Probability Software Assignment

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Code Review Report: Music Player The program implements a basic music player using the Tkinter library in Python. It utilizes the Pygame library for audio playback. This report aims to provide a comprehensive review of the code, highlighting its structure, functionality, and potential improvements.

1) **Code Structure:** The code follows a procedural programming style and is organized into several sections:
   a) Library imports: The necessary libraries, including tkinter, os, pygame, and numpy, are imported at the beginning of the code.
   b) Global variable declarations: Global variables such as currentsong, songlist, and directory are defined to store the current song, the list of songs, and the music directory path.
   c) Directory and song list initialization: The 'Music' directory is specified, and the list of songs is obtained using os.listdir(). The initial current song is set to the first song in the list.
   d) Song shuffle: The song list is shuffled using np.random.shuffle() to provide a randomized playback order.
   e) Function definitions: Several functions are defined to handle various functionalities, such as playing a song, pausing/resuming playback, playing the next/previous song, and stopping the player.
   f) Graphical User Interface (GUI) creation: The Tkinter window is created with a specific title and size.
   g) Button creation and placement: Buttons for play, pause, next, previous, and stop actions are created using tk.Button() and packed into the window.
2) **Functionality:** The music player provides the following functionalities:
   a) Play: Plays the current song using Pygame's pygame.mixer.music.load() and pygame.mixer.music.play() functions.
   b) Pause/Resume: Pauses or resumes the currently playing song using pygame.mixer.music.pause() or pygame.mixer.music.unpause().
   c) Next/Previous: Skips to the next or previous song in the shuffled song list and plays it.
   d) Stop: Terminates the program and closes the GUI window.
3) **Conclusion:** In summary, the provided code offers a basic music player implemented using Tkinter and Pygame libraries in Python. While it fulfills the core functionalities of playing, pausing, and skipping songs, there is room for improvement in terms of code structure, error handling, user feedback, and user interface enhancements. Addressing these aspects would result in a more robust and user-friendly music player application.

Some snaps of my Music Player

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

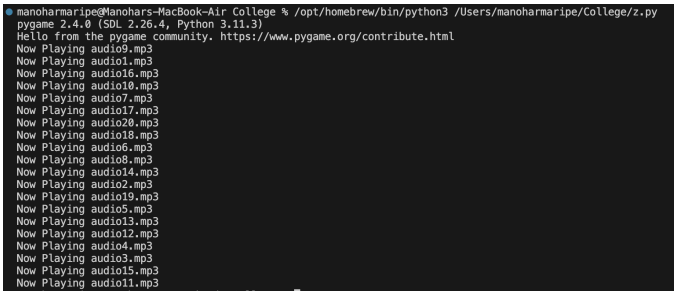

Fig. 3. After shuffling for once the list got shuffled