Probability Software Assignment

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1 Introduction

The purpose of this report is to present an audio playlist player developed using Python and Tkinter. The player allows users to play a collection of MP3 files located in a specified playlist folder. The playlist is randomly generated, providing an enjoyable and dynamic listening experience.

2 Code Overview

The provided code is implemented in Python and uses various libraries to achieve the desired functionality. Here is a brief overview of the code:

- The code begins by importing the necessary libraries: `os`, `numpy`, `pygame`, and `tkinter`.
- The playlist folder path is specified using the `expanduser` function from the `os` module.
- A list of MP3 files in the playlist folder is obtained using a list comprehension and the `os.listdir` function.
- A random playlist is generated by permuting the list of audio files using `numpy.random.permutation`.
- The `pygame.mixer` module is initialized to handle audio playback.
- Functions are defined for playing the current song, playing the next song, playing the previous song, pausing the song, and stopping the playlist.
- A Tkinter GUI window is created, along with buttons for the various player controls.
- A label is created to display the currently playing song.
- The GUI main loop is started using the `mainloop` function.

3 Features and Functionality

The audio playlist player implemented in the provided code offers the following features:

1) Random Playlist Generation: The player generates a random playlist by shuffling the MP3 files in the specified playlist folder. This ensures a different order of songs each time the playlist is played.
2) Play Controls: Users can control the playback of the audio files using the play, pause, resume, and stop buttons. These controls provide a seamless and interactive user experience.
3) Next and Previous Song: The player allows users to navigate through the playlist by playing the next or previous song. This feature enables users to easily switch between songs without interrupting the listening experience.

4 Conclusion

The provided code demonstrates the implementation of an audio playlist player using Python and Tkinter. It allows users to play a collection of MP3 files in a random order, providing an enjoyable listening experience. The player's user-friendly interface and convenient playback controls make it a versatile tool for managing and playing audio playlists.

Some snaps of my Music Player

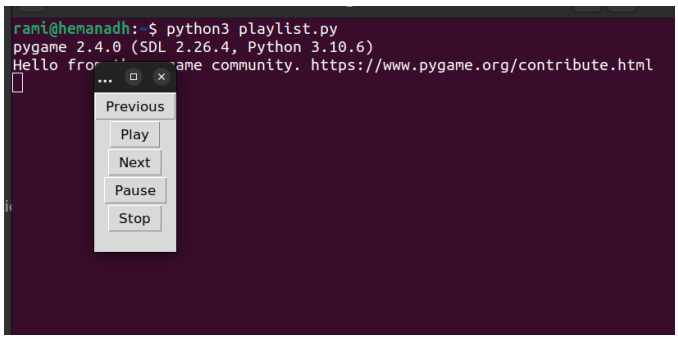

Fig. 3. This is how my Music Player looks normally