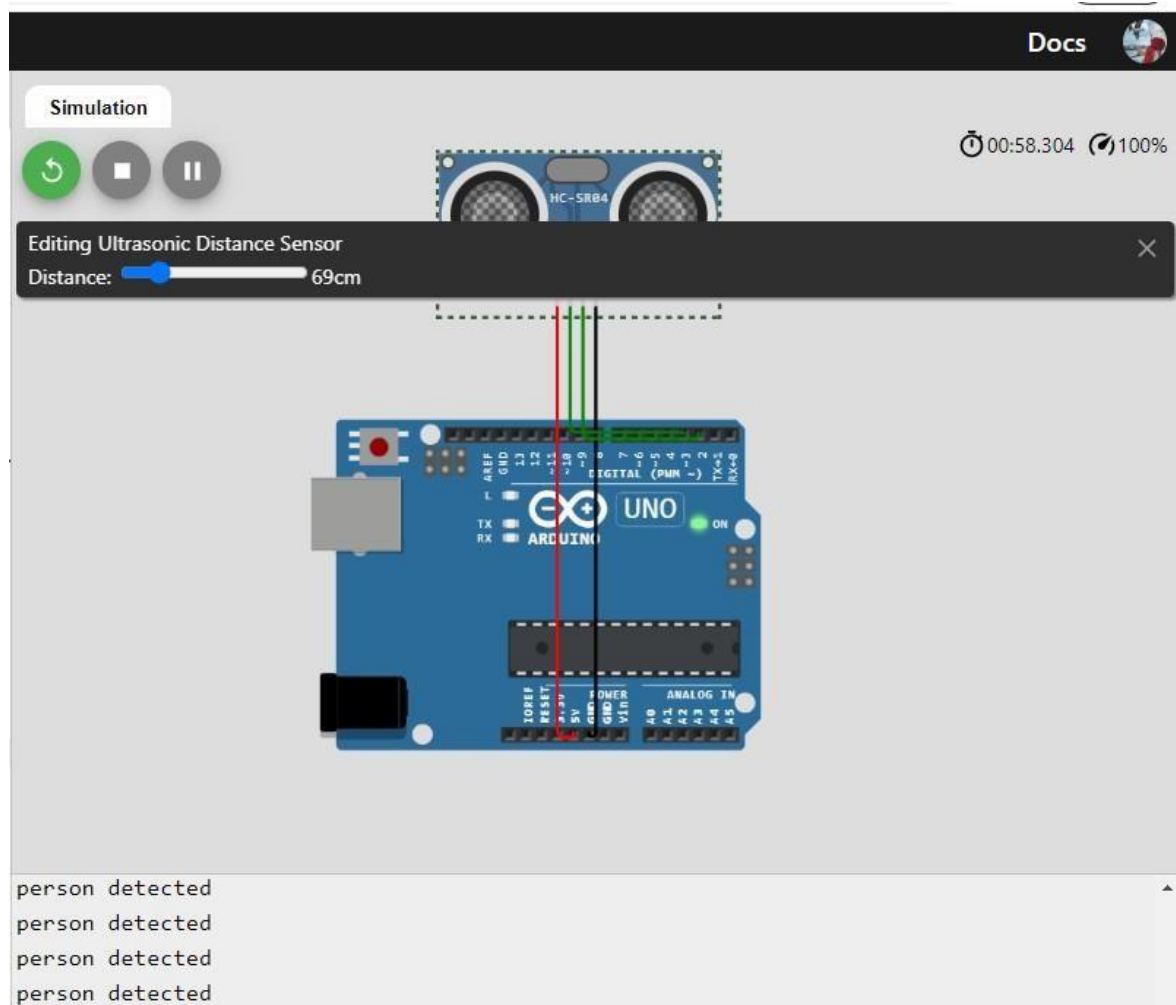
```
else{
```

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

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

```
}
```

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



## IBM Cloud

### Device Recent Events

Browser tabs: Gmail, Welcome to Project!, IBM, IBM, Service Details - IBM, IBM Watson IoT Platform

Address bar: m57ubo.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platform

411819104003@smartinternz.com  
ID: m57ubo

Navigation: Browse, Action, Device Types, Interfaces

Add Device +

| Device ID | Status       | Device Type | Class ID | Date Added          |       |
|-----------|--------------|-------------|----------|---------------------|-------|
| TMID38150 | Disconnected | Device1     | Device   | 18 Nov 2022 2:24 PM | → ... |

Identity | Device Information | Recent Events | State | Logs

Device ID: TMID38150  
Device Type: Device1  
Date Added: 18 Nov 2022 2:24 PM  
Added By: 411819104003@smartinternz.com  
Connection Status: Disconnected

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Windows taskbar: Type here to search, 29°C Haze, 14:33 19-11-2022