# Manual

## Introduction

**We will try and create a lamp turning on and off based on your Steam status. When you're online it will turn green, when you're away it will turn orange and when you're offline it will turn red.**

## #1 Connecting to the internet

Eventually we want to connect our ESP to the Steam Web API. To make a connection, we of course need to have acces to the internet.

We want to include the following libraries in our document to make the connection:

```
#include <ESP8266WiFi.h>
#include <WiFiClientSecure.h>
```

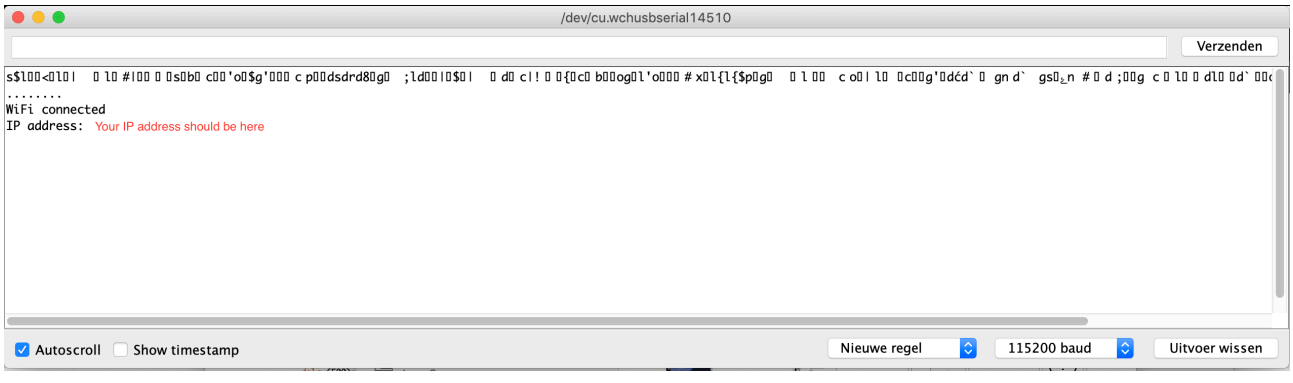
We will also create to variables for our WiFi SSID and password.

```
// Initialize Wifi connection to the router
char ssid[] = "YourNetworkSSID";     // your network SSID (name)
char password[] = "YourNetworkKey"; // your network key
```

Now we want to add some code to the setup to make a WiFi connection and to check if we have succeeded. Go to your void setup and add the following:

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

  // attempt to connect to Wifi network:
  Serial.print("Connecting Wifi: ");
  Serial.println(ssid);
  WiFi.begin(ssid, password);

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

  Serial.println("");
  Serial.println("WiFi connected");
  Serial.print("IP address: ");
  Serial.println(WiFi.localIP());

}
```

**Checkpoint:**
If everything went well you will find your IP address and a line saying "WiFi connected" in your serial monitor

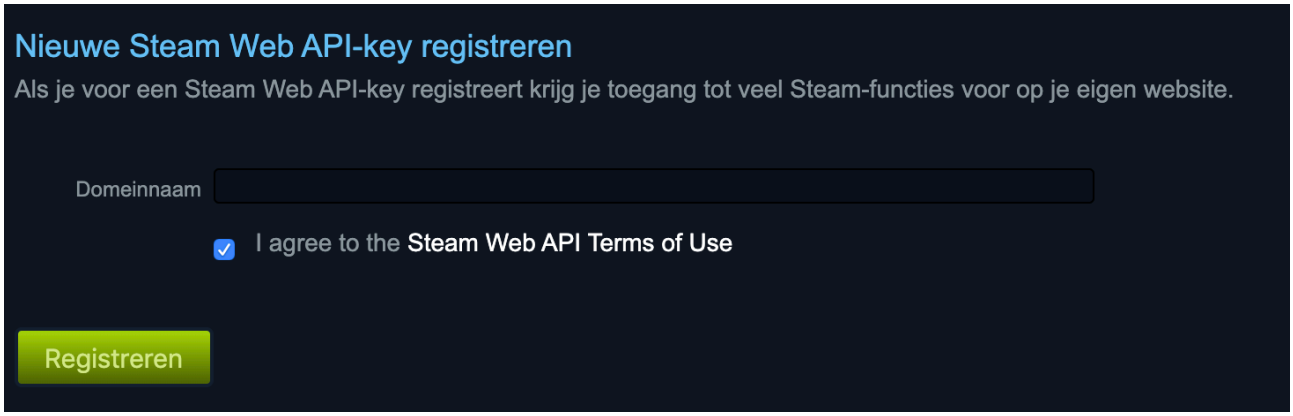


# #2 Getting a Steam Web API key

To be able to work with the Steam Web API we need to get a key from Steam.
Go to this link: https://steamcommunity.com/login/home/?goto=%2Fdev%2Fapikey

Login or create an account, since you are at this tutorial you probably already have an account.


Accept the terms of use and add one of your web domains (I think you could even fill in a random name)




**Checkpoint:**
Right now you should have gotten your API-key. If you want to learn more about the Steam Web API you can check it here: https://developer.valvesoftware.com/wiki/Steam_Web_API

Add your key within this link on all the X's: http://api.steampowered.com/ISteamUser/GetFriendList/v0001/?key=XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX&steamid=76561197960435530&relationship=friend. You should be getting a page with friend information of a certain someone, this means your key works. It should look something like this:


```
{
  - friendslist: {
    - friends: [
        - {
            steamid: "76561197960265731",
            relationship: "friend",
            friend_since: 0
          },
        - {
            steamid: "76561197960265738",
            relationship: "friend",
            friend_since: 0
          },
        - {
            steamid: "76561197960265740",
            relationship: "friend",
            friend_since: 0
          },
        - {
            steamid: "76561197960265747",
            relationship: "friend",
            friend_since: 0
          },
        - {
            steamid: "76561197960265749",
            relationship: "friend",
            friend_since: 0
          },
        - {
            steamid: "76561197960268093",
            relationship: "friend",
            friend_since: 1251433222
          },
        - {
            steamid: "76561197960269040",
            relationship: "friend",
            friend_since: 1436934825
          },
        - {
            steamid: "76561197960270258",
            relationship: "friend",
            friend_since: 0
          },
        - {
            steamid: "76561197960270457",
            relationship: "friend",
            friend_since: 1257142334
          },
```

friendslist

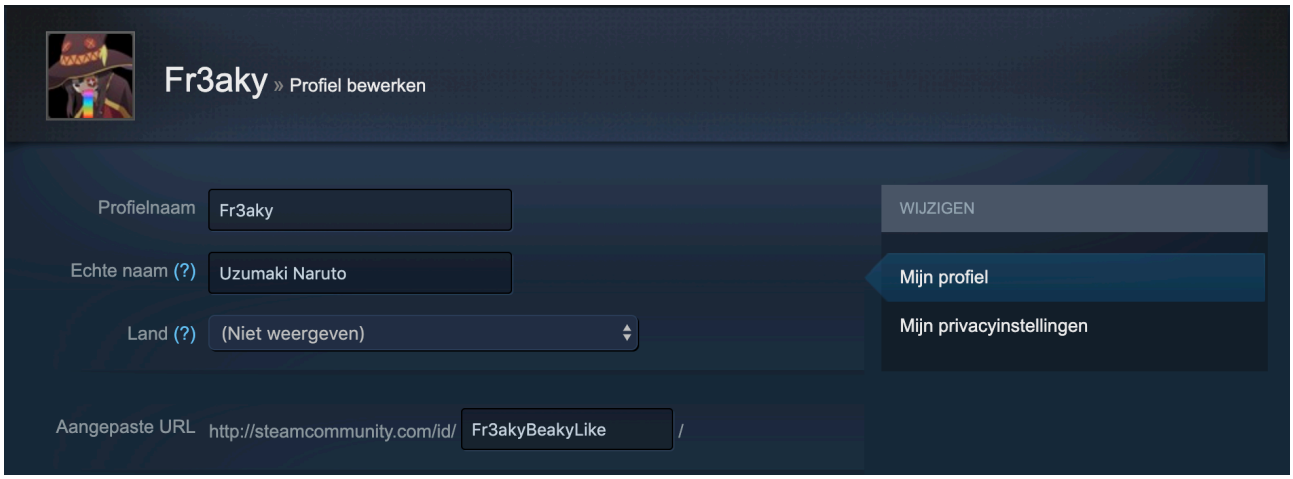
# #3 Connecting to the Steam Web API

Since we have a working key we can get back to coding. We will be including a new library into the code, the ESP8266HTTPClient and the ArduinoJson library V5.13.5. This will help us make simple HTTP requests.

```
// Libraries
#include <ESP8266WiFi.h>
#include <WiFiClientSecure.h>
#include <ESP8266HTTPClient.h>
#include <ArduinoJson.h>
```

If you want to use the latest version of ArduinoJson library, you need to upgrade it to version 6. You can follow the guide from here: https://arduinojson.org/v6/doc/upgrade/. I would recommend the V5.13.5 because the most tutorials still abide this version.

Now we will add three new variable strings. One variable will be the endstring, another the key and the last one will be your Steam ID. If you don't know your Steam ID you can find it by editing your profile, you can even edit it if you want.




The variables will be added on top again like this:

```
// Libraries
#include <ESP8266WiFi.h>
#include <WiFiClientSecure.h>
#include <ESP8266HTTPClient.h>
#include <ArduinoJson.h>

const String endpoint = "http://api.steampowered.com/ISteamUser/GetPlayerSummaries/v0002/?key=";  // Link to your API
const String key = "                                ";  // Add your Steam Web API key here
const String steamID = "&steamids=Fr3akyBeakyLike"; // Add your Steam ID here (can be found by editing your profile)
```

In the void loop we will be adding the following:

```
void loop() {

  String url = endpoint + key + steamID;

  if (WiFi.status() == WL_CONNECTED)
  {
    HTTPClient http; //Object of class HTTPClient
    http.begin(url);
    int httpCode = http.GET();

    if (httpCode > 0)
    {
      const size_t bufferSize = JSON_ARRAY_SIZE(1) + 2*JSON_OBJECT_SIZE(1) + JSON_OBJECT_SIZE(17) + 735;
      DynamicJsonBuffer jsonBuffer(bufferSize);
      JsonObject& root = jsonBuffer.parseObject(http.getString());

      int id = root["id"];
      const char* personastate = root["response"]["players"]["personastate"]; // Your status (1-online, offline or busy)
      const char* steamid = root["response"]["players"]["steamid"]; // Your steam id
      const char* personaname = root["response"]["players"]["personaname"];  // Your steam username

      Serial.print("Status:");
      Serial.println(personastate);
      Serial.print("SteamID:");
      Serial.println(steamid);
      Serial.print("SteamName:");
      Serial.println(personaname);
    }
    http.end(); //Close connection
  }
  delay(60000);
}
```

I’m not able to get the Steam Web API connected and get the personastate. I will still tell you what I’ve tried further on. Maybe you will finish it and let me know how to do it.

I have created the bufferSize using this website: https://arduinojson.org/v5/assistant/ and following this tutorial: https://randomnerdtutorials.com/decoding-and-encoding-json-with-arduino-or-esp8266/.

The root is also edited by checking the last tutorial, the example code is using ethernet instead of internet. Ethernet is used by connecting two LAN computer systems. I ended with the error ‘server’ was not declared in the scope.