**Assignment-
04**

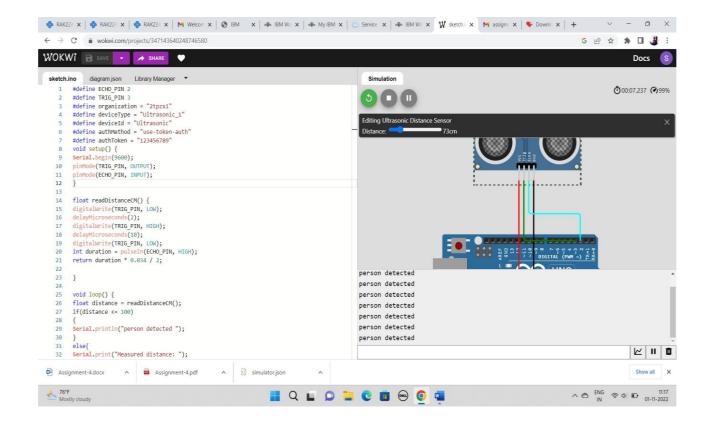| Assignment Date | 1 November 2022 |
|---|---|
| Team ID | PNT2022TMID31713 |
| Project Name | Project-Smart Farmer-IoT Enabled Smart Farming Application |

**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