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Project 2 Documentation

From my experience with project 2, I was striving to create an audio boombox that would create cool visuals. Specifically based on the user options available to create canvas drawings that would depict the audio data. Based on my interface created for the user experience, I wanted to show the user the default or basic visuals according to the audio data, after the track is selected and played that creates the visuals through a line background and display bars. Additionally, I wanted a visual pleasing background with an organized input options that would not interfere with the canvas spotlight. Then the user would have options to add different visuals such as the circle bar display, phyllotaxis display, etc.; to create a visual experience of the audio data. In fact, I believe I went above and beyond again by trying to include as many input options as possible that the user can use to adjust how the visuals are shown. I wanted to add different types of input options such as multiple sliders, checkboxes, and radio buttons to give the user options on how they want the audio visualizer to look. A goal of mine was to show different colors based on the audio data frequency, this shows to the user when the pitches are higher or lower. However, based on how my code is setup, I tried to refractor my code into organized file types based on the job being complete. I provided a utils file for an example that creates all my shapes and gradients, as well as the ones given such as the random number and color calculations. While refactoring my code, I tried to eliminate as much-repeated code as possible, as well as the magic numbers for a more organized setup. Issues that I have encountered but solved was my problem with two of the same songs playing at once, ways to incorporate audio data into visuals so it looks like they are changing, and visual pleasing filters according to the audio data. Issues that I could not solve was refactoring specific code in certain sections, creating a conolver node for a stadium echo, and the biquid filter types not automatically resetting after a new filter of the same type is selected. I have used non-course resources to help create my circle bar display and a way to change colors according to the audio data. Based on these results, I believe that my overall grade would be between 85% - 95%. Based on that circumstance, I have concluded to this based on my variety of extra control types, meeting all requirements stated, and creating a visual pleasing design for both the application and the canvas visuals.

Sources:

Sound 1: <https://prosearch.tribeofnoise.com/download/mp3/d0d59bdbe0d52079b40579044ce5c808>

Sound 2: <https://prosearch.tribeofnoise.com/download/mp3/fd4e02f1434868f91c1ceefcfeb516d1>

Sound 3: <https://prosearch.tribeofnoise.com/download/mp3/3e5dc30bfe597d95c99088e65bb16b24>

<https://www.kkhaydarov.com/audio-visualizer/>

<https://medium.com/@gg_gina/how-to-music-visualizer-web-audio-api-aa007f4ea525>

<https://developer.mozilla.org/en-US/docs/Web/API/Web_Audio_API>