

Assignment 4

The screenshot shows the Wokwi IDE interface. On the left, the 'sketch.ino' file is open, displaying the following code:

```
1 #include <WiFi.h>
2 #include <PubSubClient.h>
3 #include <ArduinoJson.h>
4 WiFiClient wifiClient;
5 #define ORG "d9o9ov"
6 #define DEVICE_TYPE "Iot"
7 #define DEVICE_ID "10"
8 #define TOKEN "11111111"
9 #define speed 0.034
10 char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
11 char publishTopic[] = "iot-2/evt/Data/fmt/json";
12 char topic[] = "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 PubSubClient client(server, 1883, wifiClient);
17 void publishData();
18 const int trigpin = 5;
19 const int echopin = 18;
20 String command;
21 String data = "";
22 long duration;
23 int dist;
24 void setup()
25 {
26   Serial.begin(115200);
27   pinMode(trigpin, OUTPUT);
28   pinMode(echopin, INPUT);
```

On the right, the 'Simulation' tab is active, showing a 3D model of an ESP32 microcontroller board. A red wire is connected to the board. A dropdown menu is open, showing the user's profile 'Uppuliappan M' and options: 'Discord', 'My projects', 'The Club', 'Feature Roadmap', 'Language', and 'Logout'.

The screenshot shows the 'Recent Events' tab in the Wokwi IDE. The tab is titled 'Recent Events' and contains the following text:

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

Event	Value	Format	Last received
Data	{"AlertDistance":36}	json	a few seconds ago
Data	{"AlertDistance":36}	json	a few seconds ago
Data	{"AlertDistance":96}	json	a few seconds ago
Data	{"AlertDistance":96}	json	a few seconds ago
Data	{"AlertDistance":97}	json	a few seconds ago

At the bottom right, a status bar indicates '2 Simulations running'.