# Assignment -4 ULTRASONIC SENSOR

Assignment Date	11 <sup>th</sup> November 2022
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Student Roll Number	412519106089
Maximum Marks	2 Marks

# **QUESTION:**

Write code and connections in wokwi for the ultrasonic sensor.

Whenever the distance is less than 100 cms send an "alert" to the IBM cloud and display in the device recent events.

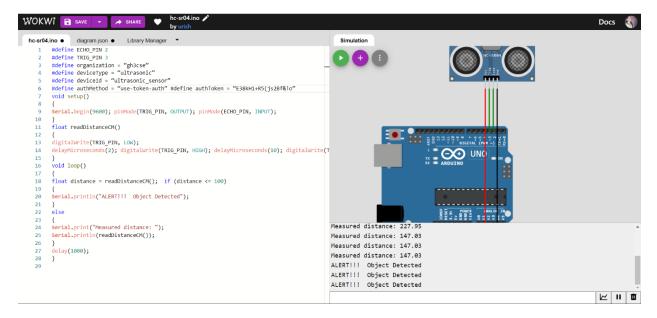
Upload document with wokwi share link and images of IBM cloud

# **SOLUTION:**

```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization = "gh3cse"
#define deviceType = "ultrasonic"
#define deviceId = "ultrasonic_sensor"
#define authMethod = "use-token-auth" #define authToken = "E38kH1+R5(js2Bf&!o")
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)</pre>
Serial.println("ALERT!!! Object Detected");
```

```
else
{
Serial.print("Measured distance: ");
Serial.println(readDistanceCM());
}
delay(1000);
}
```

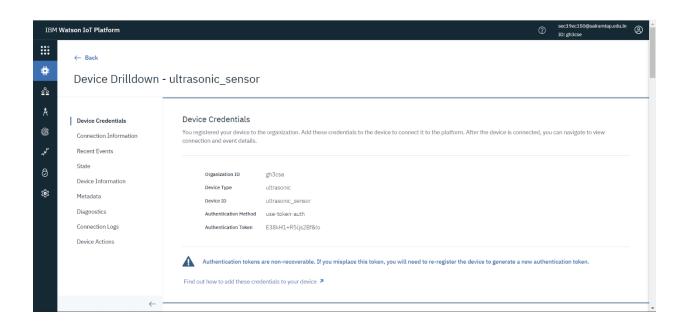
# **SIMULATION OUTPUT:**



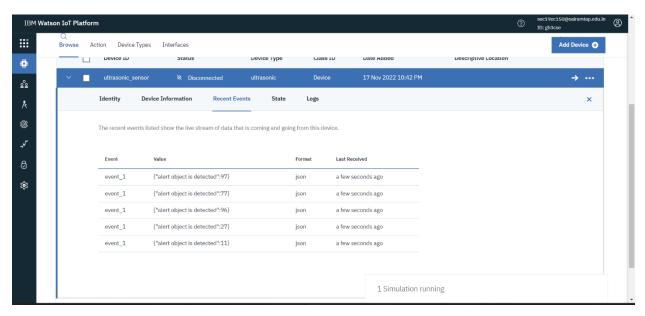
#### **WOKWI SHARE LINK:**

https://wokwi.com/projects/290056311044833800

# **IBM CLOUD DEVICE DETAILS:**



# **IBM CLOUD DEVICE RECENT EVENTS:**



# LINE CHART OF IBM CLOUD DEVICE:

