Project Report: Music Streaming Application

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Introduction: The Music Streaming Flask Application is a web-based platform designed for users to access and manage their music. It features user registration, login, song addition, and personalized dashboards. Developed with Flask, it integrates seamlessly with an SQLite database for storing user credentials, songs, and registration details.

Project Structure:

- **Flask Application:**

  - Core handling routing, rendering templates.

  - Routes for user authentication, dashboard access, and song management.

- **SQLite Database:**

  - Manages user credentials, songs, and registrations.

  - Interacts with Flask for data storage and retrieval.

- **HTML Templates:**

  - UI for pages like login, registration, dashboards, and error messages.

  - Maintains a consistent, user-friendly design.
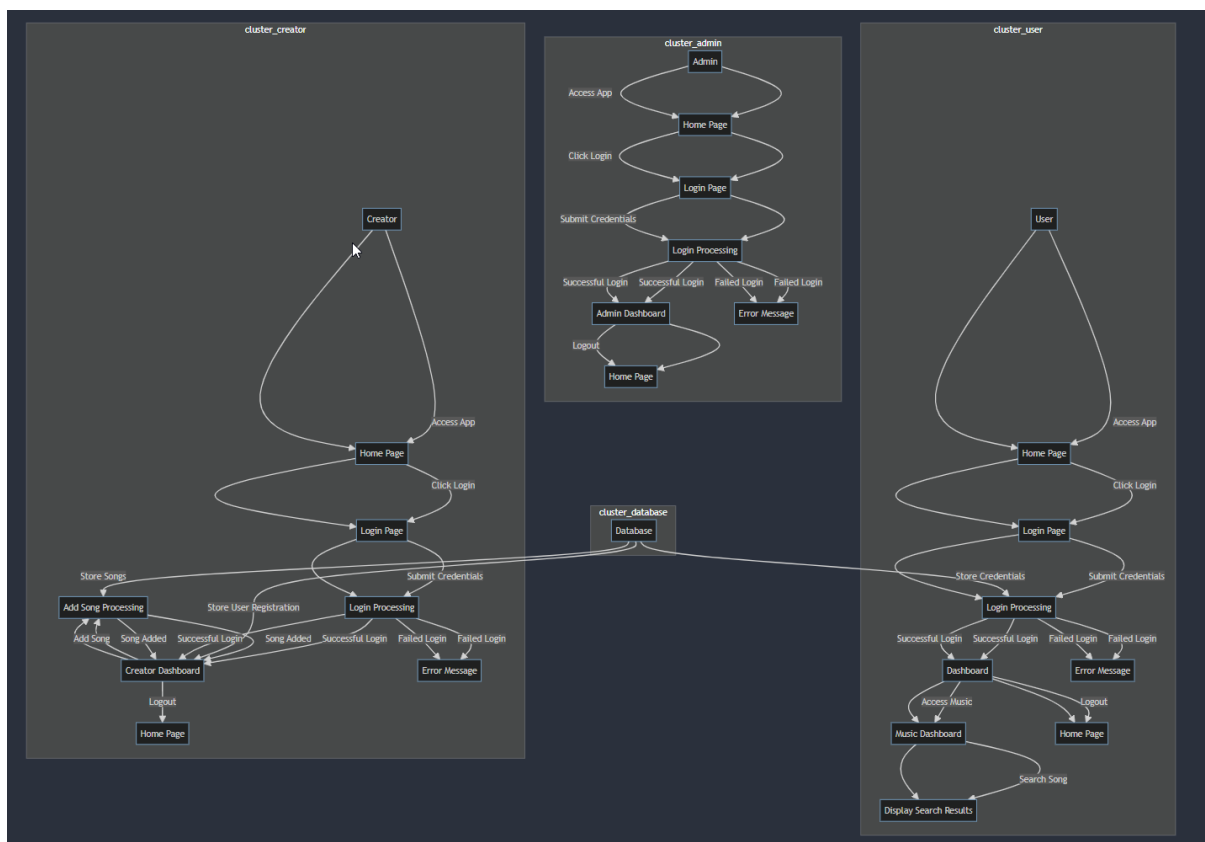
Features and Functionality:

- **User Authentication:**

  - Allows registration with a username and password.

  - Securely stores credentials in an SQLite database.

  - Implements secure login.

- **Role-Based Dashboards:**

  - Differentiates between users, administrators, and creators.

  - Redirects users to role-specific dashboards.

- **Music Dashboard:**

  - Displays a personalized music dashboard with dynamic search functionality.

  - Embeds songs from a third-party website.

- **Creator Dashboard:**

  - Exclusive dashboard for creators, enabling song addition.

- **Admin Dashboard:**

- Exclusive dashboard for administrators.

Technical Implementation:

- **Flask Routing:**

  - Utilizes Flask routes for various functionalities.

  - Implements GET and POST methods for form submissions.

- **SQLite Database Integration:**

  - Establishes a connection to store and retrieve data.

  - Creates tables for user credentials and songs.

Flowchart for the Whole Process:

Conclusion: The Music Streaming Flask Application offers a robust platform for music management. Effectively using Flask, SQLite, and web technologies, it provides a secure and feature-rich experience. Future enhancements may include user profile management, additional song-related features, and improved user interfaces.

Video Demo Link: https://youtu.be/VcUeLyDjDIE