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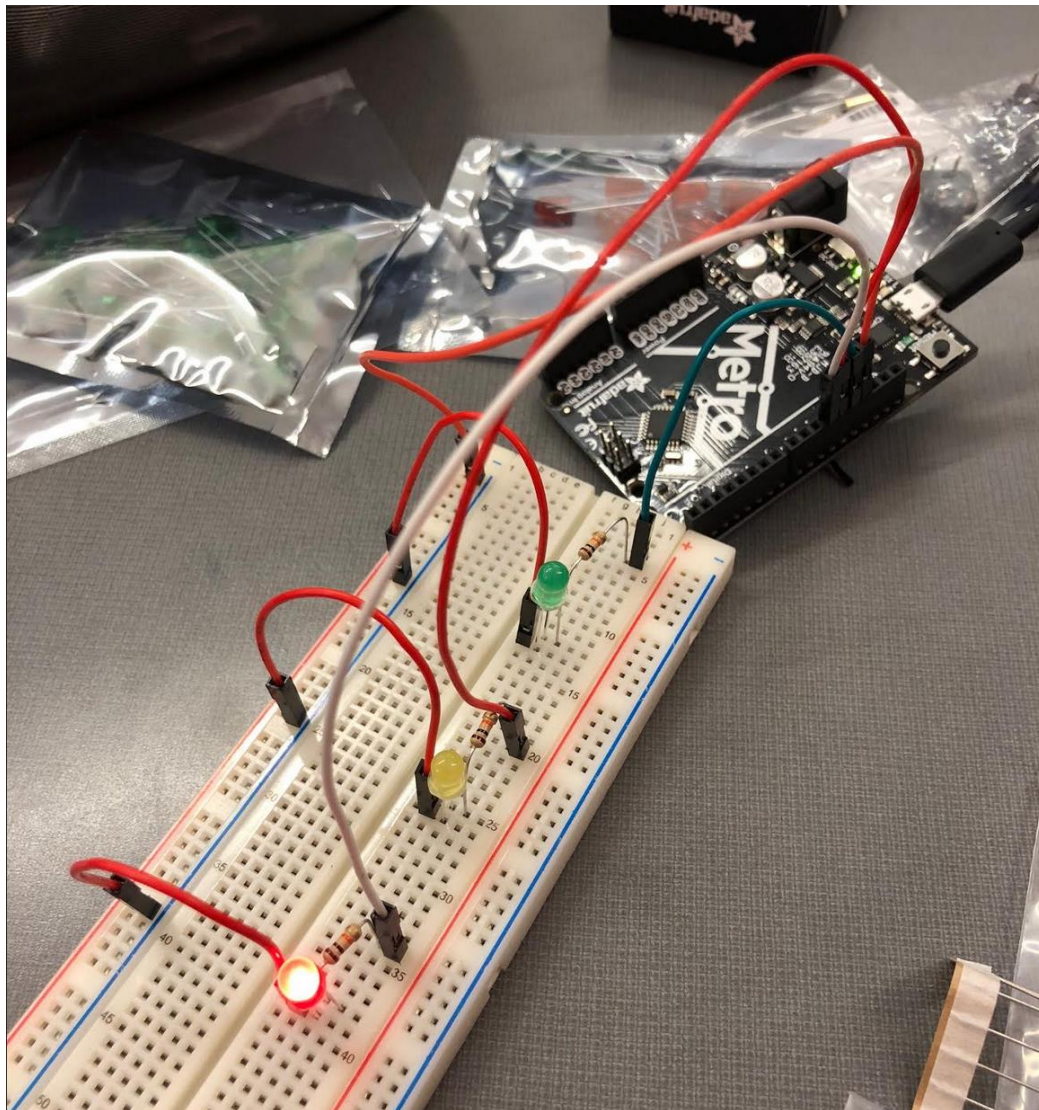
hcde 539 – physical computing and prototyping

assignment 0: “when I grow up, I’ll be a traffic light”

### objective

Use an Arduino compatible microcontroller to create a set of lights that light-up similar to a traffic light – including pausing, coloring, and ordering.

### photos



## code

```
/*
  Traffic light
  Tutorial based on the ArduinoIDE example: BLINK.
  http://www.arduino.cc/en/Tutorial/Blink
*/

// constants won't change. They're used here to set pin numbers:
const int ledRed = 12;      //pin for the red LED
const int ledYellow = 11;   // the number of the LED pin
const int ledGreen = 10;    // the number of the LED pin

// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(ledRed, OUTPUT);
  pinMode(ledYellow, OUTPUT);
  pinMode(ledGreen, OUTPUT);
}

// the loop function runs over and over again forever
void loop() {
  //turn a single LED on, and the other off
  digitalWrite(ledRed, HIGH);
  digitalWrite(ledYellow, LOW);
  digitalWrite(ledGreen, LOW);

  // wait for a bit
  delay (1000);

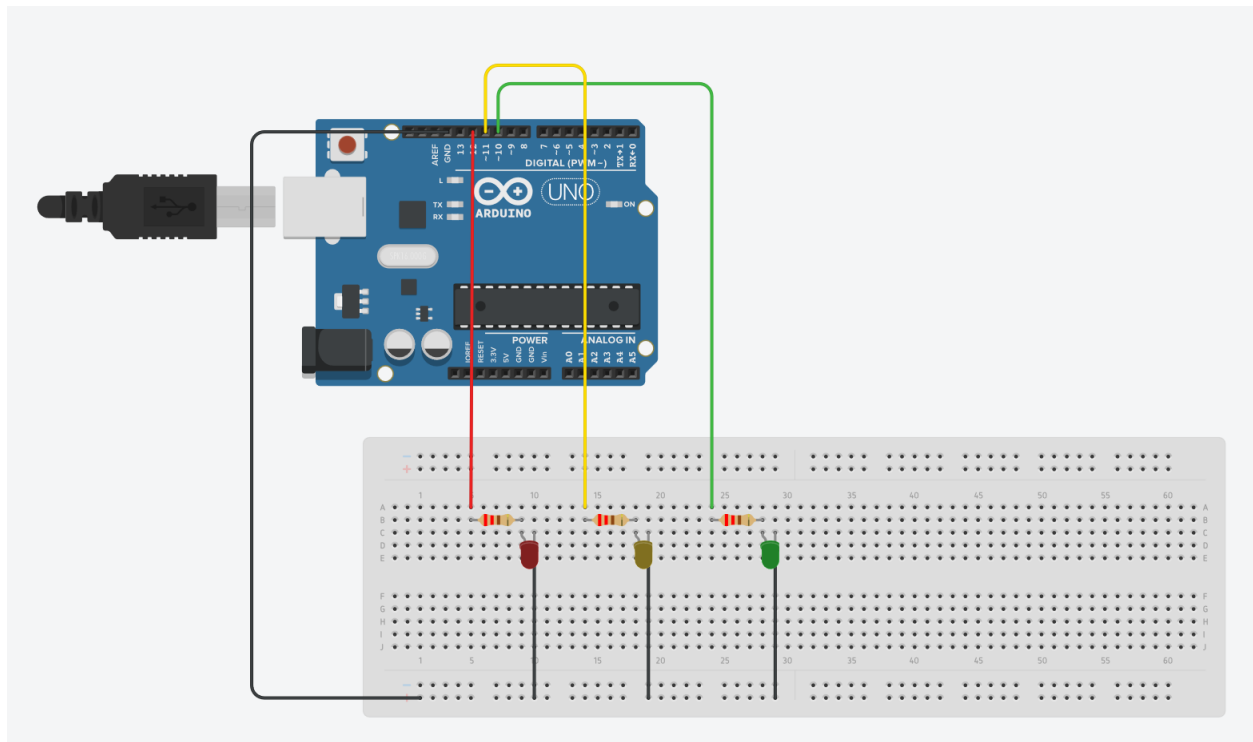
  //turn the other LED on and the rest off
  digitalWrite(ledRed, LOW);
  digitalWrite(ledYellow, LOW);
  digitalWrite(ledGreen, HIGH);

  // wait for a bit
  delay (1000);

  //turn the other LED on and the rest off
  digitalWrite(ledRed, LOW);
  digitalWrite(ledYellow, HIGH);
  digitalWrite(ledGreen, LOW);

  // wait for a bit
  delay (1000);
}
```

## schematic



## learnings

- It worked!
- I did not know that the bread boards had such internal structure (horizontal vs vertical groupings)
- I did not know that I don't need an extra power line – the electrons travel directly from the pin, through the circuit to the ground connection and light the leds up.