MINI PROJECT

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Music Player Using Python GUI

Mid Term Report

Department of Computer Engineering & Applications

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<u>Acknowledgment</u>

It gives us a great sense of pleasure to present the synopsis of the B.Tech Mini Project (Music Player Using Pyhton GUI) undertaken during B.Tech IIIrd Year. This project in itself is going to be an acknowledgement to the inspiration, drive and technical assistance will be contributed to it by many individuals.

We owe special debt of gratitude to **Mr. Piyush Vashisth**, Assistant Professor Department of CEA, for providing us with an encouraging platform to develop this project, which thus helped us in shaping our abilities towards a constructive goal and for his constant support and guidance to our work. His sincerity, thoroughness and perseverance is been a constant source of inspiration for us. We believe that he will shower us with all his extensively experienced ideas and insightful comments at different stages of the project & also taught us about the latest industry-oriented technologies.

We also do not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind guidance and co-operation.

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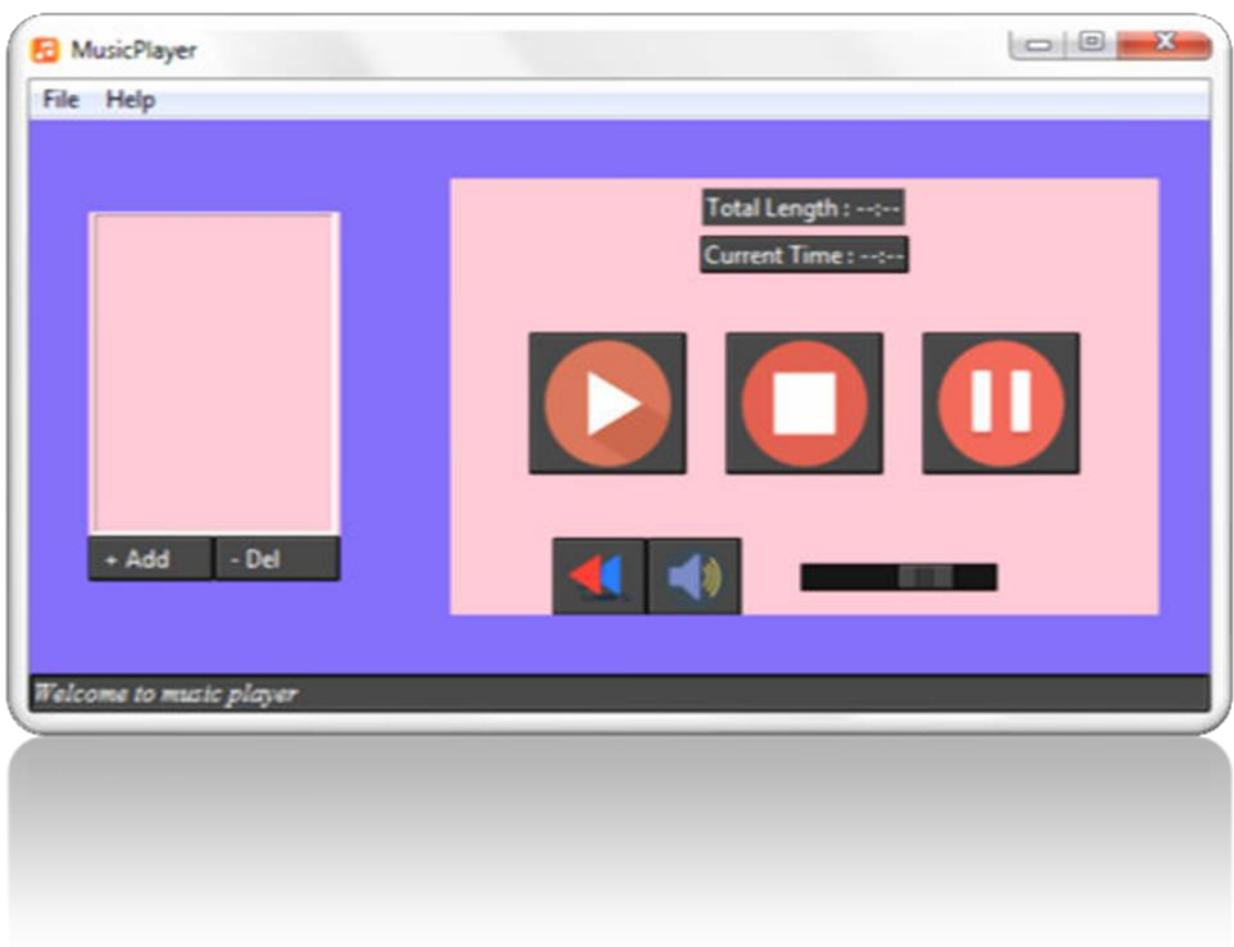
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MUSIC PLAYER USING PYTHON GUI

INTRODUCTION

A. General Introduction.

Listening to music is a hobby of almost every person you meet around daily, for playing this music we need to have installed a music player in our device, each and every operating system whether it is Windows, Linux, Mac or even Android, Apple IOS also consist of a music player for playing your favorite songs.

So In this Project, we will be learning how to create a music player from scratch using the Python Programming Language.

B. Area of Computer Science :

As we all know Python has a very rich library support, so from the bunch of libraries we are going to use some of them to build our GUI based music player.

The libraries we are going to use are:

- Tkinter
- Pygame
- OS

C. Hardware and Software Requirements

a) Hardware (minimum):

- External Hard Drives for Backup
  - Internet connection
  - 4GB RAM
  - Hard disk
  - i3 Processor (6th gen)
  - Minimum resolution :1024x765 Display

b) Software:

- PyCharm
- Windows OS
- Python 3.8 or more

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2. __Problem Definition:__

Audio is an important source of communication and is as important as text in today's time. We know that the audio files are digital files. Therefore, there is a need of a tool to run the digital files or in other words, play the files. Without this tool or player, we'll never be able to listen to music, movies or the contents of any audio file.

Thus, we need MP3 players. It is a device using to play MP3s and other digital audio files. We can build this by ourselves without have to download and install premium music players. The Mp3 player GUI project idea attempts to emulate the physical MP3 Player.

This program will allow you to play songs, music, and all MP3 files on your desktop or laptops. MP3 player using Python is a basic programming application built using the programming language Python. It is a GUI program built by the means of Python libraries Tkinter, Pygame and Mutagen. The MP3 player application should have the capabilities of playing a song, create and display a playlist, pause and resume a long and change the song, that is, play the previous or next song.

3. Objective:

- To build an MP3 player using Python programming language to be able to play and listen to songs, MP3 files and other digital audio files.
- Determine the functionalities of the MP3 player.
- The player should be have a simple and easy to use GUI with options for various functions, display screen to display the entire playlist and buttons to shut down the player.
- The player should be able to play any song. It should be capable of playing MP3 files or any other digital audio files.
- The player should allow the user to browse through the contents of the computer drive to choose song/s to be played or queued.
- It should provide the user with option to pause or resume the song.
- The user should be able to play the previous or the next song in the playlist.
- Lastly, the user should get basic details about the current playing song. The details can include the song name, singer's name, the duration of the song, size of the file, etc.

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4.Implementation Details

- Import the libraries.
- Create an object of the tkinter and Pygame libraries.
- Create a window using Tkinter object.
- Add buttons that provide different functionalities.
    1. Add a song
    2. Play the song
    3. Pause the song
    4. Play Previous song
    5. Play next song
- Add a song button when pressed should open a dialog box to browse and choose the file.
- Add label to display the song's information.
    1. Name
    2. Singer
    3. Duration
    4. Size of the file , etc.
- Display screen will display the details of the entire playlist.
- Close button will automatically clear the song list and will stop playing the song

Use Case Diagram

FLOW DIAGRAM

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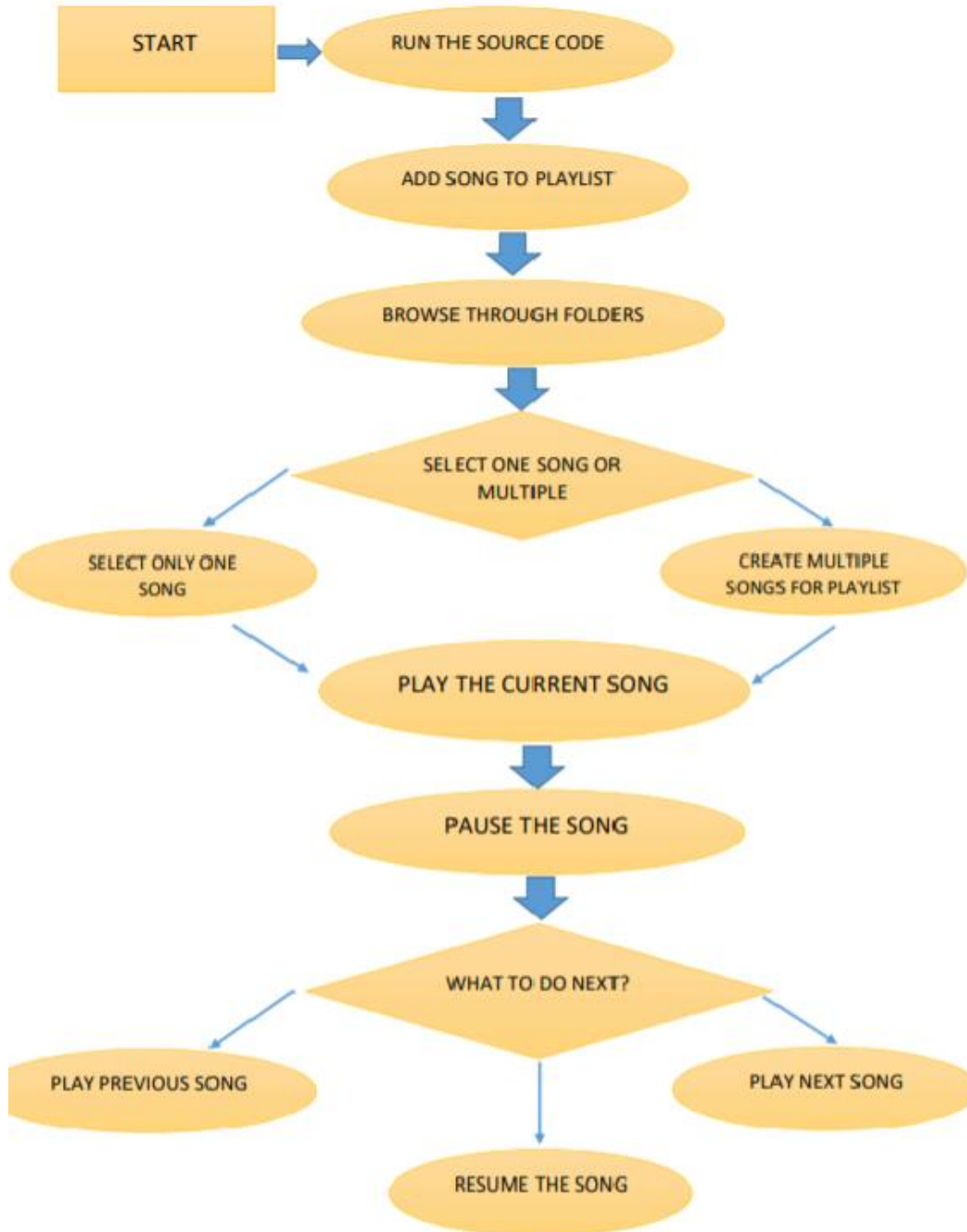
6.Progress till date:

      1. Got my hand-on Tkinter Gui programming on different applications such as Calculator and started coding for my Music Player as well

      2. I am learning the other concepts relaterd to Tkinter simultaneously as well.

Screenshots

```python
def playsong(self):
    # Displaying Selected Song title
    self.track.set(self.playlist.get(ACTIVE))
    # Displaying Status
    self.status.set("-Playing")
    # Loading Selected Song
    pygame.mixer.music.load(self.playlist.get(ACTIVE))
    # Playing Selected Song
    pygame.mixer.music.play()
```

Fig 1 –Playsong() function

```python
def stopsong(self):
    # Displaying Status
    self.status.set("-Stopped")
    # Stopped Song
    pygame.mixer.music.stop()
```

Fig 2: stopsong() function

```python
def pausesong(self):
    # Displaying Status
    self.status.set("-Paused")
    # Paused Song
    pygame.mixer.music.pause()
```

Fig 3: pausesong() function

<u>Conclusion</u>

MP3 player is a device built to play and listen to digital audio files. These can be either MP3 files or some other audio files. The player would be built using Python language. A GUI implementation of the application is to be developed that should be simple and easy to use.

The application will provide the user with five options — to add song to a playlist, to play the song, to pause or resume the song, to play the previous song and to play the next song.
The player will also hold the capability to add multiple songs to the playlist at the same time. It will have a large display area where the playlist should be visible.

- ## **REFERENCES**

    - ◆ **Book References**
        - ➢ Python GUI Programming with Tkinter: Develop Responsive and Powerful GUI Applications with Tkinter
    - ◆ **Website References**
        - ➢ **www.towardsdatascience.com**
        - ➢ www.dataflair.com
        - ➢ Studytonight –
    - ➢ **Faculty Guidelines**
        - ➢ Mr. Piyush Vashisth Sir