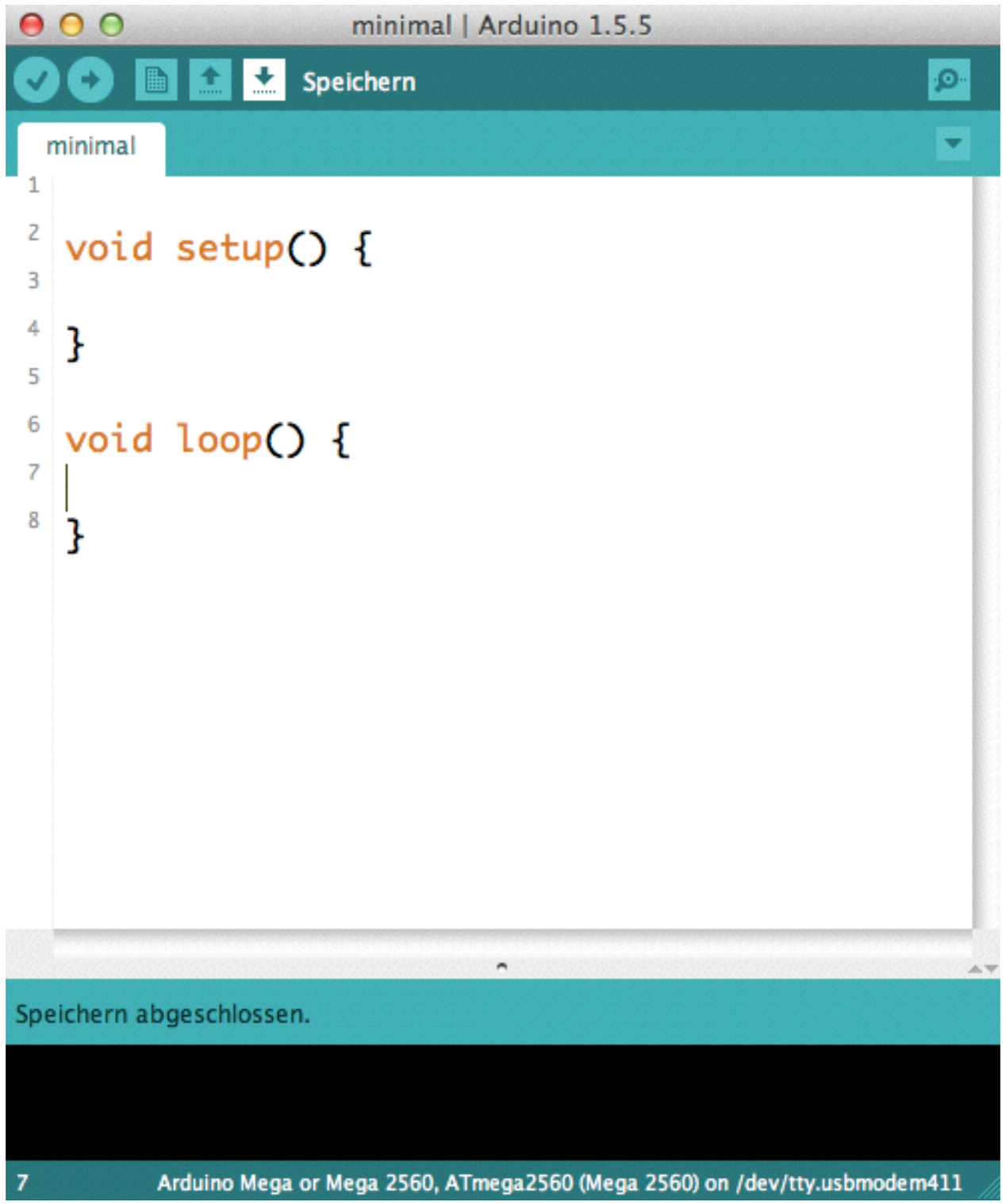
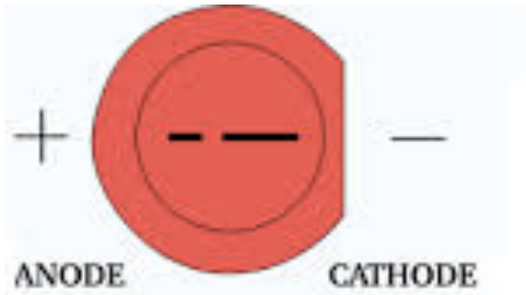
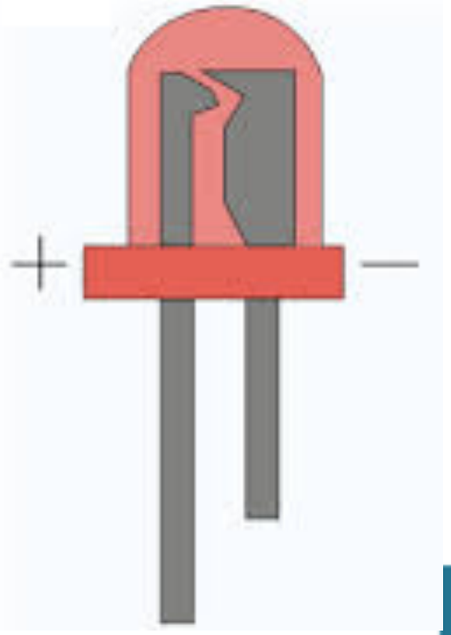
DramaLäb

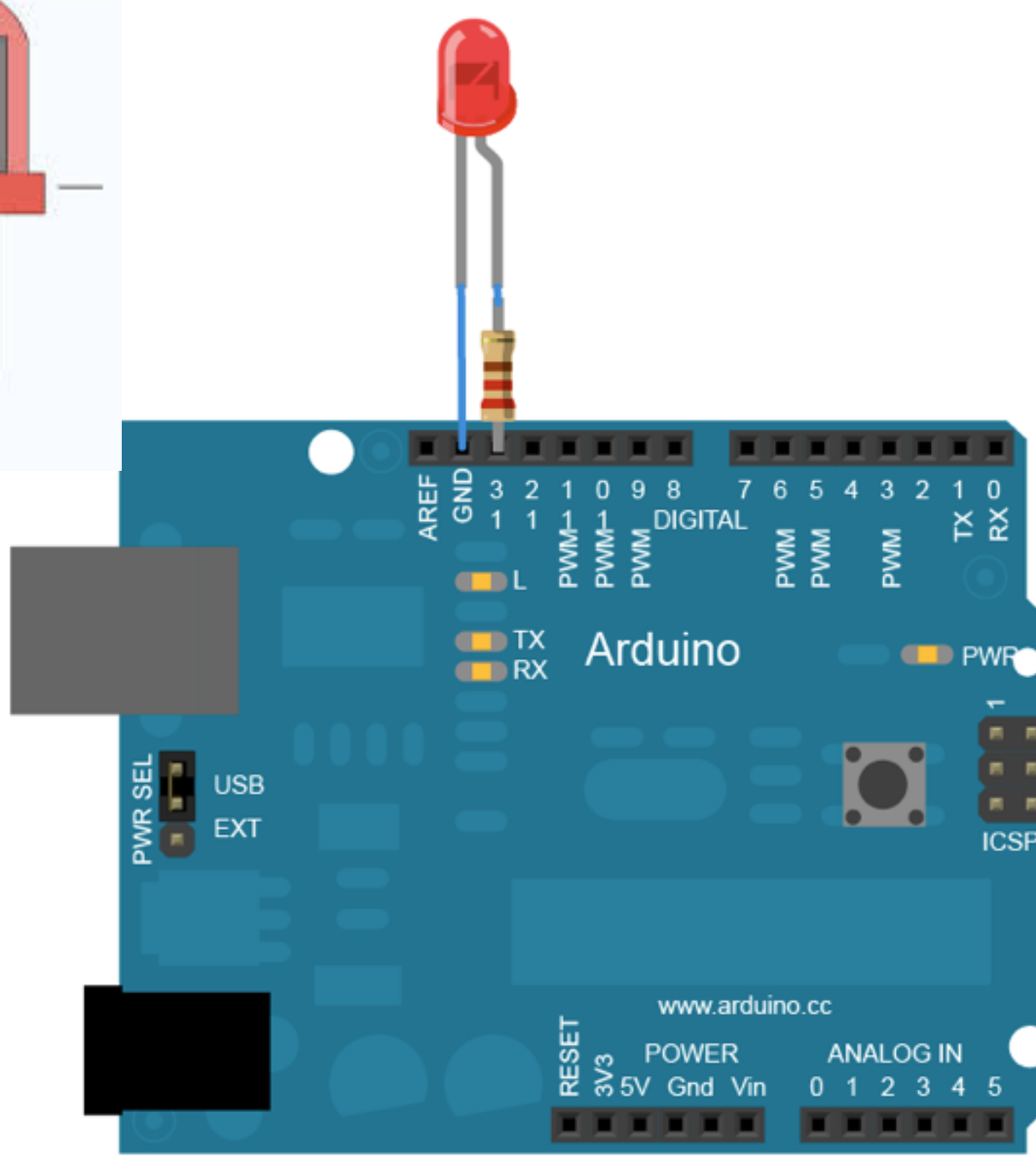
First Program


minimal | Arduino 1.5.5
Speichern
minimal
1
2 void setup() {
3
4 }
5
6 void loop() {
7
8 }
Speichern abgeschlossen.
7
Arduino Mega or Mega 2560, ATmega2560 (Mega 2560) on /dev/tty.usbmodem411

„Hello World“


ANODE
CATHODE




AREF
GND
3
2
1
0
9
8
7
6
5
4
3
2
1
0
DIGITAL
PWM
L
TX
RX
Arduino
PWR
PWR SEL
USB
EXT
ICSP
www.arduino.cc
RESET
3V3
POWER
5V
Gnd
Vin
ANALOG IN
0
1
2
3
4
5

Useful Functions

pinMode(pin,mode)

Configures the specified pin to behave either as an input or an output

digitalRead()

Reads the value from a specified digital pin, either HIGH or LOW.

digitalWrite(pin, value)

Write a HIGH or a LOW value to a digital pin.

analogRead()

Reads the value from the specified analog pin

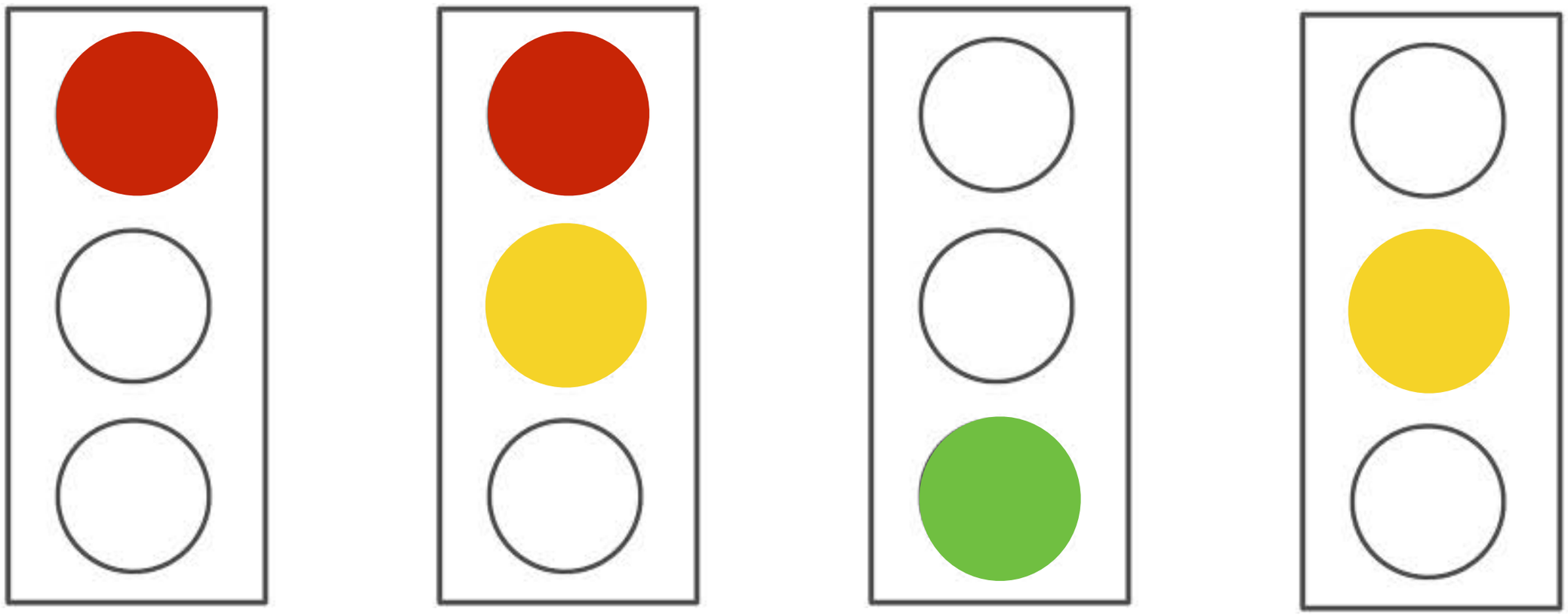
analogWrite(pin, value)

Writes an analog value (PWM wave) to a pin

```
1
2 int led = 13;
3
4 void setup() {
5   pinMode(led, OUTPUT);
6 }
7
8 void loop() {
9   digitalWrite(led, HIGH);
10  delay(1000);
11  digitalWrite(led, LOW);
12  delay(1000);
13 }
```

„Hello Traffic“

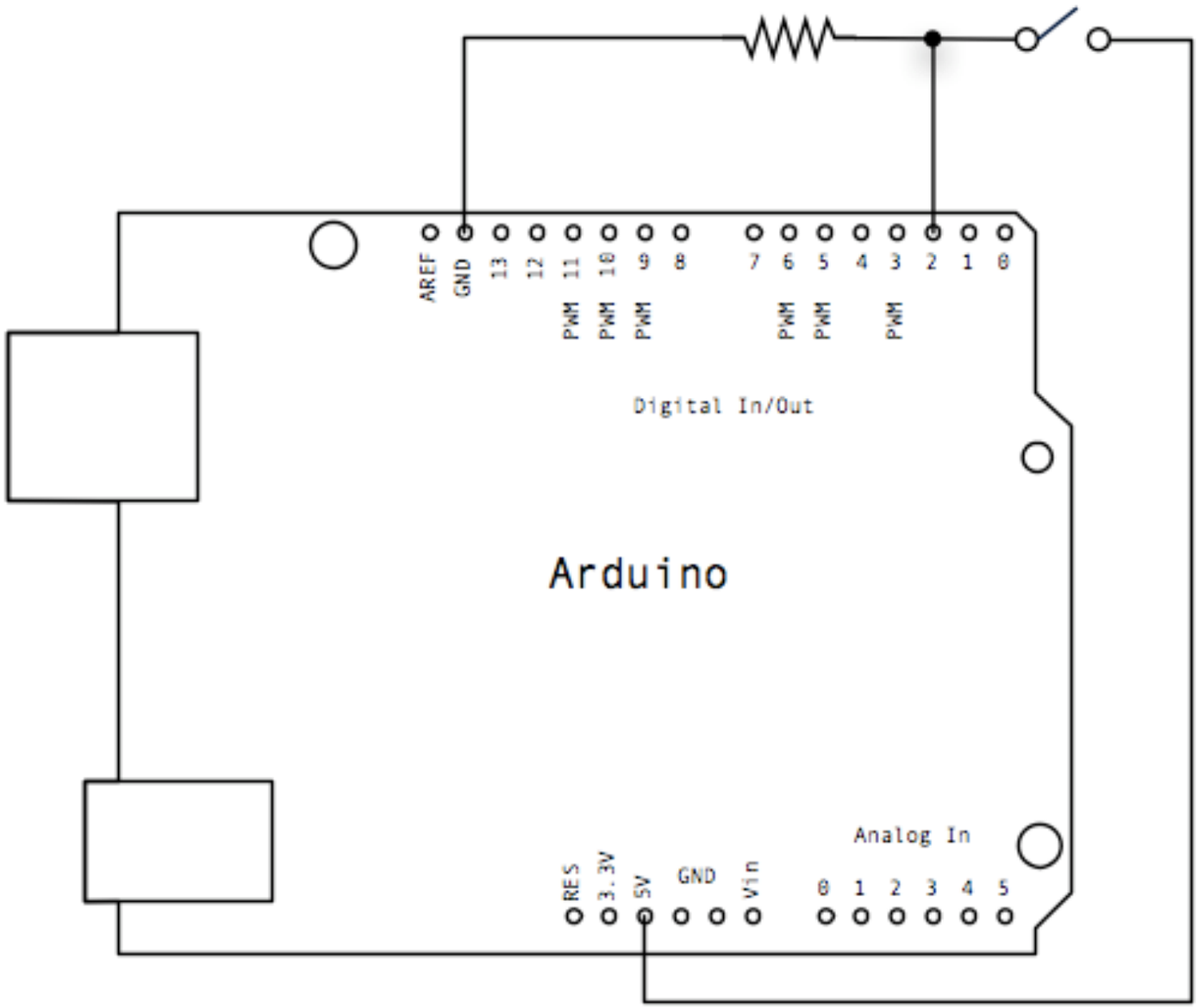
Traffic Light (UK)



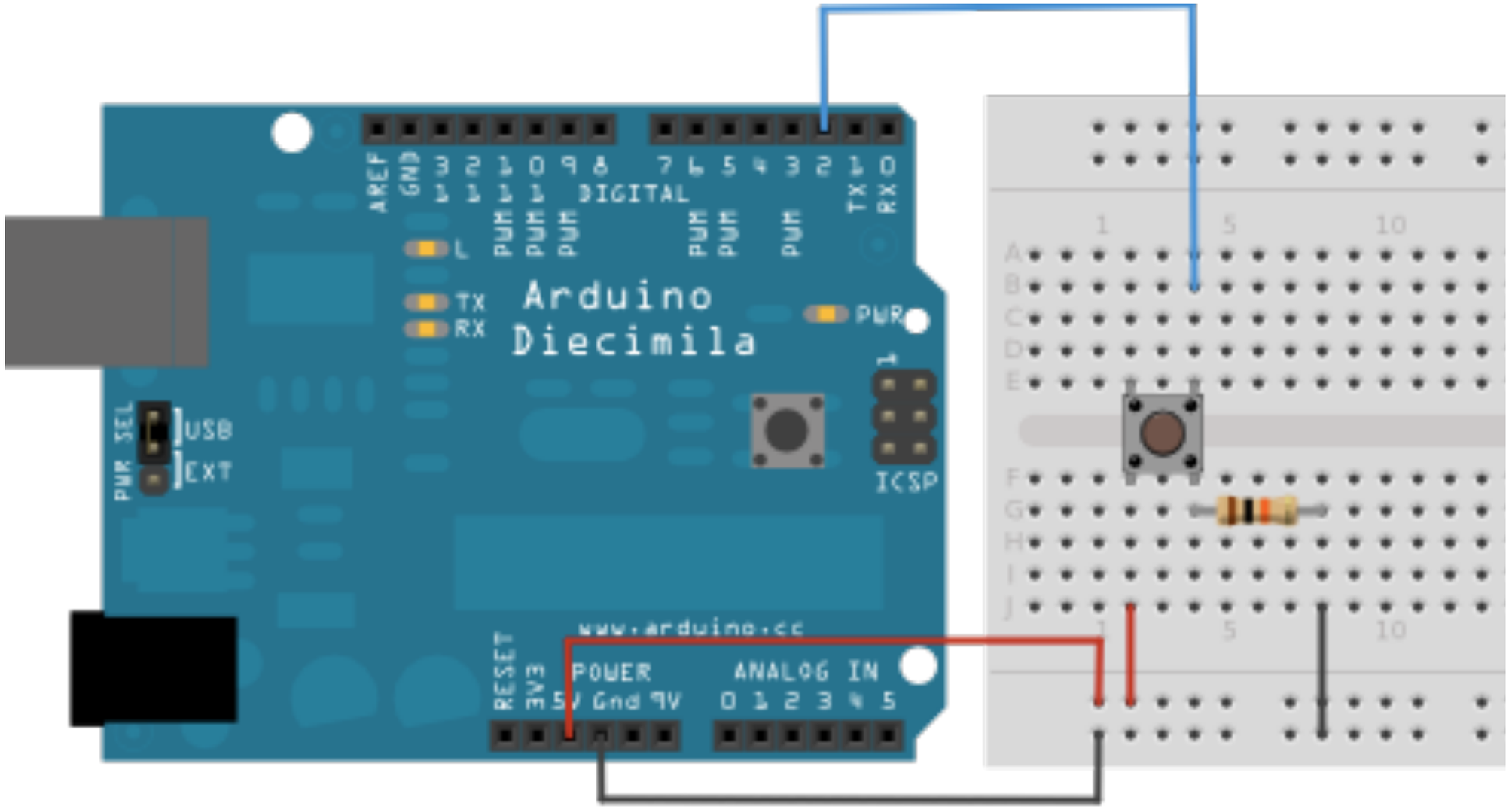
Pedestrian Crossing

- with pedestrian light (red and green)
- button to signal pedestrian
- on next red period pedestrian light turns green

Using a button



Using a button



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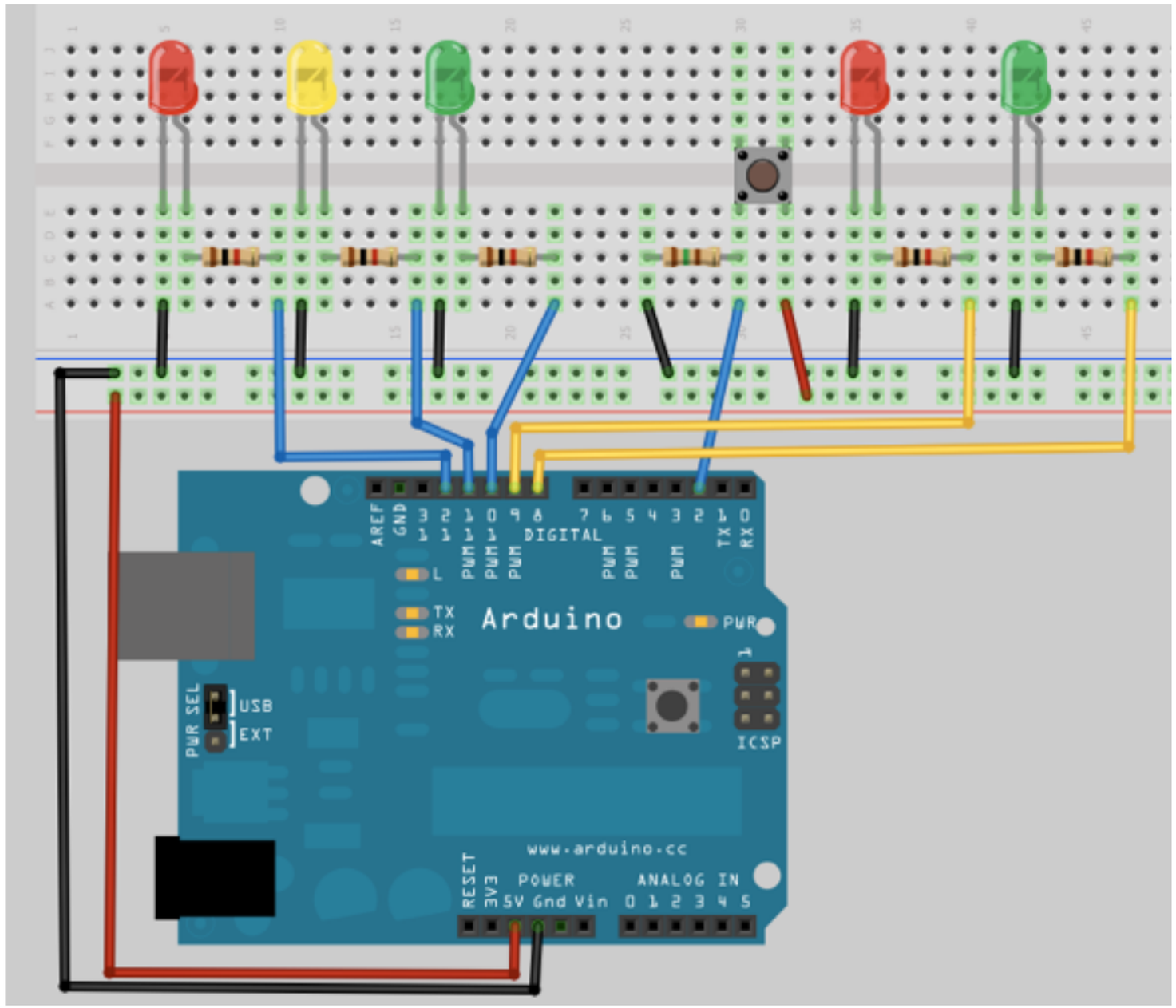
Reading the button state

```
1  int buttonPin = 2;
2  int ledPin =  13;
3
4  int buttonState = 0;
5  void setup() {
6    pinMode(ledPin, OUTPUT);
7    pinMode(buttonPin, INPUT);
8  }
9
10 void loop(){
11   buttonState = digitalRead(buttonPin);
12
13   if (buttonState == HIGH) {
14     digitalWrite(ledPin, HIGH);
15   }else {
16     digitalWrite(ledPin, LOW);
17   }
18 }
```

The traffic light



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Code?

lets build it together!