```
#include <Adafruit_NeoPixel.h>
#ifdef __AVR__
#include <avr/power.h> // Required for 16 MHz Adafruit Trinket
#endif
#define PIN        12 // Which pin on the Arduino is connected to the NeoPixels?
#define NUMPIXELS 12 // How many NeoPixels are attached to the Arduino?
Adafruit_NeoPixel pixels(NUMPIXELS, PIN, NEO_GRB + NEO_KHZ800);
#define DELAYVAL 500 // Time (in milliseconds) to pause between pixels
#include <ESP8266WiFi.h>
#include <ESP8266WebServer.h>
  // ##### WIFI-Hotspot
#ifndef APSSID
#define APSSID "My-Wifi-Lamp"  // SSID (choose)
#define APPSK  "123456789"     // Passwort (choose)
#endif
const char *ssid = APSSID;
const char *password = APPSK;
const int ap_channel = 6;
const boolean ap_hidden = false;
IPAddress local_ip(192,168,4,100); //IP AP (choose)
IPAddress gateway(192,168,4,254);  //IP Gateway
IPAddress netmask(255,255,255,0);
ESP8266WebServer server(80);
  // ###### Setup
void setup() {
  pixels.begin();
  verbindungHerstellen();
  Serial.begin(115200);
  Serial.println();
  Serial.println("Setting IP Address");
  WiFi.softAPConfig(local_ip, gateway, netmask);
  Serial.print("IP Address: ");
  Serial.println(WiFi.softAPIP());
  Serial.println("Starting Access Point");
  boolean result = WiFi.softAP(ssid, password, ap_channel, ap_hidden);
  if (result == true) {
    Serial.println("Access Point Ready");
    Serial.print("SSID: ");
    Serial.println(ssid);
    Serial.print("Channel: ");
    Serial.println(ap_channel);
    server.on("/lampeRot", lampeRot);
    server.on("/lampeGruen", lampeGruen);
    server.on("/lampeYellow", lampeYellow);
    server.on("/", indexHTML);
    server.onNotFound(onNotFound);
    server.begin();
```

```
    Serial.println("Web Server Started");
    verbindungErfolgreich();
  }
}
void loop() {
  server.handleClient();
}
  // ##### Functions of the WIFI-Lamp
void lampeRot() {
  indexHTML();
  for (int i=0; i<NUMPIXELS; i++){
    pixels.setPixelColor(i, pixels.Color(150,0,0));
    pixels.show();
    delay(DELAYVAL);
  }
}
void lampeGruen() {
  indexHTML();
  for (int i=0; i<NUMPIXELS; i++){
    pixels.setPixelColor(i, pixels.Color(0,150,0));
    pixels.show();
    delay(DELAYVAL);
  }
}
void lampeYellow() {
  indexHTML();
  for (int i=0; i<NUMPIXELS; i++){
    pixels.setPixelColor(i, pixels.Color(150,150,0));
    pixels.show();
    delay(DELAYVAL);
  }
}
  // ##### Display while connecting
void verbindungHerstellen(){
Serial.println("Lampe pulsierend rot");
 for (int m=0; m<5; m++){
  for (int i=0; i<NUMPIXELS; i++){
    pixels.setPixelColor(i, pixels.Color(150,0,0));
    pixels.show();
    delay(50);
  }
  for (int i=0; i<NUMPIXELS; i++){
    pixels.setPixelColor(i, pixels.Color(20,0,0));
    pixels.show();
    delay(50);
  }
 }
```

```
}
void verbindungErfolgreich(){
  Serial.println("Lampe pulsierend grün");
 for (int m=0; m<3; m++){
  for (int i=0; i<NUMPIXELS; i++){
    pixels.setPixelColor(i, pixels.Color(0,150,0));
    pixels.show();
    delay(50);
  }
  for (int i=0; i<NUMPIXELS; i++){
    pixels.setPixelColor(i, pixels.Color(0,20,0));
    pixels.show();
    delay(50);
  }
 }
}
void onNotFound(){
 server.send(404, "text/plain", "404 Not found");
}

void indexHTML(){
server.send(200, "text/html",
"<!DOCTYPE html>\
<html lang=\"en\">\
<head>\
<meta charset=\"UTF-8\"> <meta name=\"viewport\" content=\"width=device-
width, initial-scale=1.0\">\
<title>WiFi Lampe</title>\
<style> button{ padding: 0.6em 2em; background-color:burlywood; color:
black; font-size: 20pt; border: none; border-radius: 1000px; }\
</style>\
</head>\
<header><h1>EBGS WiFi-Lampe</h1></header>\
<body>\
<p></p>\
<a href= \"http://192.168.4.100/lampeYellow\"><button>GELB</button></a>\
</body>\
</html>");
}
```