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<u>Deconstruction Project 2 : Arduino controlled led lights</u>

Introduction:

- For this deconstruction I started to research options for controlling LED lights and further my understanding of the Arduino software, and how it works in conjunction with Processing.

How/ Process

- I chose to use the following tutorial

Link to tutorial:

http://www.instructables.com/id/How-to-Make-LEDs-Flash-to-Music-with-an-Arduino/?ALLSTEPS

- The challenges started when I had to install the Arduino library for processing. I did not know that working with both simultaneously in one project would present challenges. The aspects of using libraries was new to me and had a very hard time understanding how to do it or finding appropriate information on the internet to assist in debugging.
- I also encountered issues with the firmware Firmata. Although I found the library and was able to open it and use it most of code was too advanced and I began to make changes to it. In the process I created an huge amount of files and did not label them correctly, which proved challenging once I had to debug.
- In order to debug it I followed the instructions found in the Arduino help page, which suggested I locate a Java Archive from the processing library called_Arduino.jar and change it to arduino.jar. (change to lower case letters) I change it but the lights still didn't work.
- I downloaded an alternative mp3 to test if the song provided by the tutorial was faulty, yet it did not work
- The tutorial also suggested to change the resistor values depending on the maximum rating of each LED, and adjust the code accordingly. I was not able to find the appropriate maximum rate of each led while searching online

What I learned:

- I learned a lot in this project. Prior to discovering this tutorial I did not know that certain tasks cannot be completed by Processing or Arduino alone. This discovery makes me wonder what other environments are combined together to create a specific experience. Much like the previous project, I foolishly believed that the tutorial catered to my level of basic understanding, yet as the tutorial progressed and more adjustments to the base code where added, my lack of knowledge and inexperience with electronics became a huge challenge. I definitely learned that tutorials although seem filled with step by step instructions, assume that certain steps are understood by reader and  leave out important part of the process.