Entertainment Catalog & Recommendation System

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Overview

Build a full-stack web application that manages an entertainment catalog of movies and TV shows. The platform supports two user types: an **Admin** who maintains the catalog and a **Regular User** (Neel) who searches, likes titles, and receives recommendations based on personal preferences.

User Roles & Responsibilities

- **Admin:**
  - **Catalog Management:** Add and delete entries (movies and TV shows) with full details.
  - **Content Fields:** Each entry includes title, type, multiple genres, director(s), cast, release year, etc.

- **Regular User:**
  - **Content Discovery:** Search and filter the catalog by title, genre, director, cast, release year, etc.
  - **Personalization:** Like titles to build a profile of interests.
  - **Dashboard:** View a personalized dashboard with recommendations based on liked content.
  - **Navigation:** Use a modern, responsive interface with a clear navigation bar and smooth search experience.

Project Requirements

1. **Entertainment Entry Management:**
   - **Admin Functions:** Create, update, and delete catalog entries for movies and TV shows.
   - **Implementation:** Provide a simple admin panel with forms for adding and editing entries.

2. **Search and Filter:**
   - **User Functions:** Implement a fast search bar with real-time suggestions as Neel types.
   - **Implementation:** Develop a responsive search API that supports multiple filters.

3. **Personalized Recommendation Dashboard:**
   - **User Functions:** Allow users to like titles and view personalized recommendations.
   - **Implementation:** Create a dashboard that updates dynamically based on Neel's liked content.

4. **User Authentication and Role Management:**
   - **Role Distinction:** Only Admins can access catalog management functions; Regular Users can search, like, and view recommendations.
   - **Implementation:** Implement a simple authentication system to manage user roles.

5. **General Application Considerations:**

- **Scalability & Performance:** Ensure the system handles a growing catalog and many users efficiently.
- **User Interface:** Build a clean, responsive UI with a navigation bar, search bar, and user dashboard.
- **Documentation:** Provide clear setup and usage instructions.

Implementation Details

- **Navigation Bar:**
  - **Role:** Quick access to Home, Search, Dashboard, and Login and Logout options, etc.
  - **Implementation:** Use a modern frontend framework to create a responsive, sticky navbar.

- **Search Bar:**
  - **Role:** Provide real-time search suggestions and filtering.
  - **Implementation:** Build a dynamic search component with debouncing to optimize performance.

- **User Dashboard:**
  - **Role:** Show liked content and offer recommendations based on preferences.
  - **Implementation:** Create an interactive dashboard with grid or card layouts.

- **Admin Panel:**
  - **Role:** Manage the catalog with functions to add, edit, and delete entries.
  - **Implementation:** Design a simple interface with secure APIs for catalog management.
  - **Dual Method for Adding Movies:**
    * **A. Form-Based Entry:**
      · **Interface:** Build a web form where the admin manually enters each field (title, type, genres, director, cast, release year, etc.).
    * **B. File Upload Entry:**
      · **Interface:** Provide an option for admins to upload a file (CSV or JSON) containing multiple entries.

- **Security and Performance:**
  - Use role-based authentication to protect admin functions.

Tech Stack

The following technologies can be used to implement this project:

- **Frontend:** HTML, CSS, JavaScript
- **Backend:** Python with FastAPI for building a robust and scalable API
- **Database:** MongoDB (NoSQL) or SQL databases Like MySQL

Conclusion

This project combines essential web development practices with a user-friendly design. With a focus on simplicity and ease of use, Neel and other users can enjoy a seamless experience while exploring a well-managed entertainment catalog. The system's clear role distinctions, smooth navigation, and dynamic recommendation dashboard ensure that every user finds exactly what they are looking for.