Interactive and Generative Music

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Project Abstract

To integrate Tone.js more seamlessly and to assist with the code examples for the book, "The Code of Music".

Project Description

The project has 3 parts:
1. To assist with examples for the book "The Code of Music".
   a. Should be familiar with the topics taught in the course, which are listed in Course website.
   b. Discuss with the mentor about the interactives
   c. Coding the interactives
2. Publish a few of those interactives in the showcase website of p5.js. This is pretty straightforward.
3. Integrating Tone.js with p5.js more seamlessly.
   a. Explore Tone.js and make note of all the crucial functions of Tone.js.
   b. Look at the current code of p5-sound.js. As some functions are used from Tone.js in p5-sound.js
   c. Discuss the improvements and the issues with the current integration.
   d. Coding the changes, if needed a lightweight wrapper for tone.js.

Right now, p5-sound.js is difficult to use for those with no musical background. The interactive examples and the lightweight simple integration with Tone.js will provide a bridge for those with no musical background, to start learning music theory and understand the concepts necessary for them to start making music by code.

Development Process

Before May 17th:
1. Explore Tone.js and get familiar with the library.
2. Get familiar with the topics listed on the course page.

To get familiar with the library,I plan on reading the [documentation](#) and learning about music theory, I believe this [video](#) would suffice.

To ensure that I am familiar with the library, I plan to make a fun interactive game. A space shooter web game where instead of asteroids you will have musical blocks, thus when we destroy them, they will play the respective notes and the tempo will keep increasing to add difficulty. This interactive will help people internalize the concept of tempo and scales.

May 17th - June 7th:
1. Discuss with the mentor about ideas for interactives and start working on them
2. Discuss the integration of tone.js and also look at the existing one of p5-sound.js.

Regarding the interactives, I have had a look at the code pieces on the course page to get an idea of the work. After looking at those, I feel comfortable about working with them. Assuming the book will closely resemble the contents of the course, the following will be the plan for the interactives.
First Week (May 18th - May 25th) - The interactives for the first 3 chapters (Introduction + Rhythm) will be completed.
Second Week (May 26th - June 1) - The interactives for the Melody and Timbre will be completed.
Next 3 days (June 2 - June 4) - The interactives for the harmony part will be over.

Now the plan for the improving the integration of tone.js,
First Week (May 18th - May 25th) - Discuss the changes and possible improvements with the mentor.
Next 10 Days (May 26th - June 4) - The important changes and functions of Tone.js will be integrated.

A period of 2 days is left, (June 5 and 6) to account for some changes before going to the MIDTERM Evaluations.

June 7th - July 12th(MIDTERM Evaluations):
1. Finish the coding of the interactives
2. Integrate the important functions of Tone.js

During the evaluations, I would get feedback from my peers and work on the finishing touches of the interactives.

July 16th - August 2nd
1. If necessary, make changes to interactives and publish them in the examples section.
2. Finish writing a wrapper.
3. Write the Documentation necessary for the wrapper.

August 2nd to August 16th is kept as a buffer, in case any last-minute changes are needed.

More about me

I am Karthik Sundar, from India(GMT +0530). I love playing around with tech. I sometimes do some 3d modeling and sometimes play my guitar. I have made some projects such as [the real-time drawing app](#) and I also have a [blog](#). I am quite new to the open-source scenario. I have previously contributed to the Mozilla Organization, resolving the following [issue](#). You can check my GitHub profile [here](#), if you are interested to see some of my artwork, you can check them [here](#).