# **DISCO CHORDS By Sarah Zaheer**

A way in which a user can generate color, light, and music just by pressing the various chords on the screen.

## **Summary**

This project is your own home based disco wherein a user can:-

1)Make music by selecting different colors and along with this,

2)Generate different colored lights

, by selecting the boxes on the screen

This would include four black boxes, and when a user selects any of the four boxes it would not only change the color of that box in red, blue, yellow or green, and generate music but also light up the neopixel light in that particular color. Thus, helping the user get a home-based disco experience and helping them interact with the various components on it.

## **Component Parts**

This “Disco Chords” project has the following components:-

**Hardware**

*Arduino Neopixel Lights:-*

1)Arduino Uno

2)Usb C Cable

3)Neopixel Lights

4)Jumper Wires

5)Bread Board

**Software**

Arduino software

Processing

**Input Data:** Through processing by pressing one of the boxes by mouse or a trackpad on the keyboard.

**Output Data:** Through neopixel light and Arduino hardware to light it up, the screen on processing to color the boxes and the speakers of the computer to generate sound.

## **When your project is completed, you will then add the following sections:**

## **Timeline**

* Week 0: Write Proposal
* Week 1:Coded the Processing code of the black colors that change color when pressed.
* Week 2:Coded the Arduino code for neopixel lights adding serial numbers along with setting up the Arduino hardware.
* Week 3:Added sound and moved Arduino into processing connecting the Arduino software,the Arduino hardware and processing.
* Week 4: Present!

## **Challenges**

Not having done programming before at first this project seemed impossible to me but nevertheless, I challenged myself and with the constant help of my professor and a few tutorials I was able to make it happen.

What I found unexpectedly challenging was using processing that even though is very similar to p5 is still different. With that, making sure that only one box would light up while others remained black seemed hard.

Also, I found myself connecting the wrong hardware Arduino to my processing file because of which it would not light up.

I also had to be careful what where to put which wire while doing the set up of the hardware of neopixel lights.

## **Completed Work**

Code,Audio and Video Attached.

## **References and links**

Hybrid Lab Neopixel Light Tutorial

Daniel Shiffman Tutorials

Processing.org References