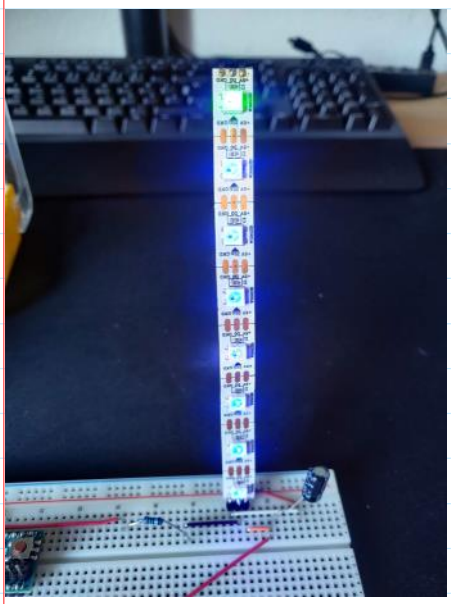
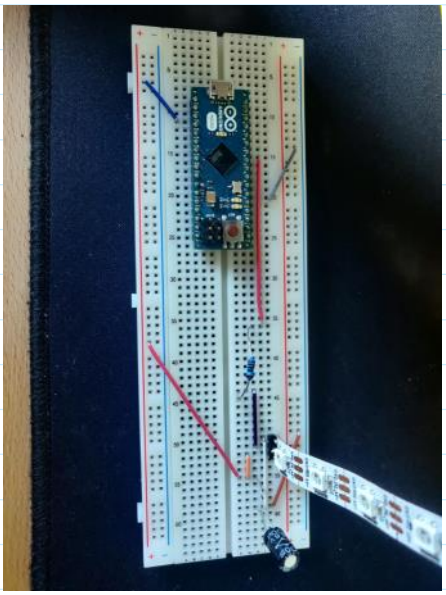
Libs

Montag, 5. April 2021 15:44

1.1 + 1.2.





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1.3.

```ino
#include <Arduino.h>
#include <Adafruit_NeoPixel.h>

#define PIN 2
#define LENGTH 7

int up = true;
int i = 0;

Adafruit_NeoPixel strip = Adafruit_NeoPixel(LENGTH, PIN, NEO_GRB + NEO_KHZ800);

void setup() {
  strip.begin();
  strip.show();
}


void loop() {
  strip.clear();
  if(up) {
    i++;
  } else {
    i--;
  }

  if(i == LENGTH - 1) {
    up = false;
  }

  if(i == 0) {
    up = true;
  }

  strip.setPixelColor(i, strip.Color(0, 150, 0));
  strip.show();
  delay(500);
}
```

Direction + Position

change Direction

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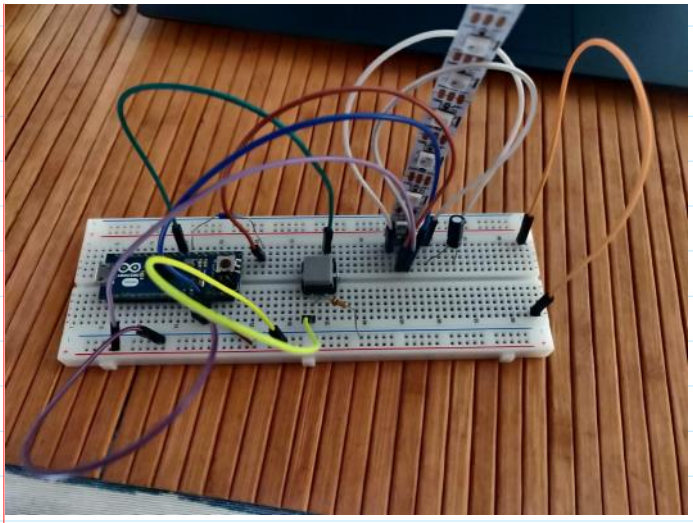
→ Aufbau wie 1.1

1.4.



2.

```
#include <Arduino.h>
#include <Adafruit_NeoPixel.h>

#define PIN 2
#define BTN 3
#define LENGTH 7
#define DELAY 500

int pos[] = {-1, -1};
int time = 0;
int prevBTN = LOW;

Adafruit_NeoPixel strip = Adafruit_NeoPixel(LENGTH, PIN, NEO_GRB + NEO_KHZ800);

void setup() {
  pinMode(BTN, INPUT);
  strip.begin();
  strip.show();
  Serial.begin(9600);
}

void step() {
  for (int i = 0; i < 2; i++) {
    Serial.println(pos[i]);
    if(pos[i] > -1) {

      if(pos[i] == LENGTH) {
        strip.setPixelColor(pos[i], strip.Color(0, 0, 0));
        strip.setPixelColor(pos[i] -1, strip.Color(0, 0, 0));
        strip.setPixelColor(pos[i] +1, strip.Color(0, 0, 0));
        pos[i] = -1;
        return;
      }
      strip.setPixelColor(pos[i] - 1, strip.Color(0, 0, 0));
      strip.setPixelColor(pos[i], strip.Color(0, 150, 0));
      pos[i]++;
      pos[1]++;
    }
  }
}

void trigger() {
  Serial.println("btn");
  for (int i = 0; i < 2; i++)
  {
    if(pos[i] == -1) {
      pos[i] = 0;
      return;
    }
  }

}

void loop() {
  if(millis() - time > DELAY) {
    step();
    strip.show();
    time = millis();
  }


  int state = digitalRead(BTN);
  if(state == HIGH) {
    trigger();
  }

  prevBTN = state;
}
```

Lib:

adafruit/Adafruit_NeoPixel: Arduino library for controlling single-wire LED pixels (NeoPixel, WS2812, etc.) (github.com)

→ siehe Video

```
    trigger();
  }

  prevBTN = state;
}
```

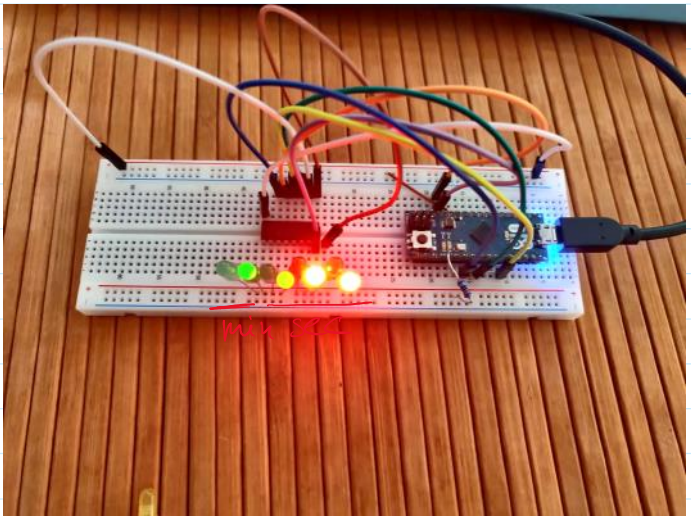
```
#include <Arduino.h>
#define SERIAL_IN 2
#define RCK 4
#define SCK 7

int time = 0;
byte sec = 0;
byte min = 0;

void setup() {
  pinMode(SERIAL_IN, OUTPUT);
  pinMode(RCK, OUTPUT);
  pinMode(SCK, OUTPUT);
  digitalWrite(SCK, LOW);
}

void writeBytes(){
  digitalWrite(RCK, LOW);
  shiftOut(SERIAL_IN, SCK, MSBFIRST, (min << 6 + sec));
  digitalWrite(RCK, HIGH);
}

void setTime(){
  sec = sec + 1;
  if(sec == 60){
    sec = 0;
    min = min + 1;
  }
}

void loop() {
  if(millis() - time >= 1000){
    time = millis();
    setTime();
    writeBytes();
  }
}
```

init

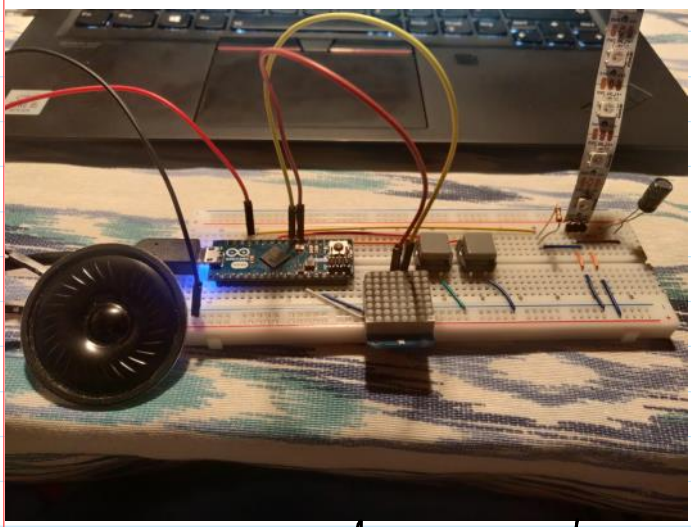
flush bytes to register

calculate time

Doku: 8-bit shift register with output latches (3-state)



3.



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=> Leider nicht richtig gespeichert; muss wiederholt werden