

#### **Assignment -4**

Assignment Date	26 October 2022
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Team ID	PNT2022TMID25294
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"

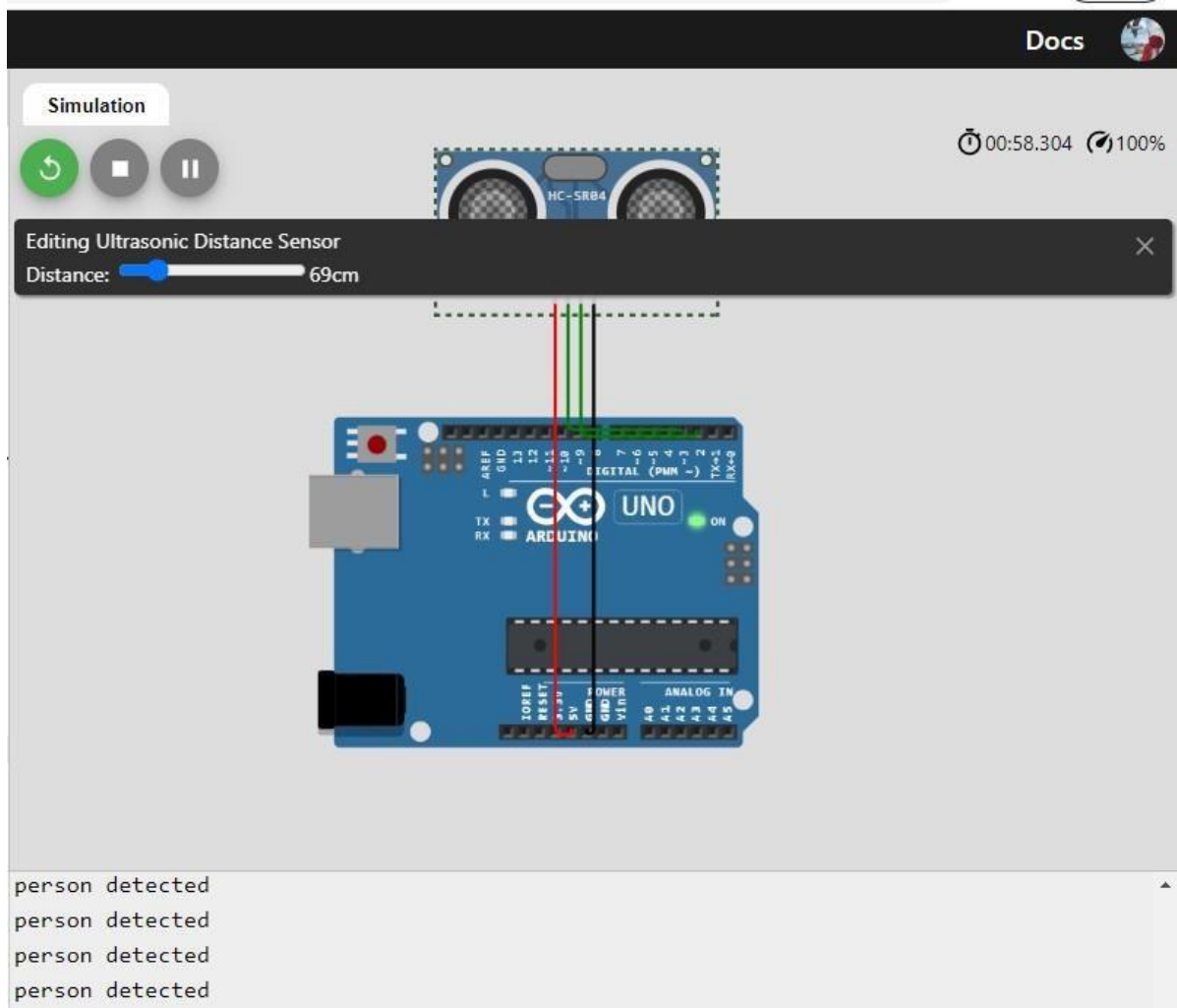
void setup() { Serial.begin(9600);
pinMode(TRIG_PIN, OUTPUT);
pinMode(ECHO_PIN, INPUT);
}

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); }
```



**Wokwi Link:** <https://wokwi.com/projects/346567584774095442>

### **IBM Cloud**

Device Recent Events



🔍 Search by Device ID

Device Simulator   

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By
1234	Disconnected	device1	Device	Oct 26, 2022 1:15 PM		820419205063@smartinternz.com

Identity	Device Information	Recent Events	State	Logs
Device ID	1234			
Device Type	device1			
Date Added	Oct 26, 2022 1:15 PM			
Added By	820419205063@smartinternz.com			
Connection Status	Disconnected			

SmartThings

Browse Action Device Types Interfaces

Add Device

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By
1234	Disconnected	device1	Device	Oct 26, 2022 1:15 PM		820419205063@smartintertz.com

Identity Device Information Recent Events State Logs

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	"person detected"	json	a few seconds ago
event_1	"person detected"	json	a few seconds ago
event_1	"person detected"	json	a few seconds ago

2 Simulations running

