

Assignment -4

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|-----------------|--|
| Assignment Date | 26 October 2022 |
| Student Name | DEEPAK KUMAR A |
| Team ID | PNT2022TMID14561 |
| 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 organization ="e03g10"

#define deviceType=" Arduino"

#define deviceId ="2502"

#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);

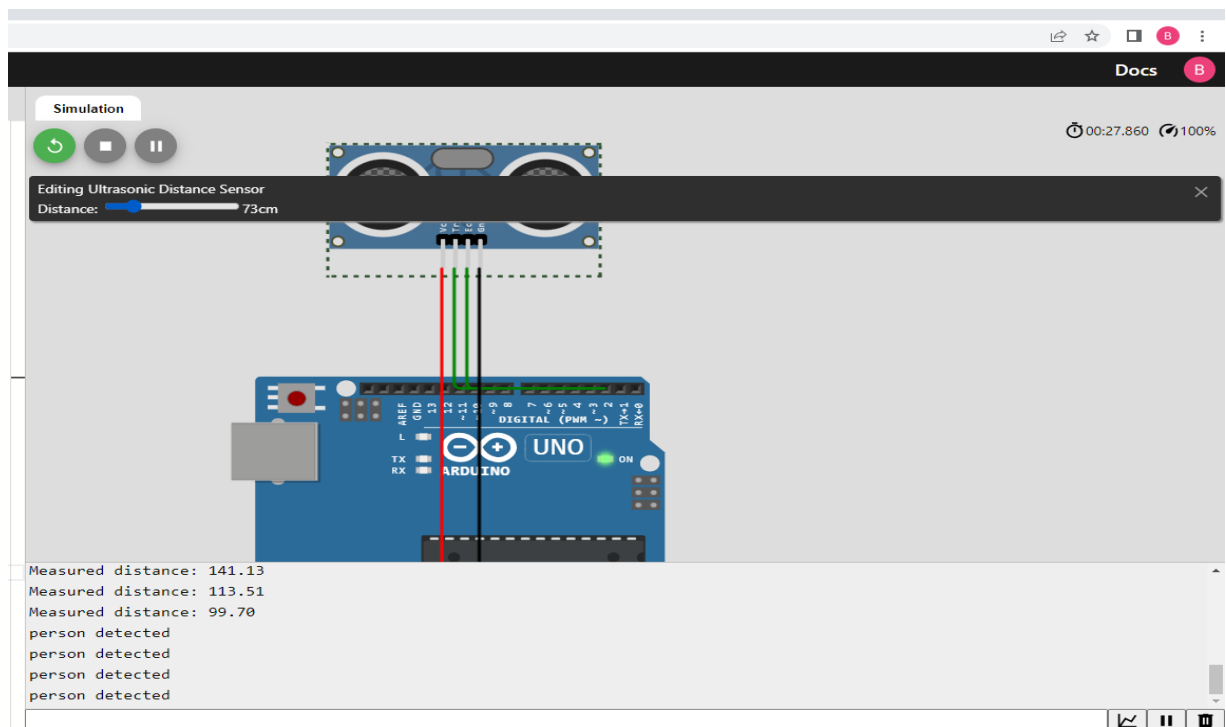
  return duration * 0.034 / 2;
```

```

}

void loop() {
    float distance = readDistanceCM();
    if(distance <= 100)
    {
        Serial.println("person detected ");
    }
    else{
        Serial.print("Measured distance: ");
        Serial.println(readDistanceCM());
    }
    delay(1000);
}

```



Wokwi Link: <https://wokwi.com/projects/346567349532361298>

IBM Cloud

Device Recent Events

IBM Watson IoT Platform

820419205010@smartinternz.com

ID: e03g10

Browse

Action

Device Types

Interfaces

Add Device

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.

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Search by Device ID

Device Simulator

| | Device ID | Status | Device Type | Class ID | Date Added | Descriptive Location | Added By | |
|--------------------------------------|-----------|--------------|-------------|----------|----------------------|----------------------|-------------------------------|-------|
| <div> <div></div> <div></div> </div> | 2502 | Disconnected | Arduino | Device | Oct 26, 2022 2:54 PM | | 820419205010@smartinternz.com | → ... |

Identity

Device Information

Recent Events

State

Logs

Device ID

2502

Device Type

Arduino

Date Added

Oct 26, 2022 2:54 PM

Added By

820419205010@smartinternz.com

Connection Status

Disconnected

Items per page: 50

1-1 of 1 item

1 of 1 page

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1

>

1 Simulation running

ID: e03g10

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Device Drilldown - 2502

- Connection Information
- Recent Events
- State
- Device Information
- Metadata
- Diagnostics
- Connection Logs
- Device Actions

Added By 820419205010@smartinternz.com

Connection Status Disconnected

Recent Events

The recent events listed show the live stream of data that is coming and going from this device.

| Event | Value | Format | Last Received |
|---------|------------------|--------|-------------------|
| event_1 | "persondetected" | json | a few seconds ago |
| event_1 | "persondetected" | json | a few seconds ago |
| event_1 | "persondetected" | json | a few seconds ago |
| event_1 | "persondetected" | json | a few seconds ago |
| event_1 | "persondetected" | json | a few seconds ago |

1 Simulation running