1. An explanation of the code's functionality in relation to the function

2. Details on the code's intended use and application

3. An outlook on how the code can be utilized in future projects and how it can benefit individuals.

Answers:

libraries used - tkinter and pydub

1. The Code revolves around the user clicking on a button that represents a note and then the button calling upon the `` notesaver(usr\_inp)`` function to search for that note exhibited by the button. The search is **binary search** and when that note is found in the list, the corresponding note from the frequency list called "notes\_real" is called upon and then that note gets added to a list of the music YOU develop. This list then gets converted to your own WAV music file.

There are 3 buttons:

1. ok - to save your file

2. clear - to restart your tune if you make mistakes in the middle!

3. exit - to exit the window

2. I've been a music lover since I was a kid. When I heard about incorporating binary search in a program, I inherently wondered about the idea of relating this search to music. I deliberated on this thought for another 3 hours and that's when I finally had my basic algo for Musify.

**Musify** is an app that produces instrumental music by using the most basic notes. As we all know all the tunes in this universe are made up of mere 7 notes. These notes, can make you all kinds of music; happy, sad, angry, sweet and so on. I even used Musify to make Beethoven's 'Ode to Joy', one of the most popular and nostalgic tunes that we've all heard since we were kids.

Example 'Ode to Joy' by Musify : <https://drive.google.com/file/d/1HJY9Xo4kJLHWyhbSq8REqqb3PJUFlyQQ/view?usp=sharing>

3. In this complex world of music softwares, a young learner who doesn't have any knowledge about instruments but wants to dive into the world of making music gets often completely lost. By the time they're on their 3rd one hour YouTube tutorial on how to operate the music app, they are exhausted and give up.

Musify was made to help these young learners like me who love music. It helps newcomers understand notes and how to put them together. It can be used to generate daily life instrumentals like ringtones, alarms, and so on. It serves as a very basic Musical Instrument Digital Interface [MIDI] which can be a great pastime and your first opportunity to become a music artist.