

Practical 11: A Nervous Lamp

How to Build a Digital-Physical System

AME 394

Wednesday 16th November 2011

Before we begin...

This Friday, **FAC**

**Body/Machine vs. Brain/Machine
Interfaces,**

Sandro Mussa-Ivaldi

3-4pm, Stauffer B 125

Next Class

**Movement, Mechanics and
Kinematics**

Programming?

How is everyone finding the programming so far?

This Class

Assignment:

Document the outcomes

Include:

- Completed code,
- Learnings
- things you tinkered with, etc.

Lets make a lamp nervous...

3 parter

Code is on the Wiki

Range Finder

- Sends an Ultrasonic pulse
- 0 - 255 inches
- Use the analog interface to read

Refresher Serial

Sending Values

```
int count = 0;

void setup()           // run once, when the sketch starts
{
  Serial.begin( 9600 ); // Setups Serial Communications
}

void loop()           // run over and over again
{
  Serial.print( "Looped " ); // Output a String
  Serial.print( count );     // Output the number of loops
  Serial.println( " times" ); // Output the end of line
  count++;                   // Increment the value
  delay(1000);               // waits for a second
}
```

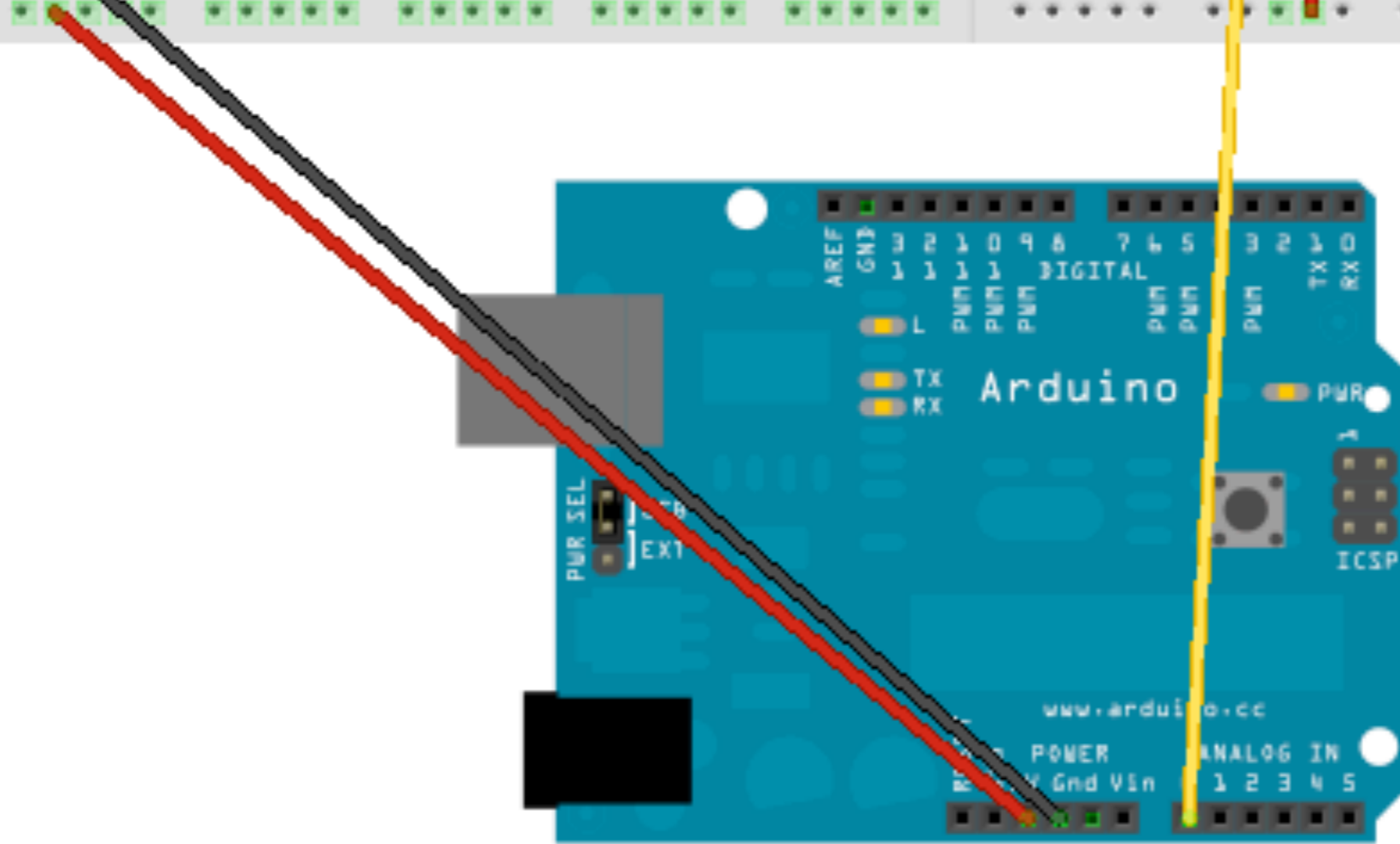
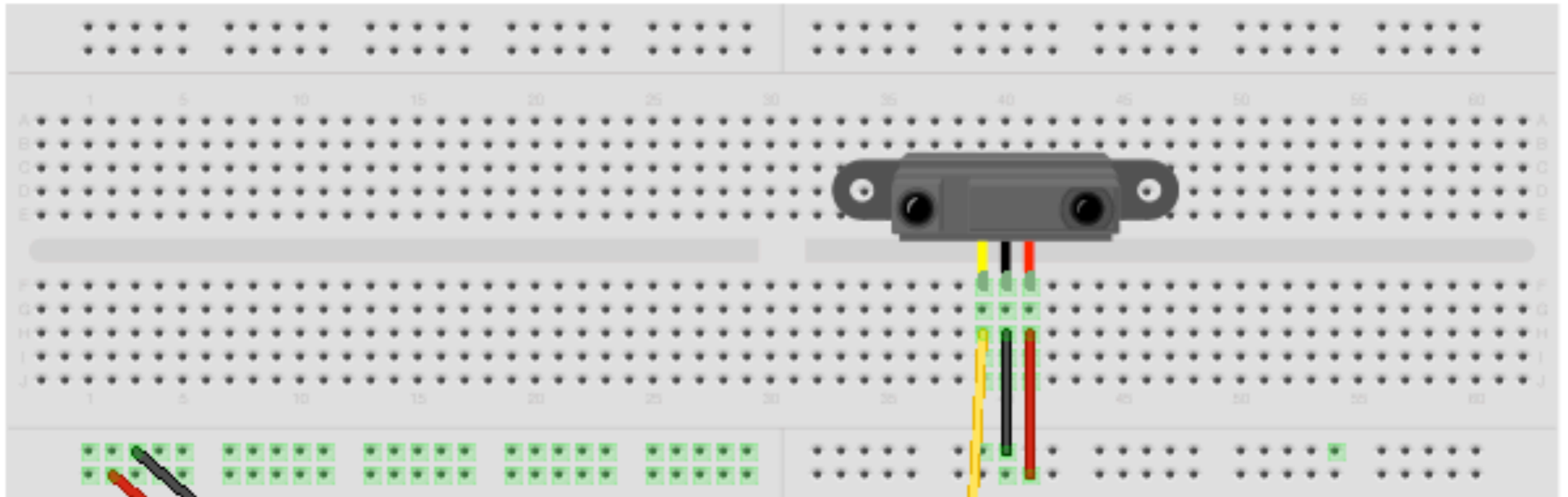
Sending Values

```
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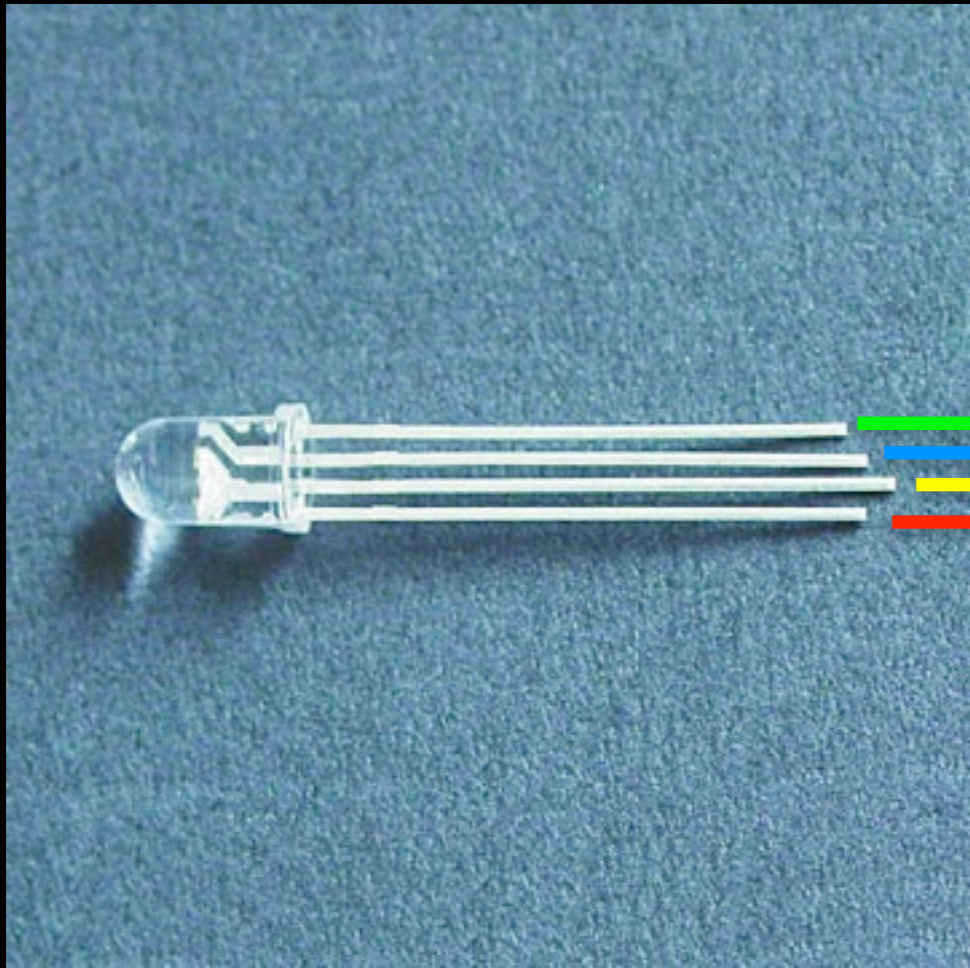
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```

```
Looped 1 times
Looped 2 times
Looped 3 times
```



RGB LED



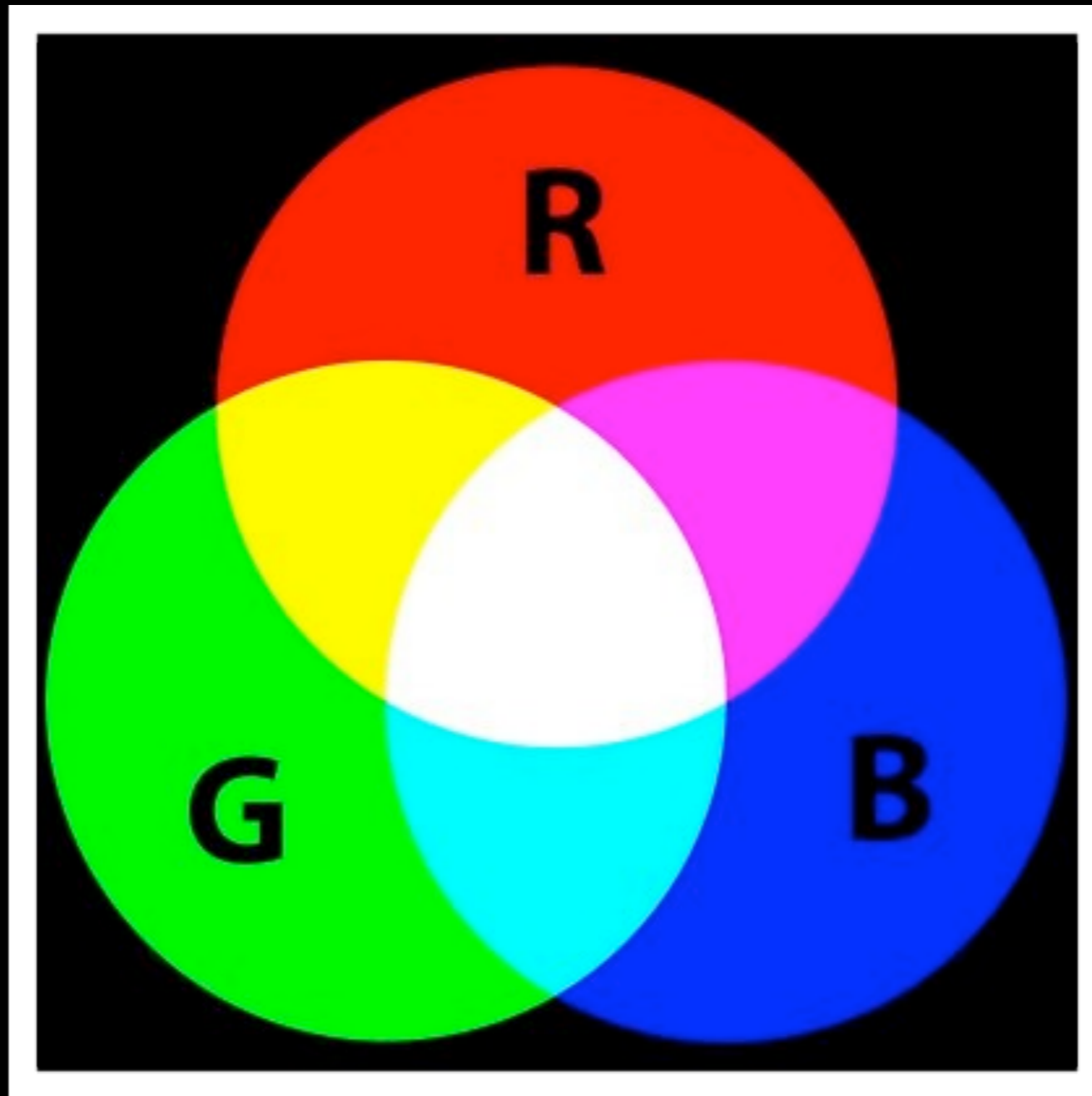
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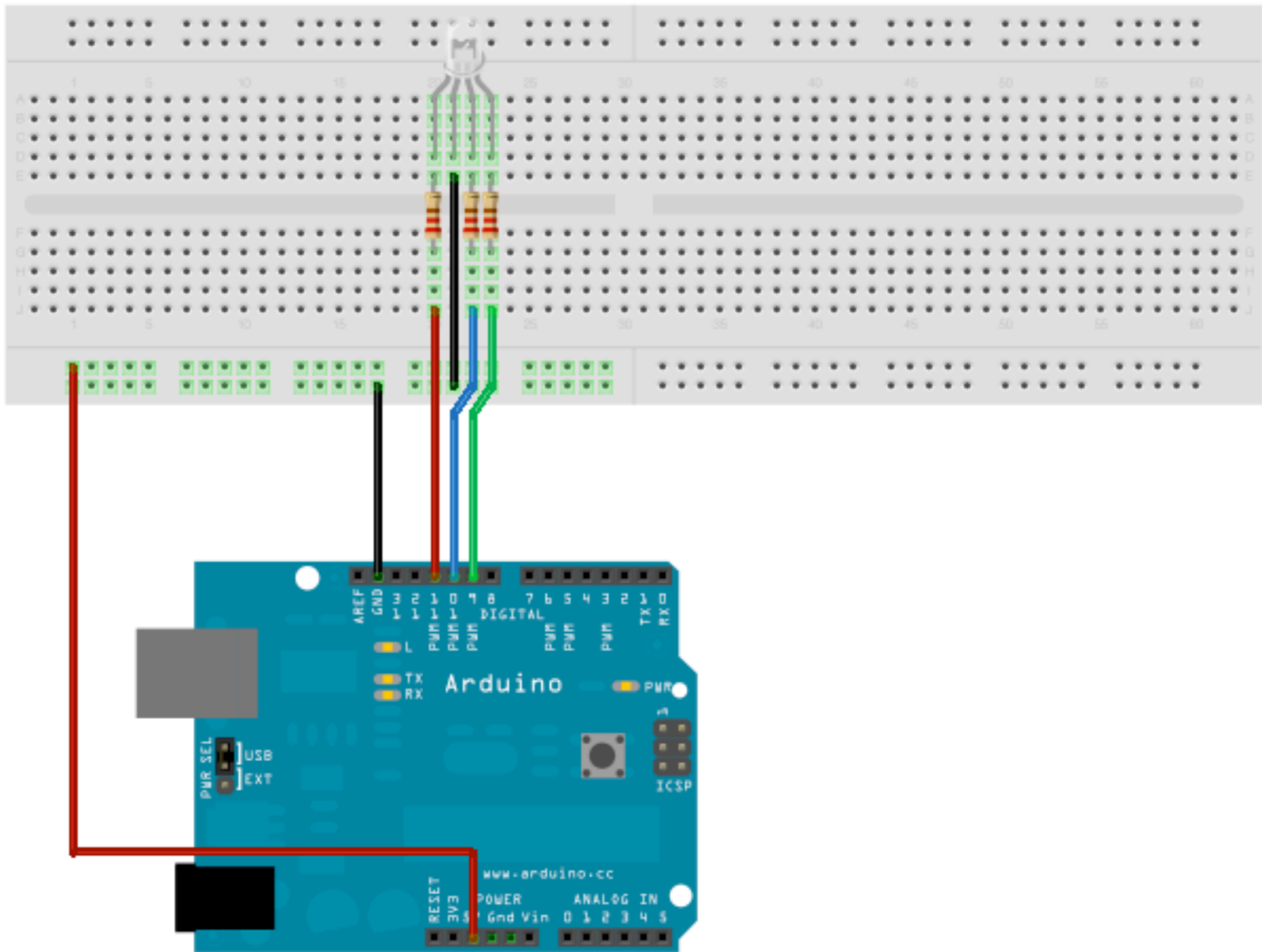
B

R

COMMON (+5)

Color Mixing





Now let's put them together

