



```
1 // float val, voltage, temp;
2 String ssid = "Simulator Wifi"; // SSID to connect to
3 String password = ""; // Virtual Wifi has no password
4 String host = "api.thingspeak.com"; // Open Weather Map API
5 const int httpPort = 80;
6 String url = "/update?api_key=8F29UR01S0N0W0C0K&field1=";
7 // Replace XXXXXXXXXXXX by your ThingSpeak Channel API Key
8
9 void setupESP266(void) {
10
11 // Start our ESP8266 Serial Communication
12 Serial.begin(115200); // Serial connection over USB to computer
13 Serial.println("AT"); // Serial connection on Tx / Rx port to ESP8266
14 delay(10); // Wait a little for the ESP to respond
15 if (Serial.find("OK"))
16   Serial.println("ESP8266 OK!!!");
17
18 // Connect to Simulator Wifi
19 Serial.println("AT+QJARD=1," + ssid + "\",\"\" + password + "\"");
20 delay(10); // Wait a little for the ESP to respond
21 if (Serial.find("OK"))
22   Serial.println("Connected to WiFi!!!");
23
24 // Open TCP connection to the host:
25 //ESP8266 connects to the server as a TCP client.
26
27 Serial.println("AT+CIPSTART=\"TCP\", \" + host + "\", \" + httpPort);
28 delay(10); // Wait a little for the ESP to respond
29 if (Serial.find("OK"))
30   Serial.println("ESP8266 Connected to server!!!");
31
32 }
33
34 void anydata(void) {
35
36 val=analogRead(A0);
37 voltage=val*0.048828125;
38 temp = (voltage - 0.5) * 100.0;
39
40 // Construct our HTTP call
41 String httpPacket = "GET " + url + String(temp) + " HTTP/1.1\r\nHost: " + host + "\r\n\r\n";
42 int length = httpPacket.length();
43
44 // Send our message length
45 Serial.print("AT+CIPSEND=" + length);
46 Serial.println(length);
47 delay(10); // Wait a little for the ESP to respond if (Serial.find(">")) return -1;
48
49 // Send our http request
50 Serial.print(httpPacket);
51 delay(10); // Wait a little for the ESP to respond
52 if (Serial.find("SEND OK\r\n"))
53   Serial.println("ESP8266 sends data to the server");
54
55 }
56
57
58 void setup() {
59   pinMode(A0, INPUT);
60   setupESP266();
61
62
63
64
65 void loop() {
66
67   anydata();
68
69   delay(4000);
70 }
71 }
```