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Design Project

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Music Database

1. **Data Requirement:**

**Entities**: Artist, Song, Album

Artist: This music database will allow the user to view information regarding the artist of specific songs. The artist responsible for the songs they have exclusive rights to through their respective record label. The Artist ID will help identify which songs they are on. The data associated with artist is primary key Artist ID, and unique key name.

Song – This music database will have multiple songs made from an artist in the database. Each song has one specific artist that the song belongs to. A song can have only a single artist that owns the rights to the song. The data associated with song will be primary key SongID, foreign key ArtistID, and SongDuration.

Album: This music database will contain the information of which songs are in their respective albums. Multiple songs by the same artist could only belong to their respective albums, hence the many songs can belong to one album. The data associated with album is primary key AlbumID, and foreign keys ArtistID, SongID.

1. **ER Diagram:**

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Album

Artist

Song

1. **Text Schema:**

Artist ( ArtistID, name**)**

Album ( AlbumID, AlbumName, ArtistID, SongID)

Song ( SongID, SongDuration, SongName, ArtistID, AlbumID)

1. **SQL Table Statements:**

CREATE TABLE Artist (

ArtistID int NOT NULL AUTO\_INCREMENT,

name varchar(40) NOT NULL,

PRIMARY KEY(ArtistID),

UNIQUE KEY(name)

);

CREATE TABLE Album (

AlbumID int NOT NULL AUTO\_INCREMENT,

AlbumName varchar(40) NOT NULL,

Artist int NOT NULL,

Song int,

PRIMARY KEY(AlbumID),

FOREIGN KEY(Artist) REFERENCES Artist(ArtistID)

);

CREATE TABLE Song (

SongID int NOT NULL AUTO\_INCREMENT,

SongName varchar(40) NOT NULL,

SongDuration varchar(40) NOT NULL,

Artist int,

Album int NOT NULL,

PRIMARY KEY(SongID),

FOREIGN KEY(Album) REFERENCES Album(AlbumID),

FOREIGN KEY(Artist) REFERENCES Artist(ArtistID)

);

Alter table Album

add FOREIGN KEY(Song) REFERENCES Song(SongID);

1. Screenshots

