Lighting Effects Using FastLED

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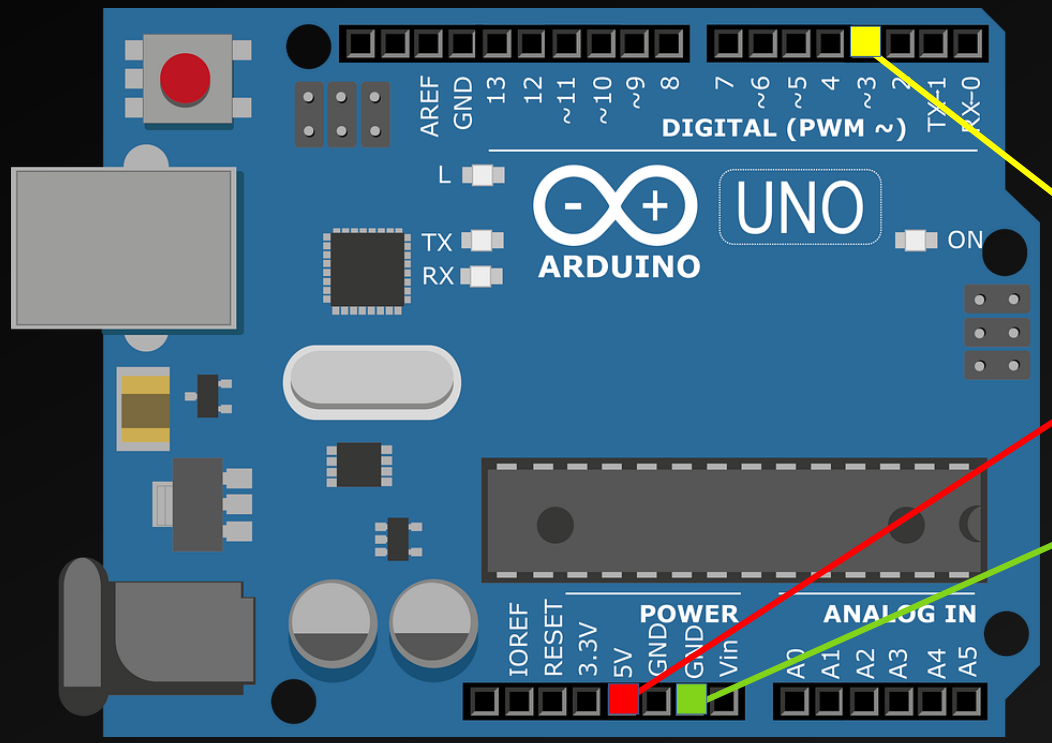
Wiring

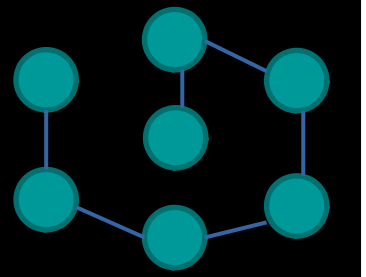


ALY Board

VCC

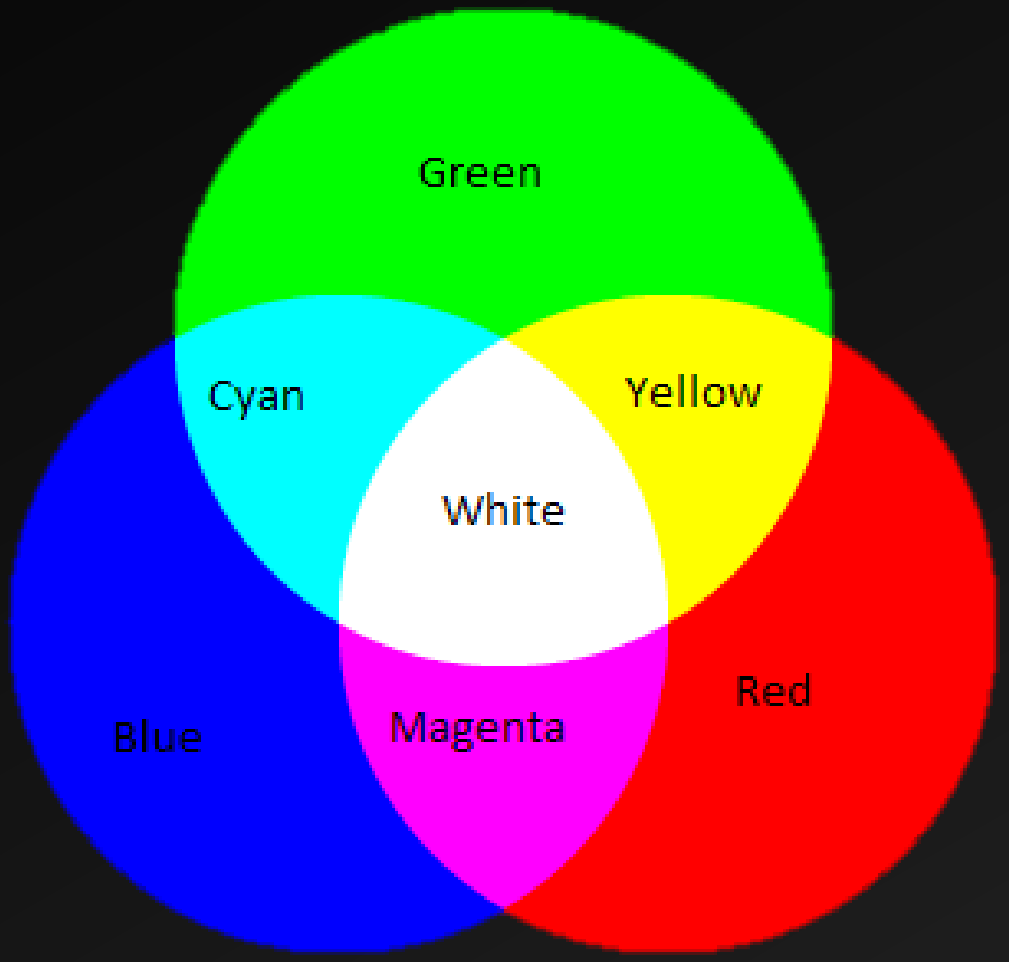
Data

Ground



CAUTION: this circuit only works for low current circuits (don’t run too many LEDs)

RGB



Different ways to set the colour of a LED

CRGB leds[NUM_LEDS];

```
leds[i].r = 255;
leds[i].g = 68;
leds[i].b = 221;
```

```
leds[i].setRGB( 255, 68, 221);
```

```
leds[i] = 0xFF44DD;
```

```
leds[0] = CRGB::Red;
```

More info: https://github.com/FastLED/FastLED/wiki/Controlling-leds

```
// Lets us use all the LED tools
#include <FastLED.h>

// How many leds in your strip?
#define NUM_LEDS 7
// How bright do you want it (0-255)
#define BRIGHTNESS 32
// Which pin are we going to send the data along?
#define DATA_PIN 3

// Make the array of leds and set them to be off
// This data has not been sent to the LEDs yet!
CRGB leds[NUM_LEDS] = {0};

// This function will run once then automatically call loop()
// Sets up all the essentials
void setup() {
    // What type of LEDs are we using
    // and what order do they expect the colours in?
    FastLED.addLeds<WS2811, DATA_PIN, GRB>(leds, NUM_LEDS);
    // Dim the LEDs
    FastLED.setBrightness(BRIGHTNESS);
}

// This function will keep looping
// Makes the 0th LED gradually brighten repeatedly
void loop() {
    // Gradually increase the brightness
    leds[0].r++;
    leds[0].g++;
    leds[0].b++;
    // If the brightness is too high, reset it
    if (leds[0].r == 255) {
        leds[i].setRGB( 0, 0, 0);
    }
    // Send the data to the LEDs
    FastLED.show();
    // Pause for half a second
    delay(500);
}
```

Your Task

Starter code can be found at:
https://github.com/3rsw/IlluminateSoftwareWorkshops/blob/master/Blink.ino