

AI1110

SOFTWARE ASSIGNMENT REPORT

ASSIGNMENT : RANDOMISED PLAYLIST

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1 INTRODUCTION

This code is in Python language that uses the Pygame library to create an Interactive music playlist. It plays songs from a specified directory in a random order and provides options like pause, resume, skip, quit to control the songs in playlist.

2 DESCRIPTION

- 1) Firstly the required modules are imported, including os, random, pygame, sys, and select.
- 2) The songs_dir variable is defined to store the directory path where all the 20 songs are located.
- 3) The os.listdir() function is used to extract the list of audio files in the songs_dir directory. The list is stored in the song_files variable.
- 4) The random.shuffle() function is used to randomize the order of songs in the song_files list.
- 5) The code then enters a while loop that loops infinitely which plays songs from the shuffled list until the program is terminated.
- 6) Inside the loop, the Pygame mixer is initialized using pygame.mixer.init().
- 7) For each song in the shuffled list, the script extracts the full path of the song file using os.path.join() and loads the song into the Pygame mixer using pygame.mixer.music.load(). The song is then played using pygame.mixer.music.play().
- 8) Then the code enters another while loop if get_busy function returns true or when a song is paused in middle.
- 9) Now the select.select function waits until the max_timer, which is the maximum duration of a song.
- 10) Depending on the user's choice, the script performs the corresponding action: pausing, resuming, skipping to the next song, or quitting the playlist.
- 11) If no input is detected within the time limit, the inner while loop breaks, and the script moves on to the next song in the shuffled list.
- 12) Once all songs have been played, the Pygame mixer is closed using pygame.mixer.quit().
- 13) And again it loops the infinite loop above, playing the next 20 randomised songs automatically.

3 SUMMARY

The main objective of this assignment is to assign a random number to each song and play them in a shuffled order. The program provides options for pausing, resuming, skipping songs, and quitting the playlist. If the user does not quit the playlist, the songs are continuously played as sets of randomized 20.

4 OUTPUT IMAGE

```
bhavyashloka@Bhavyas-MacBook-Pro Desktop % python3 main.py
pygame 2.4.0 (SDL 2.26.4, Python 3.11.3)
Hello from the pygame community. https://www.pygame.org/contribute.html
Enter :
1 to Pause
2 to Resume
3 for Next Song
4 to Quit the Playlist
1
2
3
  Playing next song

Enter :
1 to Pause
2 to Resume
3 for Next Song
4 to Quit the Playlist
  Playing next song

Enter :
1 to Pause
2 to Resume
3 for Next Song
4 to Quit the Playlist
3
  Playing next song

Enter :
1 to Pause
2 to Resume
3 for Next Song
4 to Quit the Playlist
1
2
4
%
bhavyashloka@Bhavyas-MacBook-Pro Desktop %
```

The output of the program in my terminal.