Jin Jeon
Info C262

Lab 1: Intro to Physical Computing

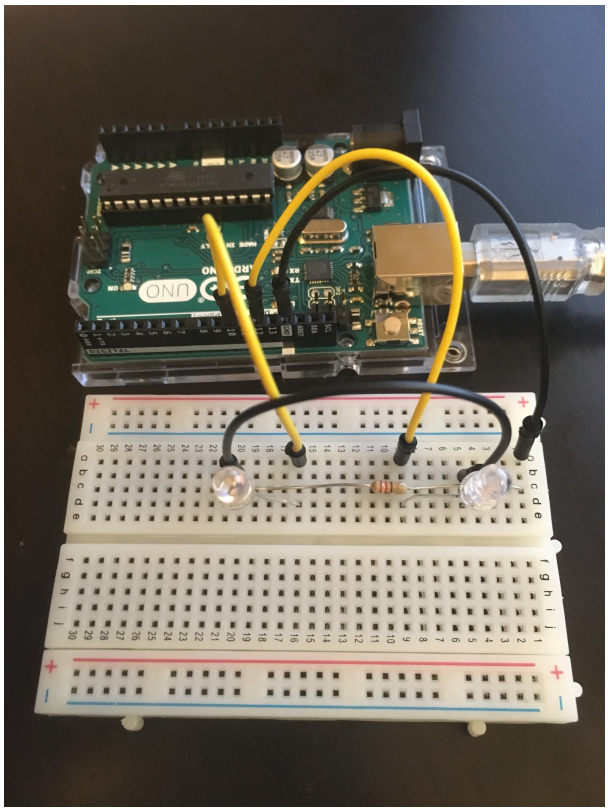
Description

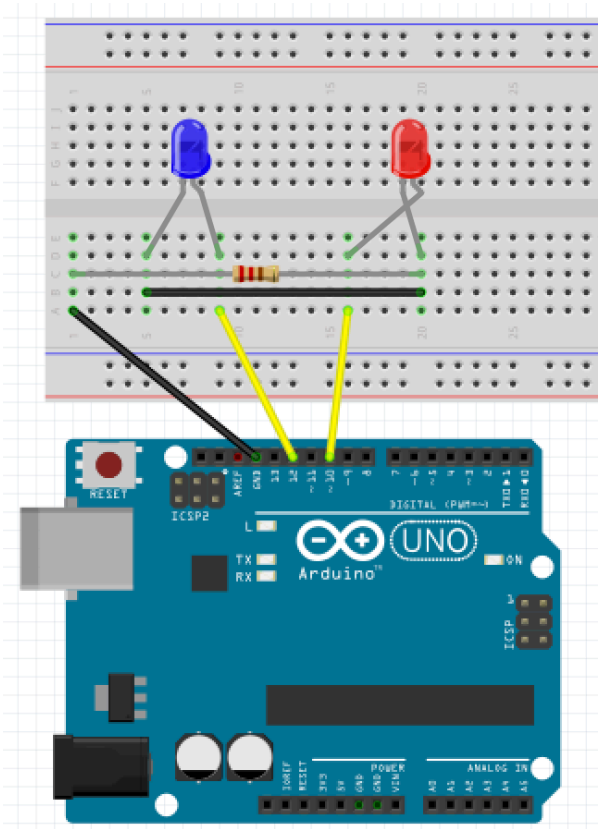
I used Arduino with blue and red LED. While it was my first time learning circuit boards and Arduino, I wanted to be more creative and try new ways. After making a single LED blink, I tried to create two blinking LEDs. After the two blinking LEDs, I wanted these LEDs to blink according to a certain song. Because my skills are currently limited, I only hardcoded the time delay to match the beat of a certain song.

The major difficulty I encountered was hardcoding the specific delay time to smoothly match with the song. Because I love EDM songs, I first tried to match the lights to EDM beats, which was very difficult to synchronize. I decided to use a K-pop song called *Playing with Fire* by BlackPink instead because it had a relatively slow beat. Even though it is a short video, here is the link to the work. Please keep the sound loud!
https://www.youtube.com/watch?v=H1_3BGOwVPc

Components

1 Arduino
2 LED (blue and red)
1 Resistor (220 Ω)
1 Breadboard
3 Jumper wires





Code

```
/*
  Blink
  Turns an LED on for one second, then off for one second, repeatedly.
  Most Arduinos have an on-board LED you can control. On the UNO, MEGA and ZERO
  it is attached to digital pin 13, on MKR1000 on pin 6. LED_BUILTIN is set to
  the correct LED pin independent of which board is used.
  If you want to know what pin the on-board LED is connected to on your Arduino
  model, check the Technical Specs of your board at:
  https://www.arduino.cc/en/Main/Products

  modified 8 May 2014
  by Scott Fitzgerald
  modified 2 Sep 2016
  by Arturo Guadalupi
  modified 8 Sep 2016
  by Colby Newman

  This example code is in the public domain.
  http://www.arduino.cc/en/Tutorial/Blink
*/

// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(12, OUTPUT); //blue
  pinMode(10, OUTPUT); //red
}

// the loop function runs over and over again forever
void loop() {
  digitalWrite(12, HIGH);
  delay(600);
  digitalWrite(12, LOW);
  delay(0);
  digitalWrite(10, HIGH);
  delay(600);
  digitalWrite(10, LOW);
  delay(0);
  digitalWrite(12, HIGH);
  delay(600);
  digitalWrite(12, LOW);
  delay(0);
  digitalWrite(10, HIGH);
  delay(600);
  digitalWrite(10, LOW);
  delay(0);
  digitalWrite(12, HIGH);
  delay(300);
  digitalWrite(12, LOW);
  delay(0);
  digitalWrite(10, HIGH);
  delay(300);
  digitalWrite(10, LOW);
  delay(0);
  digitalWrite(12, HIGH);
  delay(300);
  digitalWrite(12, LOW);
  delay(300);
  digitalWrite(12, HIGH);
```

```
  delay(300);
  digitalWrite(12, LOW);
  delay(300);
  digitalWrite(10, HIGH);
  delay(300);
  digitalWrite(10, LOW);
  delay(0);
  digitalWrite(12, HIGH);
  delay(300);
  digitalWrite(12, LOW);
  delay(0);
  digitalWrite(10, HIGH);
  delay(300);
  digitalWrite(10, LOW);
  delay(0);
  digitalWrite(10, HIGH);
  delay(300);
  digitalWrite(10, LOW);
  delay(0);
  digitalWrite(10, HIGH);
  delay(300);
  digitalWrite(10, LOW);
  delay(0);
}
```