DBMS Project

Project name: Music Library Management System

Project by:

Mahima A, PES2UG21CS268

Kuncha Sidharth, PES1UG21CS293

E Section

List of entities and attributes:

entities

1. Song
   - SongID (Primary Key)
   - Title
   - Duration
   - ReleaseYear
   - Rating
   - Lyrics
   - PlayCount
2. Artist
   - ArtistID (Primary Key)
   - Name
   - Biography
   - DateOfBirth
   - DateOfDeath
   - Nationality
3. Album
   - AlbumID (Primary Key)
   - Title
   - ReleaseYear

- o Rating
- o RecordLabel

4. Genre
- o GenreID (Primary Key)
- o Name
- o Description

5. Playlist
- o PlaylistID (Primary Key)
- o Name
- o Description
- o CreatedBy (Foreign Key: UserID)

6. User
- o UserID (Primary Key)
- o Username
- o Password
- o Email
- o ProfilePicture

7. Metadata
- o MetadataID (Primary Key)
- o SongID (Foreign Key: Song)
- o AlbumID (Foreign Key: Album)
- o ArtistID (Foreign Key: Artist)
- o GenreID (Foreign Key: Genre)
- o FileID (Foreign Key: File)
- o TrackNumber
- o Composer
- o Conductor
- o BPM

8. File
- o FileID (Primary Key)
- o FileName
- o FilePath
- o FileSize
- o FileFormat
- o Bitrate

- o SampleRate
9. PlaylistTrack (Association Entity)
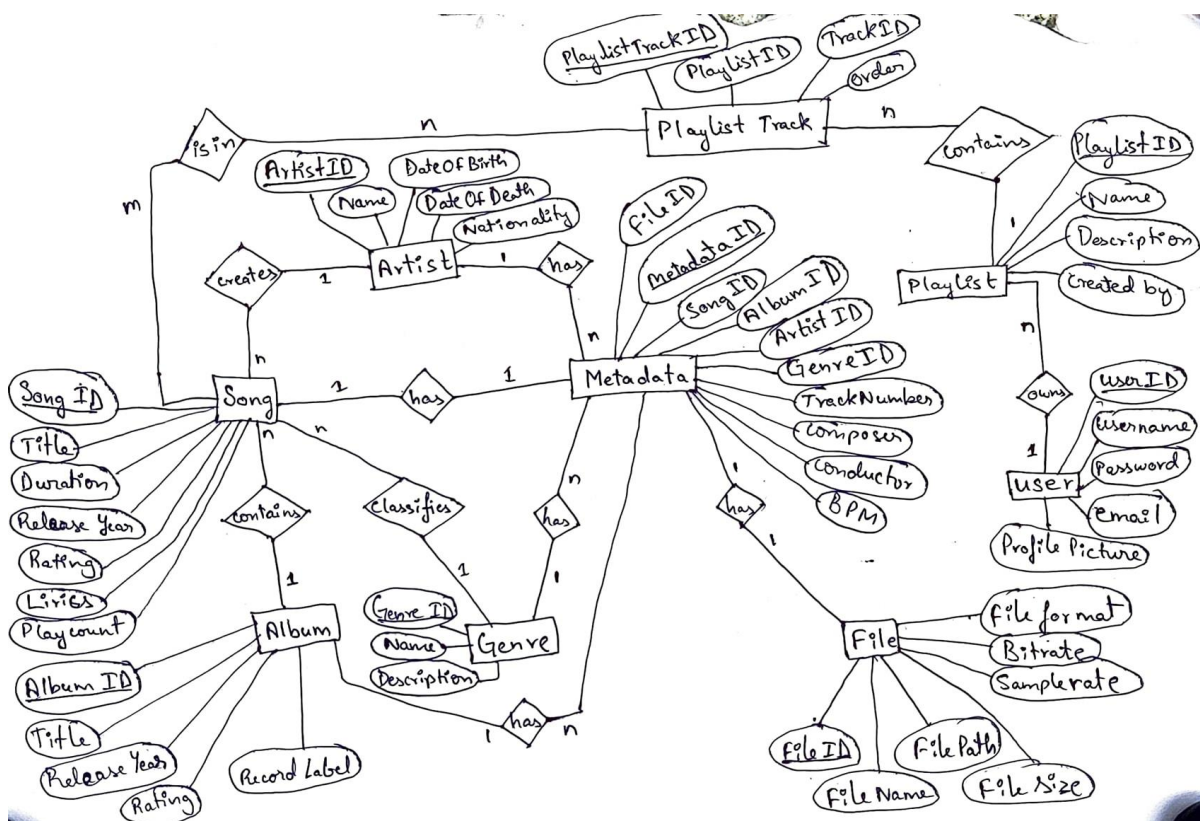   - o PlaylistTrackID (Primary Key)
    - o PlaylistID (Foreign Key: Playlist)
    - o TrackID (Foreign Key: Song)
    - o Order

Relationships:

- Song to Metadata: One-to-One (Song has Metadata)
- Artist to Song: One-to-Many (Artist creates Songs)
- Album to Song: One-to-Many (Album contains Songs)
- Genre to Song: One-to-Many (Genre classifies Songs)
- Playlist to PlaylistTrack: One-to-Many (Playlist contains Tracks)
- User to Playlist: One-to-Many (User owns Playlists)
- Song to PlaylistTrack: Many-to-Many (Song is in Playlists)
- Album to Metadata: One-to-Many (Album has Metadata)
- Artist to Metadata: One-to-Many (Artist has Metadata)
- Genre to Metadata: One-to-Many (Genre has Metadata)
- File to Metadata: One-to-One (File has Metadata)

Key: (PK) - Primary Key (FK) - Foreign Key

ER Diagram

Relationship Schema

Song

Song ID	Title	Duration	Release Year	Rating	Lirics	Play count

Artist

Artist ID	Name	Biography	Date Of Birth	Date Of Death	Nationality

Album

Album ID	Title	Release Year	Rating	Record Label

Genre

Genre ID	Name	Description

Playlist

Playlist ID	Name	Description	Created By

User

User ID	User Name	Password	Email	Profile Picture

Meta data

Metadata ID	Song ID	Album ID	Artist ID	Genre ID	File ID

Track number	Composer	Conductor	BPM

File

File ID	Filename	File Path	File Size	File format	Bitrate	Sample Rate

Playlist Track

Playlist Track ID	Playlist ID	Track ID	Order.