

Assignment -4

Assignment Date	25 October 2022
Student Name	Kavipriya M S
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
```

```
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;
```

```
}
```

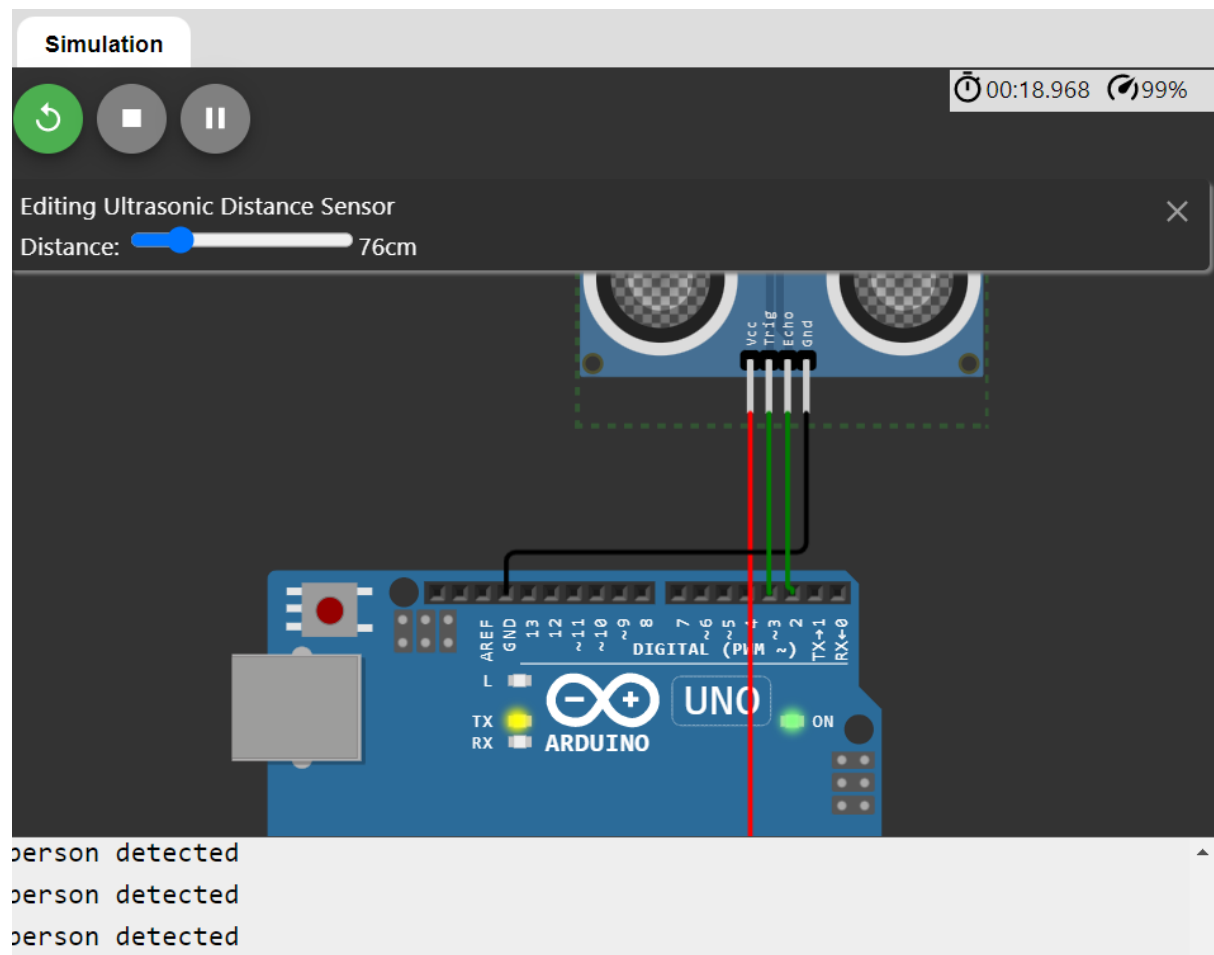
```
void loop() {
```

```
  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/346094692918624851>

IBM Cloud

Device Recent Events

IBM

IBM Cloud

IBM Watson IoT Platform

mmbh4c.internetofthings.ibmcloud.com/dashboard/devices/browse

820419205501@smartinternz.com
ID: mmbh4c

BrowseActionDevice TypesInterfaces

Add Device

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID
1234	Disconnected	SmartFarmer	Device
Ultrasonic_1	Disconnected	Ultrasonic	Device
pga460_sensor	Disconnected	Ultrasonic	Device

IdentityDevice InformationRecent EventsStateLogs

Device ID

Ultrasonic_1

Device Type

Ultrasonic

Date Added

Oct 25, 2022 4:25 PM

Added By

820419205501@smartinternz.com

Connection Status

Disconnected

Last Connected: Oct 25, 2022 4:28 PM

Client Address: 42.109.148.176 SecureToken

Duration: 2 minutes

Data Transferred: 2.7 KB

820419205501@smartinternz.com
ID: mmbh4c

BrowseActionDevice TypesInterfaces

Add Device

Ultrasonic_1ConnectedUltrasonicDeviceOct 25, 2022 4:28 PM

IdentityDevice InformationRecent EventsStateLogs

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

pga460_sensorDisconnectedUltrasonicDeviceOct 25, 2022 1:19 PM

Items per page 50 | 1-3 of 3 items

1 Simulation running