Bangalore University

University of Visvesvaraya College of Engineering

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Department of Computer Science and Engineering

Mini Project Report

On

Title: Music Library Management System

Introduction

A music library database management system is a computer program or set of programs that allow users to catalog, organize, and manage their music collections. With a music library database, users can easily search for and access specific tracks, albums, or artists within their collection. The system typically includes a user interface that allows users to input and manage data, such as artist names, track titles, and album release dates.

One key benefit of using a music library database management system is the ability to quickly and easily find and access specific tracks or albums. For example, if a user is looking for all the tracks in a particular album, they can simply search for the album's name and the system will display a list of all the tracks in their collection by that artist. Users can also use the system to create playlists, where they can delete and update songs.

In addition to helping users manage their personal music collections, music library database management systems are also used by music libraries, radio stations, and other organizations to catalog and manage their collections of music.

Problem Statement

A music library with a large and diverse collection of CDs, vinyl records, and digital tracks is experiencing difficulty in keeping track of the items in the collection and their storage locations. It is often time-consuming to manually search through physical storage or lengthy digital lists to locate a specific album or artist. In addition, there is a lack of a system to efficiently track which tracks have been

listened to, which ones should be revisited, and which ones have not yet been accessed.

There is a need for a music library management system to effectively organize and manage the collection to facilitate easy access to specific tracks and albums, as well as keep track of listened status and aid in the creation of playlists for discovering new music. It would also be beneficial to have a system in place to manage and track the physical collection, including storage locations, and allow for the addition of notes or tags to aid in the recollection of the reasoning for adding particular tracks to the collection.

The application will have 6 entities with many attributes to each:

- Admin: The admin who would be able to add, update, listen and delete songs, albums, playlists and artists. The admin can also login as a user. The admin consists of the following entities, username and password.
- User: The user would only be able to listen to songs, add and delete songs from their playlist. The user can also update his/her profile. The user consists of the following entities, username, password, first name, last name, Email ID
- Artist: This model consists of 3 entities artist id, artist name and artist pic.
- Album: This model consists of the following entities, album id, artist id, album name, album logo. It is under an artist that an album comes to existence.
- Song: file type entity allows us to upload the respective mpeg file of the particular song, song title, song id, album name which gives us information about the album to which the song belongs to.
- Playlist: consists of the attributes, user which makes the playlist unique to any user, song title, song file for uploading the MPEG file of the song track, song id.

General Features:

- An admin can perform CRUD operations on the song, album, playlist models respectively.
- The user can listen to the songs in the database but cannot add or delete songs from the album. The user can however add/delete songs from the playlist model which also happens to be unique to users.
- The user can also update his/her profile.
- A user of the website can search for the album name of the songs which is available and can get access to all the songs in that album.
- The user can also get information about the artist of that particular album.
- Both login and logout features have also been successfully implemented.

Tools to be Used:

Front-End Tools HTML, CSS

Back-End Tools Django (Python), PostgreSQL

Other Tools Used Visual Studio Code

Team Details:

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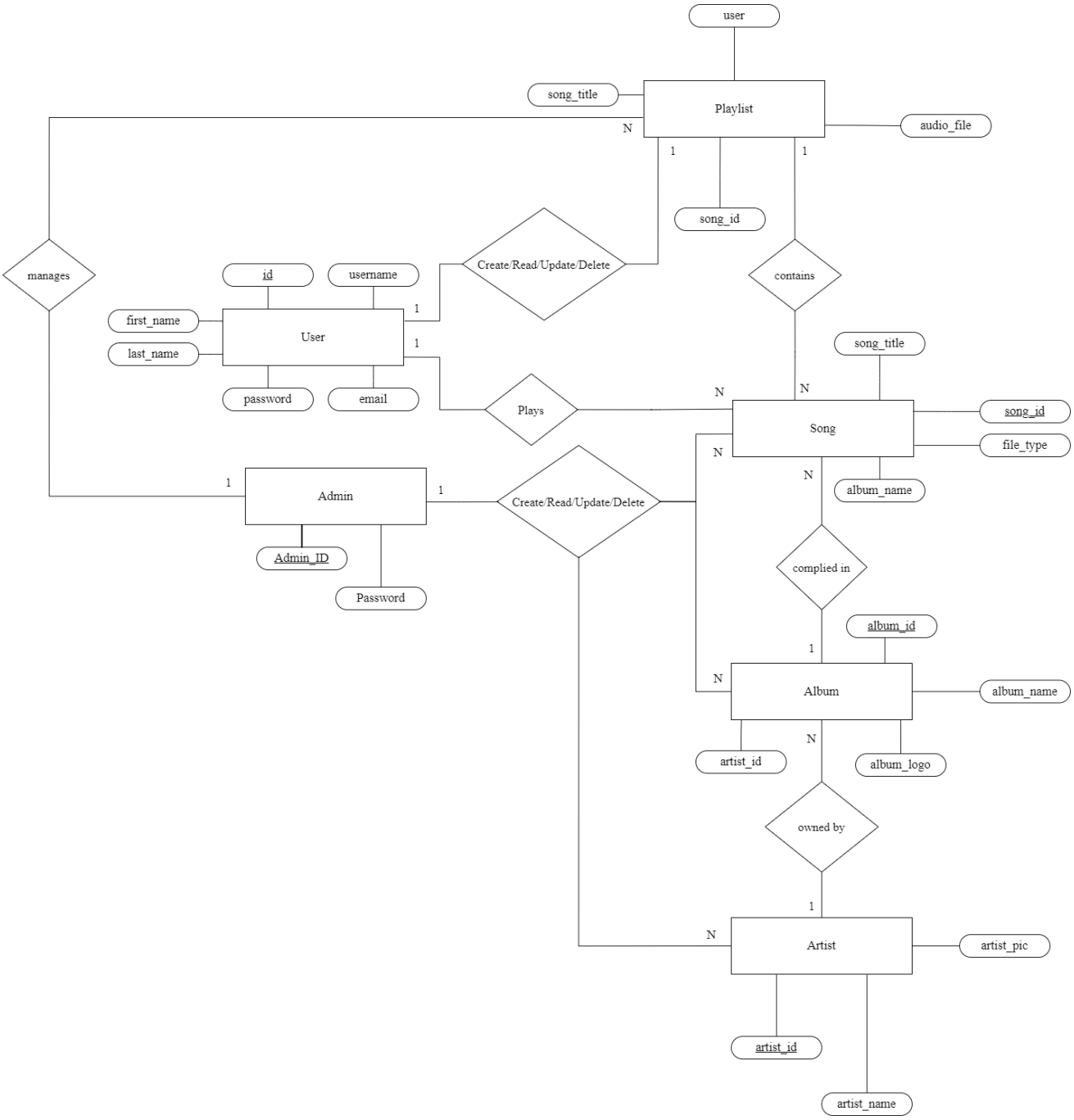

ER DIAGRAM FOR MUSIC LIBRARY MANAGEMENT SYSTEM