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**Project Proposal: Music Player Management System**

**1. Introduction** The Music Player Management System is a software application designed to efficiently manage a collection of songs using a Binary Search Tree (BST). This system allows users to add, search, delete, and display songs, providing an organized way to maintain a music library.

**2. Objectives**

* To develop an efficient music management system using a Binary Search Tree.
* To allow users to add and store song details, including title and artist.
* To enable users to search for specific songs in the library.
* To provide functionality to delete songs from the collection.
* To implement a method to load songs from an external file for ease of use.

**3. Scope of the Project**

* The system will use a BST data structure to store and manage song records.
* Songs will be stored with attributes: title and artist.
* Users will be able to perform CRUD (Create, Read, Update, Delete) operations on songs.
* The system will include a simple command-line interface for interaction.
* Songs can be loaded from an external file and stored in memory during execution.

**4. System Features**

* **Add Song**: Users can add new songs to the library.
* **Search Song**: Users can search for a song by title.
* **Display Songs**: The system displays all songs in an in-order traversal.
* **Delete Song**: Users can remove a song from the library.
* **Load Songs from File**: The system reads a list of songs from a file and loads them into the BST.

**5. Technology Stack**

* Programming Language: C
* Data Structure: Binary Search Tree (BST)
* File Handling: Reading from and writing to text files
* User Interface: Command-line interface (CLI)

**6. Expected Outcomes**

* A fully functional music library management system with the ability to add, search, delete, and display songs.
* Improved efficiency in handling song records due to the BST implementation.
* User-friendly command-line interface for seamless interaction.

**7. Future Enhancements**

* Implementation of a graphical user interface (GUI) for better user experience.
* Additional song attributes such as album, genre, and duration.
* Integration with a database for persistent storage.
* Playlist management functionality.

**8. Conclusion** The Music Player Management System aims to provide a simple yet efficient solution for managing a personal music library. Using a Binary Search Tree ensures optimized search and retrieval operations, making it an effective tool for organizing music collections.