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1  |+--+--+--+ NodeMCU_ NETPIE Temp&Humidity +--+--+--+
2  #include <DHT.h>
3  #include <ESP8266WiFi.h>
4  #include <MicroGear.h>
5
6  const char* ssid = "Bigcamp_FTTx";          //*****Change**
7  const char* password = "bc123456";          //*****Change****
8
9  #define APPID "TestLab10" //*****Change***
10 #define KEY "6mDwSeuK0xoiMTV" //*****Change***
11 #define SECRET "05nKR4l6Umwgv3SwM5Ap8708H" //*****Change****
12 #define ALIAS "alias_esp8266"
13 WiFiClient client;
14 int timer = 0;
15 char str[32];
16 #define DHTTYPE DHT22 //Define sensor type
17 #define DHTPIN D4 // Define sensor pin
18 DHT dht(DHTPIN, DHTTYPE, 15); //Initialize DHT sensor
19 int humid;
20 int temp;
21 MicroGear microgear(client);
22
23 void onMsgghandler(char *topic, uint8_t* msg, unsigned int msglen) {
24     Serial.print("Incoming message --> ");
25     msg[msglen] = '\0';
26     Serial.println((char *)msg);
27 }
28
29 void onConnected(char *attribute, uint8_t* msg, unsigned int msglen) {
30     Serial.println("Connected to NETPIE...");
31     microgear.setAlias(ALIAS);
32 }
33 void setup() {
34     dht.begin();
35
36     microgear.on(MESSAGE,onMsgghandler);
37     microgear.on(CONNECTED,onConnected);
38     Serial.begin(115200);
39     Serial.println("Starting...");
40
41
42
43     if (WiFi.begin(ssid, password)) {
44         while (WiFi.status() != WL_CONNECTED) {
45             delay(500);
46             Serial.print(".");
47         }
48     }
49     Serial.println("WiFi connected");
50     Serial.println("IP address: ");
51     Serial.println(WiFi.localIP());
52
53     microgear.init(KEY,SECRET,ALIAS);
54     microgear.connect(APPID);
55 }
56
57 void loop() {
58     if (microgear.connected()) {
59         Serial.println("connected");
60         if (timer >= 1000) {
61             humid = dht.readHumidity();

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62         temp = dht.readTemperature();
63         sprintf(str,"%d,%d",humid,temp);
64         Serial.println(str);
65         Serial.println("Sending --> ");
66         microgear.publish("/dht",str);
67         microgear.publish("/kfc",str); //////////////////////////////////kfc
68         timer = 0;
69     }
70     else timer += 100;
71 }
72 else {
73     Serial.println("connection lost, reconnect...");
74     if (timer >= 5000) {
75         microgear.connect(APPID);
76         timer = 0;
77     }
78     else timer += 100;
79 }
80 delay(1000);
81 }
82
83 +-+--+--+ NodeMCU_NETPIE_LED_TOGGLE +-+--+--+
84 #include <ESP8266WiFi.h>
85 #include <MicroGear.h>
86 const char* ssid = "Bigcamp_FTTx";          //*****Change*****
87 const char* password = "bc123456";          //*****Change**
88
89 #define APPID "TestLab10"    //*****Change*****
90 #define KEY "mEv9YqQdmQdsIsx"    //*****Change*****
91 #define SECRET "pvmzq1uFgtB7wXUNrIHFJrqgU" //*****Change**
92 #define ALIAS "pieled"
93 #define LEDPin D2
94 WiFiClient client;
95
96 char state = 0;
97 char stateOutdated = 0;
98 char buff[16];
99
100 MicroGear microgear(client);
101
102 void sendState(){
103     if (state==0)
104         microgear.publish("/pieled/state","0");
105     else
106         microgear.publish("/pieled/state","1");
107     Serial.println("send state..");
108     stateOutdated = 0;
109 }
110
111 void updateIO(){
112     if (state >= 1) {
113         digitalWrite(LEDPin, HIGH);
114     }
115     else {
116         state = 0;
117         digitalWrite(LEDPin, LOW);
118     }
119 }
120
121 void onMsgshandler(char *topic, uint8_t* msg, unsigned int msglen) {
122     char m = *(char *)msg;

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123
124     Serial.print("Incoming message -->");
125     msg[msglen] = '\0';
126     Serial.println((char *)msg);
127     if (m == '0' || m == '1') {
128         state = m=='0'?0:1;
129     updateIO();
130     }
131     if (m == '0' || m == '1' || m == '?') stateOutdated = 1;
132 }
133 void onConnected(char *attribute, uint8_t* msg, unsigned int msglen) {
134     Serial.println("Connected to NETPIE...");
135     microgear.setAlias(ALIAS);
136     stateOutdated = 1;
137 }
138 void setup(){
139     Serial.begin(115200);
140     Serial.println("Starting...");
141     pinMode(LEDPin, OUTPUT);
142
143     if (WiFi.begin(ssid, password)) {
144         while (WiFi.status() != WL_CONNECTED) {
145             delay(500);
146             Serial.print(".");
147         }
148     }
149     microgear.on(MESSAGE,onMsghandler);
150     microgear.on(CONNECTED,onConnected);
151     microgear.init(KEY,SECRET,ALIAS);
152     microgear.connect(APPID);
153 }
154 void loop(){
155     if (microgear.connected()) {
156         if (stateOutdated) sendState();
157         microgear.loop();
158     }
159     else {
160         Serial.println("connection lost, reconnect...");
161         microgear.connect(APPID);
162     }
163 }
164
```