Program description:

The program will let you choose a wave file on your device, open it up and then choose whatever frequencies you want and modify their weights. After that you can save the file or save as.

Features:

* Displays a graph of the fourier transform of the file that gets updated to reflect the changes you made to it
* Displays a graph of the sound waves that gets updated to reflect the changes you made to frequencies as you make them
* Only support for a single channel, at least at first
* Click on the fourier transform graph to select a frequency, then it lets you choose how much you’d like to multiply by or set an absolute value. Also lets you choose a radius around that point that you’d like to affect. Frequencies in that area of the point you chose get multiplied, by the chosen factor at the point itself and interpolated up/down to 1 at the end of the area.
* The program starts with an immediate popup which prompts you to choose between opening a file and creating a new one.
  + If you choose open, it lets you select a file. While you keep selecting files that aren’t valid, it will return you to the prompt. Once you select a valid one, it starts drawing graphs and all that
  + If you choose new, it lets you choose the length of the file in seconds, bit depth, and frequency. The length will be a textbox and have some default value and if the user types something bad in there he’ll get an error message and have to try again, and the rest will let you choose from a radius list of options.
* Undo and redo
* Shortcuts for open, save, new, undo, redo
* The window name should have an \* or something next to the filename when it isn’t saved
* Look into dithering
* Optional features to think about closer to the end:
  + Drag and drop files onto the window to open them
  + A help menu option that brings up a window that explains how everything works
  + An about menu with info about me or the program’s license or whatever

Roadmap:

1. Plan GUI

2. Ability to open wave files and save/save as.

3. Temporary GUI for choosing a frequency and a multiplier and applying the modification without the fancy graphs

4. Draw graphs

5. Make frequency selectable from graph