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 entails crafting a music application utilizing Django. Users will have the ability to establish accounts, curate their music collections, and enjoy streaming their favorite tunes. Prominent attributes encompass user authentication, ensuring only authorized individuals access the platform, a user-friendly interface adaptable to various screen sizes, and safeguarded storage of music files. Moreover, the application will boast an interactive music player interface, enabling seamless playback experiences. To facilitate efficient database operations, Django's integrated Object-Relational Mapping (ORM) system will be employed. Additionally, the application will expose RESTful APIs, allowing effortless integration with frontend technologies for enhanced user interaction.

Source :

Problem Statement

Creation of Music Web Application using Django Framework

Source :

Project Overview

This project endeavors to build an advanced and intuitive music streaming platform using Django. Our aim is to empower users to effortlessly create personalized accounts, curate their music libraries, and indulge in uninterrupted streaming of their preferred songs. Key highlights of the application encompass robust user authentication mechanisms, a responsive design optimized for diverse devices, secure storage solutions for music files, and an intuitive interface for seamless music playback. By harnessing Django's ORM capabilities and RESTful APIs, our objective is to deliver a dependable platform that elevates the music listening experience for all users.

Source :

Proposed Solution

Our approach revolves around constructing a music streaming platform with Django, incorporating vital functionalities such as user authentication, music uploading and organization, and a flexible music player. We prioritize secure storage solutions for user-uploaded content and guarantee compatibility across various devices with a responsive design. Leveraging Django's ORM capabilities will streamline database management, while RESTful APIs will facilitate smooth communication with the frontend. Our objective is to craft a user-friendly music streaming experience, emphasizing simplicity and functionality to ensure an enjoyable journey for our users.

Source :

Technology Used

Front-end

Back-end

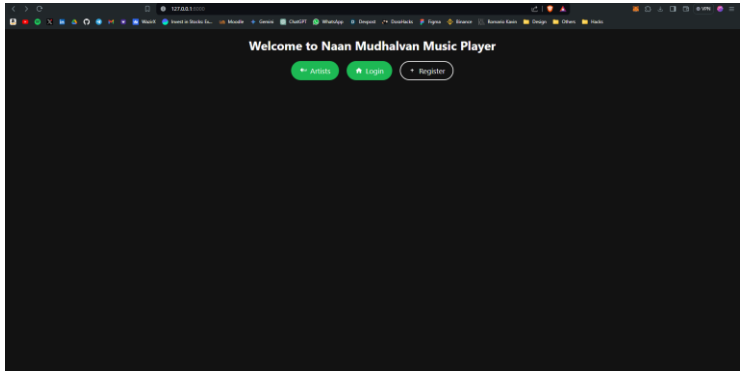
Source :

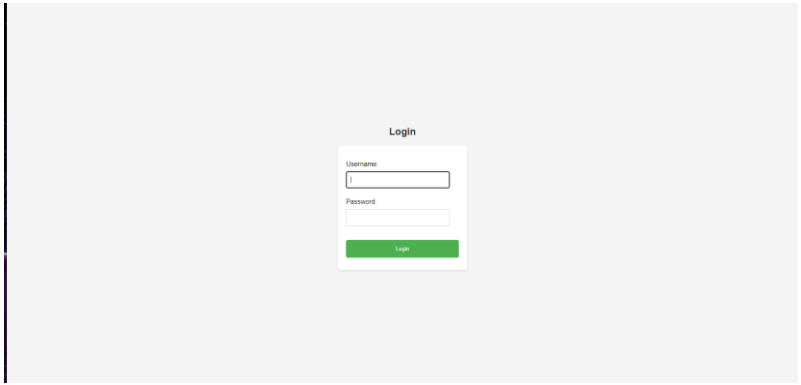
Modelling & Results

Our project will entail crafting a robust Django data model to depict users, music tracks, and playlists, leveraging Django's ORM for optimized data management. We'll integrate Django's native authentication system for user authentication. On the frontend side, we'll develop responsive templates using HTML, CSS, and JavaScript to facilitate smooth user interactions. Music streaming capabilities will be realized through Django's file handling features, complemented by a customized music player interface to enhance the user experience.

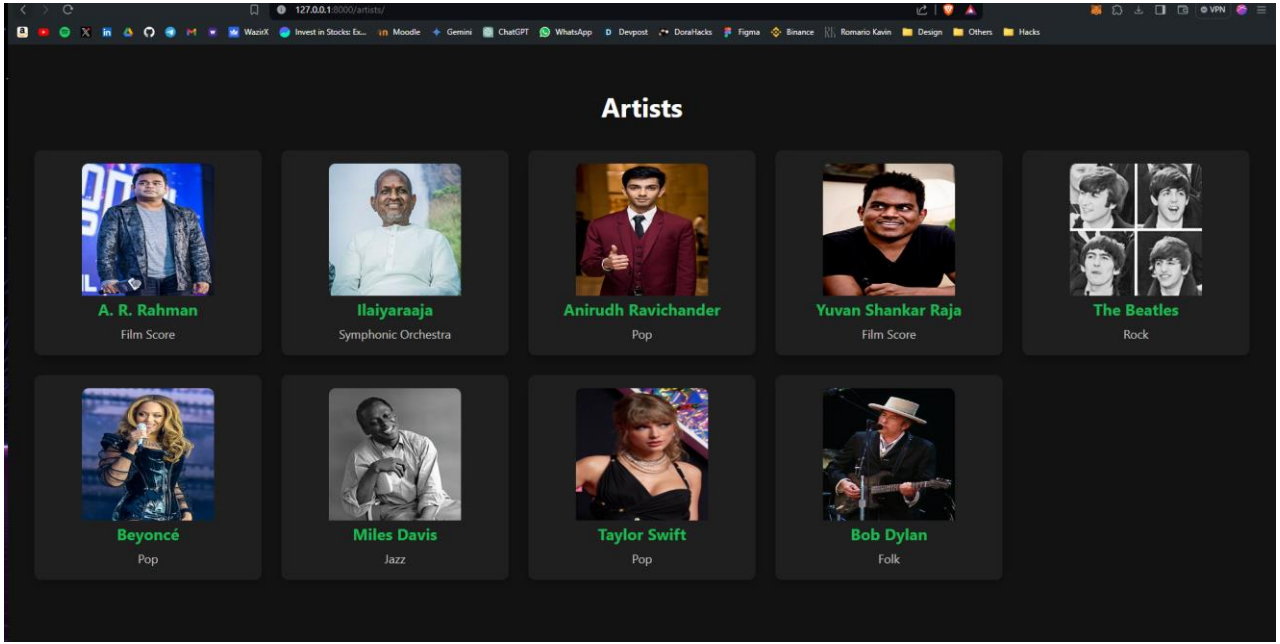
Source :

Homepage,Login Page

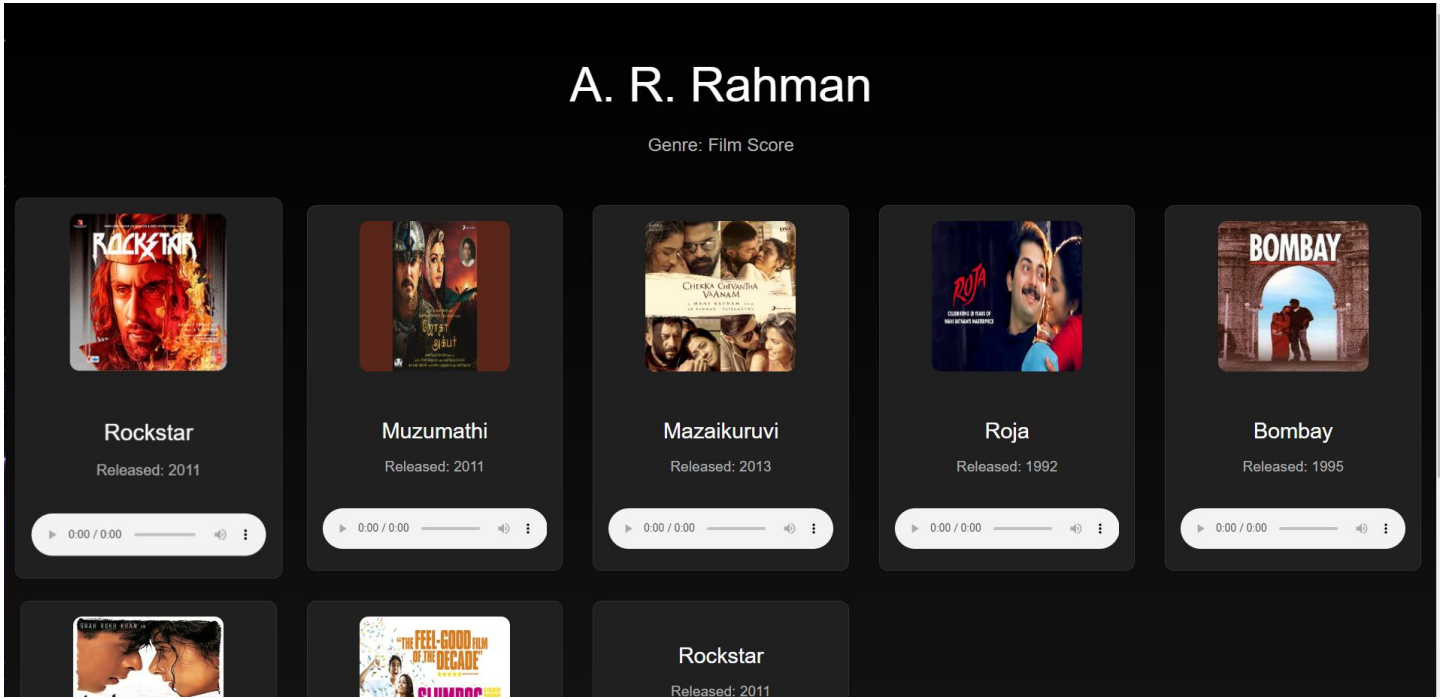




List of Artists Page



Artist Songs Page



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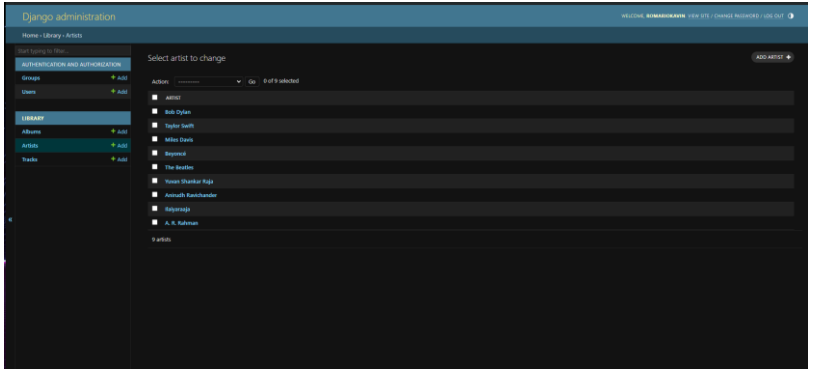
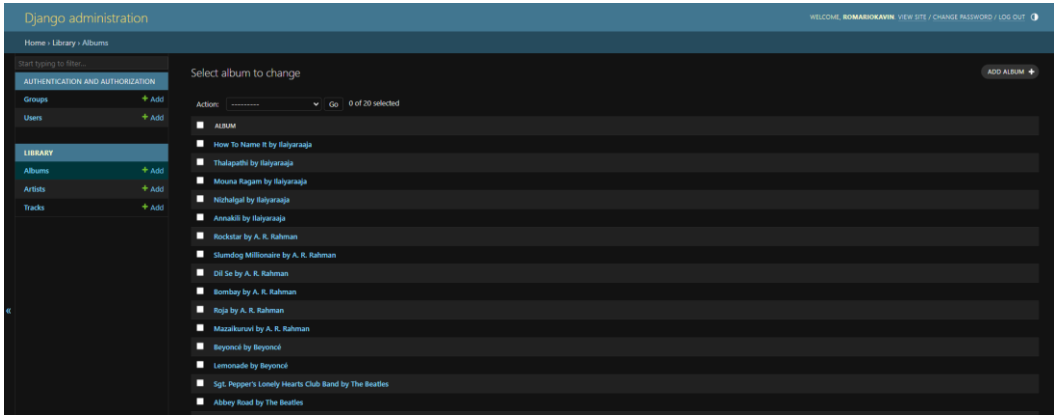
Backend Admin Page





Future Enhancements:

Looking ahead, potential enhancements for our music application may include personalized recommendations derived from users' listening histories, social sharing functionality for playlists, and integration with external music APIs to broaden content accessibility. Additionally, we could explore options for offline playback support and further enrich the user interface with interactive elements. Continuous efforts towards performance optimization and scalability improvements will be crucial to accommodate a growing user base effectively.

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.

Source :

Thank You!