How to make LED's flash to music using an Arduino

By Team 'Shoutouts to Brusk Erce'

In this tutorial we will be showing you how to make LED's flash to the beat of any music using the Arduino open source hardware and software capabilities.

What hardware you will need:

- 3 LED's (Different colours would make it look cooler but is not required)

- A USB cable (To connect the Arduino do your PC)

- A Breadboard

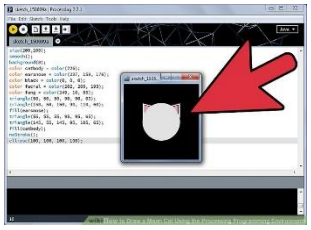
- 3 resistors

- 7 connector wires (male to male)

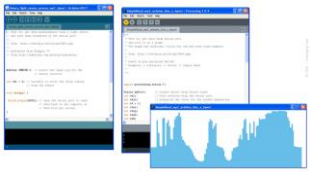
- A PC

What software you will need (All free):

- Arduino Software Environment



- Processing Software Environment

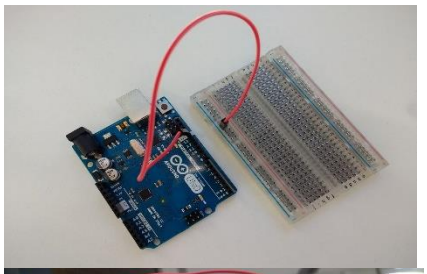


- Arduino library for processing

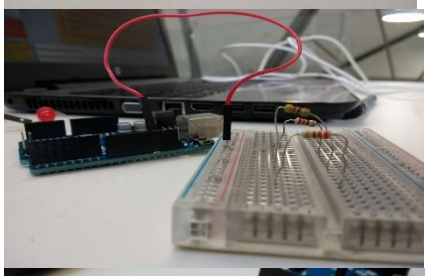
- BeatWrite from the minim JavaSound library examples

Step 1: assembling the circuit:

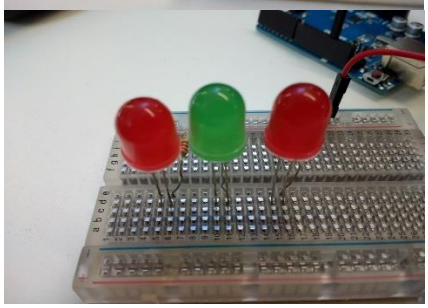
For this step you will need your LED's, resistors, breadboard, wires and of course your Arduino.



Firstly, you need to insert a wire from the Digital GND port of the Arduino onto the outer negative rail of the breadboard.



Next you need to place your resistors on the inner rails of the breadboard.



After this, place the LEDs on the right side of the resistors into the slot that is opposite to the resistors by 1 slot.

Run wires from the negative rail of the LEDs to the outer rail. This marks the end of the hardware set up. Now you must set up the software.

Step 2: Software and programming:

First thing to do regarding software is to download the applications and libraries if you haven't already and place them or upload them onto the Arduino application. Next, connect the Arduino into your PC if you haven't already, place your downloads in the Arduino library folder in your system files. Next in your Arduino application got to *file > Examples > Firmata > StandardFirmata* and upload that code to your project. Next open Processing then open the BeatWrite file in the BeatWrite folder. Change the line of *code 'song = minim.loadFile("freebird.mp3", 2048);"'* and change the .mp3 file to the name of the song you have saved to use.