

Assignment -4

Assignment Date	25 October 2022
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Team ID	PNT2022TMID43402
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;

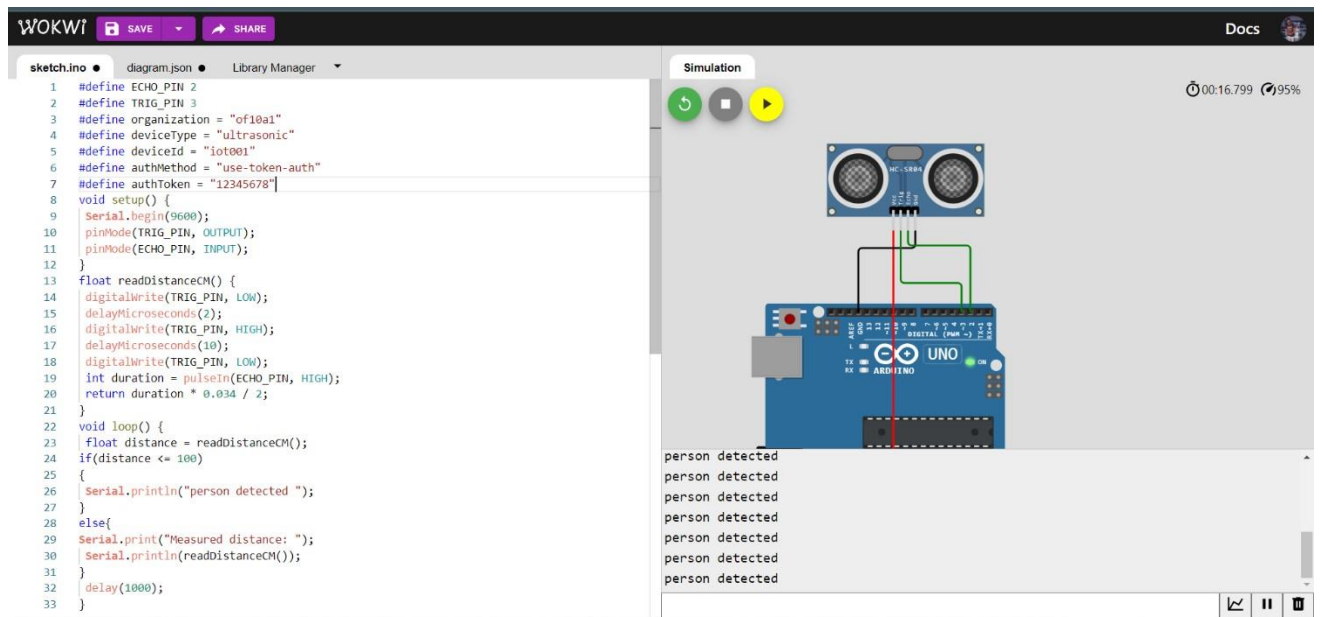
}

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

The screenshot displays the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar labeled 'Search by Device ID' is present. The main content area shows a table of devices. The first device, 'iot001', is selected, and its details are shown in a modal window. The details include:

Identity	Device Information	Recent Events	State	Logs
Device ID	iot001			
Device Type	ultrasonic			
Date Added	Nov 3, 2022 9:43 AM			
Added By	19ec156@psgitech.ac.in			
Connection Status	Disconnected			

Below the modal, another device 'qwerty' is listed. The bottom status bar indicates '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