Muse: Music Streaming and Analytics

Project Overview:

Inspired by the STREAMTV project, Muse is a project that stores music and user song analytics. The Muse project stores 5 tables that stores user and song data: user, song, artist, album and likes. The user table will store user data such as their name, email, password and data of birth. The artist table will store an artist's name, their date of birth, a small biography and where that artist lives. The album table stores the name of an album and the year it was released. The listens table is actually a table created by a relation as a user will listen to a song. The listens table stores the relationship of the user and the song, the date and time it was listened to. There is also a like table that stores the songs that a user likes to listen to. The song table has the most relations between any table as it's created by an artist, stored in an album and is both listened and/or liked by a user. The song table stores those relations along with the name and genre in the song, the track number of the song in the album and how long the song runs for.

Diagrams & Tables:

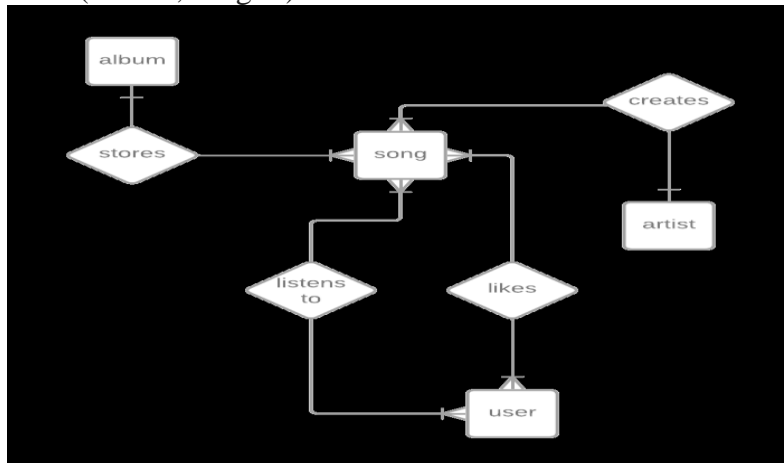Album(albumID, name, release_year)
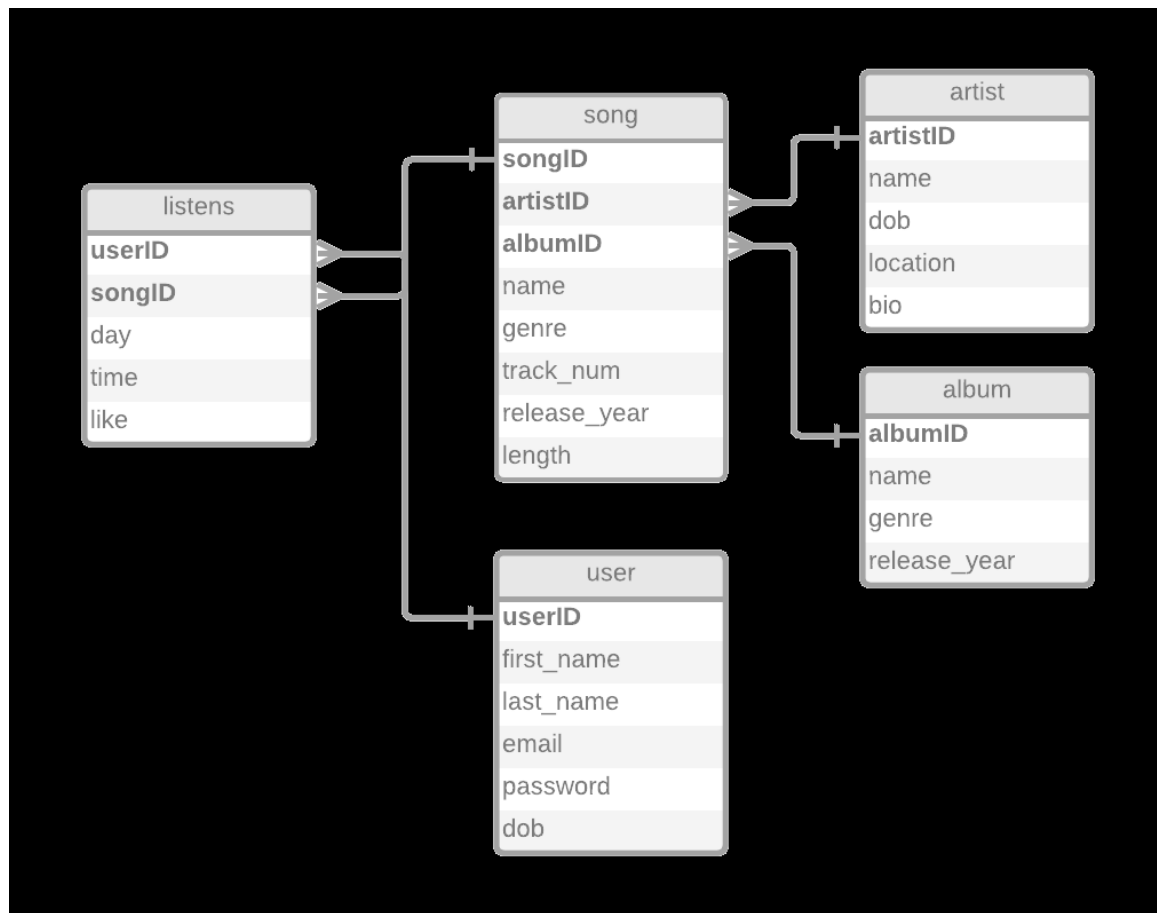Song(songID, artistID, albumID, name, genre, track_num, length)
Artist(artistID, name, dob, location, bio)
User(userID, first_name, last_name, email, password, dob)
Listens(userID, songID, day, time)
Likes(userID, songID)

Technologies:

This database will be created and stored with the phpMyAdmin SQL database in cPanel. The web application will be using Python as it has an abundance of libraries and resources to handle a project as such. I'll be using Flask, a micro web framework, to create the website with Jinja Templates. I'll also be using Pandas, a library for data manipulation and analysis, to store my results in a dataframe and SQLAlchemy to query my results and create my dataframes.