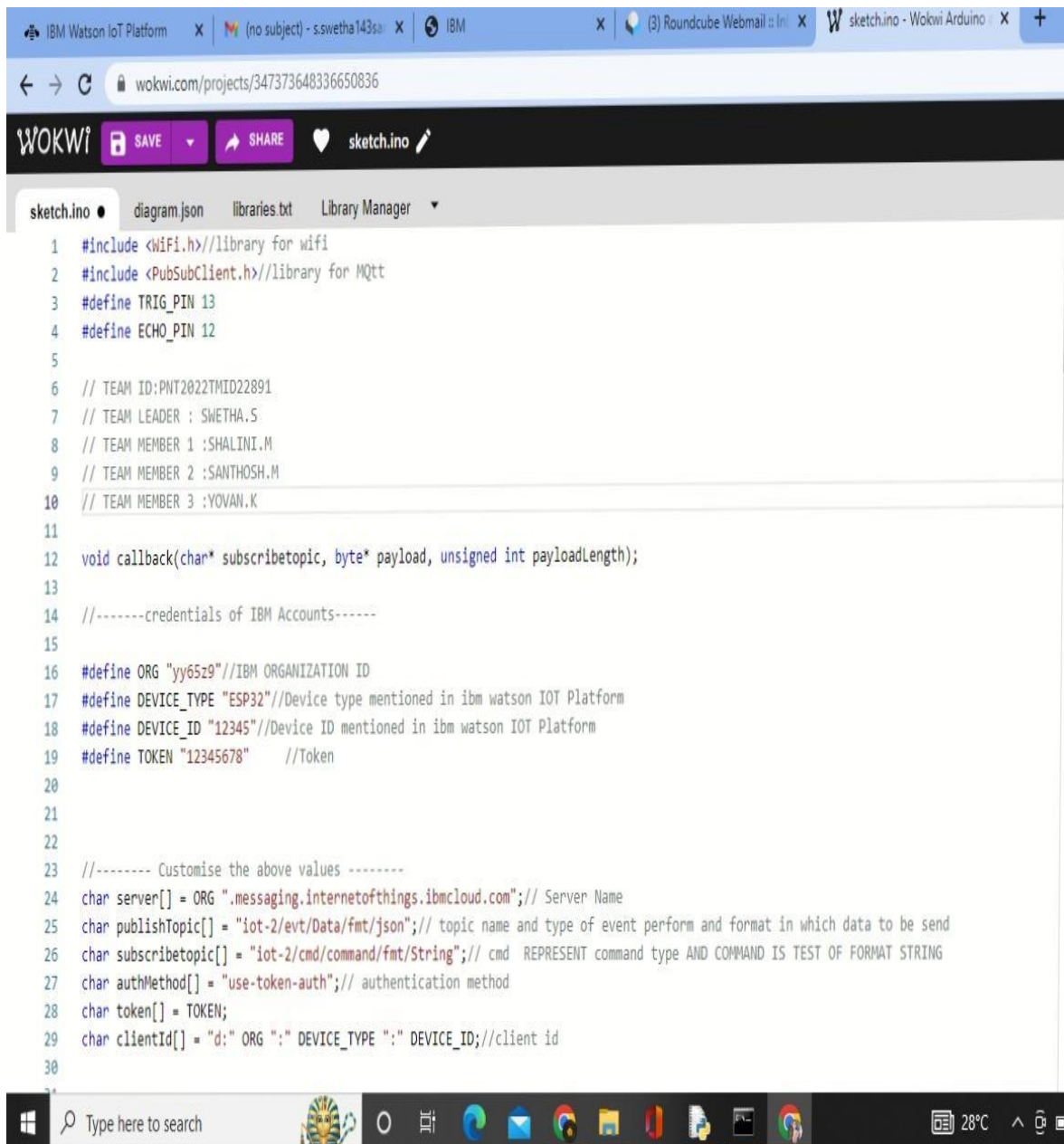


Assignment 4

Link to wokwi : <https://wokwi.com/projects/347373648336650836>



```
1 #include <WiFi.h>//library for wifi
2 #include <PubSubClient.h>//library for MQTT
3 #define TRIG_PIN 13
4 #define ECHO_PIN 12
5
6 // TEAM ID:PNT2022TMID22891
7 // TEAM LEADER : SWETHA.S
8 // TEAM MEMBER 1 :SHALINI.M
9 // TEAM MEMBER 2 :SANTHOSH.M
10 // TEAM MEMBER 3 :YOVAN.K
11
12 void callback(char* subscribetopic, byte* payload, unsigned int payloadLength);
13
14 //-----credentials of IBM Accounts-----
15
16 #define ORG "yy65z9"//IBM ORGANIZATION ID
17 #define DEVICE_TYPE "ESP32"//Device type mentioned in ibm watson IOT Platform
18 #define DEVICE_ID "12345"//Device ID mentioned in ibm watson IOT Platform
19 #define TOKEN "12345678" //Token
20
21
22
23 //----- Customise the above values -----
24 char server[] = ORG ".messaging.internetofthings.ibmcloud.com";// Server Name
25 char publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of event perform and format in which data to be send
26 char subscribetopic[] = "iot-2/cmd/command/fmt/String";// cmd REPRESENT command type AND COMMAND IS TEST OF FORMAT STRING
27 char authMethod[] = "use-token-auth";// authentication method
28 char token[] = TOKEN;
29 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id
30
```

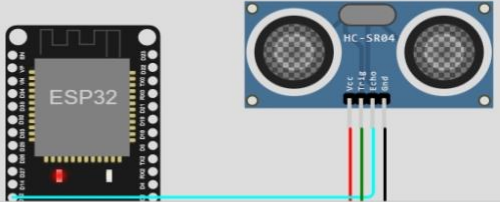
WOKWI

sketch.ino diagram.json libraries.txt Library Manager

```
89 Serial.print("Sending payload: ");
90 Serial.println(payload);
91
92
93 if (client.publish(publishTopic, (char*) payload.c_str())) {
94   Serial.println("Publish ok");// if it sucessfully upload data on
95 } else {
96   Serial.println("Publish failed");
97 }
98
99 }
100
101
102 void mqttconnect() {
103   if (!client.connected()) {
104     Serial.print("Reconnecting client to ");
105     Serial.println(server);
106     while (!client.connect(clientId, authMethod, token)) {
107       Serial.print(".");
108       delay(500);
109     }
110
111     initManagedDevice();
112     Serial.println();
113   }
114 }
115 void wificonnect() //function defination for wificonnect
116 {
117   Serial.println();
118   Serial.print("Connecting to ");
```

Simulation

02:56.137 98%



Publish ok
Sending payload: {"Distance":84.98,"MESSAGE":"ALERT"}
Publish ok
Sending payload: {"Distance":84.98,"MESSAGE":"ALERT"}
Publish ok
Sending payload: {"Distance":85.00,"MESSAGE":"ALERT"}
Publish ok

IBM Watson IoT Platform

yy65z9.internetofthings.ibmcloud.com/dashboard/devices/drilldown/ESP32:12345?returnTo=/devices/browse

732919ecr143@smartinternz.com
ID: yy65z9

Device Drilldown - 12345

← Back

Connection Information

Recent Events

State

Device Information

Metadata

Diagnostics

Connection Logs

Device Actions

Connection Information

Basic connection information about this device.

| | |
|-------------------|---------------------------------------|
| Device ID | 12345 |
| Device Type | ESP32 |
| Date Added | Nov 4, 2022 10:59 AM |
| Added By | 732919ecr143@smartinternz.com |
| Connection Status | Connected |
| | Connection Time: Nov 4, 2022 11:19 AM |
| | Client Address: 145.40.94.93 Insecure |

Recent Events

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

IBM Watson IoT Platform

732919ecr143@smartinternz.com
ID: yy65z9

← Back

Device Drilldown - 12345

Connection Information

Recent Events

State

Device Information

Metadata

Diagnostics

Connection Logs

Device Actions

Recent Events

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":84.98,"MESSAGE":"ALERT"} | json | a few seconds ago |
| Data | {"Distance":84.98,"MESSAGE":"ALERT"} | json | a few seconds ago |
| Data | {"Distance":84.98,"MESSAGE":"ALERT"} | json | a few seconds ago |
| Data | {"Distance":84.98,"MESSAGE":"ALERT"} | json | a few seconds ago |
| Data | {"Distance":85,"MESSAGE":"ALERT"} | json | a few seconds ago |

Type here to search

28°C

ENG IN

11:20 AM

11/4/2022