

Date	20 October 2022
Student Name	AFREEN . J
Student Register Number	211419106012
Maximum Marks	2 Marks

WOKWI WEB URL:

<https://wokwi.com/projects/346135768783127123>

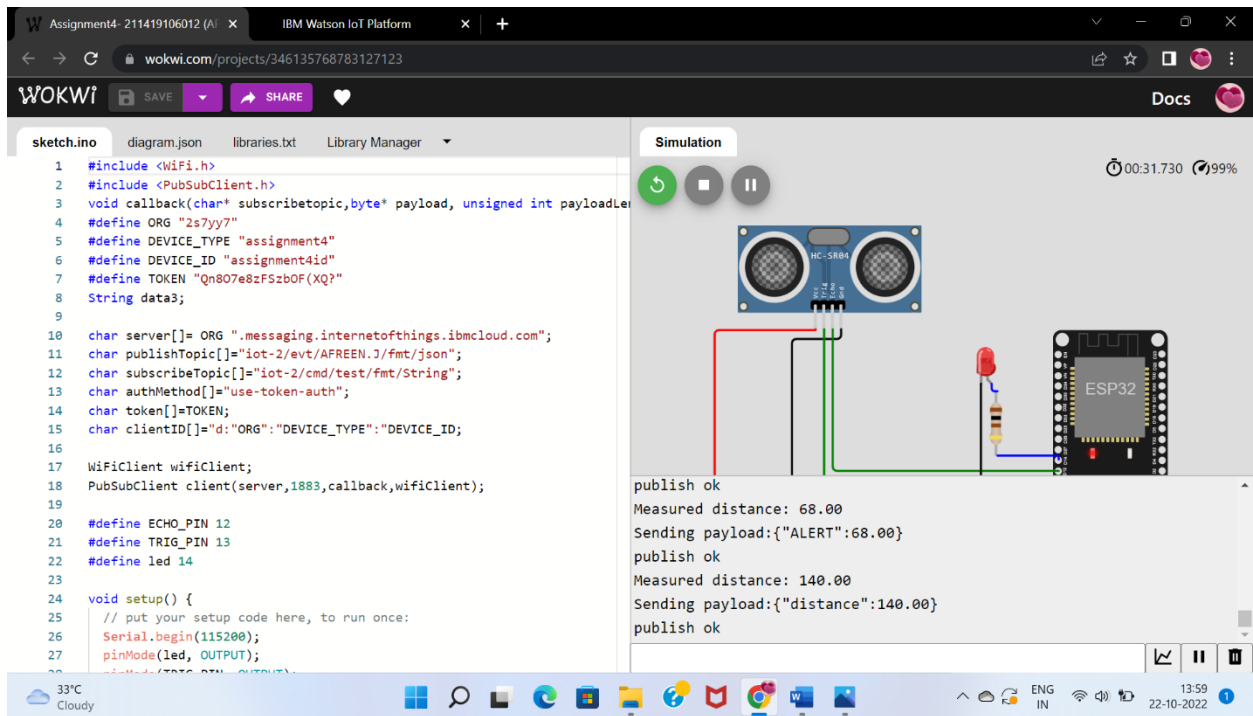
SNAPSHOTS OF SIMULATION:

The screenshot displays the Wokwi web interface for a project titled "Assignment4- 211419106012". The code editor on the left shows the following code:

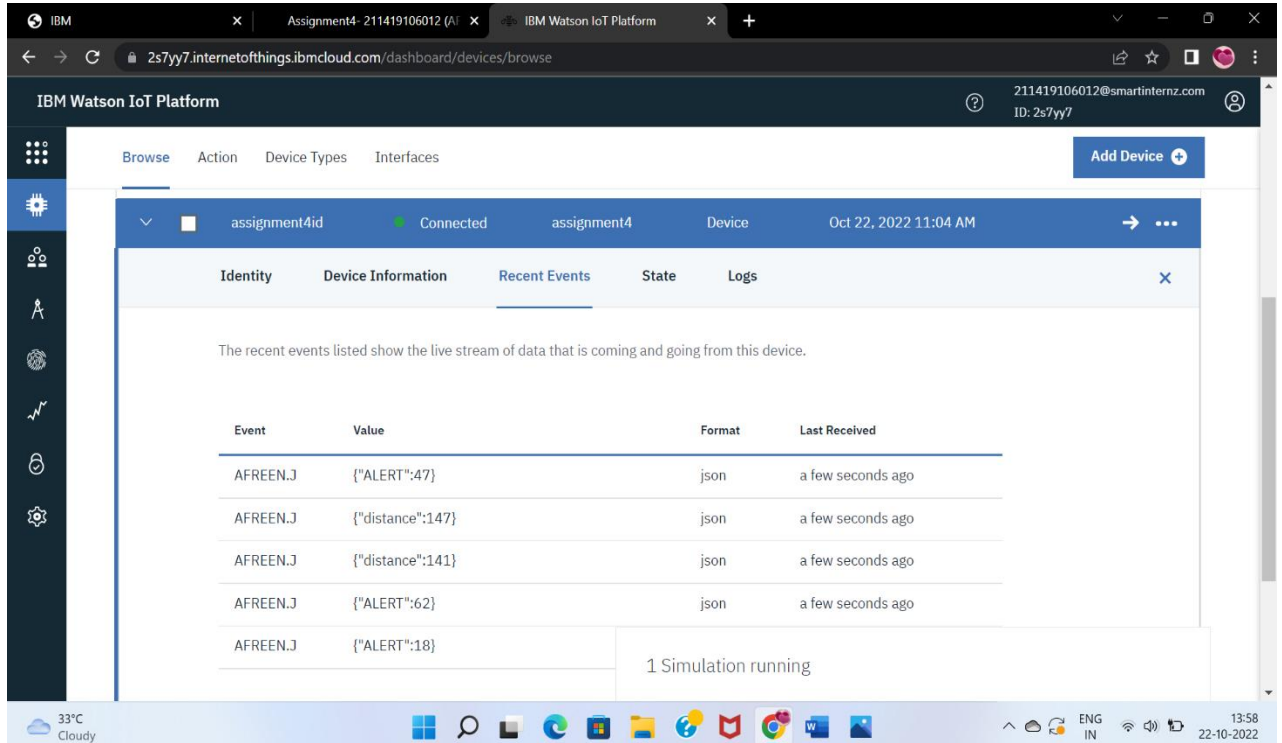
```
1 #include <WiFi.h>
2 #include <PubSubClient.h>
3 void callback(char* subscribtopic,byte* payload, unsigned int payloadLen
4 #define ORG "2s7yy7"
5 #define DEVICE_TYPE "assignment4"
6 #define DEVICE_ID "assignment4id"
7 #define TOKEN "Qn807e8zFSzbOF(XQ?"
8 String data3;
9
10 char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
11 char publishTopic[] = "iot-2/evt/AFREEN.J/fmt/json";
12 char subscribeTopic[] = "iot-2/cmd/test/fmt/String";
13 char authMethod[] = "use-token-auth";
14 char token[] = TOKEN;
15 char clientId[] = "d:ORG:DEVICE_TYPE:DEVICE_ID";
16
17 WiFiClient wifiClient;
18 PubSubClient client(server,1883,callback,wifiClient);
19
20 #define ECHO_PIN 12
21 #define TRIG_PIN 13
22 #define led 14
23
24 void setup() {
25   // put your setup code here, to run once:
26   Serial.begin(115200);
27   pinMode(led, OUTPUT);
28 }
```

The simulation window on the right shows the hardware components: an ESP32 microcontroller, an HC-SR04 ultrasonic sensor, and an LED. The log of the simulation shows the following messages:

```
publish ok
Measured distance: 42.00
Sending payload:{"ALERT":42.00}
publish ok
Measured distance: 56.00
Sending payload:{"ALERT":56.00}
publish ok
```



IMAGES OF IBM CLOUD:



The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains various icons for device management. The main content area displays a table for the device 'assignment4id', which is in a 'Connected' state. The 'Recent Events' tab is active, showing a list of events. Below the table, a status indicator shows '1 Simulation running'.

Event	Value	Format	Last Received
AFREEN.J	{"ALERT":2}	json	a few seconds ago
AFREEN.J	{"distance":176}	json	a few seconds ago
AFREEN.J	{"ALERT":49}	json	a few seconds ago
AFREEN.J	{"ALERT":48}	json	a few seconds ago
AFREEN.J	{"ALERT":47}		

1 Simulation running

This screenshot is similar to the one above, showing the same IBM Watson IoT Platform dashboard. The 'Recent Events' tab is active, and the table displays a different set of events. The status indicator still shows '1 Simulation running'.

Event	Value	Format	Last Received
AFREEN.J	{"ALERT":42}	json	a few seconds ago
AFREEN.J	{"distance":194}	json	a few seconds ago
AFREEN.J	{"ALERT":98}	json	a few seconds ago
AFREEN.J	{"distance":175}	json	a few seconds ago
AFREEN.J	{"ALERT":67}		

1 Simulation running