AI1110: Probability and Random Variables Software Project

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abstract: In this project, we made a program to play a list of 20 songs randomly.

The main logic of the randomization is in the file ”randomizer.py”. here there is a class called Randomizer, which has a list of song numbers. It has a method, ”play_next”, which does the following:

1) generate a random integer between 0 and the length of the song list minus 1 (both inclusive) using the numpy’s random.randint() function
2) start playing the song corresponding to that number using pygame’s mixer module
3) remove that song from the song list
4) if all the songs have been removed, reinitialise the list

This way, it plays the songs in random order, and for a particular song, the position of the song being played (0 to 19) follows a uniform distribution.
The main.py file uses this play_next function to play the song, and the rest of the code is related to initialising everything and making the GUI work.
The GUI consists of a play/pause button, a ”next” button, which starts playing the next song, and a list of all songs on the right, which are greyed out one by one after they are played.

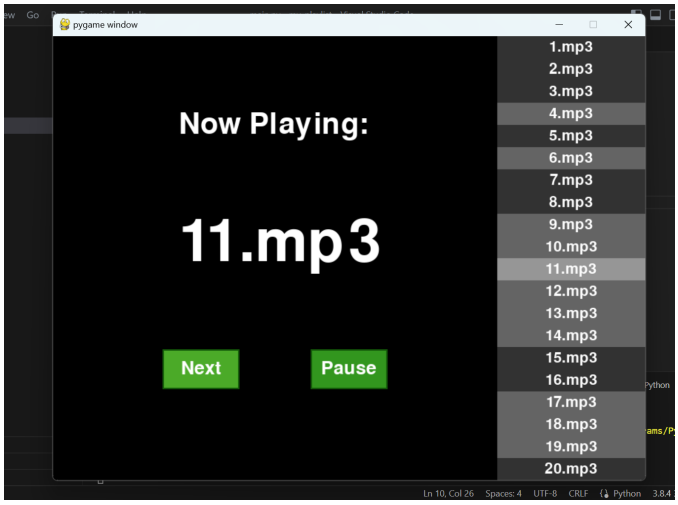

Fig. 1. Screenshot of the GUI