

SPRINT-1

DATE	14 November 2022
TEAM ID	PNT2022TMID36766
PROJECT NAME	Industry - specific intelligent fire management system

PROGRAM:

```
#include <WiFi.h>
#include <PubSubClient.h>
#include "DHT.h"
#define DHTPIN 15
#define DHTTYPE DHT22
#define LED 2
DHT dht (DHTPIN, DHTTYPE);
void callback(char* subscribetopic, byte* payload, unsigned intpayloadLength);
#define ORG "zbgr67"
#define DEVICE_TYPE "fershidevicetype"
#define DEVICE_ID "fershideviceid"
#define TOKEN "fershiageona"
String data3;
float t;
char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
char publishTopic[] = "iot-2/evt/Data/fmt/json"; char
subscribetopic[] = "iot-2/cmd/command/fmt/String"; char
authMethod[] = "usetoken-auth";
char token[] = TOKEN; char clientId[] = "d:" ORG ":"
DEVICE_TYPE ":" DEVICE_ID;

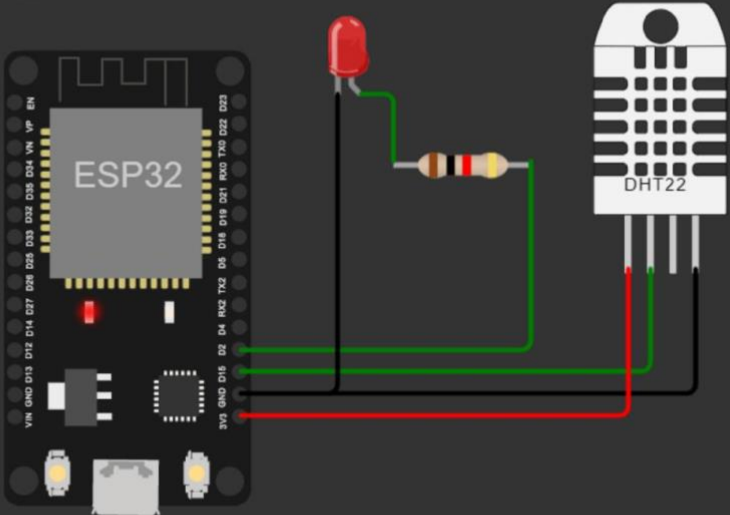
WiFiClient wifiClient;
PubSubClient client(server, 1883, callback ,wifiClient);
void setup(){ Serial.begin(115200); dht.begin();
pinMode(LED,OUTPUT); delay(10); Serial.println();
wificonnect(); mqttconnect();
} void
loop(){
    t = dht.readTemperature();
    Serial.print("temperature:");
    Serial.println(t);
    PublishData(t);
    delay(1000);
    if(!client.loop()){
        mqttconnect();
    }
}
void PublishData(float temp) {
    mqttconnect();
    String payload = "{\"temperature\":\""; payload += temp; payload += "\"}";
    Serial.print("Sending payload: ");
    Serial.println(payload);
    if (client.publish(publishTopic, (char*) payload.c_str())) {
        Serial.println("Publish ok");
    }else{
```

```

        Serial.println("Publish failed");
    }
}
void mqttconnect() {
    if(!client.connected()){
        Serial.print("Reconnecting client to ");
        Serial.println(server);
        while(!!!client.connect(clientId, authMethod, token)) {
            Serial.print("."); delay(500);
        }
        initManagedDevice();
        Serial.println();
    }
}
void wificonnect(){
    Serial.println();
    Serial.print("Connecting to "); WiFi.begin("Wokwi-
GUEST", "", 6); while(WiFi.status()!=WL_CONNECTED) {
        delay(500);
        Serial.print("."); }
    Serial.println("");
    Serial.println("WiFi connected");
    Serial.println("IP address: ");
    Serial.println(WiFi.localIP());
}
void initManagedDevice() {
    if(client.subscribe(subscribetopic)) {
        Serial.println((subscribetopic));
        Serial.println("subscribe to cmd OK");
    } else {
        Serial.println("subscribe to cmd FAILED");
    }
}
void callback(char* subscribetopic, byte* payload, unsigned int payloadLength) {
    Serial.print("callback invoked for topic: ");
    Serial.println(subscribetopic); for (int i=0;i<payloadLength; i++) {
        (char)payload[i];
    }
    Serial.println("data: "+ data3);
    if(data3=="lighton") {
        Serial.println(data3); digitalWrite(LED,HIGH);
    } else {
        Serial.println(data3); digitalWrite(LED,LOW);
    }
    data3="";
}
}

```

00:35.688 97%



```
temperature:24.00
Sending payload: {"temperature":24.00}
Publish ok
```