AI1110 Software Project Report

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I. Introduction

The objective of this experiment is to create a simple audio player using the libraries in Python. The program allows the user to play a shuffled playlist of audio files and provides options to replay the current song, move to the next song, or exit the program. The PyDub library was used to handle audio file processing and playback.

II. Implementation

- Importing necessary libraries and initializing Pygame.
- Define the playlist containing the file paths of the songs:
- Load the songs from the playlist using **AudioSegment.fromfile(),name** and store them in a list.
- Shuffle the songs in the playlist using **random.shuffle()**
- Initialize variables for counting the current song and determining whether to move to the next song or replay the current one
- Start an infinite loop to continuously play songs until the user chooses to exit
- Retrieve the current song from the shuffled playlist.
- Play the song using the **play()** function from **pydub.playback**
- Prompt the user to provide input for song control.Implement the logic for different user inputs:
  - If the user enters 'n', increment the count to move to the next song
  - If the user enters 'r' and the next variable is True, continue playing the current song
  - If the user enters 'e', break the loop and exit the program
  - Reset the count to 0 if it reaches the end of the shuffled playlist, allowing the player to loop back to the first song

A. Dependencies

To run the Music Player, the following dependencies are required:

- Python
- PyDub library
- random
- play

III. Conclusion

In this lab, The program allows users to play a shuffled playlist, replay songs, skip to the next song, and exit the program.we successfully implemented a music playlist player using the PyDub library in Python.It denomstrates the use of PyDub and its audio capabilities in Python Programming.

IV. Outcomes

These are some of pictures of working code.

```
ganesh@ganesh:~$ python3 sample.py
PLAYING: IMG_0560.mp3
Input #0, wav, from '/tmp/tmpondhw5dw.wav':   0KB sq=    0B f=0/0
  Duration: 00:01:48.64, bitrate: 1411 kb/s
  Stream #0:0: Audio: pcm_s16le ([1][0][0][0] / 0x0001), 44100 Hz,
   0.99 M-A:  0.000 fd=   0 aq=  176KB vq=    0KB sq=    0B f=0/0
```

Fig. 1. this shows the playing of songs

```
ganesh@ganesh:~$ python3 sample.py
PLAYING: IMG_0560.mp3
Input #0, wav, from '/tmp/tmpondhw5dw.wav':   0KB sq=    0B f=0/0
  Duration: 00:01:48.64, bitrate: 1411 kb/s
  Stream #0:0: Audio: pcm_s16le ([1][0][0][0] / 0x0001), 44100 Hz,
 108.55 M-A:  0.000 fd=   0 aq=    0KB vq=    0KB sq=    0B f=0/0
Press 'r' to replay, Press 'e' to exit, Press 'b' for the previous
Press 'n' for the next song
```

Fig. 2. this shows option to next song ,replay,exist

```
ganesh@ganesh:~$ python3 sample.py
PLAYING: IMG_0560.mp3
Input #0, wav, from '/tmp/tmpondhw5dw.wav':   0KB sq=    0B f=0/0
  Duration: 00:01:48.64, bitrate: 1411 kb/s
  Stream #0:0: Audio: pcm_s16le ([1][0][0][0] / 0x0001), 44100 Hz, 2 channels, s16, 1411 kb/s
 108.55 M-A:  0.000 fd=   0 aq=    0KB vq=    0KB sq=    0B f=0/0
Press 'r' to replay, Press 'e' to exit, Press 'b' for the previous song
Press 'n' for the next song
 r
PLAYING: IMG_0560.mp3
Input #0, wav, from '/tmp/tmpm2xnbla0.wav':   0KB sq=    0B f=0/0
  Duration: 00:01:48.64, bitrate: 1411 kb/s
  Stream #0:0: Audio: pcm_s16le ([1][0][0][0] / 0x0001), 44100 Hz, 2 channels, s16, 1411 kb/s
   4.45 M-A: -0.000 fd=   0 aq=  176KB vq=    0KB sq=    0B f=0/0
```

Fig. 3. replaying song

```
ganesh@ganesh:~$ python3 sample.py
PLAYING: IMG_0569.mp3
Input #0, wav, from '/tmp/tmppmgultx3.wav':   0KB sq=    0B f=0/0
  Duration: 00:00:49.09, bitrate: 1411 kb/s
  Stream #0:0: Audio: pcm_s16le ([1][0][0][0] / 0x0001), 44100 Hz, 2 channels, s16, 1411 kb/s
  48.98 M-A:  0.000 fd=   0 aq=    0KB vq=    0KB sq=    0B f=0/0
Press 'r' to replay, Press 'e' to exit, Press 'b' for the previous song
Press 'n' for the next song
 n
PLAYING: IMG_0563.mp3
Input #0, wav, from '/tmp/tmpu7nn6yqd.wav':   0KB sq=    0B f=0/0
  Duration: 00:01:12.77, bitrate: 1411 kb/s
  Stream #0:0: Audio: pcm_s16le ([1][0][0][0] / 0x0001), 44100 Hz, 2 channels, s16, 1411 kb/s
   5.29 M-A:  0.000 fd=   0 aq=  176KB vq=    0KB sq=    0B f=0/0
```

Fig. 4. playing next song

```
ganesh@ganesh:~$ python3 sample.py
PLAYING: IMG_0575.mp3
Input #0, wav, from '/tmp/tmpo59u4t8y.wav':   0KB sq=    0B f=0/0
  Duration: 00:00:33.37, bitrate: 1411 kb/s
  Stream #0:0: Audio: pcm_s16le ([1][0][0][0] / 0x0001), 44100 Hz, 2 channels, s16, 1411 kb/s
  33.30 M-A:  0.000 fd=   0 aq=    0KB vq=    0KB sq=    0B f=0/0
Press 'r' to replay, Press 'e' to exit, Press 'b' for the previous song
Press 'n' for the next song
 e
ganesh@ganesh:~$
```

Fig. 5. exit