# Software Assignment

## AI1110: Probability and Random Variables

Indian Institute of Technology Hyderabad

Aditya Garg
CS22BTECH11002
16 May 2023

## 1 Introduction

The Music Player project is a simple music player application built using the Pygame library in Python. It allows users to play and control the playback of audio files. The application provides basic functionalities such as playing the next or previous song, pausing and resuming the playback, and displaying the currently playing song.

## 2 Implementation

The project is implemented using the Pygame library, which provides functionality for graphics and audio in Python. The code is organized into classes and functions to handle different aspects of the music player.

### *2.1 Dependencies*

The following dependencies are required to run the Music Player:

- Python
- Pygame library
- NumPy library
- sys Module

### *2.2 Code Structure*

The code is structured as follows:

- Importing necessary libraries and initializing Pygame.
- Defining color constants using Pygame's Color class.
- Creating the Pygame screen and initializing the mixer for audio playback.
- Defining a Button class to represent the control buttons in the music player.
- Setting up the initial song list and play stack.
- Creating instances of the Button class for previous, next, and play buttons.
- Setting up the main loop to handle events and update the screen.
- Handling button clicks and updating the play stack accordingly.
- Loading and playing the selected song using Pygame's mixer.

## 3 Conclusion

The Music Player project provides a basic music player application with features such as playing audio files, controlling playback, and displaying the currently playing song. It demonstrates the use of Pygame and its audio capabilities in Python programming.

## 4 Images

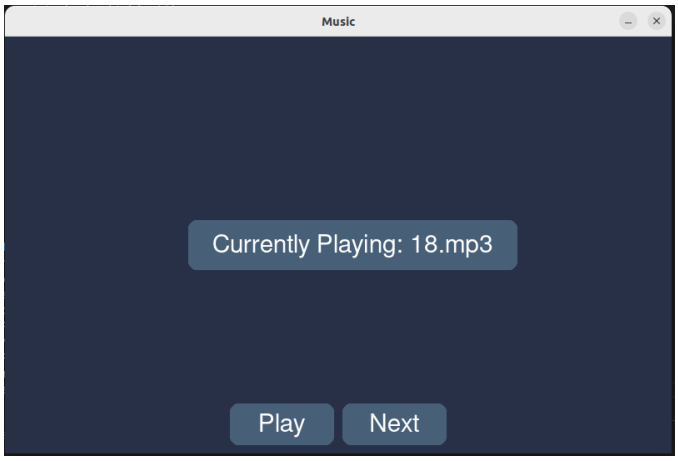


Fig. 1: Song paused

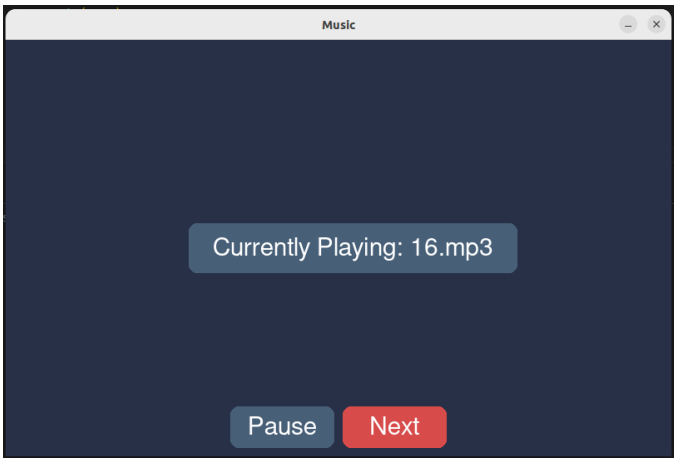


Fig. 2: Song playing

```
aditya@aditya-Mi-NoteBook-14:~/Downloads/pro.random$ /bin/python3 /home/aditya/Downloads/pro.random/code_1.py
pygame 2.3.0 (SDL 2.24.2, Python 3.10.6)
Hello from the pygame community. https://www.pygame.org/contribute.html
9.mp3
8.mp3
18.mp3
14.mp3
5.mp3
7.mp3
20.mp3
4.mp3
3.mp3
1.mp3
2.mp3
13.mp3
12.mp3
16.mp3
17.mp3
6.mp3
15.mp3
11.mp3
19.mp3
10.mp3
20.mp3
7.mp3
1.mp3
9.mp3
3.mp3
10.mp3
13.mp3
```

Fig. 3: All songs played displayed