



AISSMS
COLLEGE OF ENGINEERING

ज्ञानम् सकलजनहिताय
Accredited by NAAC with "A+" Grade

Department of Computer Engineering



Mini Project

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degree of*

BACHELOR OF ENGINEERING

In

COMUTER ENGINEERING

Submitted By

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ABSTRACT

This project presents the design and implementation of a dynamic web application titled "Netflix Clone: A Streaming Platform Interface", developed using HTML, CSS, JavaScript, PHP, and MySQL. The application replicates the core user interface and functionality of the popular Netflix platform, providing a rich, interactive experience for browsing and managing video content.

The front-end is crafted using HTML and CSS to build a visually appealing and responsive design, while JavaScript is used to handle dynamic content updates, user interactions, and client-side validations. The login and signup features offer secure user authentication, built with PHP as the server-side scripting language.

User data, including credentials and viewing preferences, is stored in a MySQL database, ensuring persistent storage and secure access control. The authentication system validates credentials and manages user sessions, allowing users to sign up, log in, and access a personalized content interface.

Though it does not include actual video streaming functionality, the clone simulates key UI components such as featured banners, horizontal content carousels, and a user dashboard. This project demonstrates a full-stack development approach, integrating frontend design with backend logic and database connectivity to create a cohesive, functional web application

INTRODUCTION

The demand for digital streaming services has seen explosive growth in recent years, changing the landscape of the entertainment industry. Platforms like Netflix have set new standards for how users access, discover, and consume video content online. In response to this trend, the Netflix Clone project was developed to simulate the core user interface and account management features of a modern streaming platform using foundational web technologies — HTML, CSS, JavaScript, PHP, and MySQL.

The project replicates the visual aesthetics and layout of the Netflix homepage, including dynamic banners, horizontal content carousels, and a dark-themed, mobile-responsive design that adapts seamlessly to different screen sizes. Users are able to register for an account through the signup page, securely log in using the login system, and navigate a basic user dashboard that mimics Netflix's content library interface.

The frontend is built using HTML and CSS to structure and style the application, while JavaScript is used to enhance user interactions and validate input data in real time. On the backend, PHP handles server-side logic such as form processing, user authentication, and session management. User credentials and other relevant information are stored securely in a MySQL database, allowing for persistent data storage and retrieval.

Though the platform does not include actual video streaming, it lays the groundwork for future integration of multimedia playback, personalized content recommendations, and advanced filtering capabilities. This project demonstrates a complete full-stack web development cycle and showcases practical implementation of secure user authentication, dynamic content display, and responsive UI design — essential skills for any aspiring web developer

OBJECTIVES

- The primary objective of this project was to design and develop a Netflix Clone web application that allows users to interact with the platform through login and signup functionalities.
- The application simulates a streaming service interface and focuses on user authentication and data interaction rather than actual video playback.
- Once users successfully log into their accounts, they are directed to a page where they can search for the presence of a particular series or movie.
- This feature demonstrates database querying and dynamic content presentation based on user input.
- The project serves as a foundational model of a streaming service, showcasing the integration of front-end and back-end technologies to provide a complete and interactive user experience

TECHNOLOGIES USED

- The development of this project involved a combination of client-side and server-side technologies, along with a local development environment. Below is a summary of the tools and technologies used:
- HTML & CSS:- HTML was used to structure the content of the web pages, while CSS was used extensively to design the user interface and ensure a clean, responsive layout. These technologies provided the foundation for the front-end design of the application.
- JavaScript:- JavaScript was used selectively for client-side form validation. It was implemented in two instances: one for validating the signup form and the other for the login form, ensuring that the required fields were filled before submission.
- PHP:- PHP served as the backend scripting language, responsible for handling user sessions, processing form data, and connecting to the MySQL database. It was used to:

Start and end sessions during login/logout

Store user registration data in the database

Authenticate login credentials

Retrieve and display information about available movies and series

- MySQL:- MySQL was used as the database management system to store:

User credentials (username, email, password)

Information about available shows and movies (e.g., titles, genres)

- XAMPP:- The XAMPP software package was used to host the application locally during development. It provided an integrated environment with Apache as the server, MySQL as the database engine, and phpMyAdmin for managing the database through a graphical interface.

SYSTEM DESIGN & ARCHITECTURE

- The Netflix Clone web application is designed as a simple full-stack system that combines client-side presentation with server-side logic and a backend database. The architecture follows a traditional three-tier structure:
 - Presentation Layer (Frontend)
 - Application Layer (Backend / Server-side logic)
 - Data Layer (Database)

1 System Overview

- When a user visits the application, they are greeted with a front page that offers login and signup options.
- Upon successful registration or authentication, the user is redirected to a dashboard page, where they can search for the availability of a movie or series title.
- The system uses session management to keep the user logged in and to control access to authenticated pages.

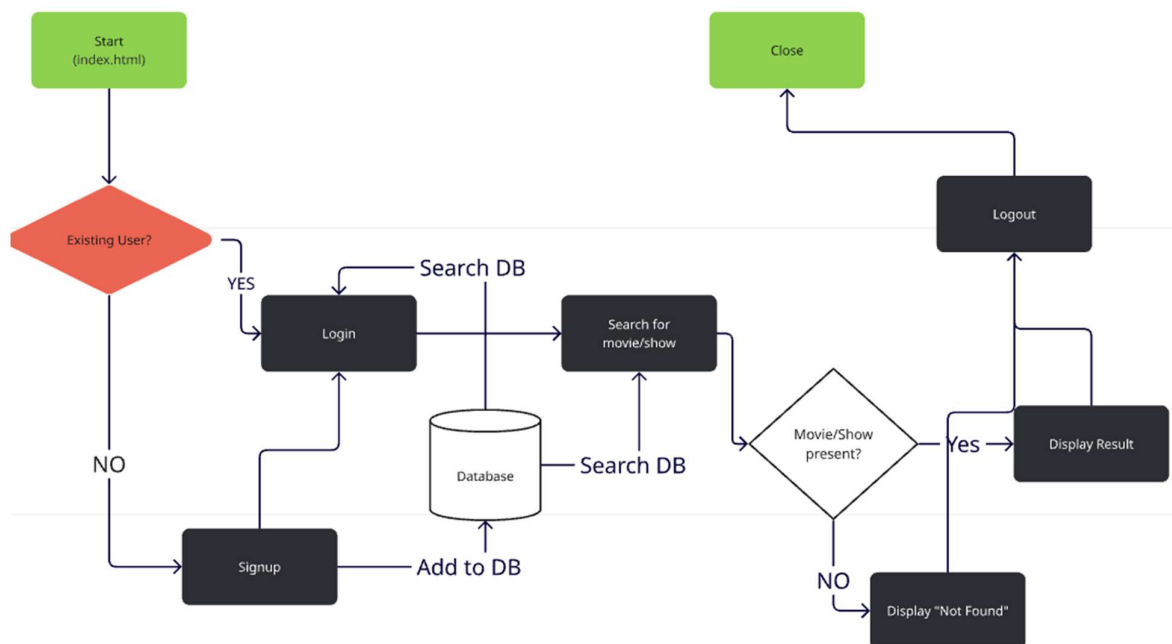
2 Architecture Components

- Frontend (Client Side):
 - Built using HTML and CSS to create a responsive and styled layout.
 - Basic JavaScript is used for validating form inputs before they are submitted (e.g., checking if all fields are filled in login/signup forms).
- Backend (Server Side):
 - Developed in PHP, which handles:
 - Processing form data from login and signup pages
 - Starting and destroying user sessions
 - Interacting with the MySQL database to verify login credentials and retrieve show data

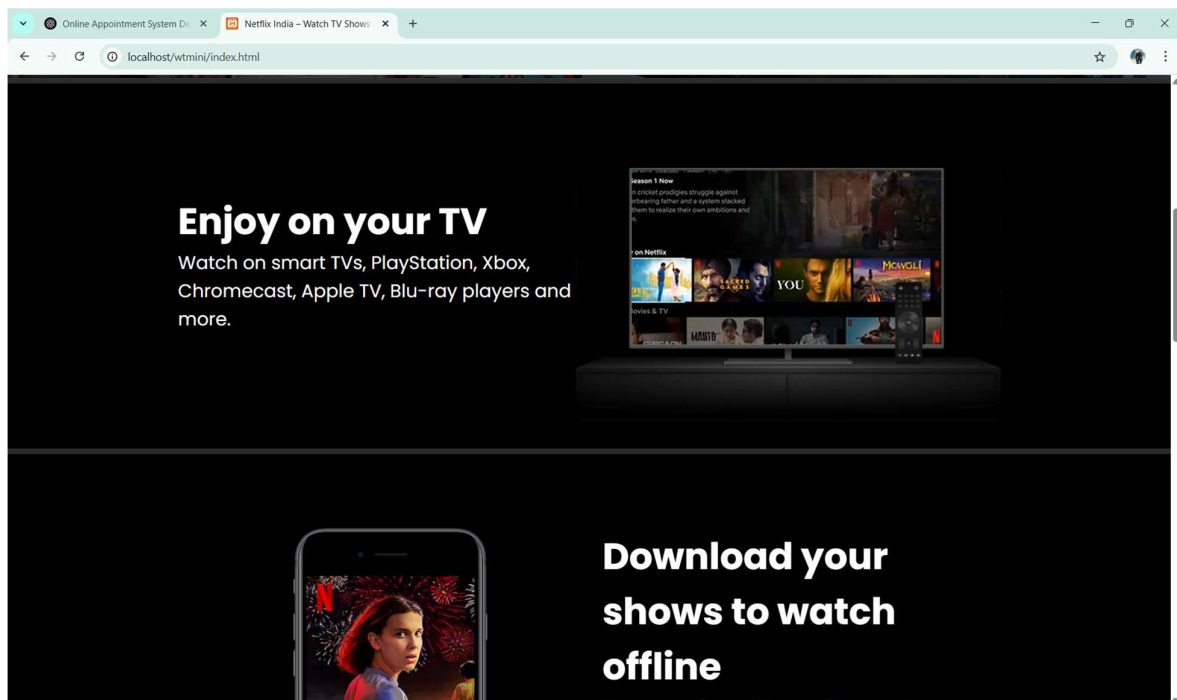
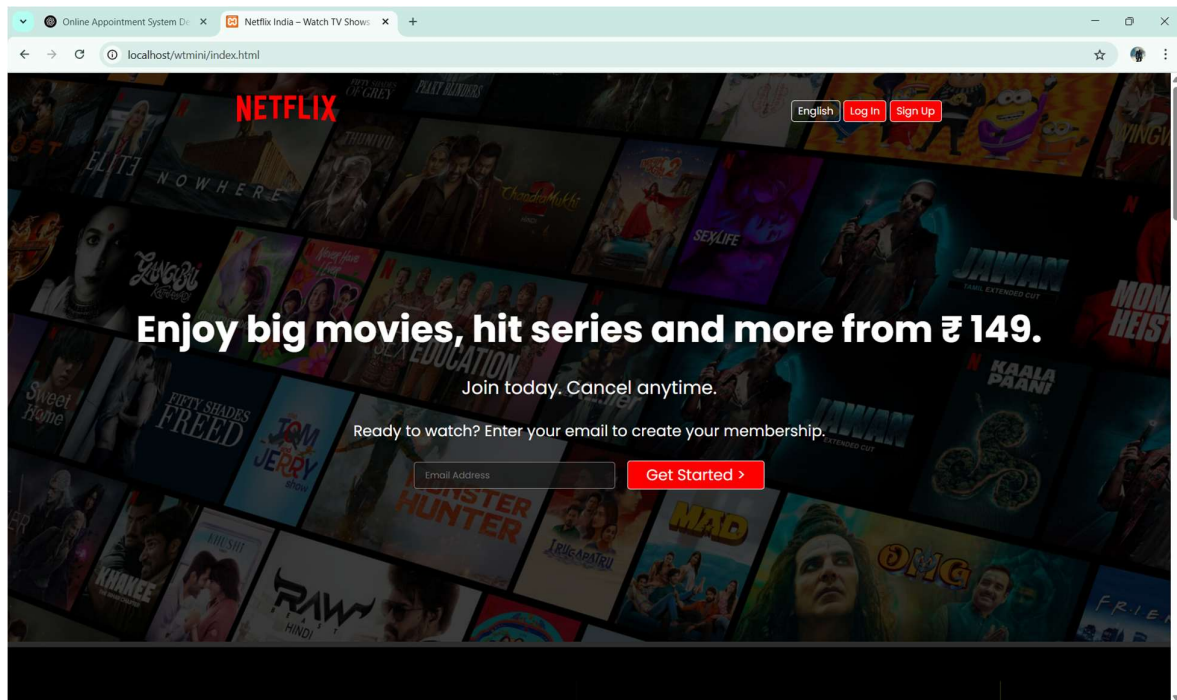
PHP scripts are responsible for routing the user to the correct page based on session state.

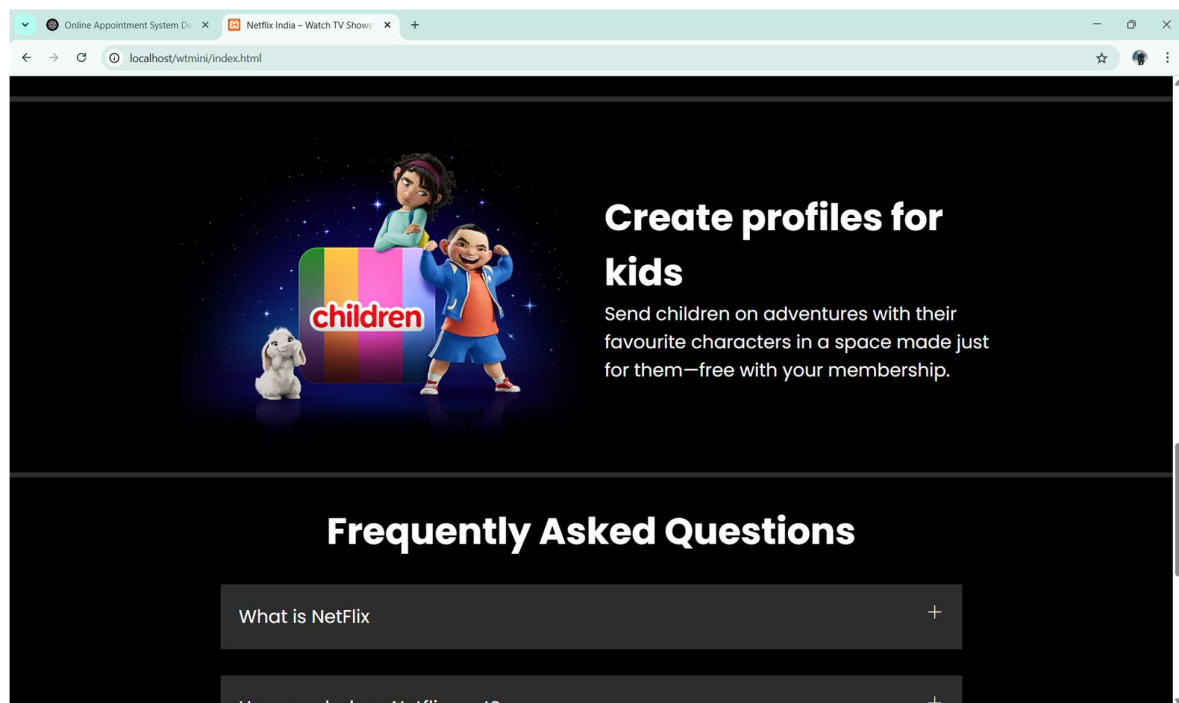
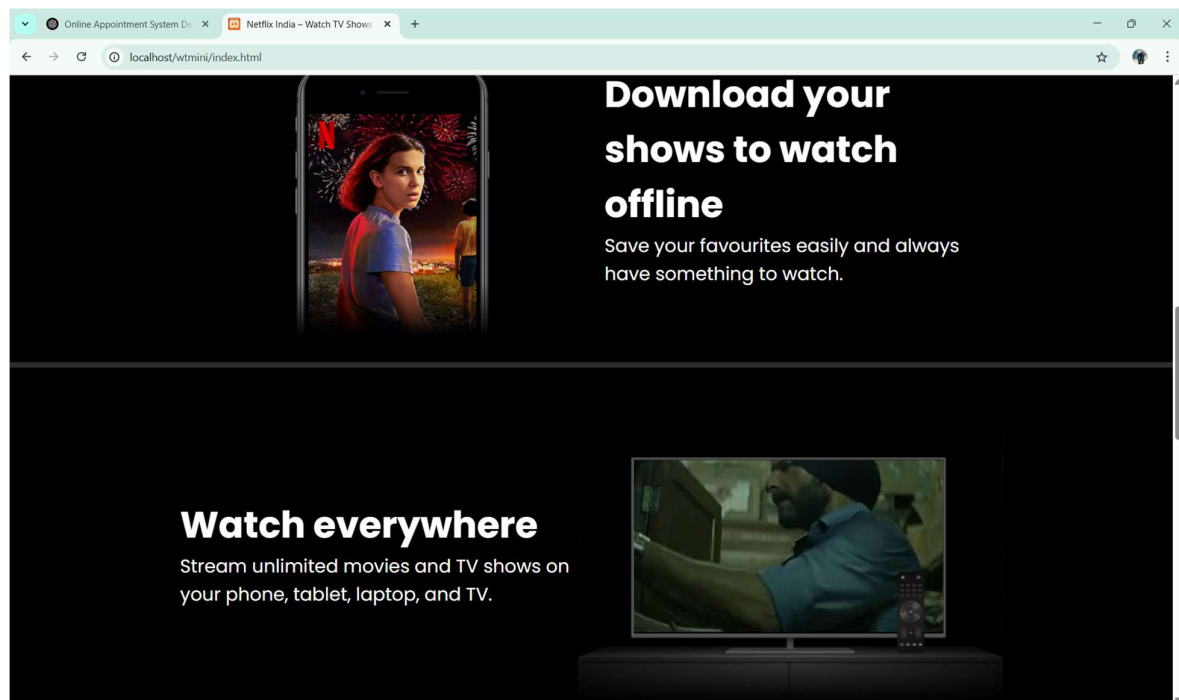
- Database (MySQL):
 - Stores user information, such as username, email, and password
 - Maintains a list of available shows or movies, with details like title, genre, and optionally description
 - PHP connects to the database using mysqli or PDO to perform CRUD operations

- Local Hosting Environment:
 - The application is hosted on XAMPP, which provides:
 - Apache for running PHP scripts
 - MySQL for the backend database
 - phpMyAdmin for managing the database via GUI

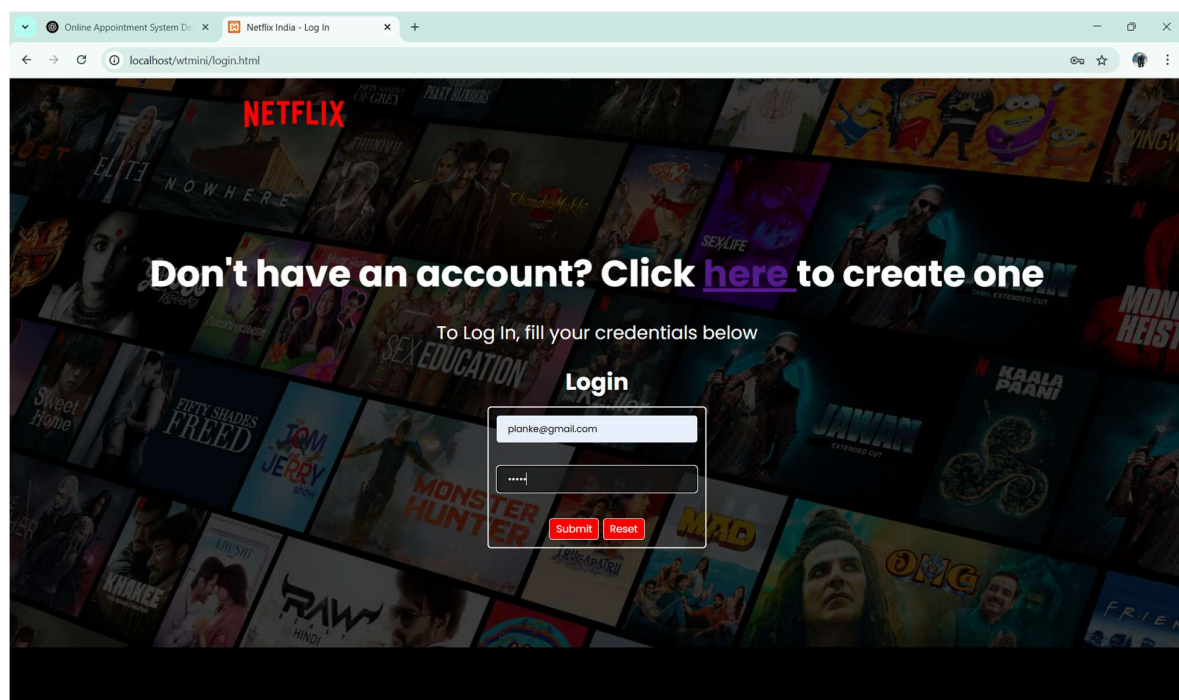
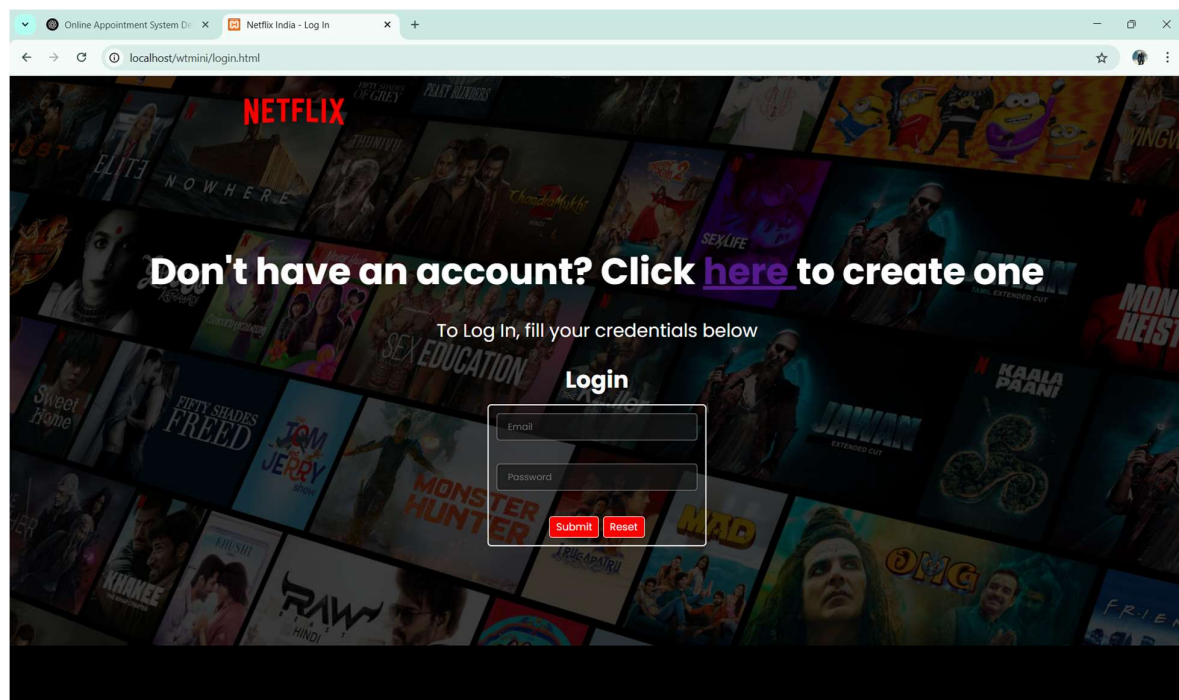


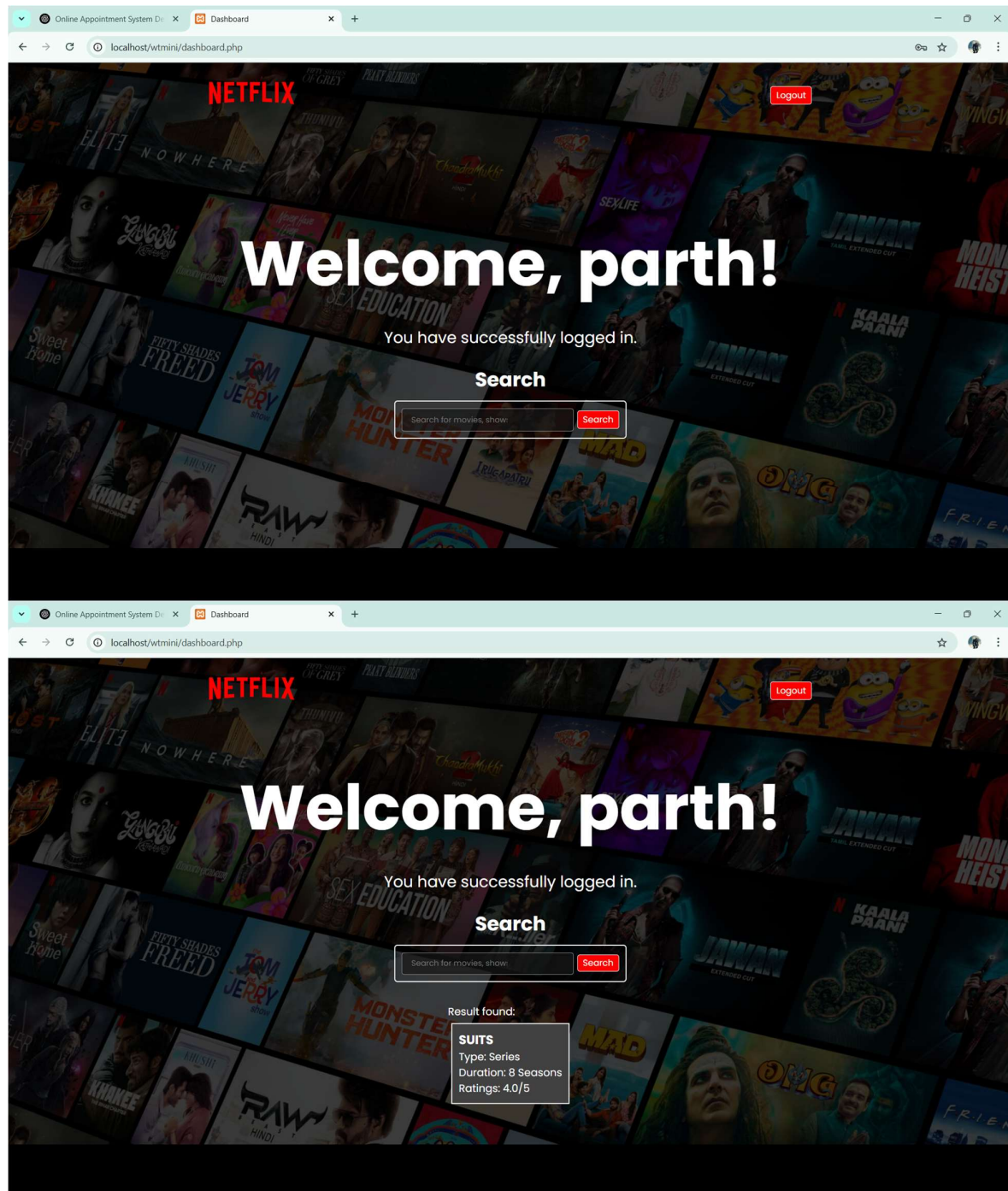
SCREENSHOTS





Login Page





Signup Page

NETFLIX

Enjoy big movies, hit series and more from Rs. 149.

Join today. Cancel anytime.

Ready to watch? Create your account in 2 minutes.

Fill out the below form

Create Your Account

Username:

Email:

Password:

Date of Birth:

NETFLIX

Enjoy big movies, hit series and more from Rs. 149.

Join today. Cancel anytime.

Ready to watch? Create your account in 2 minutes.

Fill out the below form

Create Your Account

Username:

Email:

Password:

Date of Birth:



```
Command Prompt - mysql -u x + v
20-04-2025 14:22 <DIR> MySQL Server 8.0
20-04-2025 14:24 <DIR> MySQL Shell 8.0
20-04-2025 14:22 <DIR> MySQL Workbench 8.0
0 File(s) 0 bytes
6 Dir(s) 823,545,143,296 bytes free

C:\Program Files\MySQL>cd MySQL Server 8.0

C:\Program Files\MySQL\MySQL Server 8.0>mysql -u root -p
'mysql' is not recognized as an internal or external command,
operable program or batch file.

C:\Program Files\MySQL\MySQL Server 8.0>cd bin

C:\Program Files\MySQL\MySQL Server 8.0\bin>mysql -u root -p
Enter password: *****
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 52
Server version: 8.0.42 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
```

```
Command Prompt - mysql -u x + v
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sakila |
| sys |
| world |
+-----+
6 rows in set (0.01 sec)

mysql> use world;
Database changed
mysql> show tables;
+-----+
| Tables_in_world |
+-----+
| city |
| content |
| country |
| countrylanguage |
| users |
+-----+
5 rows in set (0.01 sec)

mysql> select * from users;
```

```
Command Prompt - mysql -u x + v

| countrylanguage |
| users |
+-----+
5 rows in set (0.01 sec)

mysql> select * from users;
+-----+
| id | username | email | password | dob |
+-----+
| 3 | parth | planke@gmail.com | $2y$10$1xg4h3PsgDtYajRm/ayW6.9e5B0c1HY4gax8C35IwTKHPT09fgwEu | 2002-12-21 |
| 4 | bob | bob@yahoo | $2y$10$8Pa2/uswLNLq5b2QzSSKeLKvSVgVswLqK.V9MHfW31H/BLmCOVo. | 2001-05-04 |
| 5 | tanmay | tkale@gmail.com | $2y$10$NhVHSc6laHSC1VhwU94GK0jo2E9d/yAoSPgFaM9943uaDNtDQcvKK | 2004-10-17 |
+-----+
3 rows in set (0.00 sec)

mysql> select * from content;
+-----+
| content_id | name | type | duration | ratings |
+-----+
| 1254 | Hit Man | Movie | 150 mins | 4.1/5 |
| 2415 | Stranger Things | Series | 4 Seasons | 4.9/5 |
| 3584 | Zindagi Na Milegi Dobara | Movie | 154 mins | 4.6/5 |
| 4568 | TVD-The Vampire Diaries | Series | 7 Seasons | 3.9/5 |
| 6582 | ANIMAL | Movie | 157 mins | 4.4/5 |
| 7567 | Swades | Movie | 184 mins | 4.0/5 |
| 7815 | BULLET TRAIN | Movie | 120 mins | 4.5/5 |
| 9852 | SUITS | Series | 8 Seasons | 4.0/5 |
+-----+
8 rows in set (0.00 sec)
```

Conclusion

The Netflix Clone project successfully demonstrates the integration of front-end and back-end technologies to create a responsive and dynamic web application. By utilizing HTML, CSS, and JavaScript, the application delivers an intuitive and engaging user interface that closely resembles the Netflix platform. On the server side, PHP and MySQL enable secure user registration, login functionality, and persistent data management.

Although the application currently focuses on simulating the layout and account management features of a streaming service, it effectively highlights core web development concepts such as responsive design, form validation, database connectivity, and session handling. The project not only reinforces full-stack development skills but also provides a strong foundation for building more complex and functional web platforms in the future.

This clone serves as a practical example of how widely used technologies can be combined to replicate real-world applications, and it can be easily extended to include advanced functionalities, bringing it even closer to a complete streaming experience.

Future Improvements:

- **Video Streaming Integration:** - Implement actual video playback functionality using HTML5 video players or integration with third-party video hosting services.
- **User Profiles:** - Allow users to create and manage multiple profiles within a single account, similar to Netflix's multi-user support.
- **Watchlist Feature:** - Enable users to add content to a personal watchlist and view recently watched titles.
- **Admin Panel:** - Develop an admin dashboard to manage users, upload new content, and monitor platform activity.