

Date	21 October 2022
Student Name	KALAI KAVIYA.V.B
Student Register Number	211419106118
Maximum Marks	2 Marks

WOKWI WEB URL:

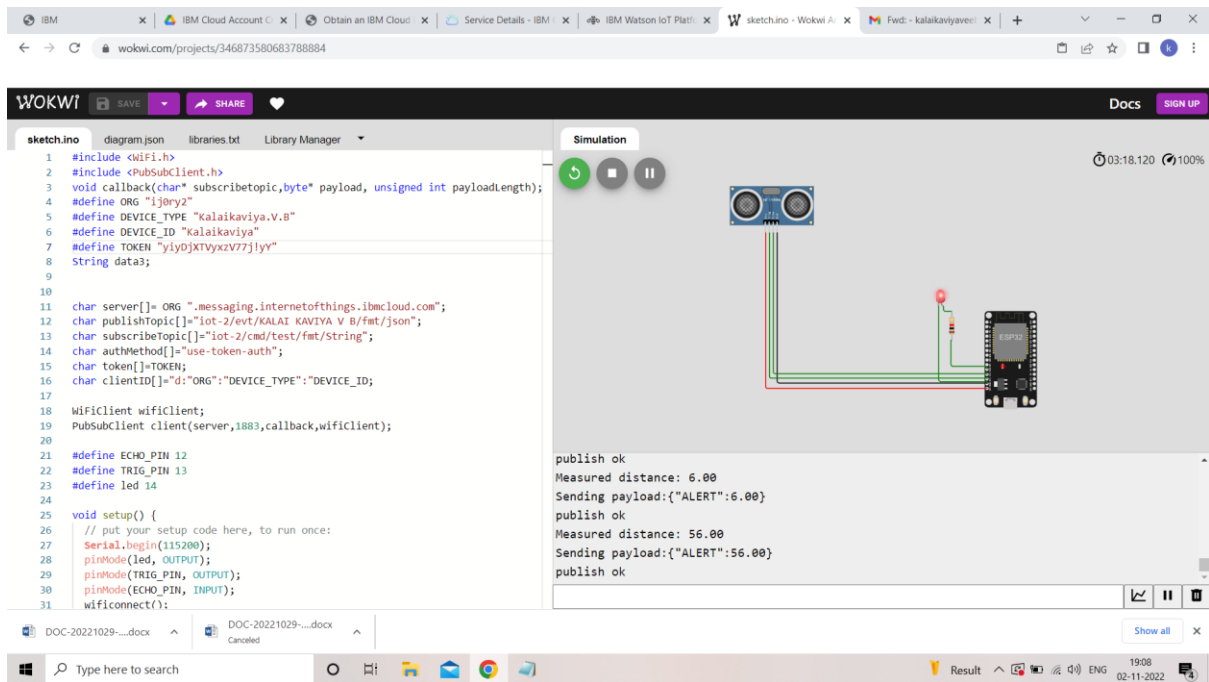
<https://wokwi.com/projects/346873580683788884>

SNAPSHOTS OF SIMULATION:

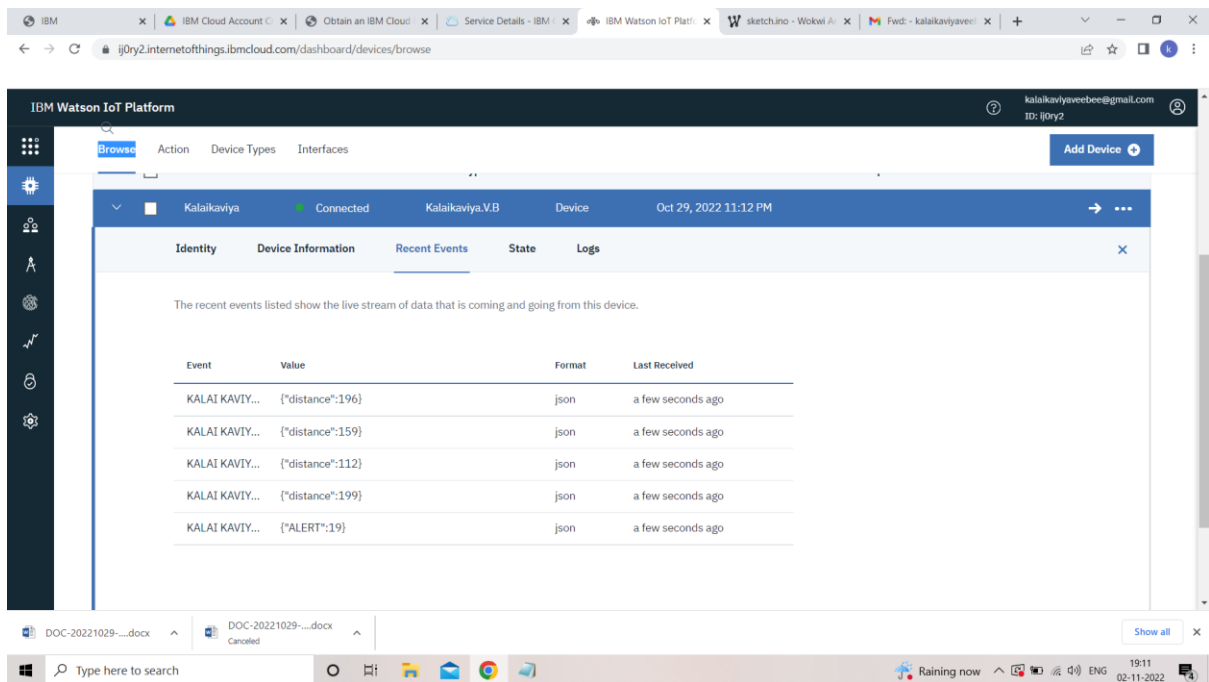
The screenshot displays the Wokwi web interface for a project simulation. The left pane shows the C++ code for an ESP8266 module, which includes an MQTT client and publishes distance data. The right pane shows the simulation of the hardware, including an ultrasonic sensor and the ESP8266 module. The output log in the bottom right corner shows the simulation results.

```
1 #include <WiFi.h>
2 #include <PubSubClient.h>
3 void callback(char* topic, byte* payload, unsigned int payloadLength);
4 #define ORG "iJory2"
5 #define DEVICE_TYPE "Kalaikaviya.V.B"
6 #define DEVICE_ID "Kalaikaviya"
7 #define TOKEN "yiyDjXTVyxzV77jlyv"
8 String data;
9
10
11 char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
12 char publishTopic[] = "iot-2/evt/KALAI KAVIYA V B/fmt/json";
13 char subscribeTopic[] = "iot-2/cmd/test/fmt/String";
14 char authMethod[] = "use-token-auth";
15 char token[] = TOKEN;
16 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;
17
18 WiFiClient wifiClient;
19 PubSubClient client(server, 1883, callback, wifiClient);
20
21 #define ECHO_PIN 12
22 #define TRIG_PIN 13
23 #define led 14
24
25 void setup() {
26   // put your setup code here, to run once:
27   Serial.begin(115200);
28   pinMode(led, OUTPUT);
29   pinMode(TRIG_PIN, OUTPUT);
30   pinMode(ECHO_PIN, INPUT);
31   wifiConnect();
32 }
```

publish ok
Measured distance: 183.00
Sending payload:{"distance":183.00}
publish ok
Measured distance: 190.00
Sending payload:{"distance":190.00}
publish ok



IMAGES OF IBM CLOUD:



The screenshot displays the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. The main content area shows the details for a device named 'Kalaikaviya.V.B', which is in a 'Connected' state. The 'Recent Events' tab is selected, showing a table of events. The table has columns for 'Event', 'Value', 'Format', and 'Last Received'. The events listed are:

Event	Value	Format	Last Received
KALAI KAVIY...	{"distance":199}	json	a few seconds ago
KALAI KAVIY...	{"ALERT":86}	json	a few seconds ago
KALAI KAVIY...	{"distance":193}	json	a few seconds ago
KALAI KAVIY...	{"ALERT":1}	json	a few seconds ago
KALAI KAVIY...	{"ALERT":36}	json	a few seconds ago

The bottom screenshot shows the same dashboard but with a different set of events in the 'Recent Events' tab:

Event	Value	Format	Last Received
KALAI KAVIY...	{"ALERT":36}	json	a few seconds ago
KALAI KAVIY...	{"distance":198}	json	a few seconds ago
KALAI KAVIY...	{"ALERT":35}	json	a few seconds ago
KALAI KAVIY...	{"distance":128}	json	a few seconds ago
KALAI KAVIY...	{"ALERT":75}	json	a few seconds ago