Assignment -4

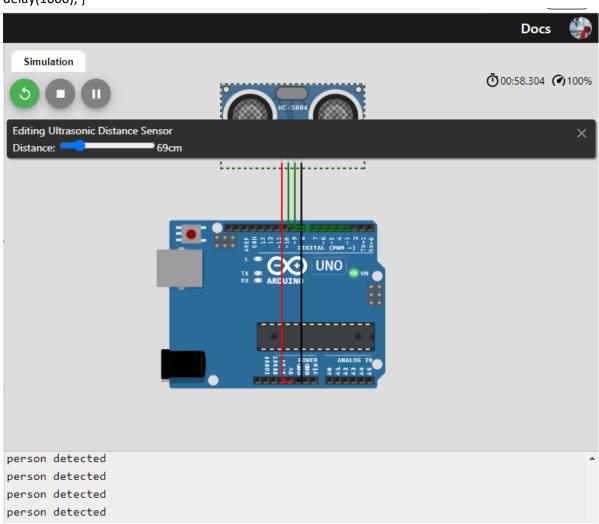| Assignment Date	26 October 2022
Student Name	Swathy. M.M
Team ID	PNT2022TMID33110
Project Name	Project-Smart Farmer-IoT Enabled Smart Farming Application
Maximum Marks	2 Marks

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); }
```

Simulation

00:58.304   100%

Editing Ultrasonic Distance Sensor   ×
Distance: ▬▬●▬▬▬▬▬▬   69cm

HC-SR04

UNO
ARDUINO

```
person detected
person detected
person detected
person detected
```

Wokwi Link: https://wokwi.com/projects/346567584774095442

IBM Cloud

Device Recent Events

Add Device

To get started, you can add devices by using the Add Device button, or by using API.

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   X

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