Probability Software Report in LaTeX

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1 Problem Statement

We were given a list of 20 songs and we had to make an Audio Player which had the functionality of ”Shuffle Songs” in it. We were asked to prepare a Command Line application but if possible, we could extend it to a Graphical User Interface too.

2 My Report

I wrote the code for my Command Line application in python(python3) and the file stucture is as follows-

```
Assignment2
├── Audio
│   ├── 1.mp3
│   ├── 2.mp3
│   ├── 3.mp3
│   ├── 4.mp3
│   ├── 5.mp3
│   ├── 6.mp3
│   ├── 7.mp3
│   ├── 8.mp3
│   ├── 9.mp3
│   ├── 10.mp3
│   ├── 11.mp3
│   ├── 12.mp3
│   ├── 13.mp3
│   ├── 14.mp3
│   ├── 15.mp3
│   ├── 16.mp3
│   ├── 17.mp3
│   ├── 18.mp3
│   ├── 19.mp3
│   └── 20.mp3
└── lsfr.py
```

3 The Logic

3.1 Modules Used

- python3
- pygame
- random

3.2 Logic

I first stored all the paths to my audio files in an array called ”musicFiles”. Now I created an array of randomly ordered integers called ”Values” of size same as the number of songs we have. We also have to ensure that the integers dont repeat themselves anywhere. For that we had to continuously check whether our new random number was already present inside.

Now all that we had to do was play the indexed songs. And while playing it had to react to specific commancd that could be given like

- next
- pause
- play
- exit

4 Conclusion

So we have successfully generated a radom nuber list and have gotten the functionality of shuffle a playlist like any other Audio Player available elsewhere.