Low-Level Document

Music Streaming Application

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System Architecture

Client-Server Architecture: The application follows a client-server architecture where the client (user interface) interacts with the server (backend) to access and stream music.

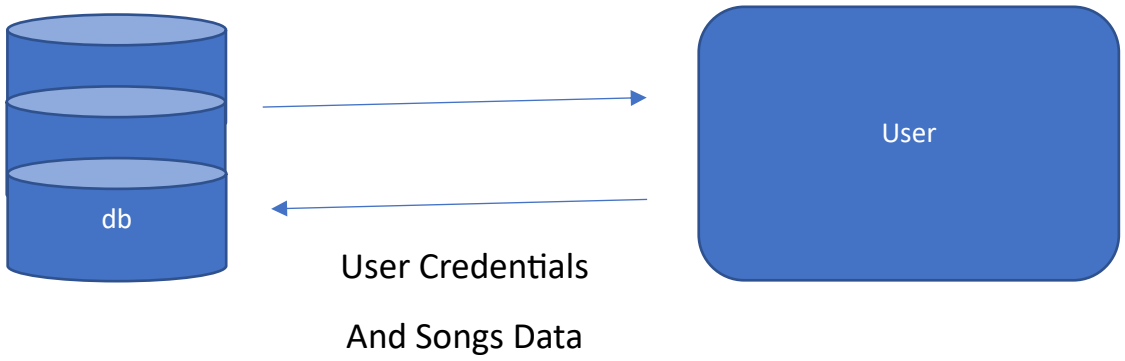
Components and module

User Interface (Client-side):

- Home Page: Displays featured music, playlists, and recommendations.
- Search Module: Allows users to search for specific songs, albums, or artists.
- Music Player: Enables users to play, pause, skip, and control the volume of music tracks.
- Playlist Management: Allows users to create, modify, and delete playlists.
- User Authentication: Handles user registration, login, and account management.
- Social Media Integration: Enables users to share music on social media platforms.
- Sign Up and Login Page: where the user can either login or register himself

Data storage

- Music Metadata Database: Stores information about songs, artists, albums, genres, and playlists.
- User Database: Stores user account details, including authentication credentials and personal information.
- File Storage: Stores the actual music files securely, ensuring quick and reliable access.



Security measure:

- User Authentication: Implements secure authentication mechanisms, such as hashing and salting passwords, to protect user accounts from unauthorized access.
- Authorization: Enforces access controls to ensure users can only perform actions they are authorized to, such as modifying their own playlists.
- Encryption: Encrypts sensitive data during transmission, such as user credentials and session information, using secure protocols (e.g., HTTPS).

Error handling and logging:

- Robust Error Handling: Implements error handling mechanisms to gracefully handle exceptions, provide meaningful error messages to users, and log errors for troubleshooting and debugging purposes.
- Logging: Implements logging functionality to record important events, application activities, and system errors for monitoring and analysis purposes.