Assignment-04

Assignment Date	18 November 2022
Team ID	PNT2022TMID43644
Project Name	Project-Smart Farmer-IoT Enabled Smart Farming Application

Question-4:

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.
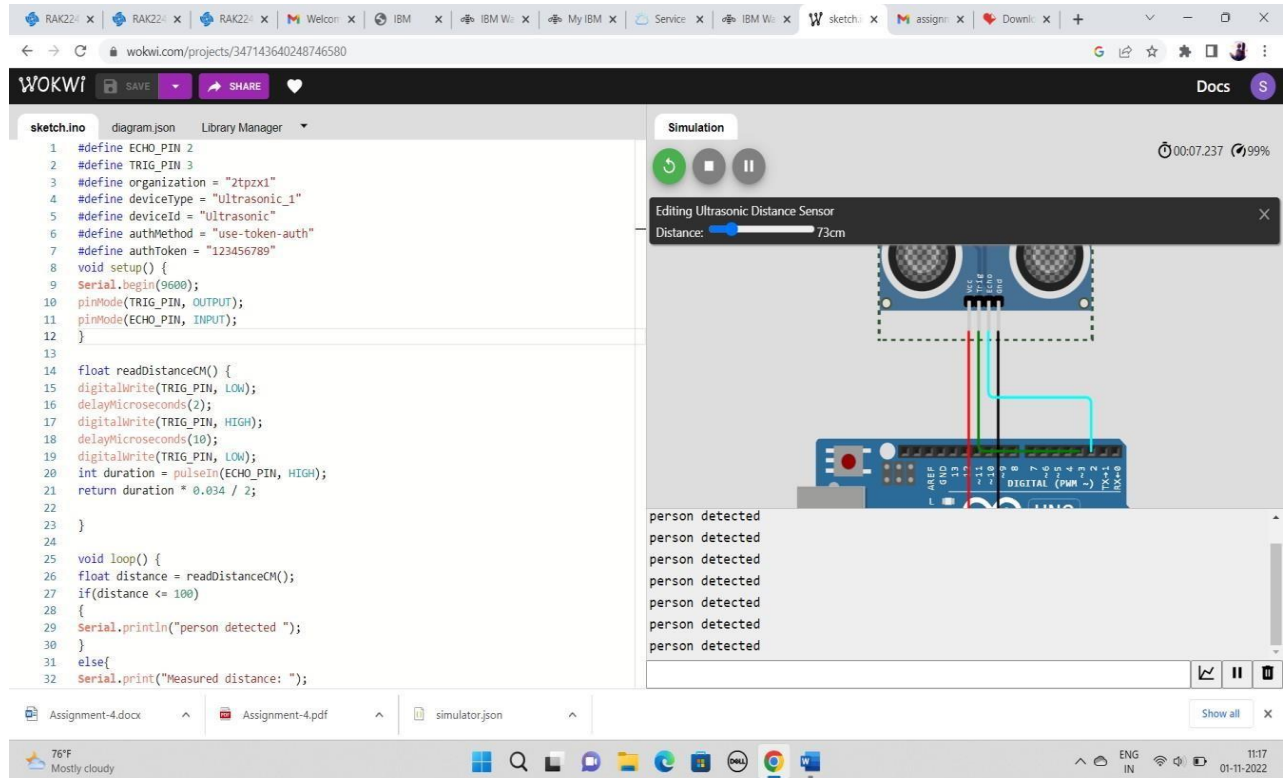
Solution:

```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization = "2tpzx1"
#define deviceType = "Ultrasonic_1"
#define deviceId = "Ultrasonic"
#define authMethod = "use-token-auth"
#define authToken = "123456789"
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/347143640248746580

IBM Cloud
Device Recent Events

IBM Watson IoT Platform

samritha.s2019@kgkite.ac.in
ID: 2tpzx1

Browse   Action   Device Types   Interfaces

Add Device ➕

	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
> ☐	12345	Disconnected	NodeMCU	Device	Oct 25, 2022 1:46 PM	
> ☐	Ultrasonic	Disconnected	Ultrasonic_1	Device	Nov 1, 2022 9:53 PM	
∨ ☑	Ultrasonic_1	● Connected	Ultrasonic	Device	Nov 1, 2022 10:41 PM	→ •••

Identity	Device Information	Recent Events	State	Logs	✕

Device ID   Ultrasonic_1

Device Type   Ultrasonic

Date Added   Nov 1, 2022 10:41 PM

Added By   samritha.s2019@kgkite.ac.in

Connection Status **Connected**
Connection Time: Nov 1, 2022 10:41 PM
Client Address: 106.197.123.99 SecureToken

Items per page 50 ▼ | 1–3 of 3 items   1 of 1 page < 1 ▼ >

1 Simulation running

76°F
Mostly cloudy

ENG
IN
01-11-20

IBM Watson IoT Platform

samritha.s2019@kgkite.ac.in
ID: 2tpzx1

Browse   Action   Device Types   Interfaces

Add Device ➕

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	{"Persondetected":94}	json	a few seconds ago
event_1	{"Persondetected":37}	json	a few seconds ago
event_1	{"Persondetected":97}	json	a few seconds ago
event_1	{"Persondetected":5}	json	a few seconds ago
event_1	{"Persondetected":92}	json	a few seconds ago

Items per page 50 ▼ | 1–2 of 2 items

1 Simulation running

📄 simulator.json   ∧

Show all

76°F
Mostly cloudy

ENG
IN
01-11-20