

Assignment -4

Assignment Date	26 October 2022
Student Name	Karthikeyan V.S
Team ID	PNT2022TMID33527
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;
}

```

```

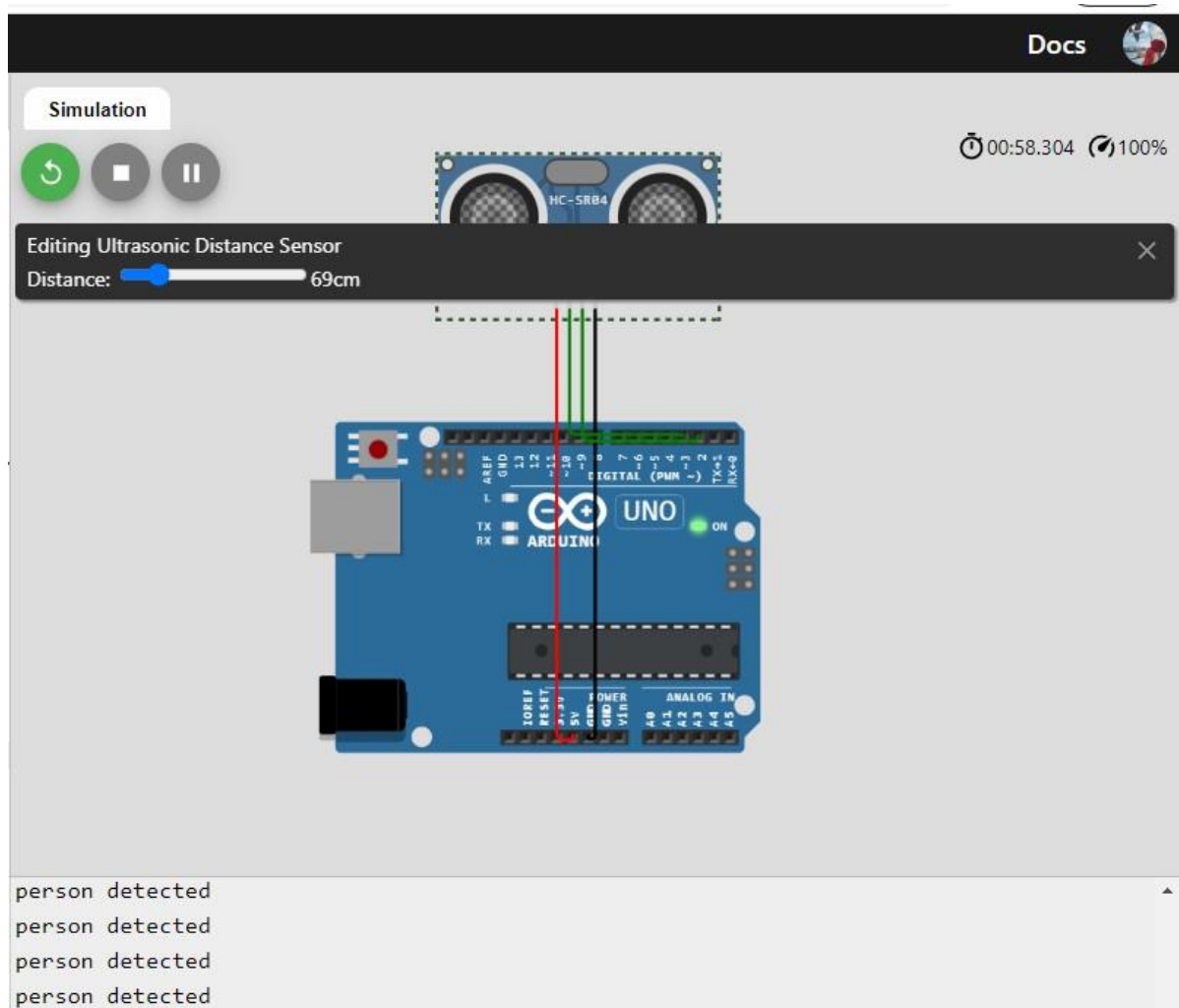
void loop() { float distance =
readDistanceCM();

```

```

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

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present with the text 'Search by Device ID'. The main content area displays a table with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. A device with ID 123456 is listed, with status 'Disconnected' and type 'demo_123'. Below the table, a detailed view of the device is shown, including its identity, device information, recent events, state, and logs. The 'Recent Events' tab is selected, showing a list of events. The bottom status bar indicates '1 Simulation running'.

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
123456	Disconnected	demo_123	Device	Nov 4, 2022 2:49 PM	

Device ID	Device Information	Recent Events	State	Logs
Device ID	123456			
Device Type	demo_123			
Date Added	Nov 4, 2022 2:49 PM			
Added By	922519106009@smartinternz.com			
Connection Status	Disconnected			

The screenshot shows the IBM Watson IoT Platform dashboard, specifically the 'Recent Events' tab for device ID 123456. The tab is selected, and the main content area displays a list of recent events. The events are shown in a table with columns: Event, Value, Format, and Last Received. The events are listed in descending order of time, with the most recent event at the top. The bottom status bar indicates '1 Simulation running'.

Event	Value	Format	Last Received
event_1	{"persondetected":23}	json	a few seconds ago
event_1	{"randomNumber":""}	json	a few seconds ago
event_1	{"persondetected":0}	json	a few seconds ago
event_1	{"persondetected":21}	json	a few seconds ago
event_1	{"persondetected":28}	json	a few seconds ago