

Assignment -4

Assignment Date	25 October 2022
Team ID	PNT2022TMID01830
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 = "of10a1"
#define deviceType = "ultrasonic"
#define deviceId = "iot001"
#define authMethod = "use-token-auth"
#define authToken = "12345678"

void setup() { Serial.begin(9600);
pinMode(TRIG_PIN, OUTPUT);
pinMode(ECHO_PIN, INPUT);
}

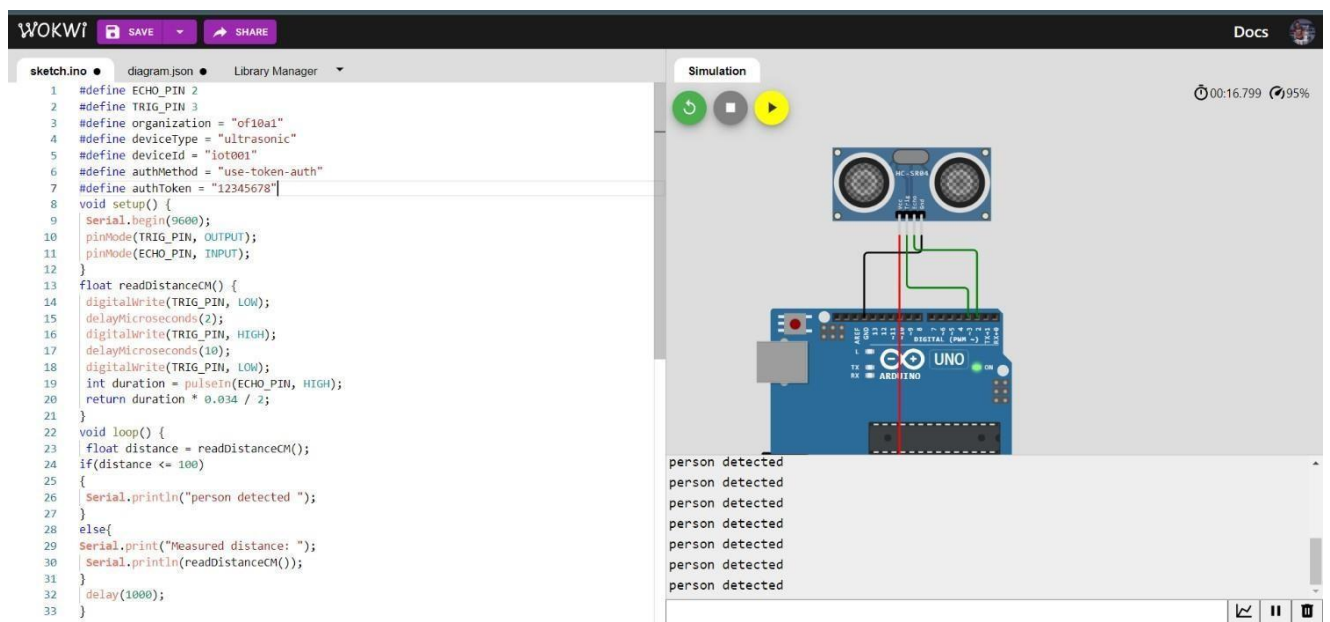
float    readDistanceCM()    {
digitalWrite(TRIG_PIN,    LOW);
delayMicroseconds(2);
digitalWrite(TRIG_PIN,    HIGH);
delayMicroseconds(10);
digitalWrite(TRIG_PIN, LOW); int
```

```

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/new/arduino-uno>

IBM Cloud

Device Recent Events

IBM Watson IoT Platform

19ec156@psgitech.ac.in
ID: of10a1

Browse

Action

Device Types

Interfaces

Add Device

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
iot001	Disconnected	ultrasonic	Device	Nov 3, 2022 9:43 AM	
qwerty	Disconnected	1234	Device	Nov 3, 2022 10:20 AM	

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0 Simulations running

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