

Date	21 October 2022
Student Name	DIVYAVARSHINI.K.K
Student Register Number	211419106077
Maximum Marks	2 Marks

WOKWI WEB URL:

<https://wokwi.com/projects/347761418079044180>

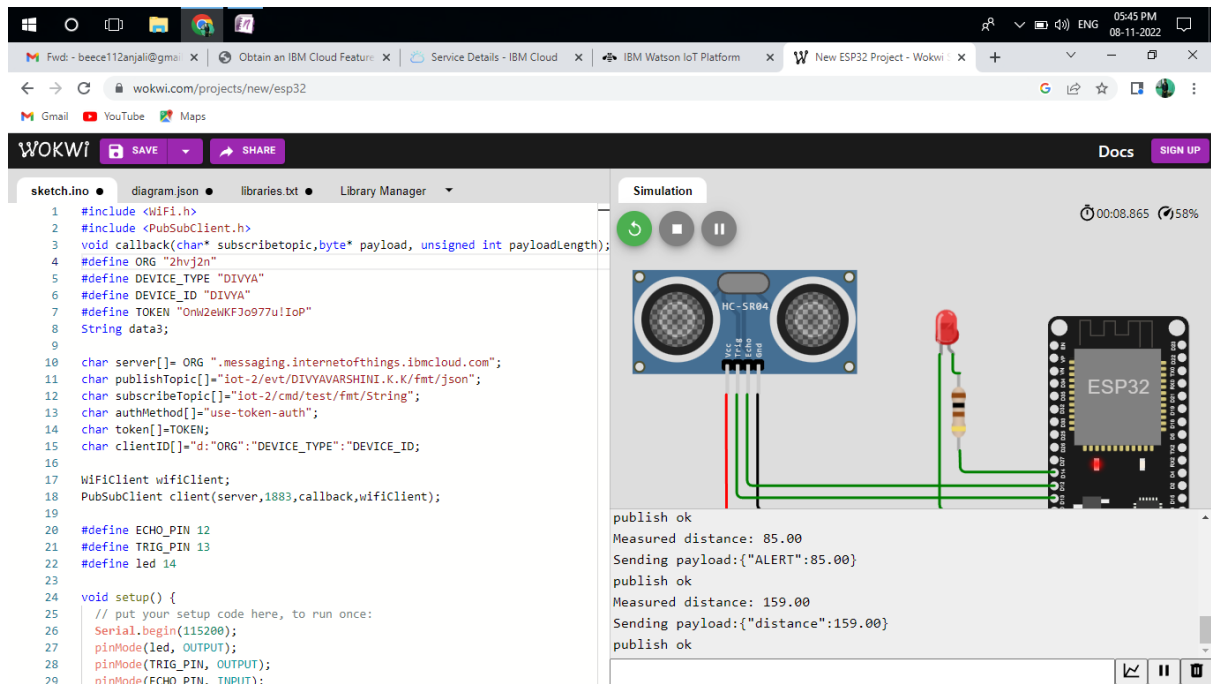
SNAPSHOTS OF SIMULATION:

The screenshot shows the Wokwi web interface for a new ESP32 project. The left pane displays the sketch code for a PIR sensor and LED. The right pane shows the simulation with a PIR sensor (HC-SR04) and an LED connected to an ESP32. The console output shows the sensor detecting a distance of 163.00 cm and sending a payload, then detecting a distance of 5.00 cm and sending an alert payload.

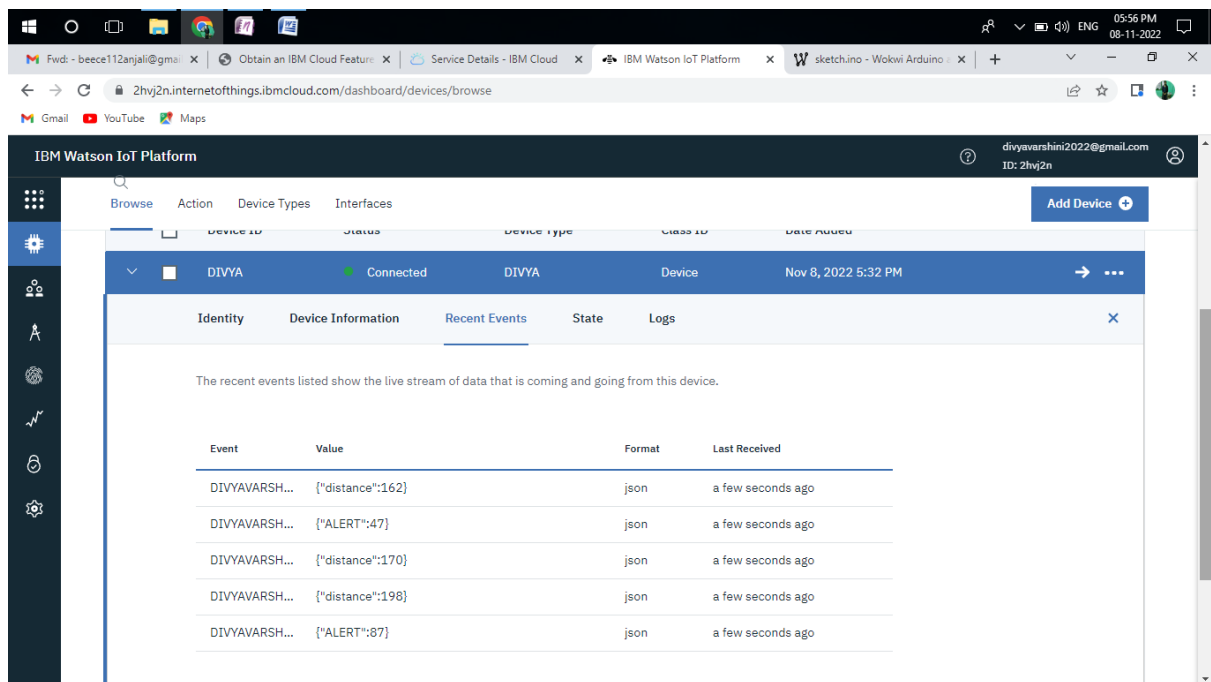
```
1 #include <WiFi.h>
2 #include <PubSubClient.h>
3 void callback(char* topic, byte* payload, unsigned int payloadLength);
4 #define ORG "2hvj2n"
5 #define DEVICE_TYPE "DIVYA"
6 #define DEVICE_ID "DIVYA"
7 #define TOKEN "OnW2eWKF3o977u!IoP"
8 String data3;
9
10 char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
11 char publishTopic[] = "iot-2/evt/DIVYAVARSHINI.K.K/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   pinMode(TRIG_PIN, OUTPUT);
29   pinMode(ECHO_PIN, INPUT);
30 }
```

Simulation console output:

```
publish ok
Measured distance: 163.00
Sending payload:{"distance":163.00}
publish ok
Measured distance: 5.00
Sending payload:{"ALERT":5.00}
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 search bar and a user profile icon are also present. The main content area displays a table of devices, with one device 'DIVYA' selected. The 'Recent Events' tab is active, showing a list of events with columns for Event, Value, Format, and Last Received.

Event	Value	Format	Last Received
DIVYAVARSH...	{"distance":195}	json	a few seconds ago
DIVYAVARSH...	{"distance":190}	json	a few seconds ago
DIVYAVARSH...	{"ALERT":92}	json	a few seconds ago
DIVYAVARSH...	{"ALERT":80}	json	a few seconds ago
DIVYAVARSH...	{"ALERT":15}	json	a few seconds ago

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar and a user profile icon are also present. The main content area displays a table of devices, with one device 'DIVYA' selected. The 'Recent Events' tab is active, showing a list of events with columns for Event, Value, Format, and Last Received.

Event	Value	Format	Last Received
DIVYAVARSH...	{"distance":169}	json	a few seconds ago
DIVYAVARSH...	{"ALERT":7}	json	a few seconds ago
DIVYAVARSH...	{"distance":151}	json	a few seconds ago
DIVYAVARSH...	{"distance":195}	json	a few seconds ago
DIVYAVARSH...	{"distance":190}	json	a few seconds ago