

# ★ MyFlix Movie App – Case Study

A Full-Stack Web Application Built with React, Node.js, Express & MongoDB

🔗 Live App: <https://myflix-movies-sagunanathani.netlify.app/>

## 🎬 1. Project Overview

MyFlix is a full-stack movie application that allows users to browse movies, view details, create an account, and manage their favorite films. This project demonstrates my ability to design, build, and deploy a complete web application using modern JavaScript technologies.

## 🧩 2. The Problem

Users often struggle to keep track of movies they enjoy or want to watch. Many apps feel cluttered or overwhelming.

My goal was to create a **simple, clean, and responsive movie discovery experience** with:

- Easy browsing
- Clear movie details
- Secure user accounts
- Personalized favorites list

## 🏠 3. My Role

- Full-Stack Developer
- UI/UX implementation
- API design & database modeling
- Frontend development (React)
- Backend development (Node.js, Express)
- Deployment & testing

## 4. Tools & Technologies

**Frontend:** React, React Router, Axios, JavaScript, CSS

**Backend:** Node.js, Express

**Database:** MongoDB

**Other:** JWT Authentication, Postman, Git, GitHub, Netlify, Render

## 5. Process & Phases

### Phase 1: Research & Planning

I analyzed existing movie apps to understand user expectations.

Key insights:

- Users want simple navigation
- Movie information must be clear
- Account management should be easy

I created a basic user flow:

**Register → Login → Browse Movies → View Details → Add to Favorites**

### Phase 2: Backend Development

I built a REST API using **Node.js + Express**.

Key Features

- User registration & login
- JWT authentication
- CRUD operations for user profiles
- Endpoints for movies and favorites

### Challenge

Secure authentication without complexity.

### Decision

Use **JWT** for stateless authentication and **bcrypt** for password hashing.

## Phase 3: Database Modeling

Using **MongoDB**, I created two collections:

- **Users**
- **Movies**

### Challenge

Designing a flexible schema for movie data.

### Decision

Use embedded documents for genres and directors for faster queries.

## Phase 4: Frontend Development

I built the UI using **React**, focusing on clarity and responsiveness.

### Key Screens

- Login
- Signup
- Movie List
- Movie Details
- Profile
- Search

### Challenge

Managing state across multiple components.

## Decision

Use React hooks and React Router for clean, modular code.

### Phase 5: Visual Design

I followed a clean, minimal UI approach:

- Light color palette
- Large movie posters
- Clear typography
- Card-based layout

### Phase 6: Testing

Tools used:

- Postman
- Manual UI testing
- Mobile responsiveness checks

## Challenge

Ensuring consistent behavior across devices.

## Decision

Use Flexbox and responsive units for layout stability.

### Phase 7: Deployment

- Frontend: [Netlify](#)
- Backend: [Render](#)
- GitHub Repo: [myFlix-client](#)
- Database: MongoDB Atlas

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## 🌟 6. Final Solution

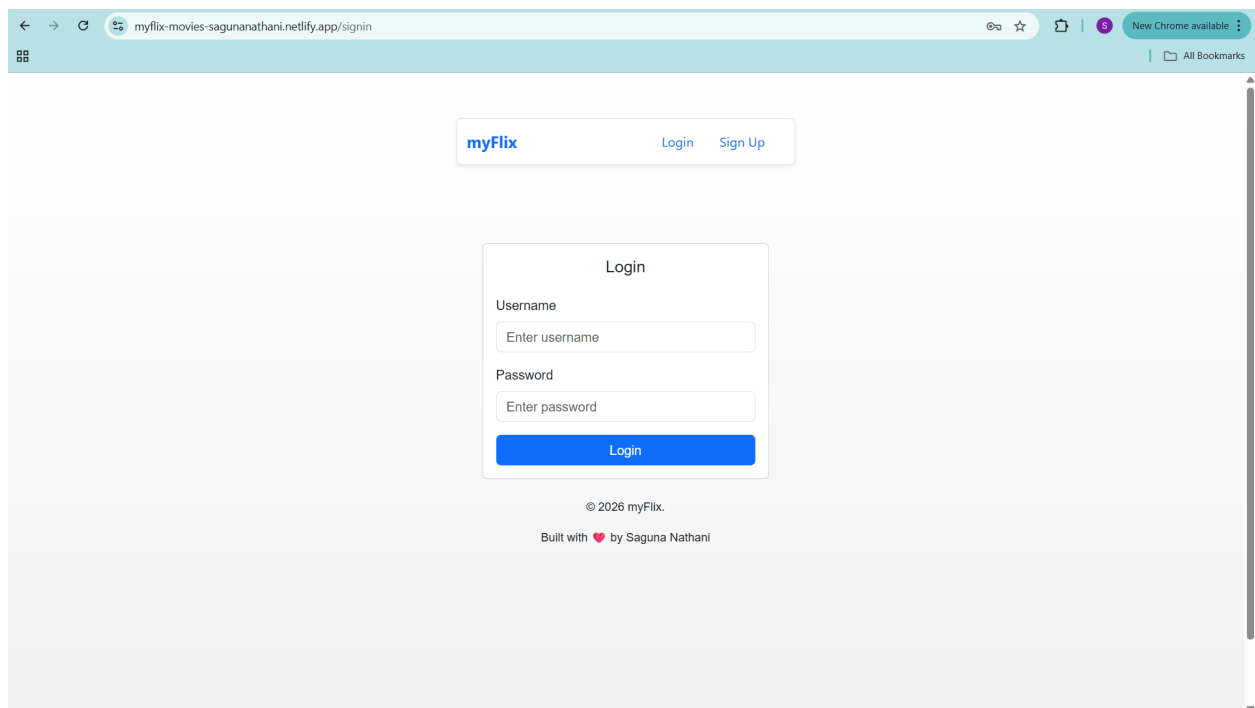
The final MyFlix app is:

- Fully responsive
- Secure and scalable
- Easy to navigate
- Built with a modern full-stack architecture

Users can register, log in, browse movies, view details, and save favorites.

## 🖼️ 7. Screenshots

### 🔑 Login View

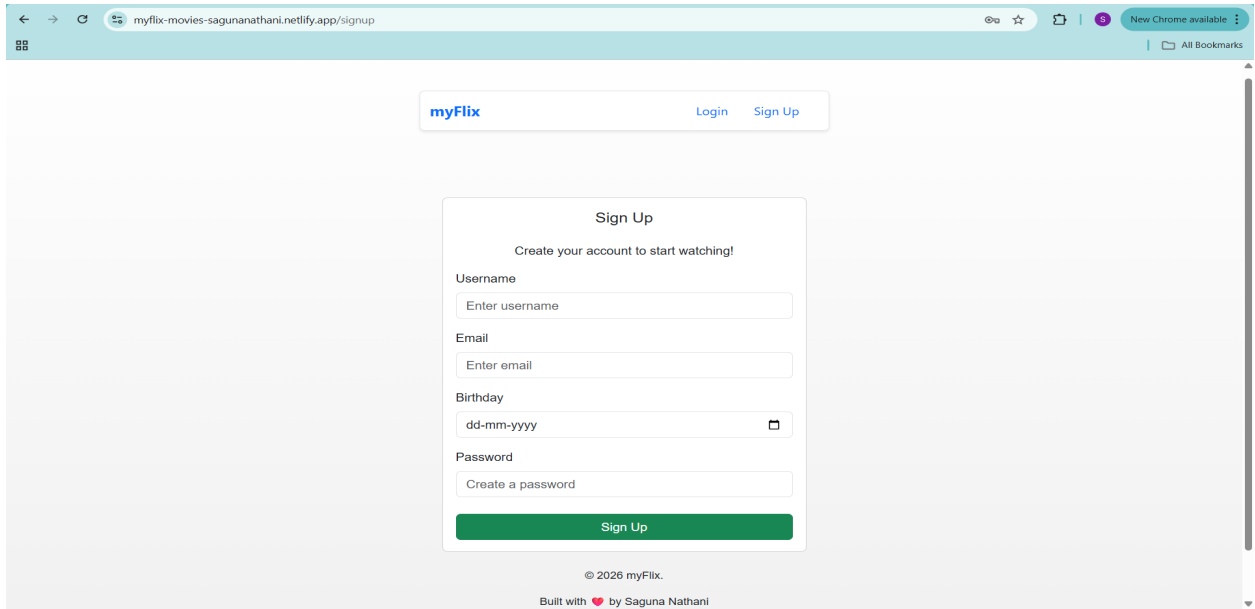


The screenshot shows a web browser window with the address bar displaying "myflix-movies-sagunanathani.netlify.app/signin". The browser interface includes navigation buttons, a star icon, a share icon, and a "New Chrome available" notification. Below the browser window, the login page is displayed. At the top, there is a "myFlix" logo and two links: "Login" and "Sign Up". The main content area features a "Login" form with the following fields:

- Username**: A text input field with the placeholder "Enter username".
- Password**: A text input field with the placeholder "Enter password".
- Login**: A blue button with the text "Login".

At the bottom of the page, there is a copyright notice: "© 2026 myFlix." and a footer: "Built with ❤️ by Saguna Nathani".

## Signup View



myFlix Login Sign Up

Sign Up

Create your account to start watching!

Username

Enter username

Email

Enter email

Birthday

dd-mm-yyyy

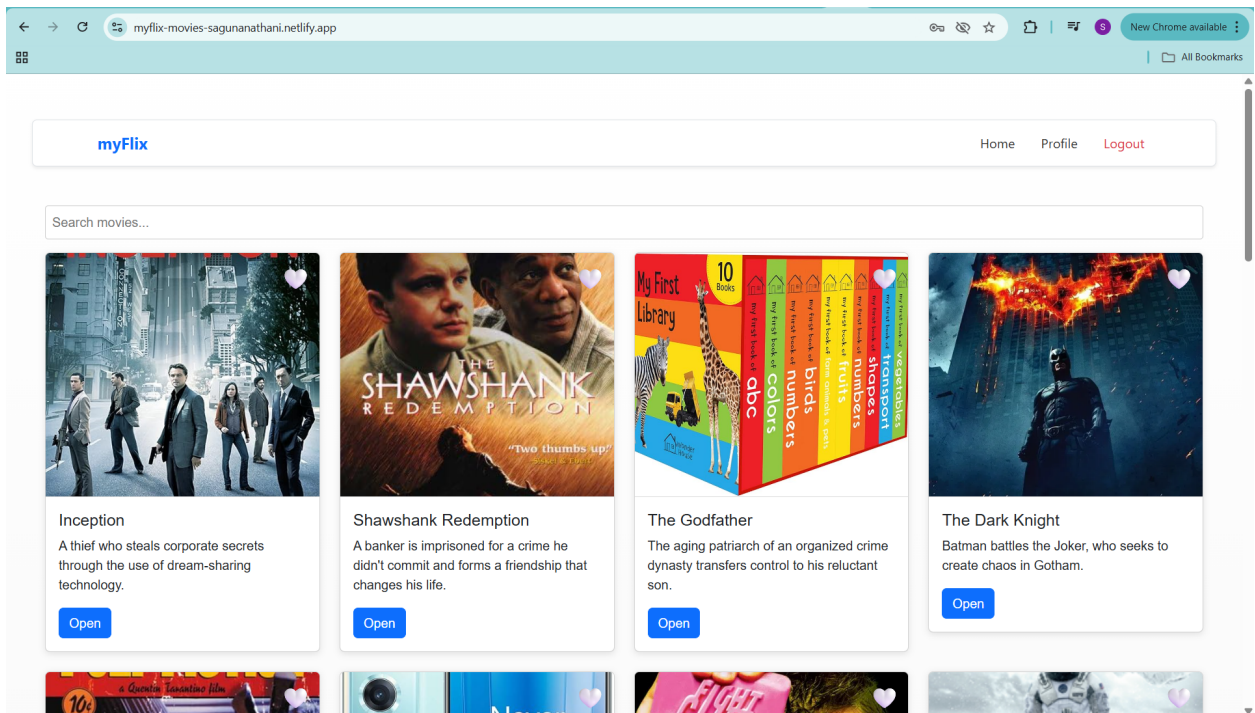
Password

Create a password

Sign Up

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## Main View – All Movies



myFlix Home Profile Logout

Search movies...



**Inception**

A thief who steals corporate secrets through the use of dream-sharing technology.

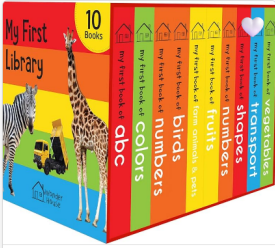
Open



**Shawshank Redemption**

A banker is imprisoned for a crime he didn't commit and forms a friendship that changes his life.

Open



**The Godfather**

The aging patriarch of an organized crime dynasty transfers control to his reluctant son.

Open



**The Dark Knight**

Batman battles the Joker, who seeks to create chaos in Gotham.

Open

## Search Movie View

The screenshot shows a web browser window with the URL `myflix-movies-sagunanathani.netlify.app`. The page has a navigation bar with "myFlix" on the left and "Home", "Profile", and "Logout" on the right. Below the navigation bar is a search input field containing the letter "g". The main content area displays four movie cards, each with a poster image, a title, a description, and an "Open" button. The movies shown are:

- The Godfather**: The aging patriarch of an organized crime dynasty transfers control to his reluctant son.
- The Dark Knight**: Batman battles the Joker, who seeks to create chaos in Gotham.
- Forrest Gump**: A man with a low IQ witnesses and influences historical events.
- Fight Club**: An office worker forms an underground fight club.

## Movie Details View

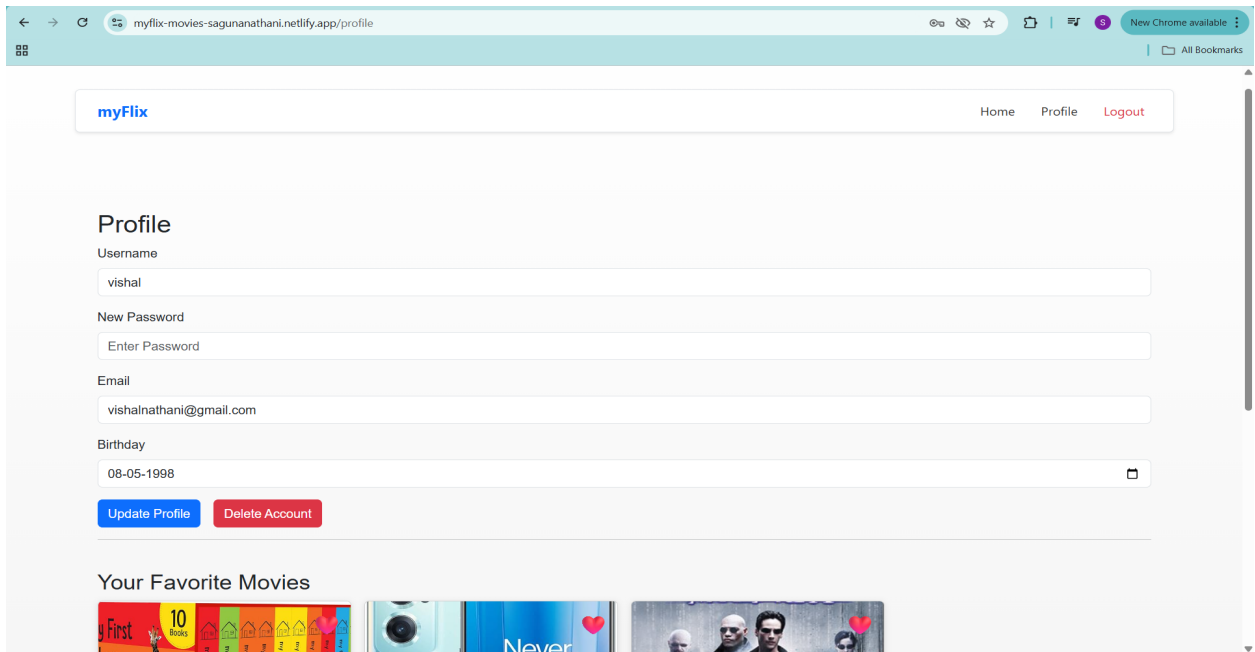
The screenshot shows a web browser window with the URL `myflix-movies-sagunanathani.netlify.app/movies/68889047f6aa4389a90b118`. The page displays the details for the movie **Inception**. The details section includes:

- Description**: A thief who steals corporate secrets through the use of dream-sharing technology.
- Genre**: Sci-Fi
- Director**: Christopher Nolan

Below the details section is a "Back to Movies" button. Under the heading "Similar Movies", there are two movie cards:

- Interstellar**: Astronauts travel through a wormhole to save humanity.
- The Matrix**: A hacker discovers reality is a simulation and joins a rebellion.

## Profile View



The screenshot shows a web browser window with the URL `myflix-movies-sagunanathani.netlify.app/profile`. The page has a header with the `myFlix` logo and navigation links for `Home`, `Profile`, and `Logout`. The main content area is titled `Profile` and contains several form fields: `Username` (with the value `vishal`), `New Password` (with the placeholder `Enter Password`), `Email` (with the value `vishalnathani@gmail.com`), and `Birthday` (with the value `08-05-1998`). Below these fields are two buttons: `Update Profile` and `Delete Account`. At the bottom, there is a section titled `Your Favorite Movies` displaying a row of movie posters, including `10 First`, `Never`, and others.

## 8. Key Learnings

- Strengthened full-stack architecture understanding
- Improved React component structure
- Learned secure API design
- Gained confidence in deployment
- Enhanced debugging and problem-solving skills

## 9. Project Links

**Live App:** <https://myflix-movies-sagunanathani.netlify.app/>

**GitHub Repository:** <https://github.com/sagunanathani/myFlix-client>

**Wrapping Up:** Thank you for taking the time to explore my MyFlix project. I look forward to building more applications that combine clean design, strong functionality, and thoughtful user experience.