Software Requirements Specification (SRS) Document

Project Name: Beat Buddy

1. Introduction

Beat Buddy is a music management and playback application designed to provide users with a seamless experience in recognizing songs, downloading them, creating playlists, and enjoying their favorite music. This Software Requirements Specification (SRS) document outlines the functional and non-functional requirements of the Beat Buddy application.

2. Functional Requirements

2.1 Song Recognition

* The system shall allow users to identify songs by utilizing audio recognition technology.
* Users shall be able to either record a portion of the song or input the song title to initiate the recognition process.
* Upon successful recognition, the system shall display the song title, artist name, album details, and provide options to download or add to playlists.

2.2 Song Downloader

* The application shall include a built-in song downloader functionality to allow users to download recognized songs for offline playback.
* The system shall support downloading songs in various formats such as MP3, FLAC, and AAC.
* Users shall have the option to specify the download quality (e.g., standard, high-definition) based on their preferences and device capabilities.

2.3 Music Player

* Beat Buddy shall feature a robust music player capable of playing downloaded songs and streaming music from online sources.
* The music player shall support essential playback controls such as play, pause, skip, repeat, and shuffle.
* Users shall be able to create and manage playlists directly within the music player interface.

2.4 User Account Management

* The application shall provide users with the ability to create individual accounts to personalize their experience.
* Users shall be required to register with a valid email address and create a password to access the application.
* Registered users shall have the capability to create, edit, and delete playlists, and their preferences shall be stored securely in the system.

3. Non-Functional Requirements

3.1 Performance

* The system shall be responsive and capable of handling multiple user requests concurrently.
* Song recognition and download processes shall be executed swiftly to provide users with a seamless experience.

3.2 Reliability

* Beat Buddy shall ensure reliable song recognition results with a high degree of accuracy.
* The application shall maintain data integrity and consistency across all user interactions and transactions.

3.3 Security

* User authentication and authorization mechanisms shall be implemented to safeguard user accounts and personal information.
* Secure connections (HTTPS) shall be utilized for all data transmissions to prevent unauthorized access and data breaches.

3.4 Usability

* The application shall feature an intuitive and user-friendly interface accessible to users of all technical levels.
* Clear instructions and prompts shall be provided to guide users through various functionalities, such as song recognition and playlist creation.

3.5 Compatibility

* Beat Buddy shall be compatible with popular operating systems such as Windows, macOS, iOS, and Android.
* The application shall support integration with major web browsers for seamless song downloading and playback.

4. Conclusion

The Beat Buddy application aims to revolutionize the way users manage and enjoy their music collections by providing advanced features such as song recognition, downloading, playlist creation, and playback. This Software Requirements Specification (SRS) document serves as a blueprint for the development and implementation of the Beat Buddy application, ensuring that it meets the expectations and requirements of its users.