MOVIE RECOMMEDATION SYSTEM

A COURSE PROJECT REPORT

By

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Under the guidance of **Dr. P .Visalakshi**

In partial fullfillment for the Course

18CSC303J-Database Management Systems

In

School of Computing

FACULTY OF ENGINEERING AND TECHNOLOGY SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

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Acknowledgement

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Gurugubelli Keerthi (RA2111030010093)

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CHAPTER-1
1.INTRODUCTION

Our movie recommendation system is designed to provide personalized movie suggestions to users based on their preferences and viewing history. By leveraging advanced algorithms and machine learning techniques, our system analyzes user behavior and movie attributes to deliver accurate and relevant recommendations, ensuring an enjoyable and tailored viewing experience for every user.

Frontend Technologies: For the frontend of our website, we utilize modern web development technologies to create an intuitive and user-friendly interface. We employ HTML, CSS, and JavaScript for building the structure, styling, and interactive elements of the website. Additionally, we leverage frameworks such as React.js or Angular.js to enhance the responsiveness and dynamic nature of the frontend, allowing users to seamlessly navigate through movie recommendations and interact with the system.

Backend Techonologies: codes that are written in Python, PHP, ASP.Net to name but a few by the developer.

The Front-End used in this project is HTML along with the CSS language.

HTML stands for Hyper Text Markup Language

- HTML describes the structure of Web pages using markup
- HTML elements are the building blocks of HTML pages
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table".
- Browsers do not display the HTML tags, but use them to render the content of the page

1.1 Advantages of HTML:

1. The first advantage it is widely used.
2. Every browser supports HTML language.
3. Easy to learn and use.
4. It is by default in every window so you don't need to purchase extra software.
5. You can integrate HTML with CSS, JavaScript, php etc.

The back-end database used in this project is **MySQL**

For the backend database of our movie recommendation system project, we utilize MySQL. MySQL is a widely-used relational database management system known for its reliability,

scalability, and performance. It allows us to efficiently store and manage user data, movie information, and other relevant data required for generating personalized recommendations. Additionally, MySQL integrates seamlessly with our chosen backend technologies, providing a robust foundation for our system's data storage and retrieval needs.

CHAPTER-2

2.1 About the Project:

Our movie recommendation system project aims to provide users with personalized movie suggestions based on their preferences and viewing history. Leveraging advanced machine learning algorithms, the system analyzes user behavior and movie attributes to generate accurate and relevant recommendations, enhancing the overall movie-watching experience.

2.1.2 Main features are:

User Profiling: The system collects and analyzes user data, including past movie ratings, genres of interest, and viewing history, to build individual user profiles.

Recommendation Engine: Using collaborative filtering, content-based filtering, or hybrid approaches, the system generates movie recommendations tailored to each user's preferences.

Search and Filtering: Users can search for specific movies or filter recommendations based on genres, release year, ratings, and other criteria.

User Feedback: The system incorporates user feedback mechanisms to continuously improve recommendation accuracy and adapt to changing preferences over time.

Scalability and Performance: Built with scalable backend technologies and optimized database management systems, the project ensures efficient handling of large datasets and high user traffic.

2.1.3 Objectives:

1.Personalized Recommendations

2.User Profiling

3.Recommendation Accuracy

4.User Engagement

5.Continuous Improvement

6.Scalability

7.Integration

8.Security and Privacy

9.Performance Optimization

8.Evaluation and Testing

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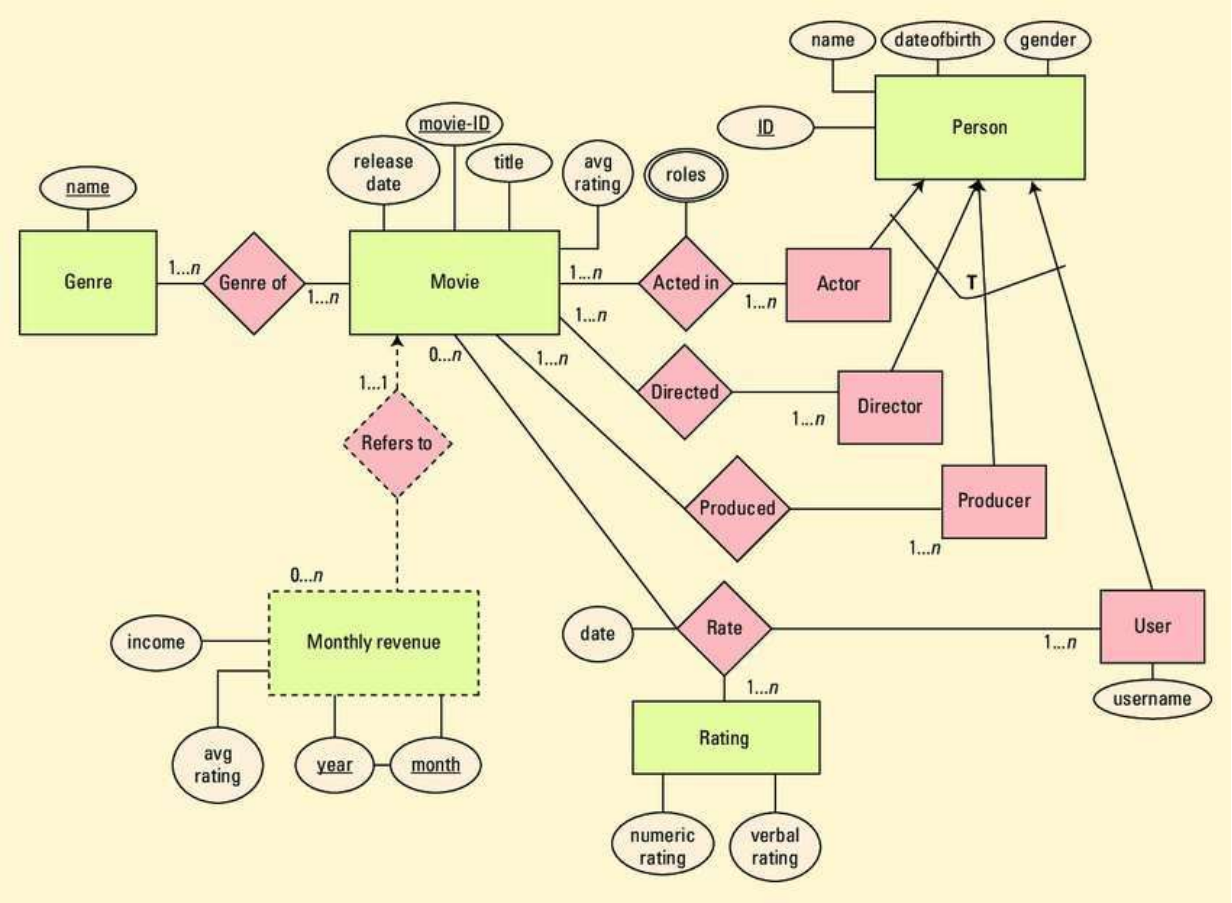
CHAPTER-3

3.1 BACK-END DESIGN

3.1.1 Conceptual Database Design(ER-Diagram)



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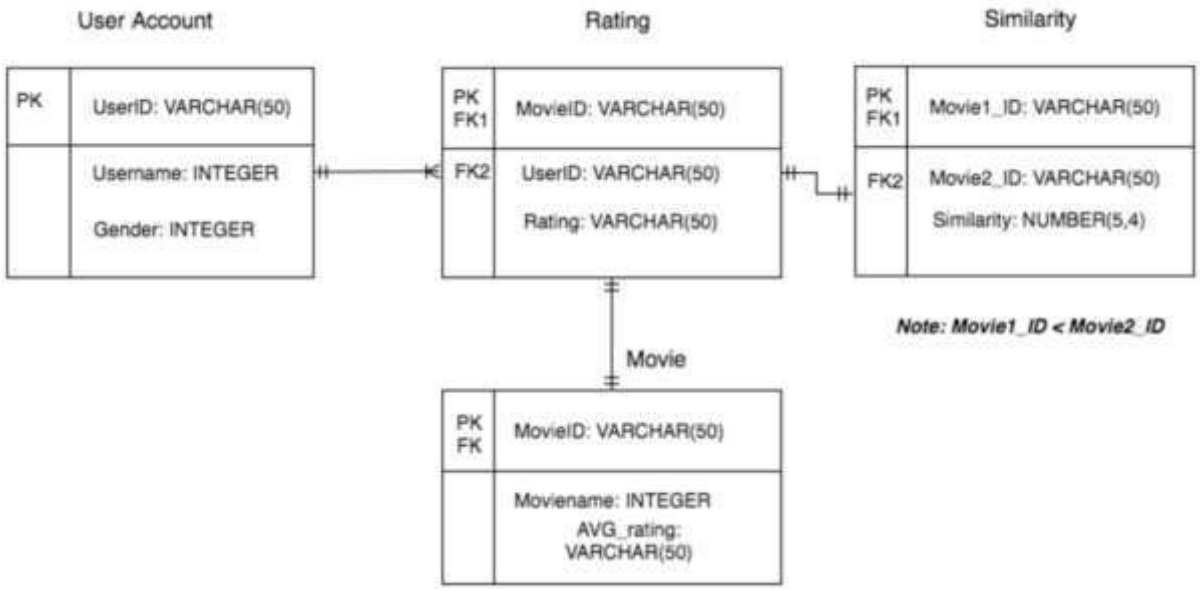
3.1.2 Logical Database Design(ER Mapping)



- The entities are represented as tables.
- The tables contain the attributes.
- The attributes which are underlined are referred as primary keys.

3.2 FRONT-END DESIGN

3.2.1 Front-end web development details

The languages commonly used in frontend web development for a movie recommendation system include:

HTML (Hypertext Markup Language): Used for structuring the content and layout of web pages.

CSS (Cascading Style Sheets): Used for styling the visual presentation of HTML elements, including colors, fonts, layouts, and animations.

JavaScript: Used for adding interactivity and dynamic behavior to web pages, such as handling user input, performing client-side validations, and implementing interactive features like sliders, dropdown menus, and pop-up dialogs.

Additionally, frontend frameworks and libraries like React.js, Angular.js, or Vue.js may be employed to streamline development, enhance code maintainability, and improve user

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experience. These frameworks are based on JavaScript and provide reusable components, state management, and other features to facilitate frontend development.

3.2.2 Connectivity (front end and Back end):

PHP is used for server-side processing in the movie recommendation system. When a user interacts with the frontend interface, such as searching for movies or submitting feedback, PHP scripts handle the requests sent from the frontend.

These PHP scripts receive the user input, process it, and interact with the backend database or recommendation engine to fetch relevant data or generate recommendations.

PHP facilitates connectivity with the backend database, allowing for the retrieval and storage of movie data, user profiles, and other relevant information.

PHP scripts use database query functions (such as mysqli or PDO) to execute SQL queries and interact with the database management system (e.g., MySQL) to fetch or update data as needed.

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CHAPTER-4

4..1.1:

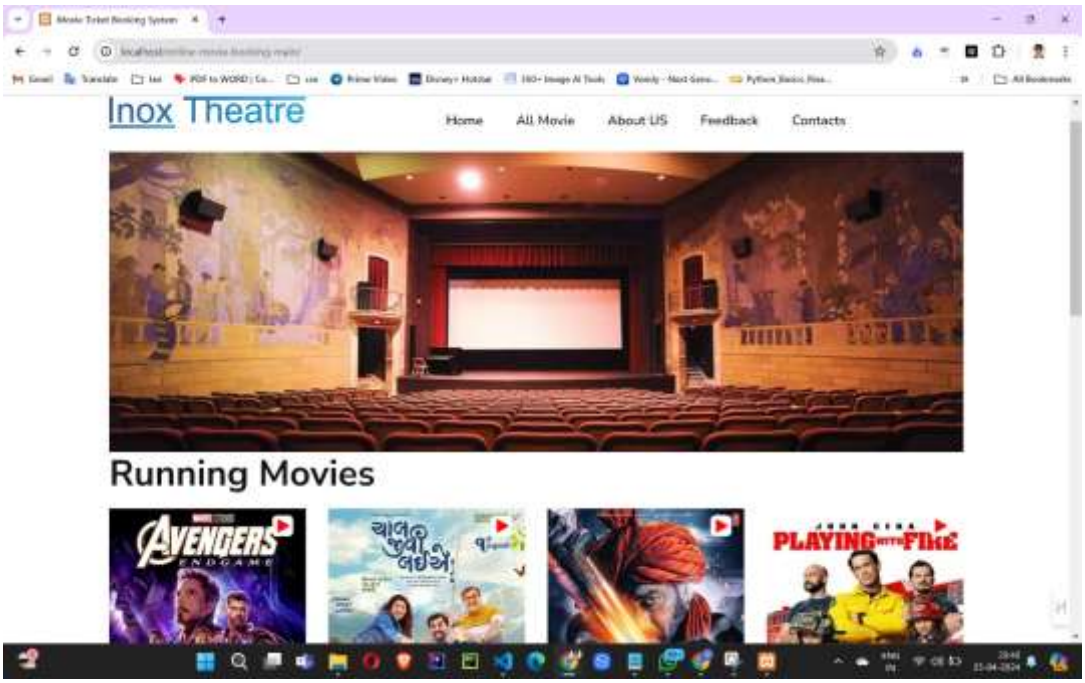
Home Page for a Movie Recommendation System:

Here's what a home page for a movie recommendation system could include:

- **Search Bar:** A prominent search bar where users can enter movie titles, actors, directors, or keywords.
- **Genre Buttons:** A selection of popular movie genres (Comedy, Action, Drama, etc.) that users can click on for personalized recommendations within that genre.

Content Sections:

- **"For You" Recommendations:** A section showcasing personalized movie recommendations based on the user's past ratings, watch history, and similar user preferences.
    - Include high-quality movie posters, titles, and short blurbs summarizing the plot.
- **"Trending Now" Section:** Display a list of popular movies that many users are watching or have high ratings.
- **"New Releases" Section:** Highlight recently released movies with trailers or links to reviews.
- **"Curated Lists" Section:** Feature curated movie lists for specific moods, interests, or events (e.g., "Scary Movies for Halloween," "Feel-Good Films for a Rainy Day").
- **"User Reviews" Section:** Showcase snippets of user reviews and ratings to help others decide.



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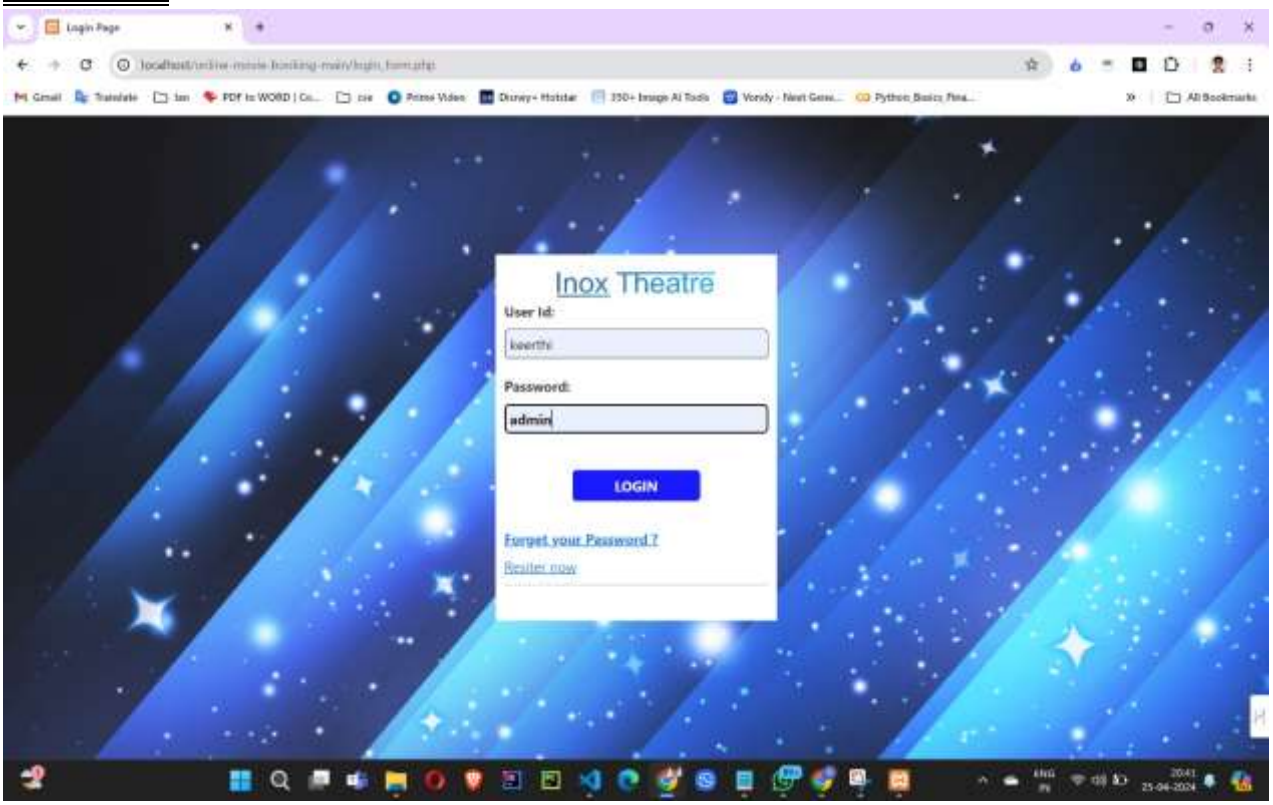
4.1.2 USER LOGIN:

Login Form: There are fields for a user ID and password.
Forgot Password: A link is provided for users who have forgotten their password.
Register Now: A button allows new users to create an account.
Language: The page shows the language is set to English (ENG).

OUTPUT:



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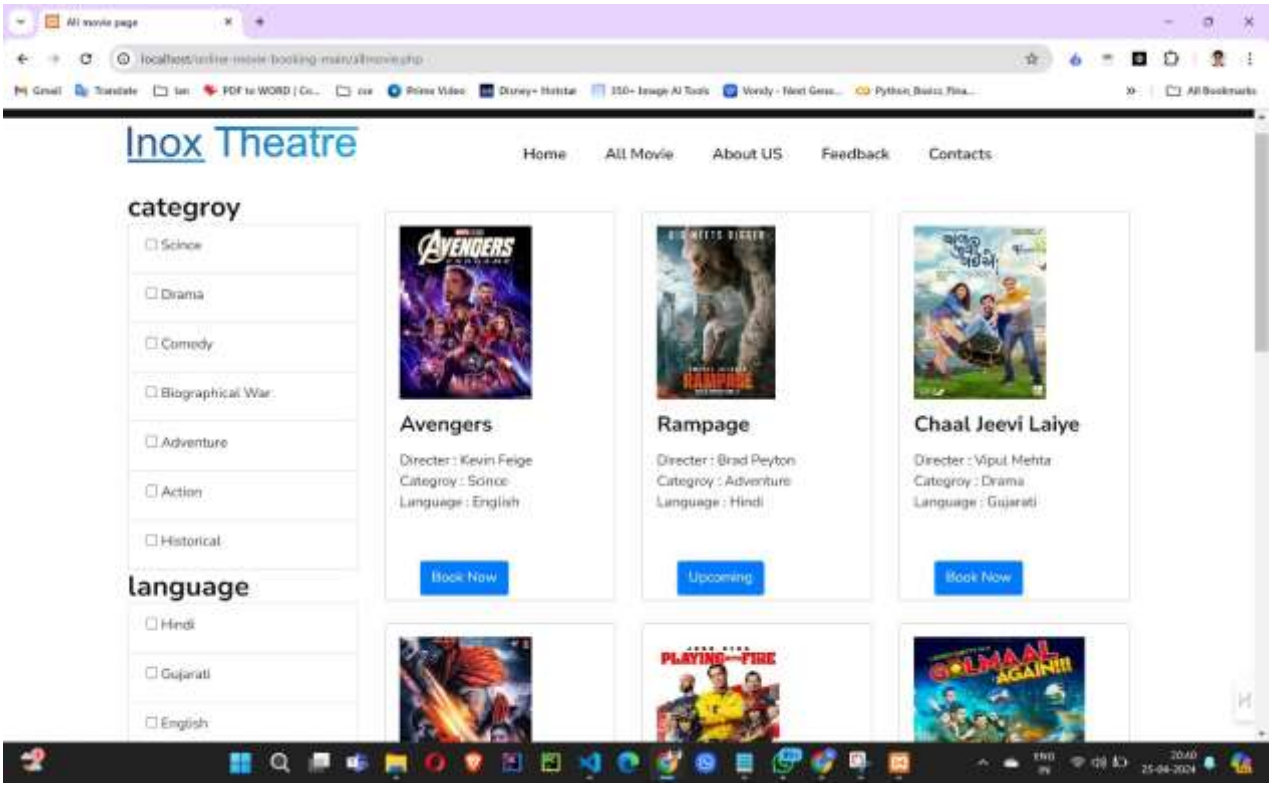
4.1.3:

- **Search Bar:** A search bar is present at the top where users can enter a movie title.
- **Movie Categories:** Below the search bar are movie category buttons including ‘Science’, ‘Drama’, ‘Comedy’, ‘Biographical War’ and ‘Adventure’.
- **Movie Listings:** The page displays movie posters, titles, directors, languages and showtimes. Here are some of the movies showing:
    - Avengers (Science) - Directed by Kevin Feige (English)
    - Rampage (Adventure) - Directed by Brad Peyton (Hindi)
    - Chaal Jeevi Laiye (Drama) - Directed by Vipul Mehta (Gujarati)
- **Book Now Buttons:** Buttons are provided to book tickets for each movie.
- **Upcoming:** A section titled "Upcoming" is seen but no movies are listed there.
- **Language Selection:** The page shows the language is set to English (ENG).

Overall Functionality:

The homepage allows users to browse movies by category, view details about each movie (including director, language and showtime), and book tickets for upcoming showings.



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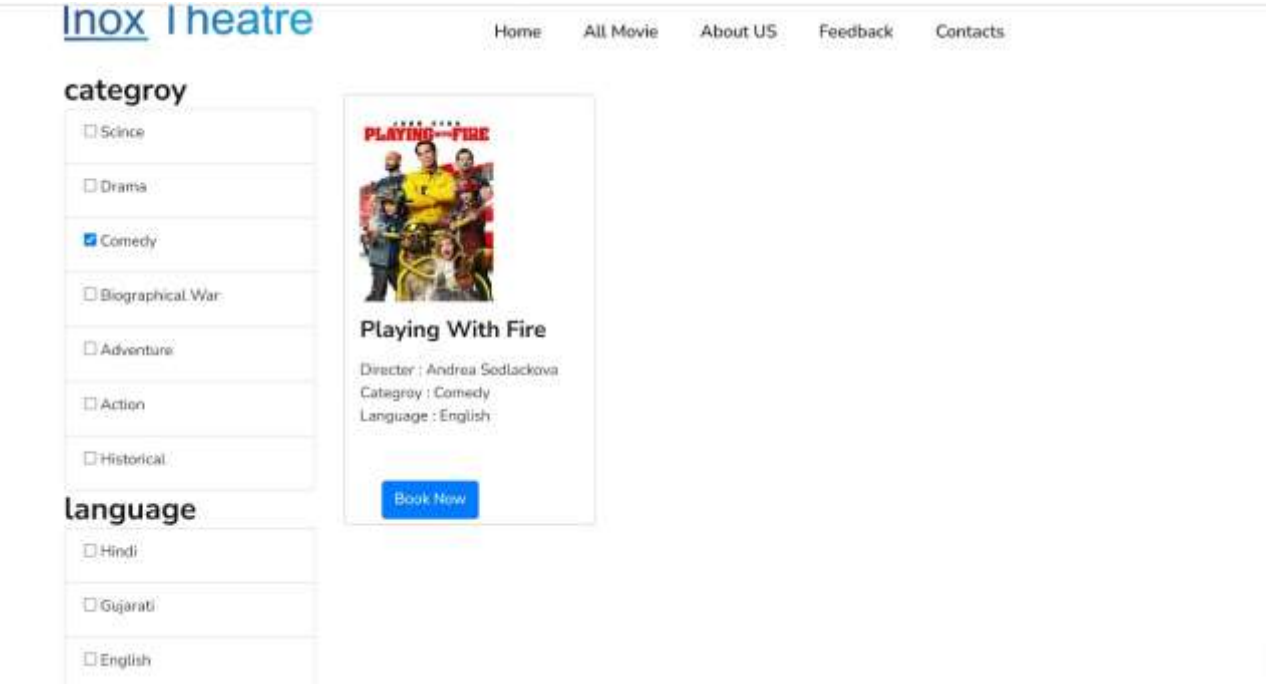
4.1.4:

Genre selection is important for several reasons, depending on the context:

- **Audience Targeting:** Choosing the right genre helps creators reach the right audience. A sci-fi film will target viewers interested in futuristic themes, while a rom-com targets those looking for a lighthearted love story.
- **Storytelling and Expectations:** Genre sets the tone and expectations for the story. A horror movie prepares viewers for scares, while a documentary sets the stage for factual information. Genre conventions guide the plot, characters, and overall feel.



4.1.5:

- **Movie Title and Time:** The movie title is "Avengers" and the showtime is "21:00".
- **Seat Selection:** There are three seat categories listed: Silver, Gold, and Platinum. The price for each seat category is not shown. Silver seats are priced at 100, Gold seats are priced at 150, and Platinum seats are priced at 300.
- **Available Seats:** A checkbox is displayed next to each seat to indicate that the seat is available. Clicking a checkbox selects the seat. The total number of seats selected is displayed in the "Total Seat" field.
- **Book Now Button:** A "GO" button is available to complete the seat booking process.
- **Payment Method:** There is no information displayed about payment methods.
- **User Location:** The bottom right corner of the webpage shows the user is located in India (IN).

Overall Functionality:

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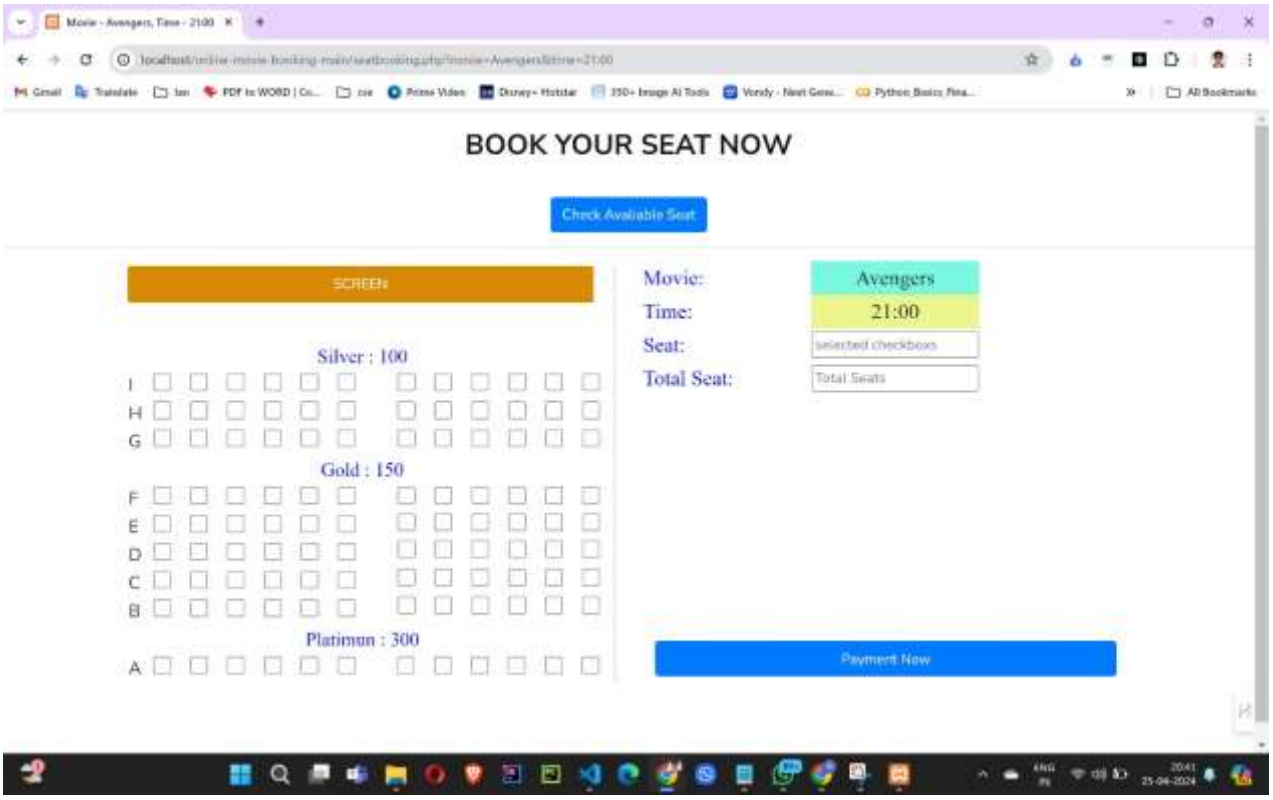
The webpage allows users to select seats for the movie "Avengers" showing at 21:00. Users can choose from Silver, Gold, and Platinum seating options. Once the desired seats are selected, users can click the "GO" button to proceed with the booking process. However, information about payment methods is not provided on this webpage.



4.1.6:

- **Booking Summary:** The booking summary confirms that Keerthi has booked 4 tickets (seats 110, 111, H10, and H11) for the movie "Chaal Jeevi Laiye".
- **Movie Details:**
  - Movie Title: Chaal Jeevi Laiye
  - Director: Vipul Mehta
  - Language: Gujarati
- **Showtime:** The showtime is 18:15 on Friday, April 26, 2024.
- **Inox Theatre:** The movie will be playing at Inox Theatre located near Upansna Circle, Surendranagar. The phone number for the theater is +91 846050 2720.
- **Payment Details:**
  - Payment Date: Thursday, April 24, 2024
  - Payment Amount: RS. 400/-
- **Customer Details:**

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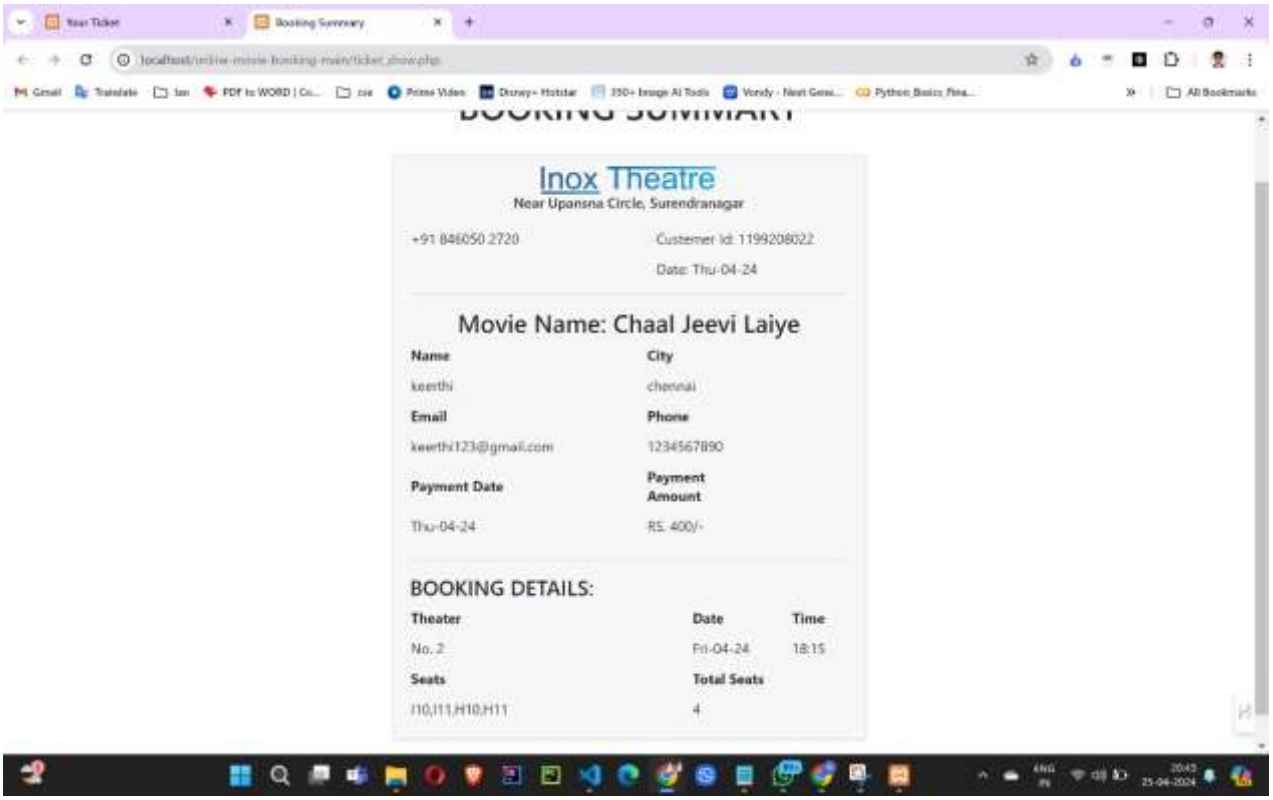
- Name: Keerthi
- City: Chennai
- Email: keerthi123@gmail.com
- Phone: 1234567890

Overall:

This webpage confirms a movie ticket booking for the movie "Chaal Jeevi Laiye" showing on Friday, April 26, 2024 at 18:15 at Inox Theatre located near Upansna Circle, Surendranagar. The total cost of the tickets was RS. 400.



4.1.7:

The table structure is named add_movie and it contains fields for storing information about movies. Here's a breakdown of the columns:

- id (int): This is likely a primary key that uniquely identifies each movie in the database.
- movie_name (varchar): This column stores the name of the movie.

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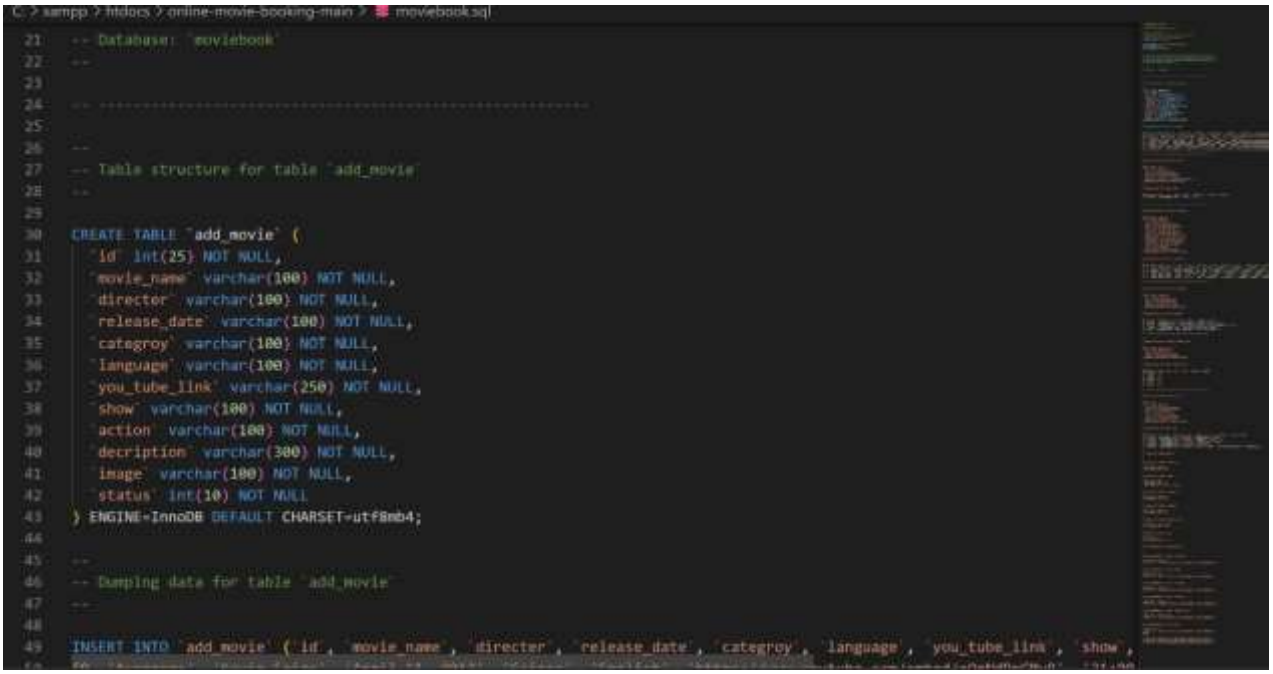
- director (varchar): This column stores the name of the movie's director.
- release_date (varchar): This column stores the movie's release date.
- category (varchar): This column stores the genre of the movie.
- language (varchar): This column stores the language the movie is in.
- you_tube_link (varchar): This column stores a link to the movie's trailer on YouTube.
- show (varchar): This column is unclear from the screenshot, but it might be related to showtimes for the movie.
- action (varchar): This column is also unclear from the screenshot, but it might be related to managing movie listings or bookings.
- description (varchar): This column stores a description of the movie.
- image (varchar): This column stores a link to an image for the movie.
- status (int): This column might be used to indicate the availability of the movie or other administrative purposes.



5.1 APPLICATIONS :

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Movie recommendation systems have a wide range of applications. Let's explore some of them:

Personalized Streaming Services:
Platforms like Netflix, Amazon Prime Video, and Disney+ use recommendation systems to suggest movies and TV shows based on users' viewing history, ratings, and preferences1. These systems employ collaborative filtering and content-based approaches to tailor recommendations to individual users.

YouTube Recommendations:
YouTube leverages recommendation algorithms to suggest videos based on users' watch history, likes, and interactions.
These algorithms consider factors like video content, user engagement, and related videos to enhance user experience.

E-Commerce Platforms:
Online retailers like Amazon use recommendation systems to suggest products to users based on their browsing history, purchase behavior, and similar items.
Collaborative filtering and item-based approaches help improve product discovery.

Social Media Platforms:
Facebook, Instagram, and Twitter employ recommendation systems to recommend friends, posts, and content.
These systems analyze user interactions, interests, and connections to provide relevant suggestions.

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6.CONCLUSION

In conclusion, the movie recommendation system represents a pivotal advancement in the realm of entertainment technology, offering users a personalized and enriching cinematic experience. By harnessing sophisticated algorithms and user data analysis, this system empowers streaming platforms, e-commerce websites, and movie review platforms alike to cater to individual preferences and tastes. Seamlessly integrated into various domains, from online streaming services to social media platforms, its applications transcend mere movie suggestions, influencing marketing strategies, educational platforms, and social interactions. As it continues to evolve and refine its capabilities, the movie recommendation system not only enhances user satisfaction but also fosters deeper engagement with cinematic content, reaffirming its indispensable role in modern entertainment consumption.

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It has been a matter of immense pleasure, honor and challenge to have this opportunity to take up this project and complete it successfully.

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