

## ASSIGNMENT - 4

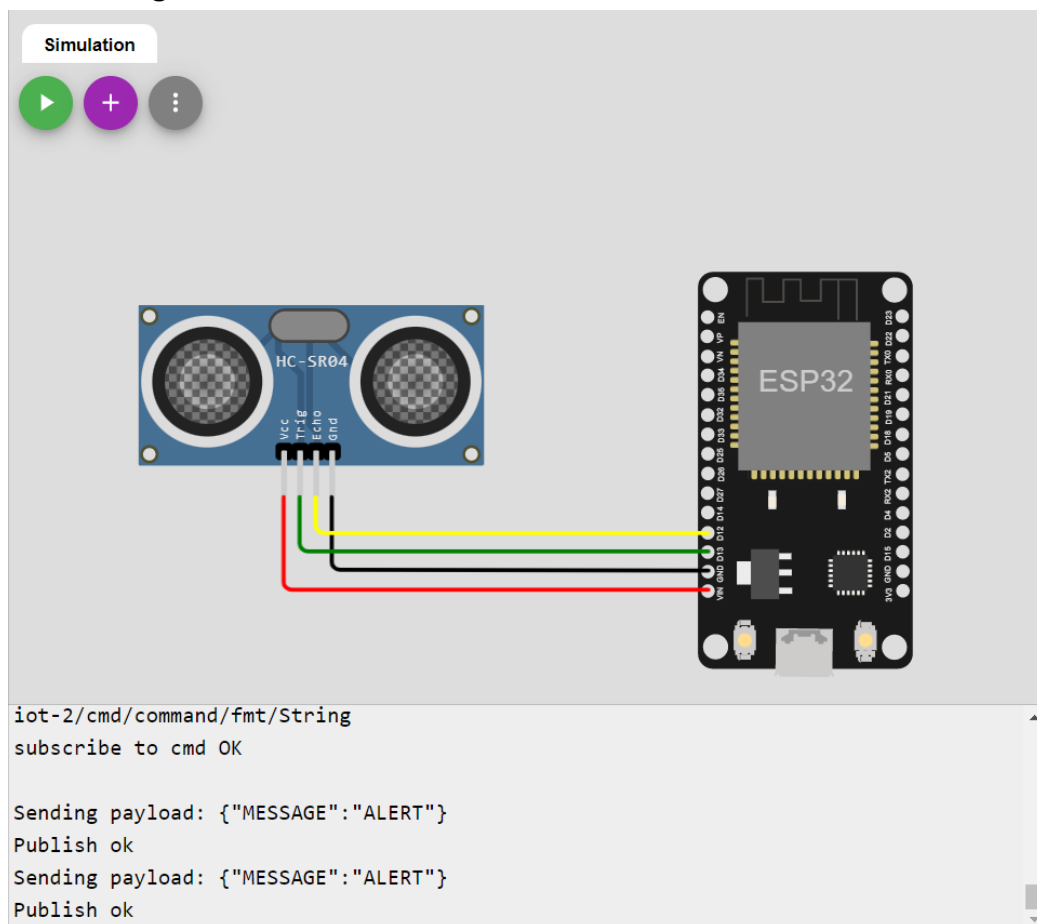
Date	28 September 2022
Student Name	Harippriyadharshini J
Student Roll Number	917719D027
Maximum Marks	2 marks

### 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.

Link: <https://wokwi.com/projects/346782026684170836>

### Circuit Diagram:



WOKWI

SAVE

SHARE

Docs

H

sketch.ino

diagram.json

libraries.txt

Library Manager

```

53
54 digitalWrite(TrigPIN, HIGH);
55 delayMicroseconds(10);
56 digitalWrite(TrigPIN, LOW);
57
58 pulse_width = pulseIn(EchoPIN, HIGH);
59
60 distance= pulse_width * 0.034 / 2;
61
62 if(distance<100)
63 {
64   PublishData();
65 }
66
67 delay(1000);
68 if (!client.loop()) {
69   mqttconnect();
70 }
71 }
72
73
74
75 /*.....retrieving to Cloud.....
76
77 void PublishData() {
78   mqttconnect();//function call for connecting to ibm
79   /*
80   | creating the String in in form JSON to update the data to ibm cloud
81   */
82   String payload = "{\"MESSAGE\":\"ALERT\"}";
83
84   Serial.print("Sending payload: ");
85

```

Simulation

▶

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⋮

```

iot-2/cmd/command/fmt/String
subscribe to cmd OK

Sending payload: {"MESSAGE":"ALERT"}
Publish ok
Sending payload: {"MESSAGE":"ALERT"}
Publish ok

```

## OUTPUT:

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Browse

Action

Device Types

Interfaces

Add Device +

assign\_4

Disconnected

assign

Device

Oct 28, 2022 8:31 PM

→ ...

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
Data	{"MESSAGE":"ALERT"}	json	a few seconds ago
Data	{"MESSAGE":"ALERT"}	json	a few seconds ago
Data	{"MESSAGE":"ALERT"}	json	3 minutes ago
Data	{"MESSAGE":"ALERT"}	json	3 minutes ago
Data	{"MESSAGE":"ALERT"}	json	4 minutes ago

