

# MODERN APPLICATION DEVELOPMENT – I (MAD-I) CAPSTONE PROJECT



## MUSIC STREAMING APPLICATION

### Author

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Hello everyone! I'm Vardhini K, from Karaikal, Puducherry. I'm currently pursuing this degree along with BTech in Biotechnology. I'm delighted to be a part of this course, and one of the prestigious institutes in our country. I love challenges and I see this opportunity to develop myself, with passion and motivation.

### Description

This is a web application, with Flask Framework in backend and HTML, CSS in frontend, utilizing SQLite3 for database management. The application's purpose is to view, search and play songs, along with creating playlists by the users. This application also allows special users, termed “creators”, who can add and edit, songs and albums. The administrators are equipped with same CRUD interface for song/album management in the application, along with application statistics.

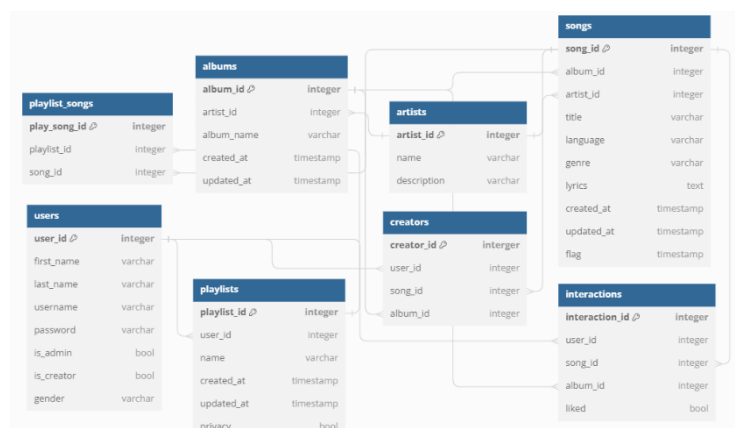
### Technologies Used

- Python
- HTML, CSS, JavaScript
- Bootstrap
- Flask, Jinja2, Flask-SQLAlchemy, Flask-restful
- Matplotlib Pyplot

### Database Schema

This Database contains 8 entities, namely, users, artists, albums, songs, interactions, creators, playlists and playlists-songs.

The relationship is one to many, where one user can have many playlists, one playlist can have many songs, one album can have many songs, one artist can have many songs/albums, etc.



## Architecture

In project folder, named **22f2000195** there are two folders, **templates** and **static** and seven files, **app.py**, **models.py**, **api.py**, **exceptions.py**, **requirements.txt**, **database.sqlite3** and **readme.md**. The **templates** folder contains 25 HTML files, which form the structure for the web application, whereas the **static** folder contains four folders: **images**, which contains images for the application, **audio** which contains song mp3 files, **styles** which contain 8 CSS files and **js**, which contains **main.js** JavaScript file.

## Features

### **1. Users**

- 1.1. View, Play and like songs
- 1.2. Search for a song
- 1.3. Create Playlists (Public and Private) and add songs
- 1.4. Option to join as a creator

### **2. Creators**

- 2.1. General functionalities of a user
- 2.2. Add songs/albums to the app
- 2.3. Edit and delete the added songs

### **3. Admin**

- 3.1. Monitor Application Statistics
- 3.2. Flag and Unflag songs
- 3.3. Add new songs/albums
- 3.4. Edit and delete all songs in the app

## Video Demonstration

<https://drive.google.com/file/d/1N9YFzyCMh9fj6e3dE9cVKRCUP0wLDV9B/view?usp=sharing>