

Assignment -4

Assignment Date	25 October 2022
Student Name	Selvabharathi. A
Team ID	PNT2022TMID33110
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 ="h8ugeq"

#define deviceType="smart"

#define deviceId ="2000"

#define authMethod ="use-token-auth"

#define authToken ="12200018"

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{
```

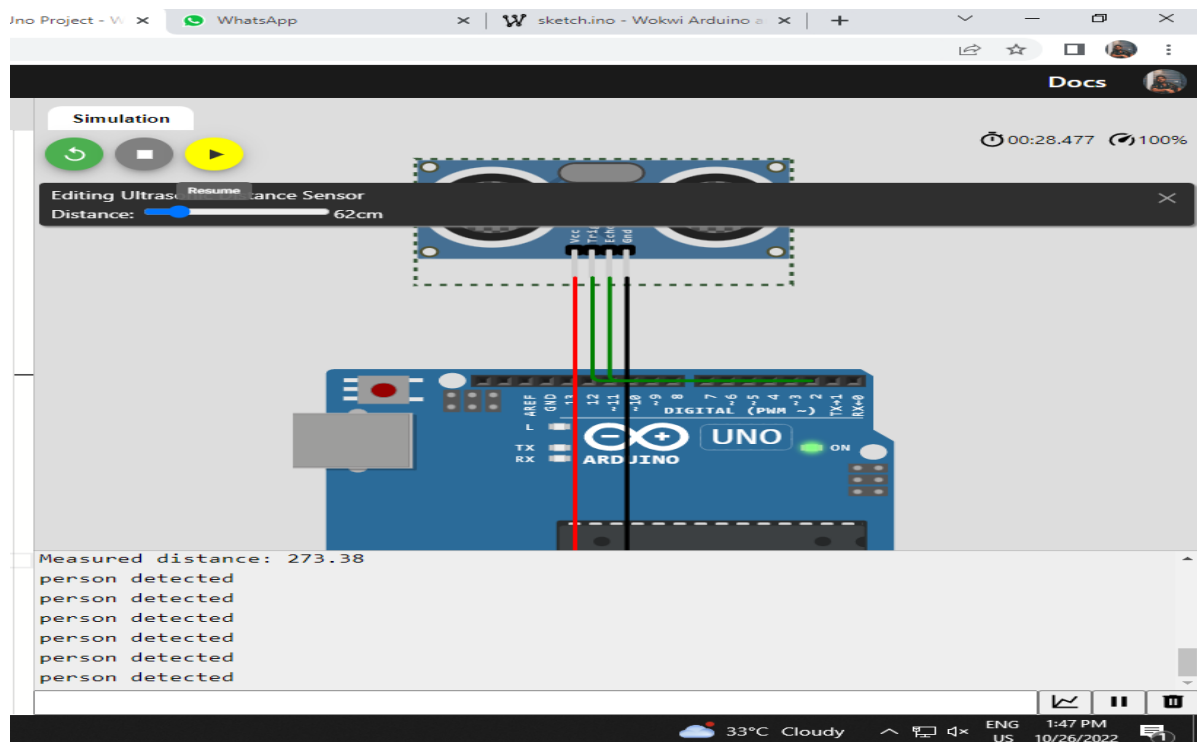
```
        Serial.print("Measured distance: ");
```

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

```
    }
```

```
    delay(1000);
```

```
}
```



Wokwi Link: <https://wokwi.com/projects/346570453642379860>

IBM Cloud

Device Recent Events

Service Details - IBM Cloud | IBM Watson IoT Platform | IBM | Wokwi - Online Arduino and ESP | +

h8ugeq.internetofthings.ibmcloud.com/dashboard/devices/drilldown/smart:2000?returnTo=/devices/browse

820419205052@smartinternz.com
ID: h8ugeq

Device Drilldown - 2000

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

Connection Information

Basic connection information about this device.

Device ID	2000
Device Type	smart
Date Added	Oct 26, 2022 1:30 PM
Added By	820419205052@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
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h8ugeq.internetofthings.ibmcloud.com/dashboard/devices/drilldown/smart:2000?returnTo=/devices/browse

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Recent Events

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Event	Value	Format	Last Received
event_1	"persondeceted"	json	a few seconds ago
event_1	"persondeceted".	json	a few seconds ago
event_1	"persondeceted".	json	a few seconds ago
event_1	."persondeceted".	json	a few seconds ago
event_1	"persondeceted". "	json	a few seconds ago

State

This table shows a list of data points that are reported by this device.

Showing Raw Data | No Interfaces Available

1 Simulation running