

#### Assignment -4

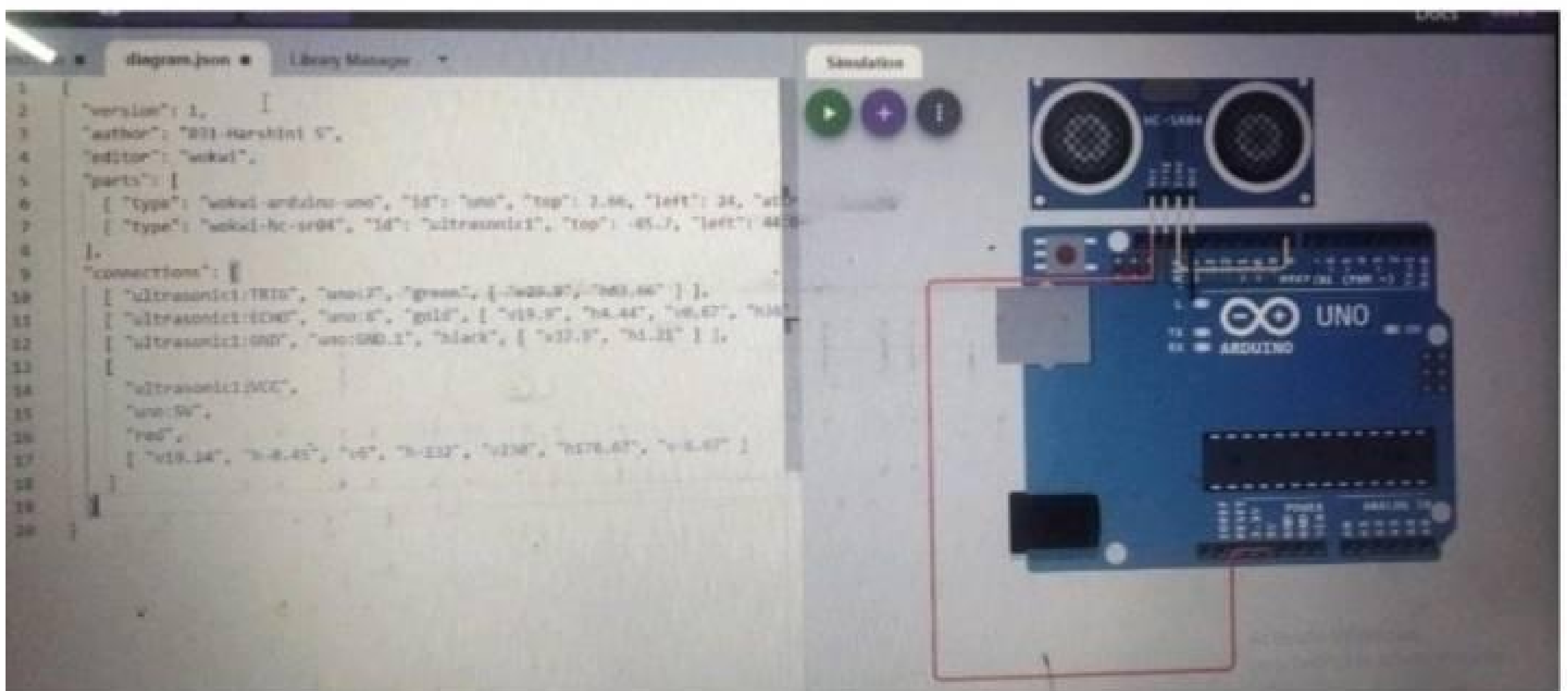
Assignment Date	30 OCTOBER 2022
Student Name	S. HARSHINI
Student Roll Number	913119106031
Maximum Marks	2 Marks

#### PROBLEM STATEMENT: IOT BASED CHILD SAFETY MONITORING AND NOTIFICATION

**QUESTION:** Write code and connection in wokwi for ultrasonic sensor. Whenever distance is less than 100cm and send "alert" to iim cloud and display in device recent events.

#### WOKWI LINK:

<https://wokwi.com/projects/347040624824812114>



WOKWI

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Docs

sketch.js

diagram.json

Library Manager

```

1  const int TRIG_PIN = 7;
2  const int ECHO_PIN = 8;
3
4  // anything over 400 cm (1000 us pulse) is "out of range"
5  const unsigned int MAX_DIST = 1000;
6
7  void setup() {
8
9      pinMode(TRIG_PIN, OUTPUT);
10     digitalWrite(TRIG_PIN, LOW);
11     pinMode(ECHO_PIN, INPUT);
12     Serial.begin(9600);
13 }
14
15 #define ORG "brennvetofthings.brecloud.com"
16 #define DEVICE_TYPE "ultrasonic"
17 #define DEVICE_ID "123"
18 #define TOKEN "c2345678"
19
20 char server[] = ORG ".messaging.breanvetofthings.brecloud.com";
21 char pubTopic1[] = "iot-2/ext/status1/req/json";
22 char pubTopic2[] = "iot-2/cmd/test/req/string";
23 char authMethod[] = "jwt-token-auth";
24 char token[] = TOKEN;
25 char clientId[] = "0:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;
26 void loop() {
27
28     unsigned long t1;
29     unsigned long t2;
30     unsigned long pulse width;

```

Simulation

00:04.800

40%

Editing Ultrasonic Distance Sensor

Distance:

Alert



**IBM CLOUD:**

Identity

Device Information

Recent Events

State

Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
event_1	{"dist":286,"message":"alert"}	json	a few seconds ago
event_1	{"dist":89,"message":"in range"}	json	a minute ago
event_1	{"dist":78,"message":"in range"}	json	a minute ago