



NEXT GEN EMPLOYABILITY PROGRAM

| Creating a future-ready workforce

Team Members

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CAPSTONE PROJECT SHOWCASE

Project Title

Music Web Application using Django Framework

Abstract | Problem Statement | Project Overview | Proposed Solution |
Technology Used | Modelling & Results | Conclusion



Abstract:

This project involves development of a music application using Django. This application will allow users to create accounts, manage music libraries and stream music. Key features include user authentication, a responsive user interface, secure file storage, and a dynamic music player interface. Additionally, the application will utilize Django's built-in ORM for database management and RESTful APIs for seamless integration with frontend technologies.

Problem Statement

Creation of Music Web Application using Django Framework

Project Overview

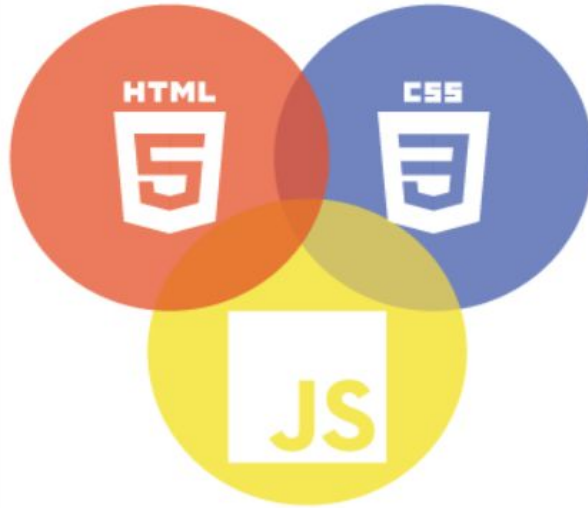
This project aims to develop a modern and user-friendly music streaming application using Django. The application will enable users to create personalized accounts, manage their music collections, and enjoy seamless streaming of their favorite tracks. Key features include user authentication, responsive design for various devices, secure file storage, and an intuitive music player interface. Leveraging Django's ORM and RESTful APIs, our goal is to deliver a reliable platform that enhances the music listening experience for all users.

Proposed Solution

Our solution involves building a music streaming application using Django, integrating essential features like user authentication, music upload and management, and a responsive music player. We will implement secure file storage for user uploads and ensure compatibility across different devices through responsive design. The use of Django's ORM will facilitate efficient database management, while RESTful APIs will enable seamless communication with the frontend. Our aim is to create a streamlined and enjoyable music streaming experience for users, emphasizing simplicity and functionality.

Technology Used

Front-end



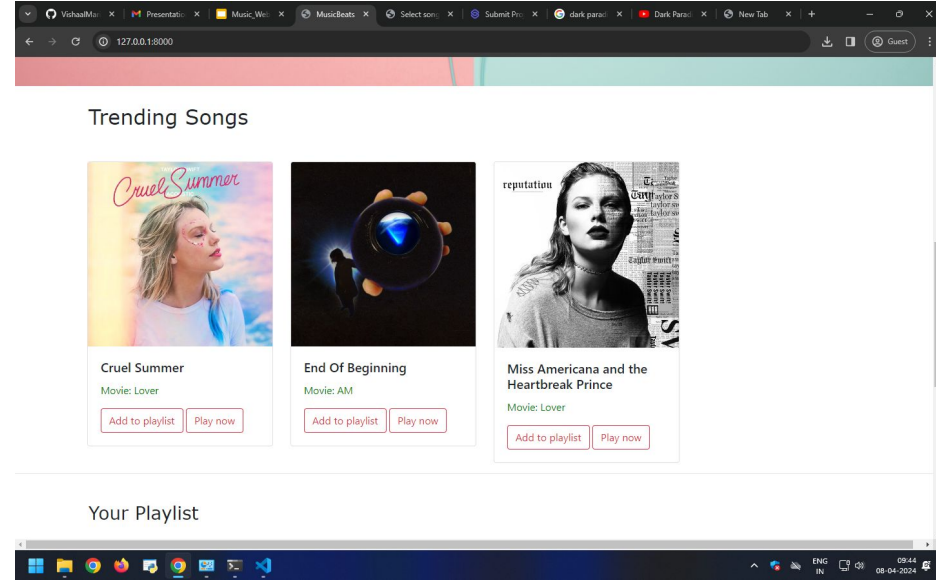
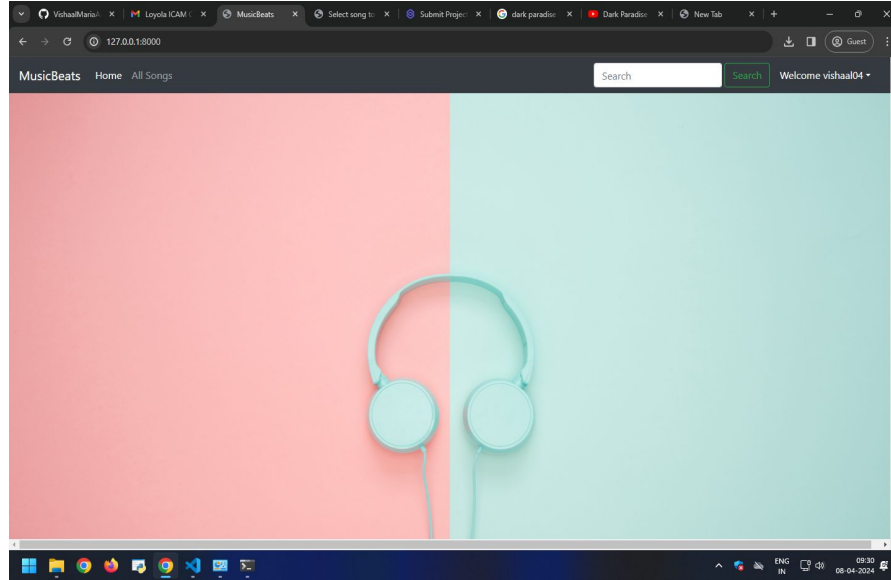
Back-end



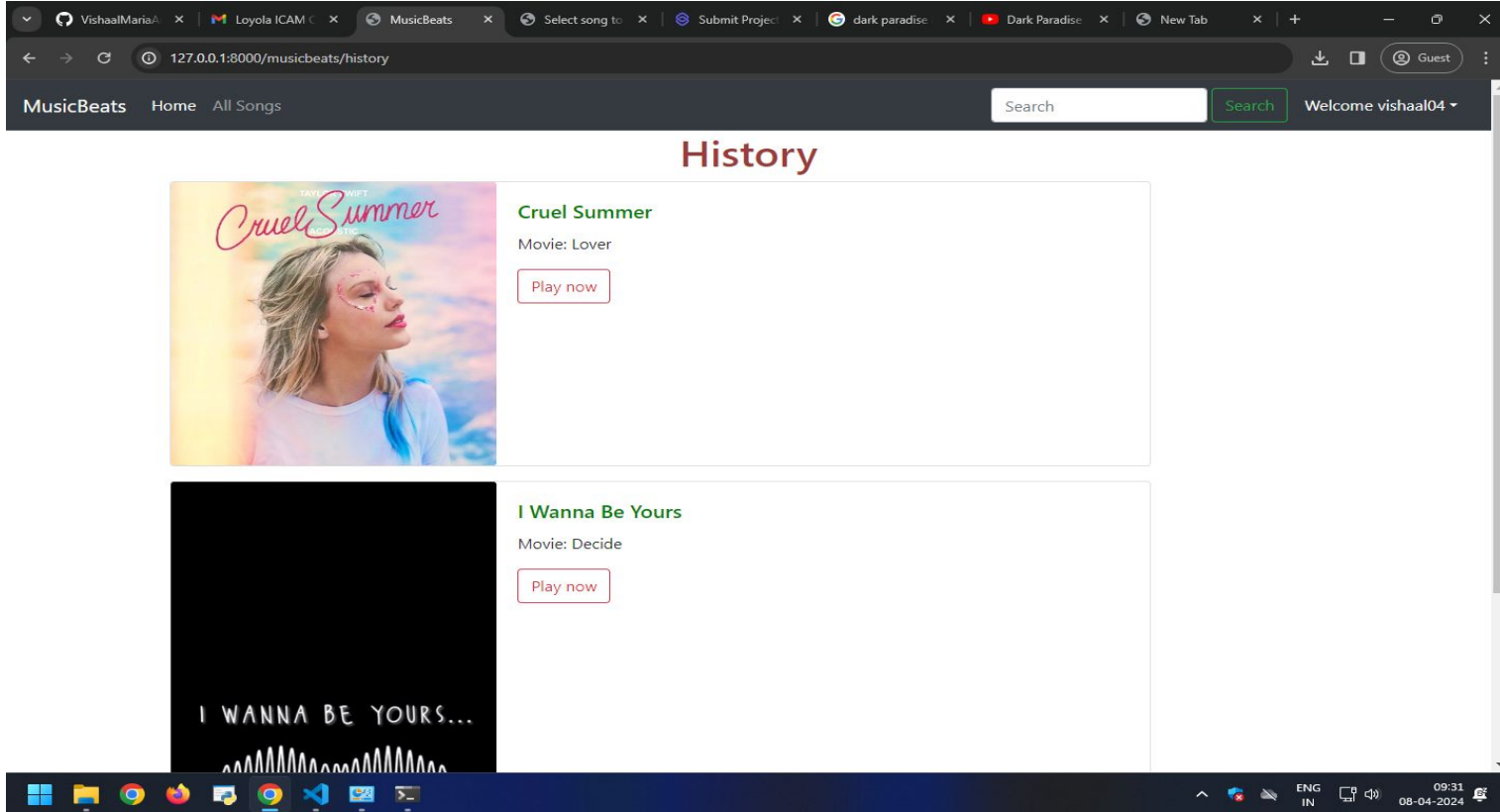
Modelling & Results

The project will involve designing a Django data model to represent users, music tracks, and playlists. Utilizing Django's ORM, we'll ensure efficient data storage and retrieval. User authentication will be implemented using Django's built-in authentication system. For the frontend, responsive templates will be created using HTML, CSS and JavaScript for seamless user interaction. The music streaming functionality will be achieved using Django's file handling capabilities and a custom music player interface.

Homepage



History Page

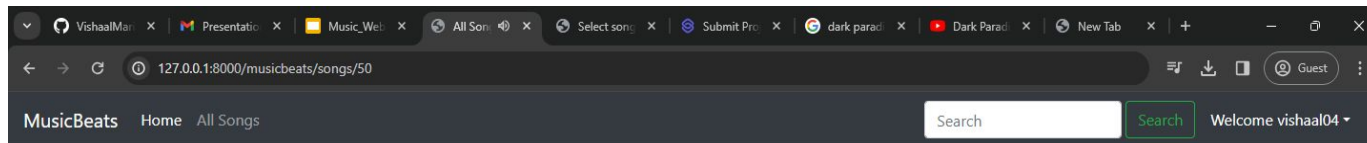


The screenshot shows a web browser window with the URL `127.0.0.1:8000/musicbeats/history`. The page has a dark header with the "MusicBeats" logo, navigation links for "Home" and "All Songs", a search bar, and a "Search" button. A welcome message "Welcome vishaal04" is visible on the right. The main content area is titled "History" in a large, reddish-brown font. It displays two items from the user's history:

- Cruel Summer**
Movie: Lover
A "Play now" button is located below the movie information.
- I Wanna Be Yours**
Movie: Decide
A "Play now" button is located below the movie information.

The bottom of the image shows the Windows taskbar with various application icons and the system clock indicating 09:31 on 08-04-2024.

Audio Player Page



Title: Dark Paradise

Category: Pop

Movie: Born to Die

Singer: Lana Del Ray

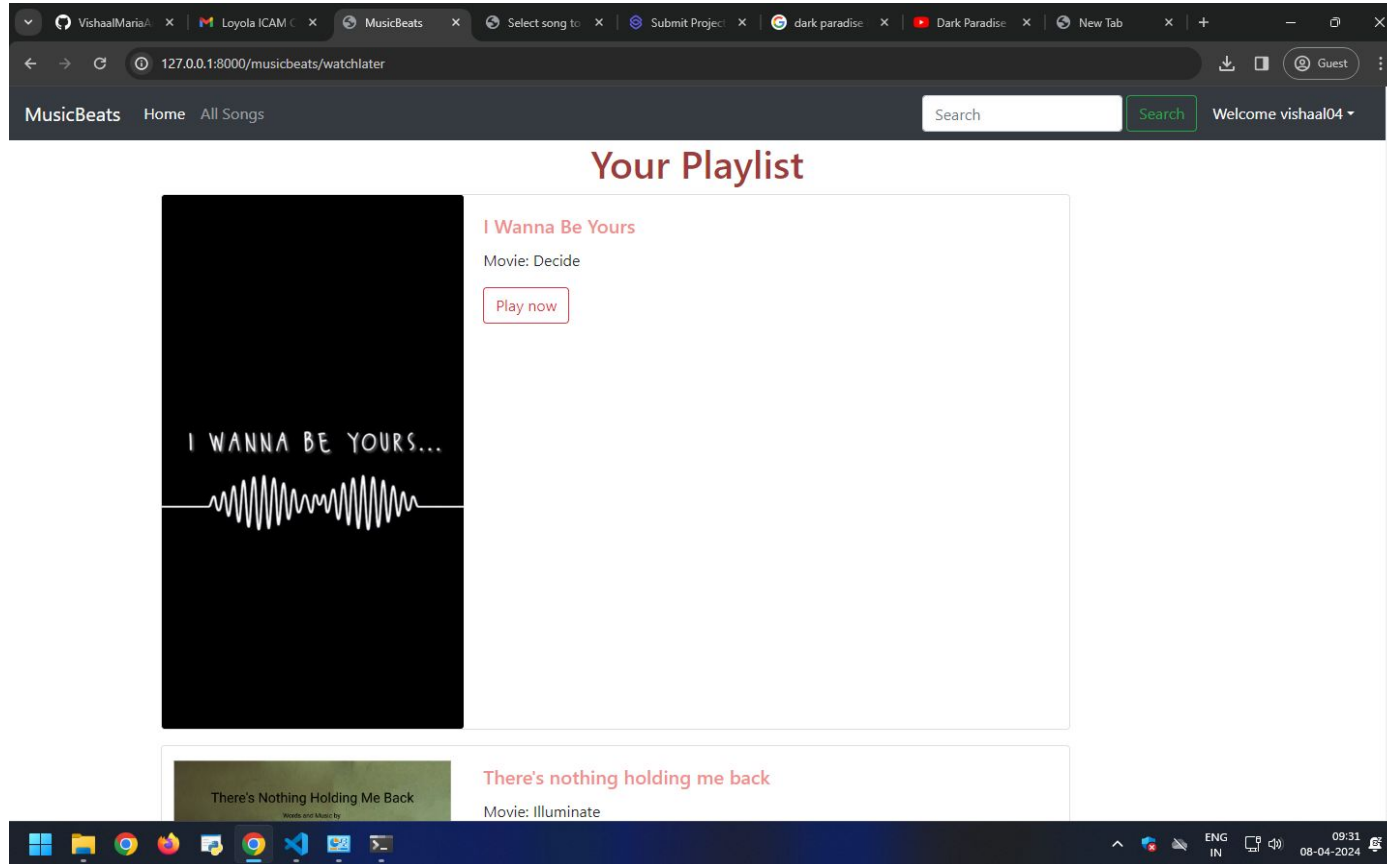
Watch video song: [Click here](#)



Add to Playlist

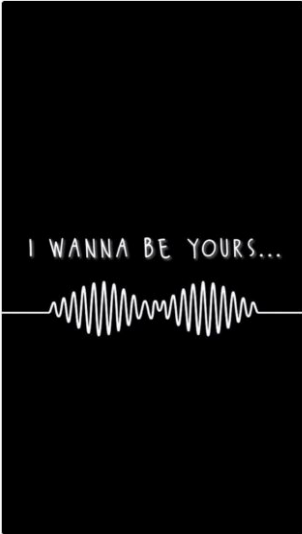
Download Song

Playlist Page




MusicBeats Home All Songs Search Search Welcome vishaal04

Your Playlist



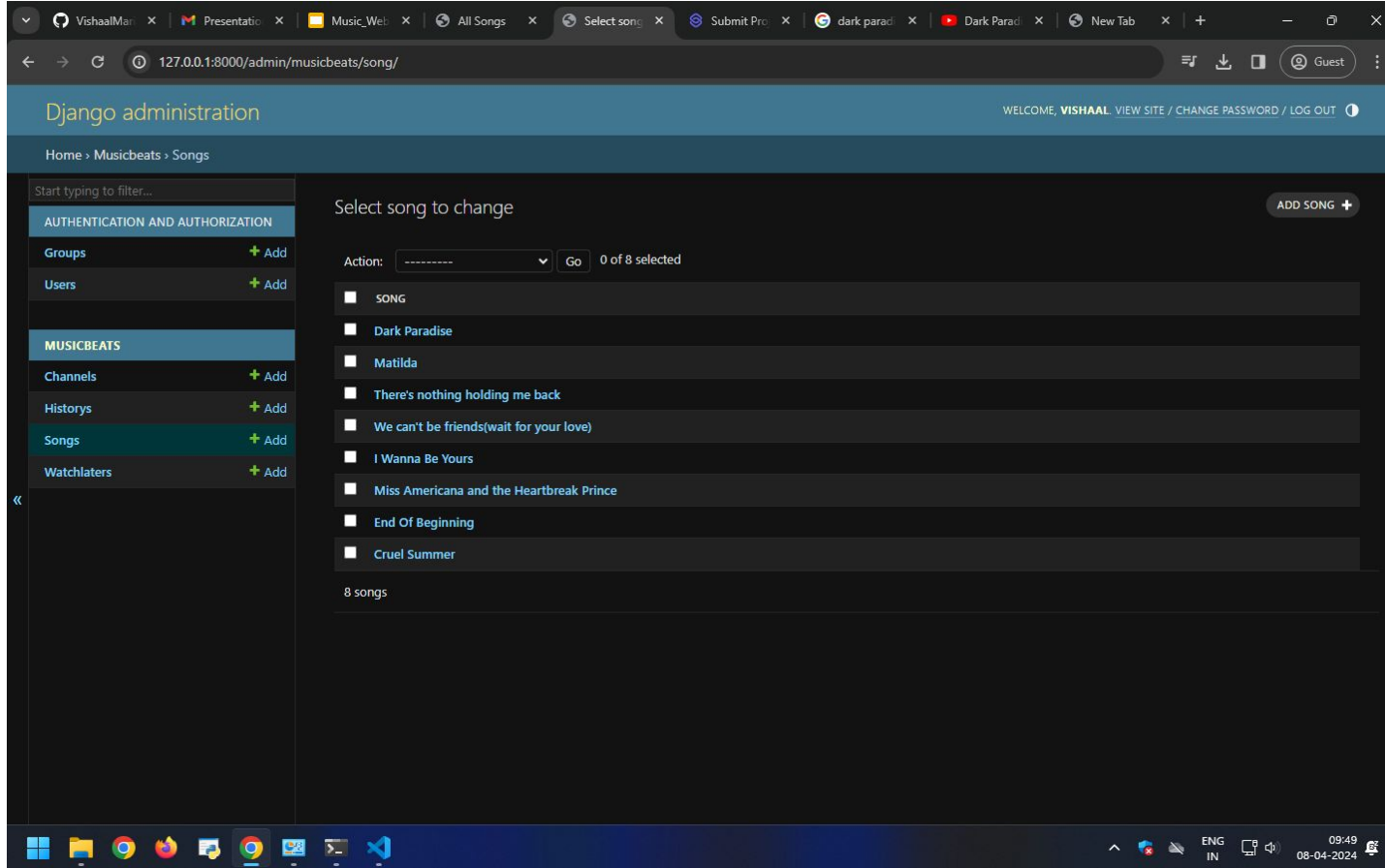
I Wanna Be Yours
Movie: Decide
[Play now](#)



There's nothing holding me back
Movie: Illuminate

Windows taskbar: 09:31 08-04-2024

Backend Admin Page



The screenshot shows a web browser window displaying the Django administration interface for the 'Musicbeats' application. The browser's address bar shows the URL '127.0.0.1:8000/admin/musicbeats/song/'. The page title is 'Django administration'. The user is logged in as 'VISHAAL' and is viewing the 'Songs' page. The left sidebar contains a navigation menu with sections: 'AUTHENTICATION AND AUTHORIZATION' (Groups, Users) and 'MUSICBEATS' (Channels, Historys, Songs, Watchlaters). The main content area is titled 'Select song to change' and features a list of 8 songs with checkboxes for selection. The songs listed are: SONG, Dark Paradise, Matilda, There's nothing holding me back, We can't be friends(wait for your love), I Wanna Be Yours, Miss Americana and the Heartbreak Prince, and End Of Beginning. The bottom of the screen shows the Windows taskbar with various application icons and the system clock indicating 09:49 on 08-04-2024.

Browser tabs: VishalMan, Presentatio, Music_Wel, All Songs, Select song, Submit Pro, dark parad, Dark Paradi, New Tab.

Browser address bar: 127.0.0.1:8000/admin/musicbeats/song/

Page title: Django administration

User: WELCOME, VISHAAL. [VIEW SITE](#) / [CHANGE PASSWORD](#) / [LOG OUT](#)

Home > Musicbeats > Songs

Start typing to filter...

AUTHENTICATION AND AUTHORIZATION

- Groups + Add
- Users + Add

MUSICBEATS

- Channels + Add
- Historys + Add
- Songs + Add
- Watchlaters + Add

Select song to change

Action: [-----] Go 0 of 8 selected

- ☐ SONG
- ☐ Dark Paradise
- ☐ Matilda
- ☐ There's nothing holding me back
- ☐ We can't be friends(wait for your love)
- ☐ I Wanna Be Yours
- ☐ Miss Americana and the Heartbreak Prince
- ☐ End Of Beginning
- ☐ Cruel Summer

8 songs

Windows taskbar: 09:49 08-04-2024

Songs List


VishaalMariaA x Loyola ICAM C x All Songs x Select song to x Submit Project x dark paradise x Dark Paradise x New Tab x +

127.0.0.1:8000/musicbeats/songs/

Guest

MusicBeats Home All Songs

Search Welcome vishaal04



LANA DEL REY


BORN TO DIE

The Paradise Edition

PARENTAL ADVISORY EXPLICIT CONTENT


Dark Paradise

Movie: Born to Die




Matilda

Movie: Harry's House



There's nothing holding me back



ENG IN 08:31 08-04-2024

Future Enhancements:

In the future, we could implement features such as personalized recommendations based on listening history, social sharing of playlists, integration with external music APIs for expanded content access, and support for offline playback. We could also enhance the user interface with more interactive elements. Continuous performance optimization and scalability improvements could also be done for growing user base.

Conclusion:

In conclusion, this Django-based music streaming application presents a scalable and feature-rich platform for music enthusiasts. By leveraging Django's robust framework, I have developed a responsive and secure solution that prioritizes user experience. With planned future enhancements, we are committed to evolving this application to meet the dynamic demands of music streaming while maintaining a seamless and enjoyable experience for our users.

Thank You!