

Assignment -4

Assignment Date	19 Novamder 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 ");
```

```
}
```

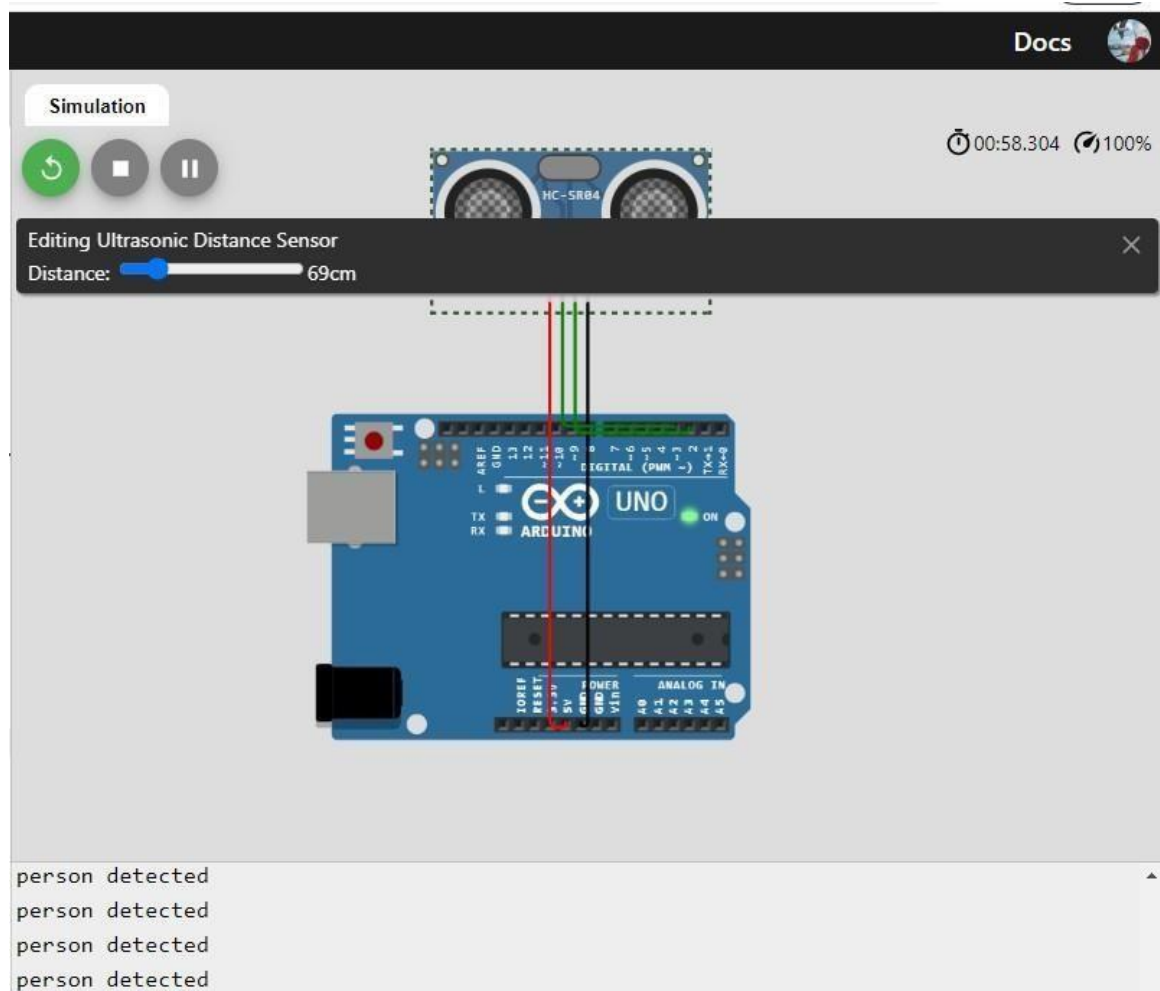
```
else{
```

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

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

```
}
```

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



IBM Cloud

Device Recent Events

The screenshot displays the IBM Watson IoT Platform interface. The main heading is "Browse Devices". Below it, there are tabs for "All Devices" and "Diagnose". A message states: "This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API."

A search bar is present with the text "Search by Device ID". To the right, there is a "Device Simulator" toggle switch.

Device ID	Status	Device Type	Class ID	Date Added
Device1	Disconnected	TMID38150	Device	Nov 21, 2022 11:23 AM

Below the table, a detailed view of "Device1" is expanded, showing the following information:

- Identity
- Device Information
- Recent Events
- State
- Logs

The "Device Information" section includes the following details:

- Device ID: Device1
- Device Type: TMID38150
- Date Added: Nov 21, 2022 11:23 AM
- Added By: 411819104006@smartinternz.com
- Connection Status: Disconnected

At the bottom, there is a pagination bar showing "Items per page: 50" and "1 of 1 page".