# Music Collection Manager Draft Application

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## Application Description

The MCM is an offline, single-user application designed specifically for DJs, music producers, and enthusiasts with large offline music databases. It simplifies the organization and management of music files, offering powerful tools to catalog, search, and optimize music collections for performances, productions, or personal use. Unlike basic music library tools, MCM provides a highly detailed and customizable database system that enables users to organize their music files precisely, using attributes such as title, artist, album, genre, BPM, key, and more. With advanced search, filtering, and similarity analysis features, the application helps users quickly find tracks that align with specific creative or performance needs. Tailored to the demands of professionals, MCM goes beyond the standard catalog by offering tools to identify songs that mix well together, tag tracks with performance notes, and analyze similarities in melody, instrumentation, and vibe. Designed to work entirely offline, MCM ensures users maintain full control and access to their music collection without relying on cloud services or internet connectivity.

## Functionality

1. Create:

* Add new songs to the library, including details such as title, artist, album, genre, release year, BPM, and key.
* Add new albums with associated artists and genres.
* Add new artists with relevant details (e.g., name, biography)
* Create personal playlists.

1. Retrieve:

* Search and filter the music library by criteria such as artist, genre, album, release year, BPM, or key.
* View detailed information about specific songs, albums, and artists.
* Find similar songs based on BPM, key, and relative keys.
* Discover songs from different genres or BPM ranges with similar vibes, considering melody, instrumentation, or vocal style.

1. Update:

* Edit song details like title, genre, BPM, key, or artist.
* Update album or artist information.
* Modify genre names or descriptions.
* Add songs to the playlists.

1. Delete:

* Remove songs, albums, or artists from the database.
* Automatically handle cases adding deletions (e.g., deleting an album removes all associated songs)
* Deleting specific songs from specific playlists.

## Additional Features

1. User-friendly interface with simple navigation and search capabilities
2. Export and import data to/from files for backup purposes
3. Advanced song similarity analysis using BPM, key, melody, instrumentation, and vocal style