

ASSIGNMENT-4

Wokwi link:

<https://wokwi.com/projects/290056311044833800>

Program for ultrasonic detection:

```
#define ECHO_PIN2
#define TRIG_PIN3
#define organization = "pb6xw8"
#define deviceType = "abcd"
#define deviceId = "12"
#define authMethod = "token"
#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);  
}
```

Service Details - IBM Cloud x IBM Watson IoT Platform x +

6dwk4o.internetofthings.ibmcloud.com/dashboard/devices/drilldown/Tamil:21?returnTo=/devices/browse

IBM Watson IoT Platform

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Device Drilldown - 21

Device Credentials
Connection Information
Recent Events
State
Device Information
Metadata
Diagnostics
Connection Logs
Device Actions

Connection Information

Basic connection information about this device.

Device ID	21
Device Type	Tamil
Date Added	Oct 29, 2022 10:51 AM
Added By	dhivagark2002@gmail.com
Connection Status	Disconnected

Recent Events

The recent events listed show the live s

0 Simulations running

Service Details - IBM Cloud x IBM Watson IoT Platform x +

6dwk4o.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platform

Browse Action Device Types Interfaces

Identity **Device Information** **Recent Events**

The recent events listed show the live stream of data that is com

Event	Value
event_1	{"randomNumber":23,"distance":57}
event_1	{"randomNumber":56,"distance":97}
event_1	{"randomNumber":92,"distance":59}
event_1	{"randomNumber":70,"distance":78}
event_1	{"randomNumber":96,"distance":88}

Simulations

1/50 Simulations Running

+ New Simulation

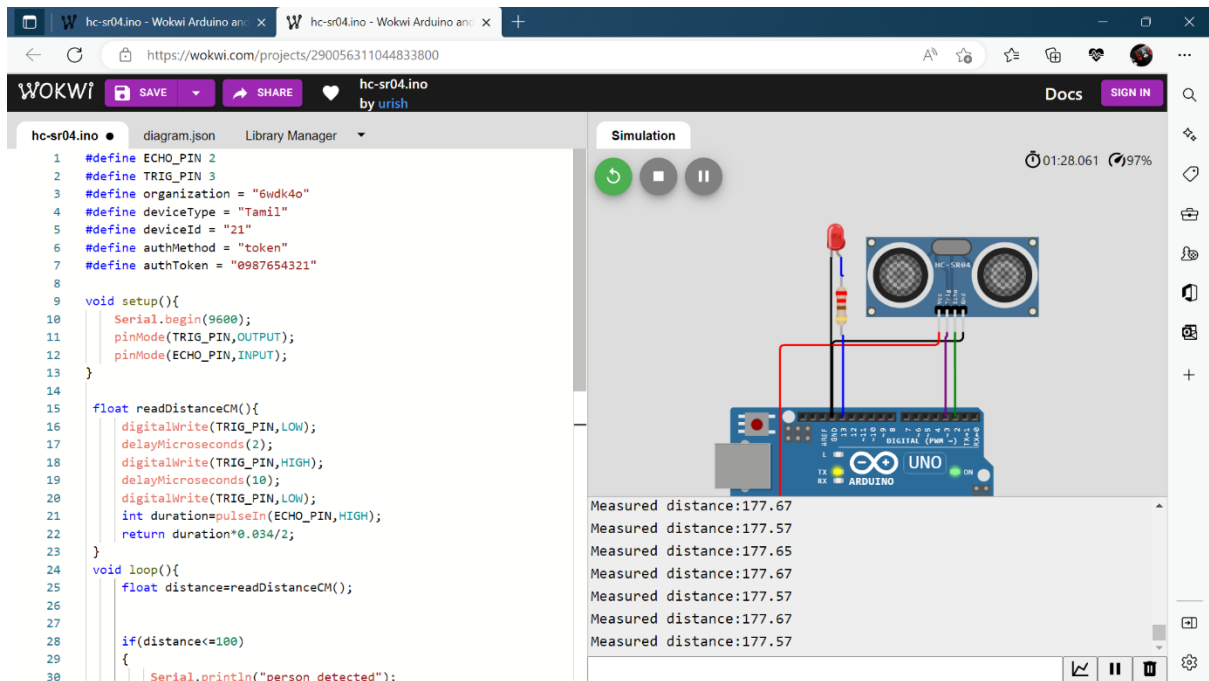
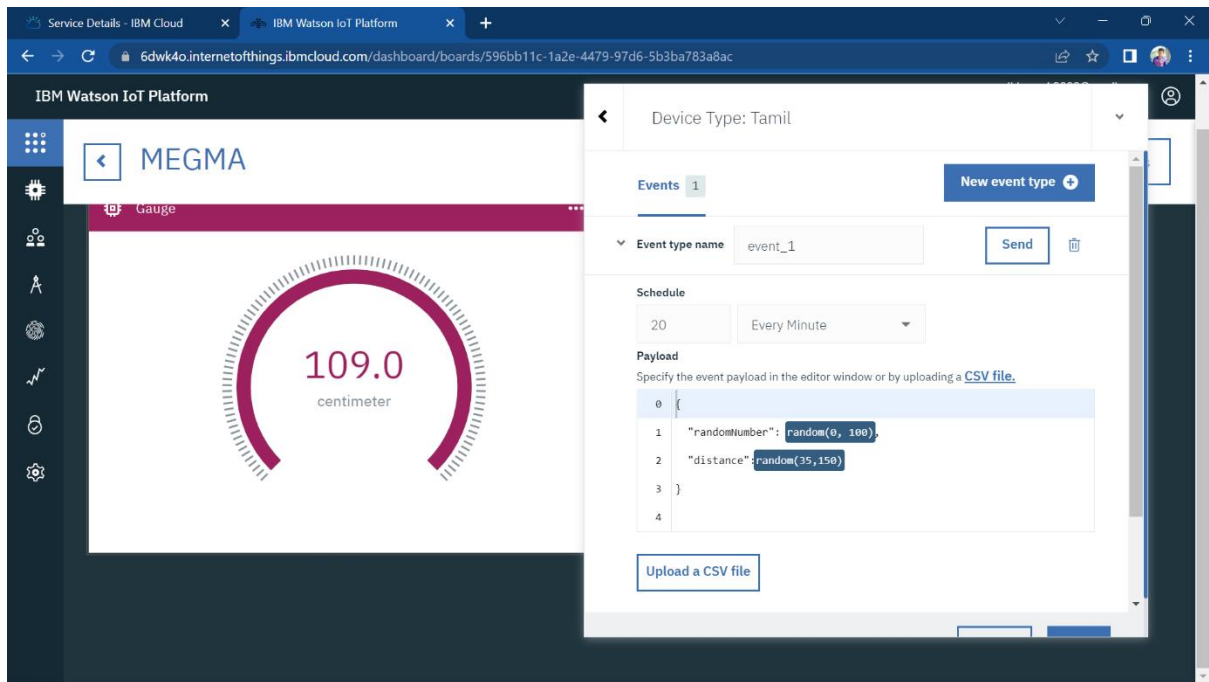
Device Type
Tamil

1 Event

1 Device

21

1 x Create Simulated Device Use Registered Device



Wokwi

SAVE

SHARE

hc-sr04.ino
by urish

Docs

SIGN UP

hc-sr04.ino

diagram.json

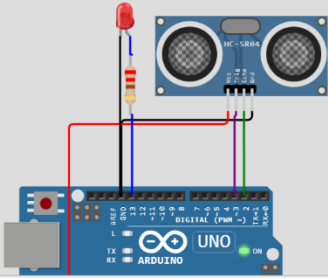
Library Manager

```
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      }delay(1000);
36  }
37  }
```

Simulation

02:33.803

100%



Measured distance:177.65
Measured distance:177.67
Measured distance:177.57
Measured distance:177.65
Measured distance:177.57
Measured distance:177.65
Measured distance:177.67