AI5030 - Software Assignment
Generating an audio playlist with random number generation

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***Aim:* To create an interactive GUI that enables playing the audio in random order**

***Given data :* Samples of 20 recorded videos**

Solution: A random number generator generates random numbers within a specified range.Here it has been utilised to generate an audio playlist in a random order. The numbers thus generated have a uniform distribution wherein each occurrence is equiprobable. This project ultimately plays audio files from a playlist randomly using a python code. In this we use the Moviepy for converting video files to audio, the os for importing the files, random for random selection of songs. Initially the audio from the video has been extracted using Moviepy library in python. The audio files thus extracted are saved in the same folder as the source code file and are later utilised for further processing.

Implementation :
This entire project uses python and these are the steps followed

- Extraction of audio: The program list of all the video files in a folder converted to audio files utilising the os library

- File selection and Randomization: After providing path of folder containing files, the program lists of all the audio files and shuffles them randomly

- Audio playback: The Moviepy library is used to load and play the audio files.This plays the songs in a sequence.

Usage:
To use this program these steps are to be followed:

- The python is run to extract the audio files from the video playback in the folder "Videos"

- The extracted audio are saved in the same path as the code file and hence random generator code is to be run to fetch the audio files in a randomized fashion

- The interactive GUI enables easy navigation among various songs.

Conclusion: The project's primary objective of creating play randomly in a chosen playlist with GUI functionality is successfully attained. This programme encourages people to enjoy the song collection. This clearly demonstrates how Python was used to create a fun randomly played audio playlist.