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I am a student currently enrolled in the diploma level of the bs Data Science degree in IIT Madras. Looking forward to learn Data Science aspects from the degree and benefit myself and others from the skills acquired in the best ways possible.

Description

A Multi-user Music Streaming Application which provides functions such as streaming songs, registration as a creator and playlist CRUD functionalities to the user, CRUD functionalities on songs and playlists to creators and Application Monitoring functionality to the Admin.

Technologies used

- Flask for API
- VueJS for UI
- Bootstrap
- SQLite for database
- Celery and Redis for batch jobs
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DB Schema and Design

User

| COLUMN NAME | COLUMN TYPE | CONSTRAINTS |
|----------------------|-------------|-----------------------------|
| Id | Integer | Primary key=true |
| Username | String | Unique=true |
| Email | String | Unique=true, nullable=false |
| Password | String | Nullable=false |
| Active | Boolean | |
| Fs_uniquifier | String | Unique=true, nullable=false |
| Last_login | date | |

Role

| COLUMN NAME | COLUMN TYPE | CONSTRAINTS |
|--------------------|-------------|-----------------------------|
| Id | Integer | Primary key=true |
| Name | String | Unique=true, nullable=false |
| Description | String | |

RolesUsers

| COLUMN NAME | COLUMN TYPE | CONSTRAINTS |
|----------------|-------------|---------------------|
| Id | Integer | Primary key=true |
| User_id | Integer | Foreignkey(user.id) |
| Role_id | Integer | Foreignkey(role.id) |

Songs

| COLUMN NAME | COLUMN TYPE | CONSTRAINTS |
|-----------------------|-------------|-----------------------------|
| Id | Integer | Primary key=true |
| Title | String | Unique=true, nullable=false |
| Description | String | Nullable=false |
| Artist | String | |
| Release_date | String | |
| Creator_id | Integer | Nullable=false |
| Song_lyrics | String | Nullable=false |
| Average rating | Float | |
| flag | boolean | Default=false |

Playlists

| COLUMN NAME | COLUMN TYPE | CONSTRAINTS |
|----------------------|-------------|---------------------|
| Playlist_id | Integer | Primary_key=true |
| Playlist_name | String | Nullable=false |
| User_id | integer | Foreignkey(user.id) |

Playlistsong

| COLUMN NAME | COLUMN TYPE | CONSTRAINTS |
|--------------------|-------------|-----------------------------------|
| Song_id | Integer | Foreignkey(songs.id) |
| Playlist_id | integer | Foreignkey(playlists.playlist_id) |

Rating

| COLUMN NAME | COLUMN TYPE | CONSTRAINTS |
|------------------|-------------|----------------------|
| Rating_id | Integer | Primarykey=true |
| Value | Integer | |
| User_id | Integer | Foreignkey(user.id) |
| Song_id | Integer | Foreignkey(songs.id) |

Architecture and Features

The Project code is organized into:

- Main.py containing Flask app code
- Config.py and celery_config.py for configurations
- Static folder containing javascript files for UI and router
- Instance folder containing database
- Application folder containing APIs and Models

Video

<https://drive.google.com/file/d/1eD5OfZb9IQGh7aOxyO1eXL9oYzvqBpDx/view?usp=sharing>