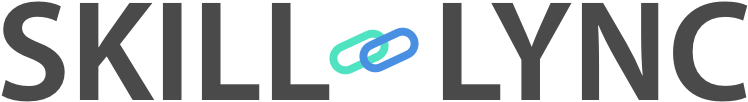
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A PROJECT REPORT

**“NETFLIX - CLONE”**

SUBMITTED BY

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**INTRODUCTION**

A Netflix clone is a web application or mobile app that replicates the functionality and user interface of the popular video streaming service, Netflix. The clone typically allows users to browse and watch a large selection of movies and TV shows on demand, often with personalized recommendations and user profiles.

Many Netflix clones also include features like search functionality, categories, ratings, and reviews, as well as the ability to add titles to a watchlist or queue.

The aim of a Netflix clone is to provide users with a similar streaming experience to Netflix, either as a standalone service or as part of a larger streaming platform. With the growing popularity of video streaming, Netflix clones have become a popular choice for entrepreneurs and developers looking to enter the online streaming market.

**OBJECTIVE**

The objective of creating a Netflix clone is to provide users with a streaming service that offers a similar experience to Netflix, but with unique features and content that set it apart from the original. By replicating the popular features of Netflix, such as personalized recommendations and a vast selection of movies and TV shows, a Netflix clone aims to attract users who are looking for an alternative streaming service.

Additionally, a Netflix clone may target niche audiences by offering specialized content or unique features that appeal to specific demographics. The ultimate goal of a Netflix clone is to provide a high-quality streaming service that keeps users engaged and satisfied, while also generating revenue through subscriptions, advertising, or other monetization models.

**HARDWARE REQUIREMENTS**

* **Processor –** Intel core I3 and above
* **RAM –** 4GB or Above
* **Hard Disk –** 50GB or Above
* **Input Device –** Keyboard, Mouse
* **Output Device –** Monitor or Laptop

**SOFTWARE REQUIREMENTS**

* **Platforms –** Windows XP through Windows 10 and Linux.
* **Application Tools –** VS Code.

**TECH STACK**

HTML, CSS and Java Script.

**HTML:**

HTML, which stands for Hypertext Markup Language, is the standard markup language used to create web pages and web applications. It is a coding language that allows developers to structure content on the web by creating HTML tags, which are used to define the structure and content of a web page.

HTML is a relatively simple language to learn and use, and it provides the foundation for most websites on the internet. With HTML, developers can create text, images, links, videos, forms, and other elements that make up a web page. The HTML code is written in a text editor and then saved as an HTML file, which can be viewed in a web browser.

HTML is often used in conjunction with other web development languages such as CSS (Cascading Style Sheets) and JavaScript, which can be used to add styling and interactivity to web pages. Together, these three languages form the core technologies used to create websites and web applications.

**CSS:**

CSS, which stands for Cascading Style Sheets, is a stylesheet language used to describe the presentation and layout of a web page or web application written in HTML. CSS provides a way to separate the content of a web page from its presentation, making it easier to maintain and update the design of a website.

CSS works by defining rules that specify how HTML elements should be displayed. These rules include properties such as color, font, size, positioning, and layout. CSS rules are written in a separate file or in the head section of an HTML file, and are then applied to the HTML elements that match the specified selectors.

By using CSS, developers can create a consistent look and feel across a website, with the ability to easily update the design and layout of multiple pages at once. CSS also makes it possible to create responsive designs that adapt to different screen sizes and devices.

CSS is often used in conjunction with other web development languages such as HTML and JavaScript, which can be used to add structure and interactivity to web pages. Together, these three languages form the core technologies used to create websites and web applications.

**JAVA SCRIPT:**

JavaScript is a high-level, dynamic programming language that is used to add interactivity and functionality to web pages. It is a client-side scripting language, which means that it runs in the web browser and can manipulate the content of a web page in real time without needing to communicate with the server.

JavaScript is used to create interactive features such as pop-ups, dropdown menus, form validation, and animations on web pages. It can also be used to create more complex applications such as web-based games, social media platforms, and productivity tools.

JavaScript is a versatile language that can be used on both the front-end and back-end of web development. On the front-end, it is used to create dynamic and interactive web pages. On the back-end, it can be used with server-side frameworks such as Node.js to create server-side applications and APIs.

JavaScript has become one of the most popular programming languages in the world, and is supported by all major web browsers. It is also used outside of web development, such as in desktop and mobile application development, game development, and the Internet of Things.

**Getting Started**

To get started with building a Netflix clone app using React.js and TMDB API, you will need to have some knowledge of React.js and how to use APIs. Here are some general steps to follow:

Set up your development environment: To build a React.js app, you will need to install Node.js and a package manager such as npm or yarn. Once you have installed these tools, you can create a new React.js project using a command-line tool like create-react-app.

Choose a design template: To make your Netflix clone app look similar to the real Netflix, you can choose a pre-made design template or create your own design. There are several UI component libraries available that can help you build a visually appealing app, such as Material-UI or Bootstrap.

Integrate the TMDB API: To get access to movie data, you will need to integrate the TMDB API into your app. You can use a library like axios to make API requests and fetch data from the TMDB API.

Implement user authentication and authorization: To provide users with a personalized streaming experience, you can implement user authentication and authorization using a service like Firebase. This will allow users to create accounts, log in, and access their watch history and preferences.

Implement search and filter functionality: To make it easy for users to find the movies and TV shows they want to watch, you can implement search and filter functionality. This will allow users to search for titles and filter by genre, release year, and other criteria.

Build the player: To enable users to stream movies and TV shows, you will need to build a player component. There are several video player libraries available for React.js, such as Video.js or ReactPlayer.

Deploy your app: Once your app is ready, you can deploy it to a hosting service like Netlify or Heroku to make it accessible to users.

### Prerequisites

To build a Netflix clone app using React.js and TMDB API, you will need to have a basic understanding of several technologies and concepts. Here are some prerequisites:

HTML, CSS, and JavaScript: You should have a good understanding of HTML, CSS, and JavaScript as they form the foundation for building web applications.

React.js: You will need to have a solid understanding of React.js, including how to use components, state, props, and lifecycle methods. There are several online resources and tutorials available that can help you learn React.js.

API: You should have a basic understanding of how APIs work and how to make API requests using tools like axios.

### Installing

To build a Netflix clone app using React.js and TMDB API, you will need to install several tools and dependencies. Here are the main requirements: Package manager: npm (Node Package Manager) or yarn are package managers that allow you to install and manage dependencies for your project. You can use either of these package managers to install the required dependencies for your React.js app.

React.js: You will need to install React.js to build your app. React.js is available as an npm package, and you can install it by running the command: npm install react or yarn add react

React Router: React Router is a library that allows you to handle client-side routing in your React.js app. You can install React Router by running the command: npm install react-router-dom or yarn add react-router-dom

Axios: Axios is a library that allows you to make HTTP requests to the TMDB API to fetch movie data. You can install Axios by running the command: npm install axios or yarn add axios

Firebase: Firebase is a platform that provides several services, including user authentication and authorization. You can use Firebase to implement user authentication in your app. You can install Firebase by running the command: npm install firebase or yarn add firebase

## 🔧 Running the tests

To run automated tests for a Netflix clone app built with React.js and TMDB API, you can use testing frameworks like Jest and React Testing Library. Here are the general steps to run automated tests:

Install Jest and React Testing Library: You can install Jest and React Testing Library as dev dependencies using npm or yarn. Run the command npm install --save-dev jest @testing-library/react @testing-library/jest-dom or yarn add --dev jest @testing-library/react @testing-library/jest-dom

Write test cases: You can write test cases for your components and other parts of your app using Jest and React Testing Library. For example, you can test if a component renders correctly, if user interactions work as expected, and if API requests return the correct data.

Create a test script: In the package.json file, create a script for running tests. The script could be something like "test": "jest"

## 🎈 Usage

Here are some notes on how to use the Netflix clone app built with React.js and TMDB API:

Home page: The home page displays a list of popular movies and TV shows. You can click on a movie or TV show to view more details, or use the search bar to search for a specific movie or TV show.

Sign up and login: To access certain features of the app, such as creating a watchlist or leaving a review, you need to sign up and login. You can create an account by clicking the "Sign Up" button in the top right corner of the app. After you create an account, you can log in by clicking the "Log In" button.

Movie and TV show details: When you click on a movie or TV show, you can view more details such as the plot summary, cast, and user reviews. You can also add the movie or TV show to your watchlist, leave a review, or rate the movie or TV show.

## 🚀 Deployment

To deploy the Netflix clone app built with React.js and TMDB API on a live system, you can use a cloud hosting service such as Firebase, AWS, or Google Cloud. Here are some steps to deploy the app using Firebase:

Create a Firebase project: Create a new Firebase project and select the "Web" option to add the app to the project.

Install Firebase CLI: Install the Firebase CLI using npm or yarn. Run the command npm install -g firebase-tools or yarn global add firebase-tools

Configure Firebase: In the Firebase console, go to the "Project Settings" and copy the Firebase configuration code. Paste this code into a new file named .env.local in the root directory of your app.

Build the app: Run the command npm run build or yarn build to create a production build of your app.

Initialize Firebase: Run the command firebase login to log in to your Firebase account. Then run the command firebase init to initialize Firebase for your app. Follow the prompts to select the Firebase project and configure the app.

Deploy the app: Run the command firebase deploy to deploy the app to Firebase hosting. The app will be live at the URL specified in the Firebase hosting settings.

## ⛏️ Built Using

react Js (<https://react.dev/learn>)