ESP8266 – AUTOMATED PUBLIC LIGHTING

```
#include <DHT.h>  // Including library for dht

#include <ESP8266WiFi.h>

String apiKey = "H38TEGNC0XKW43BB";     //  Enter your Write API key from ThingSpeak

const char *ssid =  "how2electronics";     // replace with your wifi ssid and wpa2 key
const char *pass =  "alhabibi";
const char* server = "api.thingspeak.com";

#define DHTPIN 0          //pin where the dht11 is connected

DHT dht(DHTPIN, DHT11);

WiFiClient client;

void setup()
{
      Serial.begin(115200);
      delay(10);
```

```
      dht.begin();

      Serial.println("Connecting to ");
      Serial.println(ssid);


      WiFi.begin(ssid, pass);

     while (WiFi.status() != WL_CONNECTED)
    {
         delay(500);
         Serial.print(".");
    }
     Serial.println("");
     Serial.println("WiFi connected");

}

void loop()
{

     float h = dht.readHumidity();
     float t = dht.readTemperature();
```

```
          if (isnan(h) || isnan(t))
            {
               Serial.println("Failed to read from DHT sensor!");
                return;
            }

                  if (client.connect(server,80))   //   "184.106.153.149" or
api.thingspeak.com
                {

                     String postStr = apiKey;
                     postStr +="&field1=";
                     postStr += String(t);
                     postStr +="&field2=";
                     postStr += String(h);
                     postStr += "\r\n\r\n";

                     client.print("POST /update HTTP/1.1\n");
                     client.print("Host: api.thingspeak.com\n");
                     client.print("Connection: close\n");
                     client.print("X-THINGSPEAKAPIKEY: "+apiKey+"\n");
                     client.print("Content-Type: application/x-www-form-
urlencoded\n");
                     client.print("Content-Length: ");
```

```
                    client.print(postStr.length());
                    client.print("\n\n");
                    client.print(postStr);

                    Serial.print("Temperature: ");
                    Serial.print(t);
                    Serial.print(" degrees Celcius, Humidity: ");
                    Serial.print(h);
                    Serial.println("%. Send to Thingspeak.");
                }
        client.stop();

        Serial.println("Waiting...");

  // thingspeak needs minimum 15 sec delay between updates
  delay(1000);
}
```