

S.Abirami Assignment -4

Question-1: Write code and connections in wokwi for ultrasonic sensor.

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 ="niqzrg"
#define deviceType=" Arduino"
#define deviceId ="1824"
#define authMethod ="use-token-auth"
#define authToken ="jkgR(E47y(?6S-SE8&"

void setup() {
  // put your setup code here, to run once:
  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() {
```

```
    // put your main code here, to run repeatedly:
```

```
    float distance = readDistanceCM();
```

```
    if(distance <= 100)
```

```
    {
```

```
        Serial.println("person detected ");
```

```
    }
```

```
    else{
```

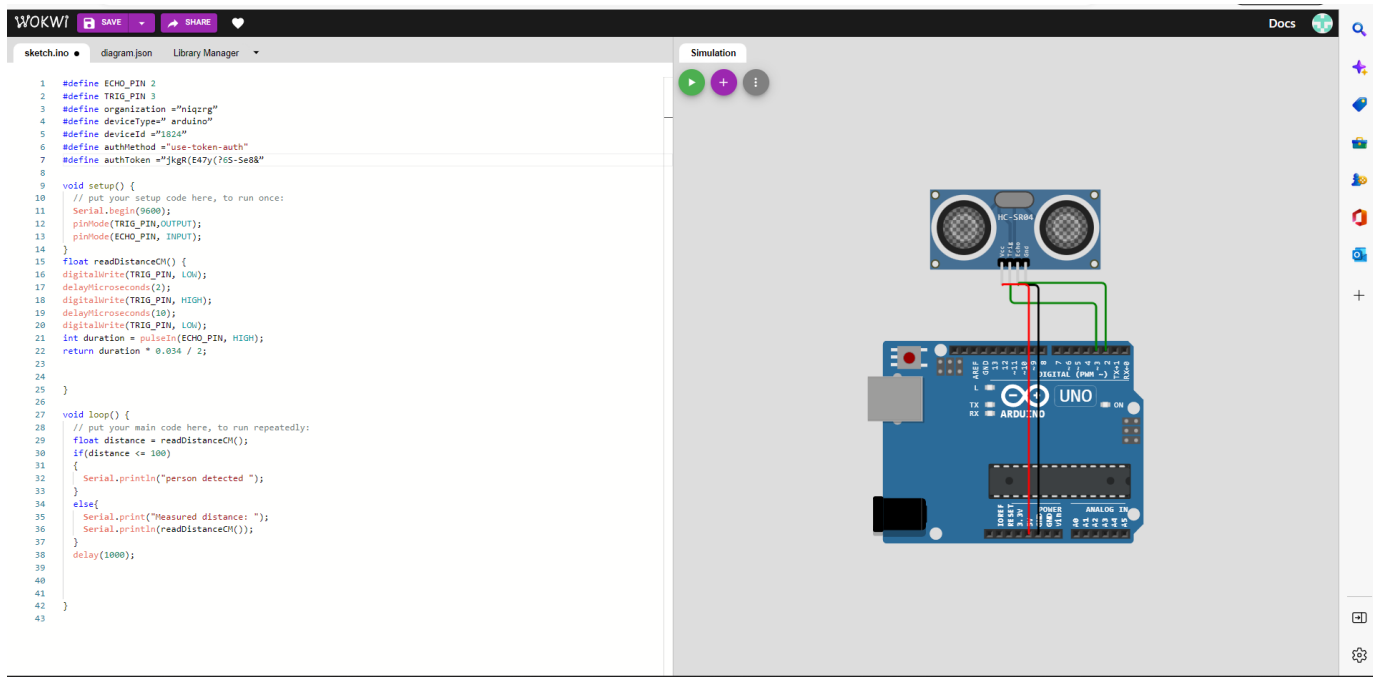
```
        Serial.print("Measured distance: ");
```

```
        Serial.println(readDistanceCM());
```

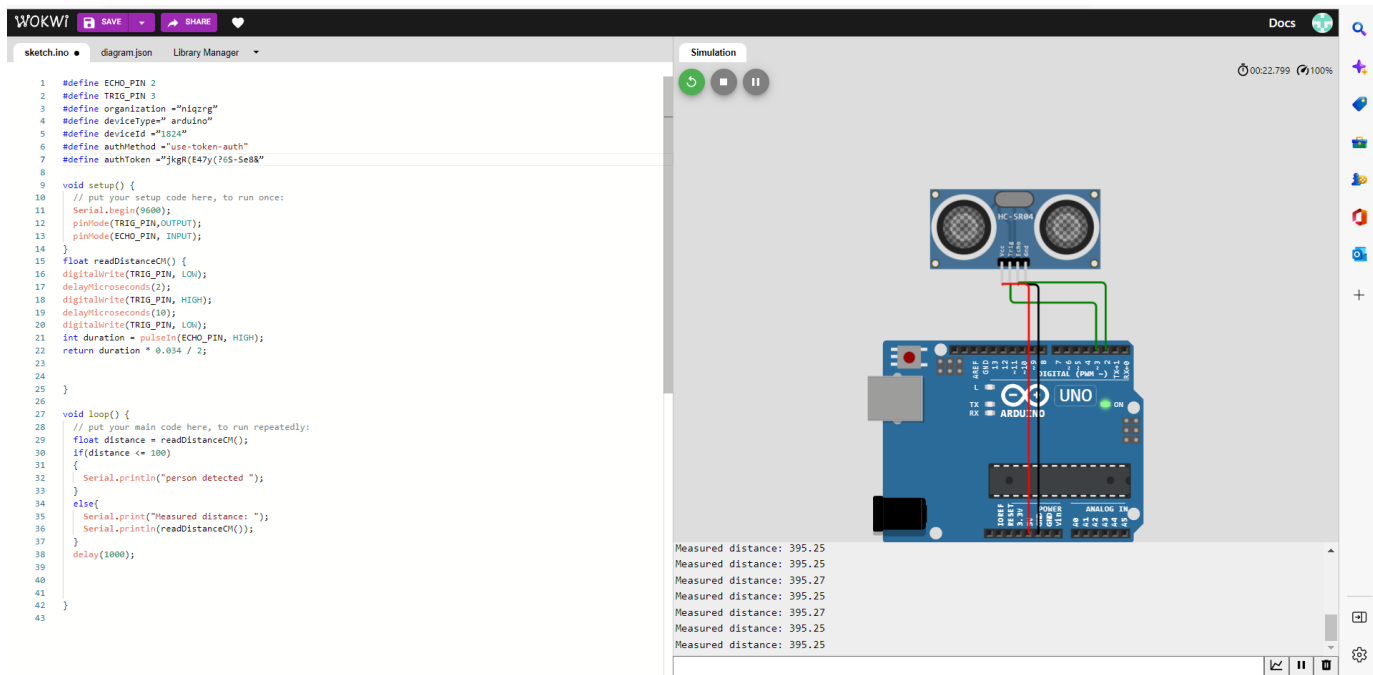
```
    }
```

```
    delay(1000);
```

```
}
```



Output:



Device Recent Events

IBM Watson IoT Platform

abisaravanan181096@gmail.com
ID: niqzrg

⌵

⚙️

👤

📏

📊

🔒

⚙️

← Back

Device Drilldown - 1824

Connection Information

Recent Events

State

Device Information

Metadata

Diagnostics

Connection Logs

Device Actions

Event	Value	Format	Last Received
event_1	{"version":1,"author":"Anonymous maker","edito...	json	a few seconds ago
event_1	{"version":1,"author":"Anonymous maker","edito...	json	a few seconds ago
event_1	{"version":1,"author":"Anonymous maker","edito...	json	a few seconds ago
event_1	{"version":1,"author":"Anonymous maker","edito...	json	a few seconds ago
event_1	{"version":1,"author":"Anonymous maker","edito...	json	a few seconds ago

1 Simulation running

