Assignment -4

ULTRASONIC SENSOR

Assignment Date	11 th November 2022
Student Name	Pranav S
Student Roll Number	412519106105
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 = "wv4o8f"
#define deviceType = "sensor"
#define deviceId = "sensor1"
#define authMethod = "use-token-auth" #define authToken = "vE7cCLc9jg@abDVSYy"
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);
}
```

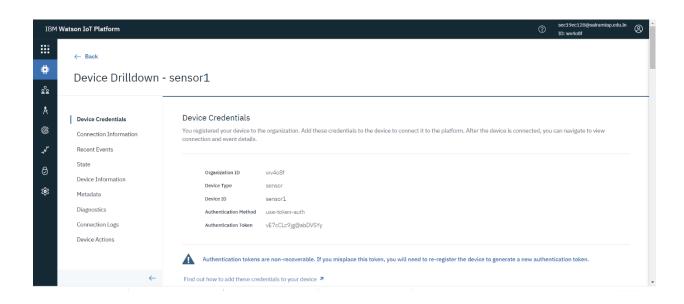
SIMULATION OUTPUT:



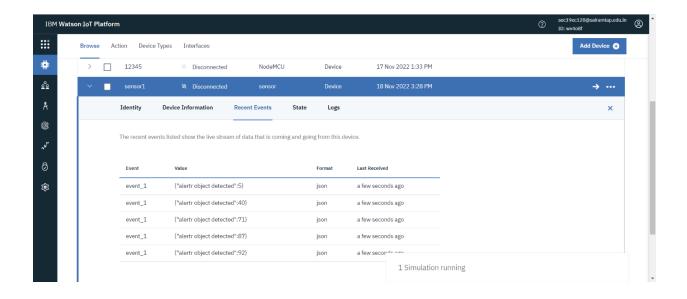
WOKWI SHARE LINK:

https://wokwi.com/projects/290056311044833800

IBM CLOUD DEVICE DETAILS:



IBM CLOUD DEVICE RECENT EVENTS:



LINE CHART OF IBM CLOUD DEVICE:

