**Intro to Programming: Final Project Proposal**

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*March 6, 2020*

For my final project in Intro to Programming I am planning to make a small CLI application for guitarists. It will be way to create and store chords played on the instrument, all from the user’s terminal. It will prompt the user for: the name of the chord and which note to be played on each string (which will be stored as a two-dimensional array). I will also add the ability for the user to save the chord to a text file and view all saved chords in the application by reading from the text file(s) containing the chords.

The target audience for this software is a bit niche, it targets both guitarists and people comfortable using a terminal. I will have everything in the program inside of a terminal session, so the user can create a new a chord and save it, they can also view all other saved chords without leaving the program. I may even add command line arguments focused at power users, example: $ java chord.java -o (to output all chords saved in one command). This will focus the target audience more towards experienced UNIX users and guitarists alike.

There are other CLI applications out there that are focused at guitar players, but I did not see any that resemble a chord chart like this one. The other applications I have found are for: creating sheet music, creating guitar tablature, or finding chords for a specific song. While those are all fantastic projects, they are all slightly different from goal this project. This project aims at being a simple and concise chart of chords, almost a dictionary of chords if you will.

Anybody who played guitar in their teenage years undoubtedly had a poster with all the common chords on their wall right next to their guitar. This was very helpful in the learning process, and there are so many out there that only a savant could really memorize them all. So, this project is essentially the same concept in your terminal, which is usually what is in front of me when playing guitar in the first place. So, I think that this project will be useful to other musicians out there like myself, just albeit have to both play guitar and have a terminal open.

Where I foresee possible problems in this program will be in the storing and printing of chords. Getting the user input for the chord is quite a simple task of using a Scanner to get values that are thus stored in an array, and exporting them to a text file will be slightly tricky. But it’s the viewing all of the stored chords where the issues will most likely lie, here are some various reasons/examples I see giving me problems:

1. Have not dealt with File I/O with Java yet, but seems to simple (Have experience with this in other languages).
2. Unsure if I want each chord to be a separate file, or have all chards stored in one large file with each new chord just appended to the list. Will have to experiment here to see what works best.
3. This program will only take chords designed for six string guitars tuned to EADGBE (standard tuning), if I find the time I can make this variant, but for now this simplifies things to avoid bugs.

The main reason for this project, and why the idea came to me, as I wanted something on my programming portfolio that has more appeal outside of hardcore enthusiasts of tech. Most of the projects I have worked on in the past have a very small appeal and audience and were merely educational concepts, this project will be appealing to those who aren’t super tech savvy. In order to complete this project, I will go through these steps to complete the most vital parts first:

1. Get user input and store into an array.
2. Save array to text file(s).
3. Print previous arrays stored.
4. Add command line arguments.
5. Create a good README on GitHub (may even create a wiki if I have the time).