Software Assignment

AI1110:Probability and Random Variables

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Abstract—In this assignment we made a Music player in python which uses numpy module of python to pick random songs from the playlist and play in the loop one after another without repeating till the playlist ends. Once the playlist ends it starts again.

DESCRIPTION

1) I used numpy.random.randint in the numpy module to pick random song from the playlist.
2) To make the UI which uses the tkinter module in python, I have taken help of the online sources.
3) Whenever the user clicks the 'Play' button, it picks a random song from the playlist and plays it.This song will be added to another list which tracks the played songs.
4) Whenever the user clicks the 'Next' button, next random song will be played and the played songs' list will ensure that the next song is not the same as any of the previous ones.
5) The code is checking if the song ended or not after every 0.1 seconds, so that if the song has ended it will call the next song function.
6) After all songs in the list are played, it will clear the played songs list and will again start with another set.
7) There are buttons for pause and resume also.
8) The playing of songs,pause and resume are getting implemented with the help of pygame.mixer.music.

NUMPY.RANDOM.RANDINT

The numpy.random.randint function in NumPy is used to pick a random integer from uniform discrete distribution in the given range.
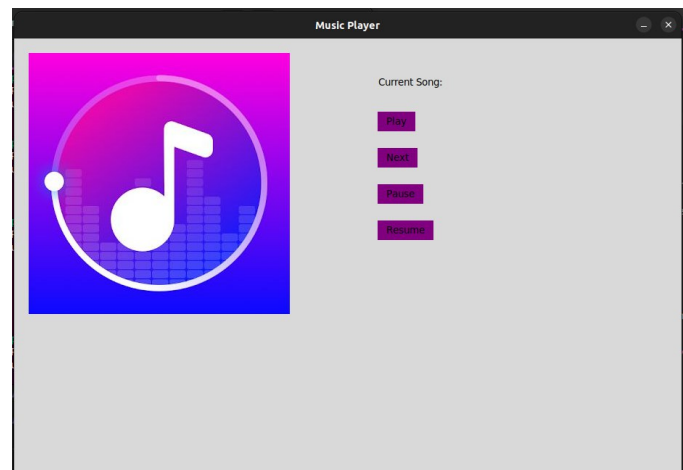

Fig. 8. This is how the UI looks

Fig. 8. Randomised playlist

SOME SNAPS OF MY MUSIC PLAYER

```
pradyumn@pradyumn-HP-Laptop-15-bs1xx:~/audio$ python3 audioplayer.py
pygame 2.4.0 (SDL 2.26.4, Python 3.10.6)
Hello from the pygame community. https://www.pygame.org/contribute.html
IMG_0556.mp3
IMG_0555.mp3
IMG_0568.mp3
IMG_0564.mp3
IMG_0558.mp3
IMG_0572.mp3
IMG_0569.mp3
IMG_0560.mp3
IMG_0559.mp3
IMG_0557.mp3
IMG_0565.mp3
IMG_0561.mp3
IMG_0571.mp3
IMG_0566.mp3
IMG_0567.mp3
IMG_0562.mp3
IMG_0570.mp3
IMG_0554.mp3
IMG_0553.mp3
IMG_0563.mp3
```

Fig. 8.   Playlist randomised once again