PROJECT REPORT FOR MAD-II PROJECT

The project topic that I chose was Music Streaming App, an app that acts as the primary medium for accessing and enjoying music anytime anywhere. It is a multi-user app that acts as a place to enjoy music as well as a place to show your talent to the whole world by becoming a creator.

The app uses a Token Based Authentication approach using flask-jwt-extended, we have VueJS for frontend, flask-restful for the backend Api and celery for task-jobs. There are more technologies like Pinia for state management that was used for experimentation purposes as it was only used on one page of the app, it was a new technology so needed a bit more time to understand, used a combination of Redis and flask-caching to create the cache, all the static assets are store in the public folder of the frontend. The database is SQLite with flask-SQL alchemy ORM.

The app has 11 models in total

UserInfo : which stores all the metadata related to creators and users this includes their first name, last name, username, password, email, account type etc with primary key being user id.

- Songs : which stores all the metadata related to a song such as singer id which is used a foreign key to access singer information from the UserInfo model, song name, genre, release date playback count, rating and also duration which we use mutagen library to obtain. They can be deleted by the admin if there has been some sort of violation of policy
- SongFlags : stores the user id and song id of songs that were flagged by the users.
- Lyrics : it is used to stored lyrics of songs that are not yet sung so its more like a safe house than anything else and it can only be accessed by the creators themselves
- Favourites : Stores the songs that a user has favourited
- Playlists : used to store playlist that are created by the users, they are private and can only be accessed by the owner of the playlist.
- PlaylistSongs : store the songs associated with each playlist
- Albums : used to store albums that were created by a singer, this is publicly available and can be deleted by the admin in case of any policy violation

- AlbumSong : has information about the songs that a created added to a specific album
- AlbumFlags : information on if the Album was flagged by any users or not.
- AdminInfo : has details about the admin which is username and password which are both hashed using bcrypt