PYTHON

GexoPlayMix - Offline Media Player

Scenario

You are tasked with developing an Offline Media Player. The application should allow users to play audio and video files stored locally on their device without an internet connection. The goal is to create a user-friendly and responsive application that provides seamless media playback capabilities.

Task Description

Develop a desktop application using Java that enables users to play audio and video files stored locally on their device. The application should have the following features:

- **Media Playback:** Users should be able to select and play audio and video files from their device's storage.
- **Controls:** Provide standard media controls, including play, pause, stop, seek, and volume adjustment.
- **Playlist:** Allow users to create playlists and add/remove media files from them.
- **User Interface:** Design an intuitive and visually appealing user interface that enhances the user experience.
- **Media Information:** Display relevant metadata such as title, artist, duration, and thumbnail for each media file (optional).
- **Offline Mode:** Ensure that the application can function without an internet connection.

Requirements:

- Implement a responsive user interface that adapts to different screen sizes.
- Handle different media file formats commonly used for audio and video.
- Support both landscape and portrait orientations (optional).
- Implement smooth and seamless media playback.
- Ensure efficient memory management for large media files.

Requirements:

- **PyQt5** or **Tkinter (GUI):** PyQt5 A Python binding for the Qt toolkit, which provides a comprehensive set of GUI components for building desktop applications with a modern and visually appealing interface. pip install PyQt5. Tkinter A built-in Python library that provides a simple way to create GUI applications using widgets and event-driven programming.

- **pygame (Media Playback):** pygame A popular library for multimedia applications in Python, including audio and video playback. It provides easy-to-use functions for playing media files and controlling playback. pip install pygame

- **mutagen (Media Metadata):** mutagen A Python library for reading and writing audio metadata. It can be used to extract relevant information such as the title, artist, album, duration, and other metadata from audio files. pip install mutagen

- **os (File Management):** A built-in Python module that provides functions for interacting with the operating system. It can be used to navigate directories, list files, and perform file operations such as opening, deleting, or renaming files.

Explanation

In this project, you will be developing an Offline Media Player. The application should allow users to play audio and video files stored locally on their devices. You will need to design a user-friendly interface, implement media playback controls, create playlists, and provide relevant media information. The application should be capable of functioning without an internet connection.