

## Assignment -4

### ESP32 Program

Assignment Date	31 October2022
Student Name	Vinothkumar S
Student Roll Number	620119104117
Maximum Marks	2 Marks

#### 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 Upload document with wokwi share link and images of ibm cloud

WOKWi Link: <https://wokwi.com/projects/347012261319017044>

esp32-blink.ino

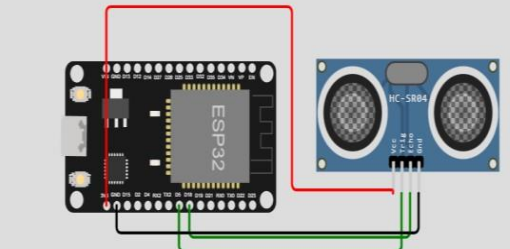
diagram.json

libraries.txt

Library Manager

```
21 String data3;
22
23
24
25 //----- Customise the above values -----
26 char server[] = ORG ".messaging.internetofthings.ibmcloud.com";// Server Name
27 char publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of event perform and format in which
28 char subscribetopic[] = "iot-2/cmd/test/fmt/String";// cmd REPRESENT command type AND COMMAND IS TEST OF FO
29 char authMethod[] = "use-token-auth";// authentication method
30 char token[] = TOKEN;
31 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id
32
33 Wi-FiClient wificlient; // creating the instance for wificlient
34 PubSubClient client(server, 1883, callback ,wificlient);
35
36 void setup() {
37   Serial.begin(115200); // Starts the serial communication
38   pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
39   pinMode(echoPin, INPUT); // Sets the echoPin as an Input
40   Serial.println();
41   wificlient.connect();
42   mqttconnect();
43 }
44
45
46 void loop() {
47   // Clears the trigPin
48   digitalWrite(trigPin, LOW);
49   delayMicroseconds(2);
50   // Sets the trigPin on HIGH state for 10 micro seconds
51   digitalWrite(trigPin, HIGH);
52   delayMicroseconds(10);
53   digitalWrite(trigPin, LOW);
54
55   // Reads the echoPin. returns the sound wave travel time in microseconds
```

Simulation



Distance (inch): 85.41  
Sending payload: {"Distance (cm)":216.94}  
Publish ok  
Distance (cm): 216.97  
Distance (inch): 85.42  
Sending payload: {"Distance (cm)":216.97}  
Publish ok

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assign4 Disconnected assign4 Device Oct 31, 2022 11:33 AM

[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	{"Distance (cm)":216.94}	json	a few seconds ago
Data	{"Distance (cm)":216.94}	json	a few seconds ago
Data	{"Distance (cm)":216.97}	json	a few seconds ago
Data	{"Distance (cm)":216.94}	json	a few seconds ago
Data	{"Distance (cm)":216.94}	json	a few seconds ago

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