

Assignment - 4

Link:

<https://wokwi.com/projects/347029623224140371>

Program Code:

```
1  #define ECHO_PIN 2
2  #define TRIG_PIN 3
3  #define organization = "t18snh
4  #define deviceType = "ibm"
5  #define deviceId = "20"
6  #define authMethod = "token"
7  #define authToken = "12345678"
8
9  void setup(){
10     Serial.begin(9600);
11     pinMode(TRIG_PIN,OUTPUT);
12     pinMode(ECHO_PIN,INPUT);
13 }
14
15 float readDistanceCM(){
16     digitalWrite(TRIG_PIN,LOW);
17     delayMicroseconds(2);
18     digitalWrite(TRIG_PIN,HIGH);
19     delayMicroseconds(10);
20     digitalWrite(TRIG_PIN,LOW);
21     int duration=pulseIn(ECHO_PIN,HIGH);
22     return duration*0.034/2;
23 }
24 void loop(){
25     float distance=readDistanceCM();
26
27
28     if(distance<=100)
29     {
30         Serial.println("person detected");
31     }
32     else{
33         Serial.print("Measured distance:");
34         Serial.println(readDistanceCM());
35     }
```

```

36     delay(1000);
37 }
38

```

IBM CLOUD :

The first screenshot shows the IBM Watson IoT Platform dashboard with a device selected. The device is named '20', has a status of 'Disconnected', and a device type of 'ibm'. The 'Recent Events' tab is active, displaying a table of events.

Event	Value	Format	Last Received
event_1	{"randomNumber":58,"distance":56}	json	a few seconds ago
event_1	{"randomNumber":35,"distance":113}	json	a few seconds ago
event_1	{"randomNumber":73,"distance":143}	json	a few seconds ago
event_1	{"randomNumber":79,"distance":140}	json	a few seconds ago
event_1	{"randomNumber":77,"distance":117}	json	a few seconds ago

The second screenshot shows the 'Device Type: ibm' configuration modal. The 'Event type name' is 'event_1'. The 'Schedule' is set to '20' and 'Every Minute'. The 'Payload' is a JSON object:

```

{
  "randomNumber": random(0, 100),
  "distance": random(0, 150)
}

```

The 'Send' button is visible, and the 'Payload' field is highlighted.

