Mykhal Parson

ENT 4499

9/5/21

Culmination Proposal

Project Description: I will use p5.js and a MIDI keyboard in order to create a portable setup in which the names of the notes and chords will display on the screen, as well as colors, to indicate what kind of chords are being played when the MIDI keys are pressed. If the user is playing a major and a minor chord, the color of the screen changes to be a mix of the colors. If two of the same types of chords are played, then the color becomes more intense and bolder (brighter or darker). If one key is pressed (or no keys at all), the screen doesn't change colors, but the sound of the note plays. This idea is aimed towards 8-10 year olds, but people of any age can benefit from my project. With this project I want people to learn music chords and eventually teach them ear training, which can eventually lead them to creating their own songs. Also, I hope to learn how to be able to teach people about a small aspect of music theory so that they can have more knowledge and enjoy music more.

Methods/Calendar:

Work Breakdown Structure:

1. Research (Weeks 1-2)

    a. Research colors and their connections to chords (Weeks 1-2)

2. Programming Interface on p5.js (Weeks 3-4)

    a. Choosing and coding screen display style (Week 3)

    b. Assignment of colored screens to chords (major, minor, major + major, minor + minor, major + minor) (Week 4)

3. Design (Weeks 5-7)

    a. Importing MIDI/USB data into p5.js (Week 5)

        i. Console log used to see if chords are entered correctly when pressed

    b. Placement of chord names on screen (Week 6)

    c. Sounds of chords implemented (Week 6)

4. Programming Graphical Objects (Visuals that connect to chords) (Week 7)

    a. Displays of shapes and images chosen

5. Prototyping/Testing (Weeks 8-10)

    a. Initial self-tests (Week 8)

        i. Self-testing captured on camera

    b. Testing with friends and family (Week 9)

        i. Showing test subjects my video from week 8 to help them with ear training

    c. Final changes to project (Week 10)

    d. Last tests of project (Week 10)

Deliverables:

Web application prototype

Resources:

Hardware:	Software:
MIDI Keyboard (Owned by Me)	Processing/p5.js
Laptop (My personal MacBook Air)	Microsoft Word (To document any notes)
	Logic Pro X
	Music Theory Websites

Other: Scholar Papers (City Tech Library)

Budget:

Culmination Project Budget
PM: Mykhal Parson

Name	Description	Price
MIDI Keyboard	Personal Keyboard (USB)	$0.00
MacBook Air	Personal Laptop	$0.00
Processing	Free sketchbook software	$0.00
Scholar Papers	(From City Tech Library)	$0.00
	Total Cost:	$0.00

Proposed table of contents/Portfolio Outline:

- Research Phase findings
- How my app works

Culmination Project Agreement:

CULMINATION PROJECT AGREEMENT
Submit signed copy to your ENT 4499 Professor
1. Student Name: __Mykhal Parson__
2. Phone number: __718-598-4000__
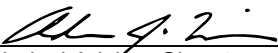3. Email: __Mykhal.Parson@mail.citytech.cuny.edu__
5. Title of the project.
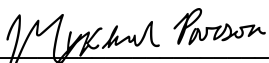__MIDI Colors__

6. This Agreement is entered into between:
Student's name: __Mykhal Parson__
Faculty advisor: __Adam Wilson__
Technical advisor: __Adam Wilson__

1. This is an agreement whereby grade and credit for ENT 4499 will be awarded in return for specified project efforts. It is agreed that all work described in this Agreement will be completed as scheduled and within the cost total and other parameters as noted.
2. Student will meet with the technical adviser at least 3 times throughout the course of the project.
3. Failure to maintain the agreed-upon plan and schedule may result in grade penalties. Failure to submit the complete project and report by the scheduled date will result in failure of ENT 4499
4. You will provide both your advisor and technical advisor with a copy of your proposal which will include the following:
   - Project description
   - Methods
   - Project Deliverables
   - Schedule or calendar
   - Required Resources
   - Budget
   - Proposed table of contents/Portfolio Outline
   - Culmination Project Agreement (this page)

Technical Advisor's Statement: I agree to serve as Technical Advisor for this culmination project and will participate in the evaluation as appropriate.

_____   **9/8/21**
Technical Advisor Signature   Date

Student's Statement: I fully understand the Project description, the Procedure, and the agreed-upon contributions of my Technical Advisor and others who may be involved in this Agreement. I agree to meet all requirements and to request, in writing, any significant changes, which may become necessary during this Culmination project. Any such request will become valid and a part of this Agreement/Contract when accepted by my Faculty Advisor.

_____   9/2/21
Student Signature   Date