

#### 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"

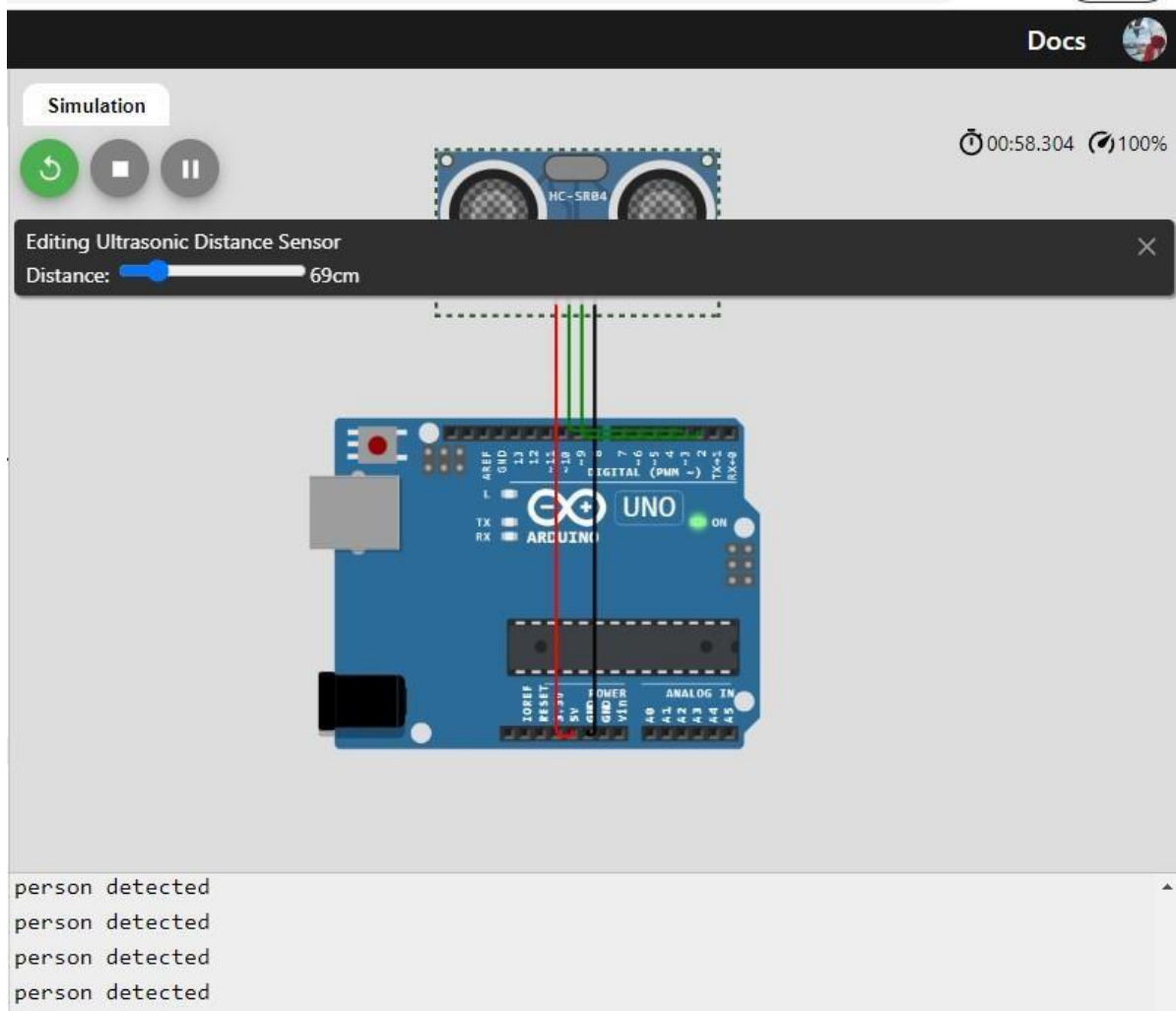
void setup() { Serial.begin(9600);
pinMode(TRIG_PIN, OUTPUT);
pinMode(ECHO_PIN, INPUT);
}

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



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					

The screenshot shows the SmartThings mobile app interface. At the top, there's a navigation bar with 'Browse', 'Action', 'Device Types', and 'Interfaces'. Below this is a search bar. The main content area shows a list of devices. One device, '1234', is selected and its details are shown below. The device is in a 'Disconnected' state. The details section has tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs'. The 'Recent Events' tab is active, showing a table of events. A status bar at the bottom indicates '2 Simulations running'.

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

