



Bachelor of IT (Computer Science)
Assignment 2 - Client-Side React Application
CAB230 - Web Computing

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1 Introduction

Appendix A

1.1 Purpose and Description

The purpose of this react application is to collate and display information regarding movies, and cast members to the user in a responsive and accessible manner. The application should allow the user to search for movies by year or title and display the results in a list (Figure 1). When a movie is selected, the application should display all the details of the movie, including the year the movie was made, the plot of the movie and all the cast members involved with the movie (Figure 2). The application should also allow the user to visit individual pages of cast members where the user can view that cast members details, including their birth year, death year and all the movies they have been involved with.

To achieve this goal and to provide the user with the best experience I can, I have used a number of advanced react features, including the use of react router, IntersectionObserver and react-responsive-carousel. The use of these features has allowed me to create a professional looking application that is both easy to use and responsive for the user.

1.2 Completeness and Limitations

This implementation covers all the requirements of the assignment specification. Navigation is handled using react router, controlled forms are used for all user input, and every 10 minutes the refresh token is used to get a new access token. In addition to this, the application uses ag-grid to display the search results in an infinitely scrolling grid and react-responsive-carousel to display the highest scoring movies of all time on the home (landing) page. On the person page the movies the person is involved in are displayed in a grid with the IMDb Rating.

2 Use of End Points

Appendix B

The functionality for all the API endpoints is handled in API.js. This file contains all the functions that are used to make requests to the API. By containing all the API functionality in one file, it makes it easier to maintain and potentially update the application in the future.

2.1 /movies/search

This endpoint is implemented as the getMovies function and is utilised by two search forms at the top of the application. The first search form is for the user to search for movies by title, and the second is for the user to search for movies by year. Both of these

forms are controlled forms and can be accessed from any page in the application. Doing it this way removes an extra layer of complexity for the user and allows them to get into the function of the application right from the start of the application.

(Figure 3)

2.2 /movies/data/{imdbID}

This endpoint is implemented as the getMovie function and is utilised by the movie page to get the details of the movie the user has selected. The movie page is accessed by clicking on any of the movies in the search results. The movie page displays all the details of the movie, including the title, year, box office earnings, runtime, genre, country of origin, plot, cast and ratings. each cast member is a clickable link that will lead to that cast members respective page.

(Figure 4)

2.3 /people/{id}

This endpoint is implemented as the getPerson function and is utilised by the person page to get the details of the person the user has selected. The person page is accessed by clicking on any of the cast members on the movie page. The person page displays all the details of the person exposed by the API, including their name, birth year, death year, all the movies they have been involved with. In a grid the name of each movie, the name of the character the person played and the IMDb Rating is displayed for the users convenience.

(Figure 5)

2.4 /user/register

This endpoint is implemented as the postRegister function and is utilised by the profile page to register new users. The profile page is accessed by clicking on the profile button in the navidation bar at the top of the page. When first launched, if the user isnt logged in the profile page will be in the login state, if the user presses the register button the profile page will be transitioned into the register state. The register state contains fields for the user to enter their email, password and confirm password. If the user presses the register button the /user/register endpoint will be utilised to register the user and the tokens will be stored in local storage. If the user presses back to login the page will be transitioned back into the login state.

(Figure 6)

2.5 /user/login

This endpoint is implemented as the postLogin function and is utilised by the profile page to login existing users. If the user accesses the the profile page while logged out they will be gretted with a login prompt with an email and password field, button to login and a button to register. If the user presses the register button the page will be transitioned into the register state. If the user presses the login button the /user/login endpoint will be utilised to login the user and the tokens will be stored in local storage.

(Figure 7)

2.6 /user/refresh

This endpoint is implemented as the postRefresh function and is utilised in the back end in App.js to refresh the tokens when the app first starts and every 10 minutes after. This is done to ensure the user does not have to login every 10 minutes.

2.7 /user/logout

This endpoint is implemented as the postLogout function and is utilised by the profile page to logout the user. If the user accesses the the profile page while logged in they will be greeted with a message telling them they are logged in accompanied with a button to logout, if the user presses the logout button the /user/logout endpoint will be utilised to logout the user and the tokens will be deleted.

(Figure 8)

3 Modules Used

3.1 react-router-dom

This module was used to handle navigation within the application. It was used to create the navigation bar at the top of the page and to create the routes for the different pages in the application.

<https://www.npmjs.com/package/react-router-dom>

3.2 react-responsive-carousel

This module was used to create a carousel on the home page to display the movies with the highest IMDb Rating.

<https://www.npmjs.com/package/react-responsive-carousel>

3.3 ag-grid-react

This module was used in MoviesPage to create a grid to display the search results in an infinitely scrolling grid, and in PersonPage it is used to display the movies the person stars in.

<https://www.npmjs.com/package/ag-grid-react>

3.4 ag-grid-community

This module was used in both MoviesPage and PersonPage to utilise the CSS for the respective grids.

<https://www.npmjs.com/package/ag-grid-community>

4 Application Design

Appendix C

4.1 Navigation and Layout

The application has been designed to be as simple to use as possible. The ultimate goal of the design was to develop a user experience that the user can understand and use without having to think about it.

A few design choices were made to achieve this goal. The first major choice I made was to move the search bars to the navigation bar at the top of the page. This was done to make the search functionality more accessible to the user by allowing them to search from any page in the application. Moving the search bars to the navigation also freed up space on the MoviesPage allowing me to display more search results at once.

During development I also investigated the possibility of having the poster image for each movie displayed in the search results (Figure 10, Figure 11). I decided against this as it excessively queries the API and often resulted in a rate limit. It also increased the complexity of being able to sort the search results which was something I wanted to implement.

4.2 Usability and Quality of Design

As the application was designed with simplicity in mind, the usability of the application is very high. The application is very easy to use and the user can navigate the application with ease. The application is laid out in a way that is very clean, the only page that can at all be considered cluttered is the LandingPage because of the carousel but even then the carousel is very clean, easy to use and it doesn't seem to distract the user from the rest of the page.

The navigation of the app is very simple and easy for the user to understand. As previously mentioned, by having the search bars within the navigation bar at the top of the page the user can search from anywhere in the application. The only part of the navigation that may confuse the user is the home button using the logo of the application. It may not be clear to the user that this is a button that leads them home. But, this is quite a common design choice in web design and there isn't much use for the user to return to the home page as the user can search from any page in the application.

The design of the application is consistent throughout. The navigation bar is the same on every page, very little colours are used throughout the application and the colours that are used are consistent. Only the standard font is used throughout the application except in the ag-grids where a separate style is used.

4.3 Accessibility

The application has attempted to be as accessible as possible. The application achieves most of the checkpoints of the W3C Web Content Accessibility Guidelines 2.0. The application has achieved the following checkpoints:

- 1.1.1 All non-text content such as images have alternative text.
- 1.2.1 Information conveyed in colour can also be conveyed in black and white.
- 1.6.1 Page can be read without CSS.
- 1.6.2 Text equivalents update when content changes.
- 1.7.1 The screen doesn't flicker.
- 1.14.1 The application uses the clearest language appropriate.

5 Technical Description

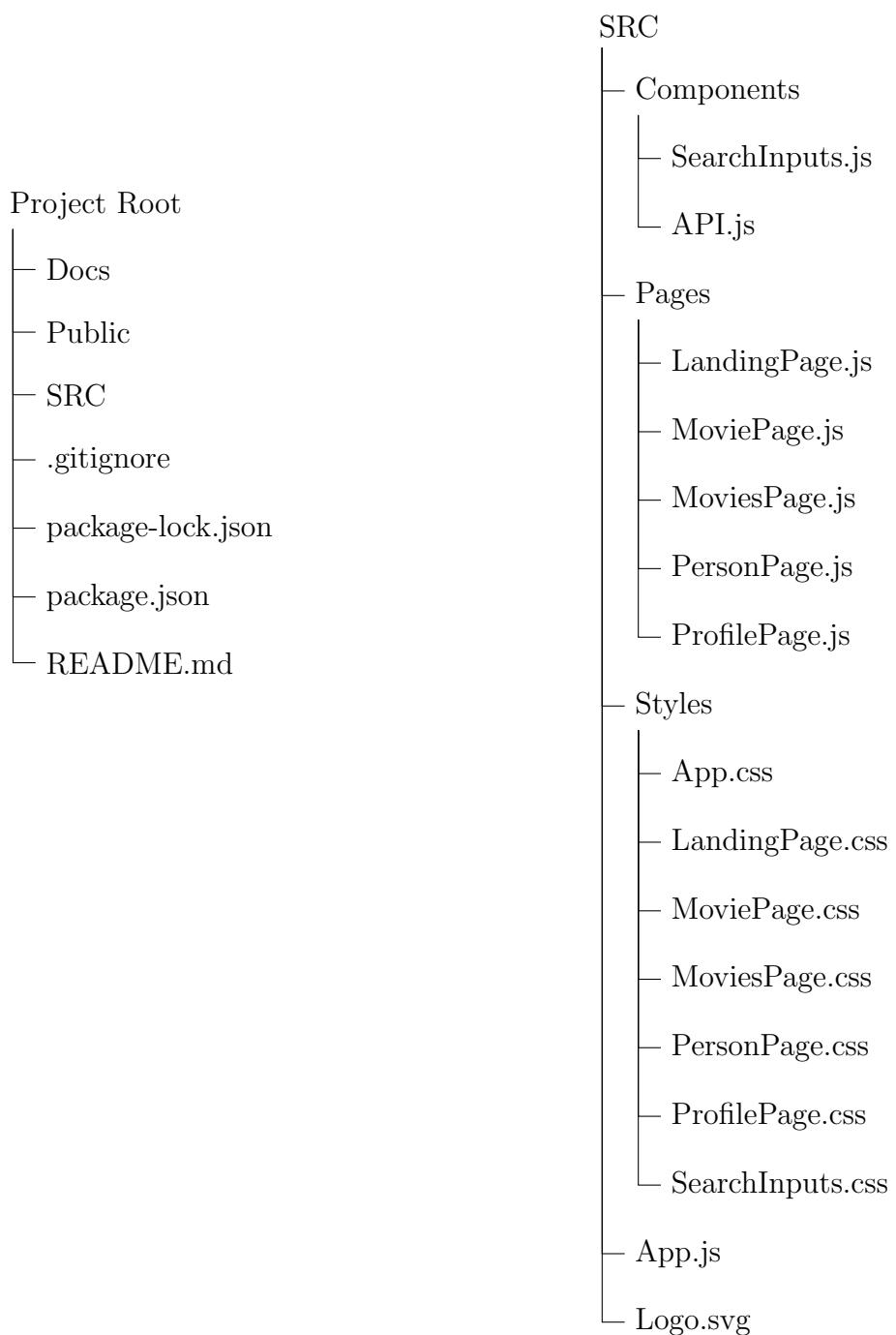
5.1 Architecture

- **Components:**
This folder contains the components and the API handler for the application.
- **Pages:**
This folder contains all the pages for the application.
- **Styles:**
This folder contains all the CSS files for the application.

The diagram on the next page shows the file structure of the application. As you can see, the application is structured in a very simple way. As previously mentioned, all the code for handling API requests is contained within the API.js file. This has made it easier to write the code for the application as it is all in one place and can be reused easily.

The only component of the application that has been separated out into its own file is the search inputs. The only reason this was done was because I couldn't get it working within App.js.

Each page of the application has its own JS and CSS file. This was done to make the code easier to read and understand, and to cut down on the amount of code in each file.



5.2 Test Plan

Appendix D

Task	Expected Outcome	Result	Screenshot
Search by title.	List of movies returned	PASS	Figure 13
Search by year.	List of movies returned	PASS	Figure 14
Search by title and year.	Movie, or List of movies returned	PASS	Figure 15
Click on a movie.	Respective movie page is displayed.	PASS	Figure 16
Click on a cast member. (Logged Out)	User is prompted to Login	PASS	Figure 17
Click on a cast member. (Logged In)	Respective person page is displayed.	PASS	Figure 18
Register a new user.	User is registered and logged in.	PASS	Figure 19 Figure 20
Login as a user.	User is logged in.	PASS	Figure 21 Figure 22
Log out as a user.	User is logged out.	PASS	Figure 23 Figure 24

5.3 Difficulties, Exclusions or Unresolved and Persistent Errors

The only notable issues that persist in the final version of the app is the lack of an ability to sort the movies by title, year or rating, and an error that occurs when the application has been offline for more than a day. The first issue is due to the fact that the API doesn't support sorting and the second issue is due to the fact that the refresh token expires after 24 hours. In summation, both of these issues are server side so there's not a lot that can be done.

6 User Guide

6.1 How to Search for a Movie

1. To search for a movie, click on one of the search boxes and start typing.



2. A list of Movies will appear, click on the one you want to view.

Title		Year	IMDb Rating	Rotten Tomatoes Rating	Metacritic Rating	Classification
Goodfellas	1990	8.7	96	91	R	
A Few Good Men	1992	7.7	84	62	R	
The Good Son	1993	6.4	25	45	R	
The Long Kiss Goodnight	1996	6.8	68	44	R	
Good Burger	1997	5.7	33	41	PG	
Good Will Hunting	1997	8.3	97	70	R	
Midnight in the Garden of Good and Evil	1997	6.6	50	57	R	
As Good as It Gets	1997	7.7	86	67	PG-13	
Good Advice	2001	6.2	33		R	
The Good Girl	2002	6.4		71	R	
The Good Thief	2002	5.4		68	R	
No Good Deed	2002	7.7	25		R	
Good Bye, Lenin!	2003	6.7	90	68	R	
The Good Shepherd	2006	6.7	56	61	R	
Goodbye, Dragon Inn	2003	7.1	81	83	N/A	
A Good Woman	2004	6.5	37	53	PG	
In Good Company	2004	6.5	82	66	PG-13	
A Good Year	2006	6.9	26	47	PG-13	

3. The respective Movie Page will appear, displaying information about the movie.

UMDb Click here to return home good Search by year Continue Typing to refine the results Profile



Goodfellas

Year: 1990
Box Office: \$46,909,721
Runtime: 145 minutes
Genres: Biography, Crime, Drama
Country: United States

Plot:
The story of Henry Hill and his life in the mob, covering his relationship with his wife Karen Hill and his mob partners Jimmy Conway and Tommy DeVito in the Italian-American crime syndicate.

Cast:

- Thelma Schoonmaker(editor)
- Robert De Niro(actor) - James Conway
- Ray Liotta(actor) - Henry Hill
- Joe Pesci(actor) - Tommy DeVito
- Lorraine Bracco(actress) - Karen Hill
- Morgan Freeman(actor)
- Nicholas Pileggi(writer)
- Irrfan Khan(actor)
- Michael Ballhaus(cinematographer)
- James Y. Krieg(editor)

Ratings:

Internet Movie Database: 8.7
Rotten Tomatoes: 96
Metacritic: 91

6.2 How to Visit a Cast Members Page

1. To visit a cast members page, click on one of the cast members names on a Movie Page.

The screenshot shows the UMDb interface for the movie "Goodfellas". At the top, there are search bars for "Search by title" and "Search by year", and a "Profile" link. Below the header is the movie's poster featuring Ray Liotta, Robert De Niro, and Joe Pesci. The movie's title, "Goodfellas", is displayed in large orange letters. Below the title, the year 1990, box office earnings (\$46,909,721), runtime (145 minutes), genres (Biography, Crime, Drama), and country (United States) are listed. A "Plot:" section contains a brief summary of the movie's plot. A "Cast:" section is highlighted with a red box, listing the names of the cast members: Thelma Schoonmaker (editor), Robert De Niro (actor), James Conway, Ray Liotta (actor), Henry Hill, Joe Pesci (actor), Tommy DeVito, Lorraine Bracco (actress), Karen Hill, Martin Scorsese (director), Nicholas Pileggi (writer), Irvin Winkler (producer), Michael Ballhaus (cinematographer), and James Y. Kwei (editor). Below the cast list is a "Ratings:" section with links to the Internet Movie Database (8.7), Rotten Tomatoes (96), and Metacritic (91). A red annotation with the text "Click any of the cast members here to view their respective page" points to the cast list.

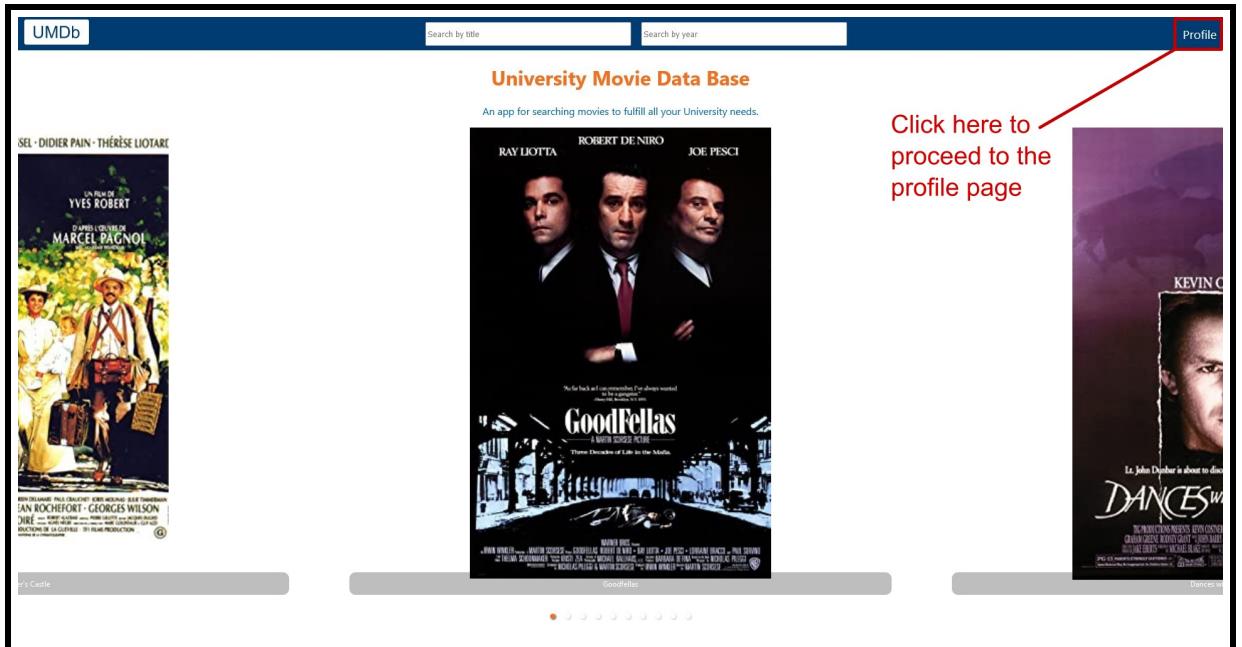
2. The respective Person Page will appear, displaying information about the cast member.

The screenshot shows the UMDb "Person Details" page for Ray Liotta. The header includes the UMDb logo, a search bar for "Blade", and a "Profile" link. The main section is titled "Person Details" and features a "Ray Liotta" profile card with his date of birth (1954) and death (2022). Below the profile card is a "Roles:" section. A table lists Ray Liotta's roles in various movies, including his character name and the IMDb rating. The table has columns for "Movie Name", "Character", and "IMDb Rating".

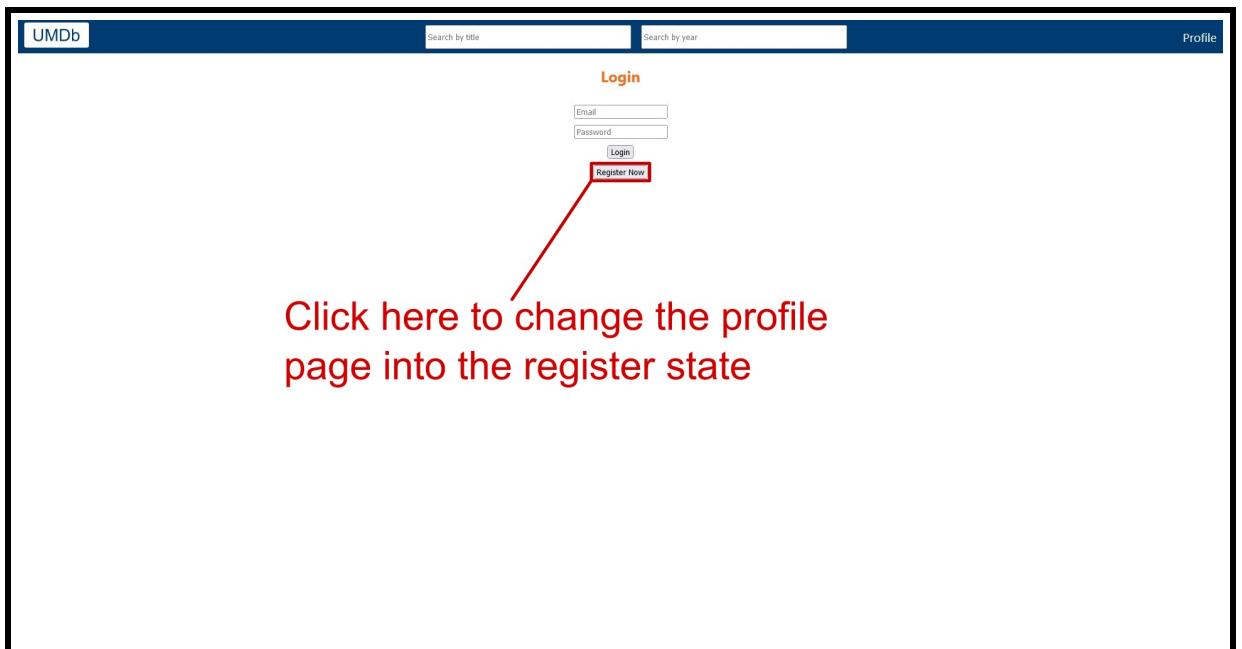
Movie Name	Character	IMDb Rating
Goodfellas	Henry Hill	8.7
Unlawful Entry	Officer Pete Davis	6.4
Corrina, Corrina	Manny Singer	6.6
No Escape	Capt. J.T. Robbins	6.1
Operation Dumbo Drop	Capt. T.C. Doyle	5.2
Unforgettable	David Krane	6
Cop Land	Gary Figgis	7
Turbulence	Ryan Weaver	4.9

6.3 How to Register an Account

1. To register an account, first proceed to the profile page by clicking on the button at the top left of the screen.



2. When the profile page first launches the page will be in the Login state, click Register Now to change into the Register state.



3. In the Register state enter your Email and then your desired password twice before clicking register to confirm your registration.

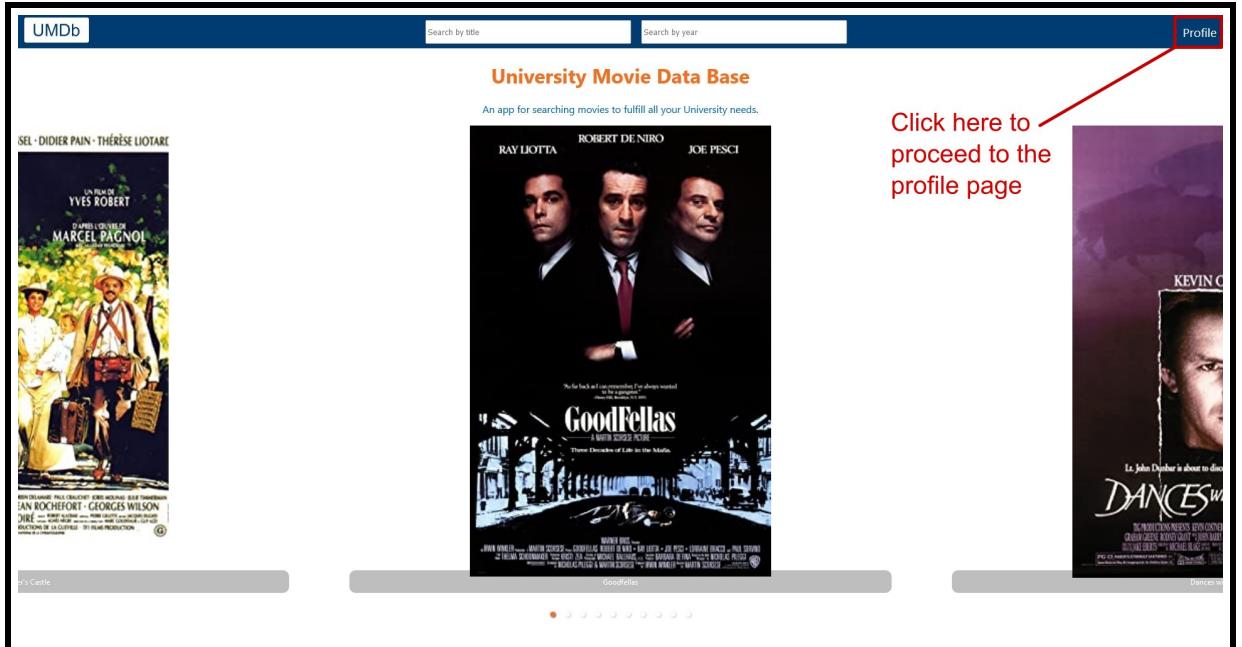
The screenshot shows the UMDb Register page. At the top, there is a navigation bar with 'UMDb' on the left, search fields for 'Search by title' and 'Search by year', and a 'Profile' link on the right. Below the navigation bar, the word 'Register' is centered in red text. There are three input fields: 'Email' (highlighted with a green border), 'Password' (highlighted with a red border), and 'Confirm Password' (highlighted with a blue border). Below these fields is a purple 'Register' button. To the left of the 'Email' field, a green line points to the text 'Enter your email'. To the right of the 'Password' field, a red line points to the text 'Enter password twice to confirm'. A purple line points from the bottom right to the 'Register' button with the text 'Click \'Register\' to register'. At the bottom left, an orange line points to the 'Back to Login' button with the text 'Click \'Back to Login\' to return to the Login State'.

4. If the registration is successful the page will be transitioned into the logged in state indicating the user has been logged in.

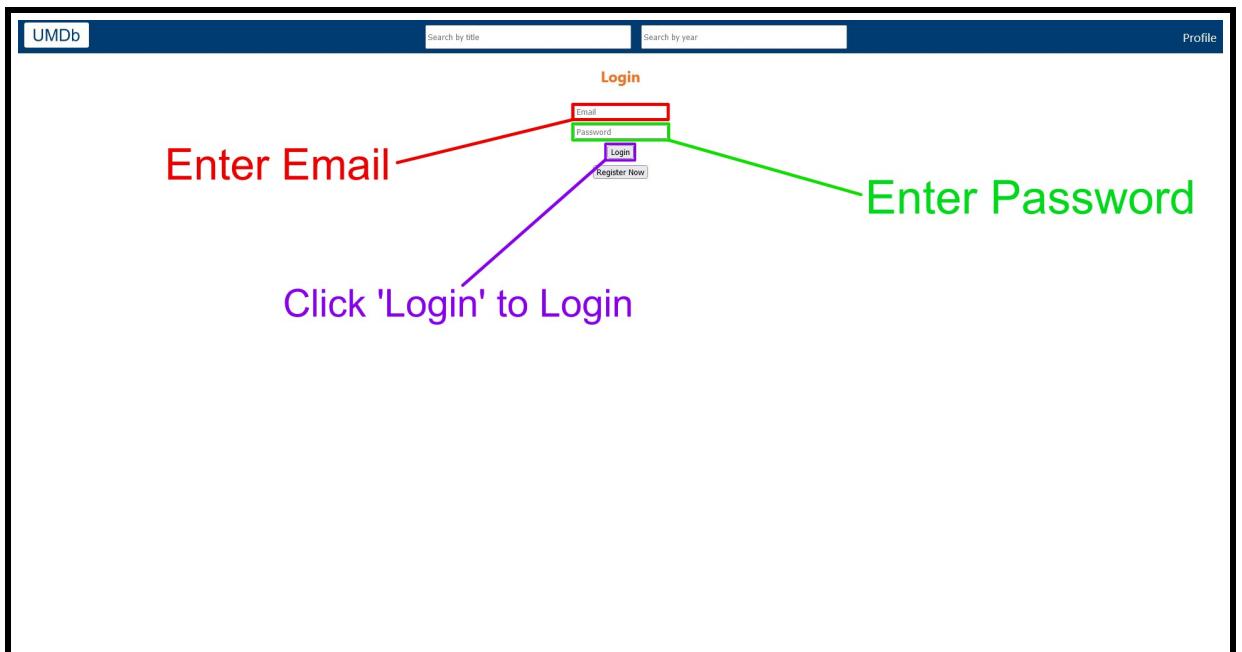
The screenshot shows the UMDb Logged In page. At the top, there is a navigation bar with 'UMDb' on the left, search fields for 'Search by title' and 'Search by year', and a 'Profile' link on the right. The main content area displays the message 'You are Logged In' in orange text, followed by a small 'Logout' button below it.

6.4 How to Login as a User

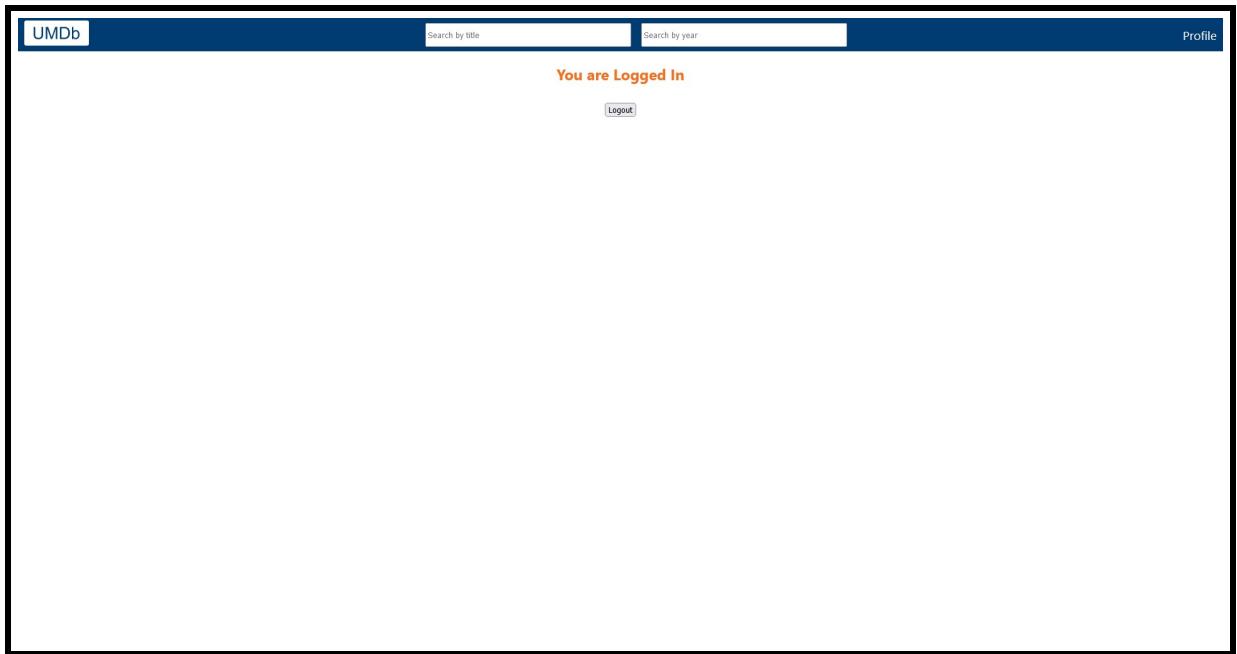
1. To login as a user, first proceed to the profile page by clicking on the button at the top left of the screen.



2. When the profile page launches, enter your Email and Password before clicking Login to confirm your login.

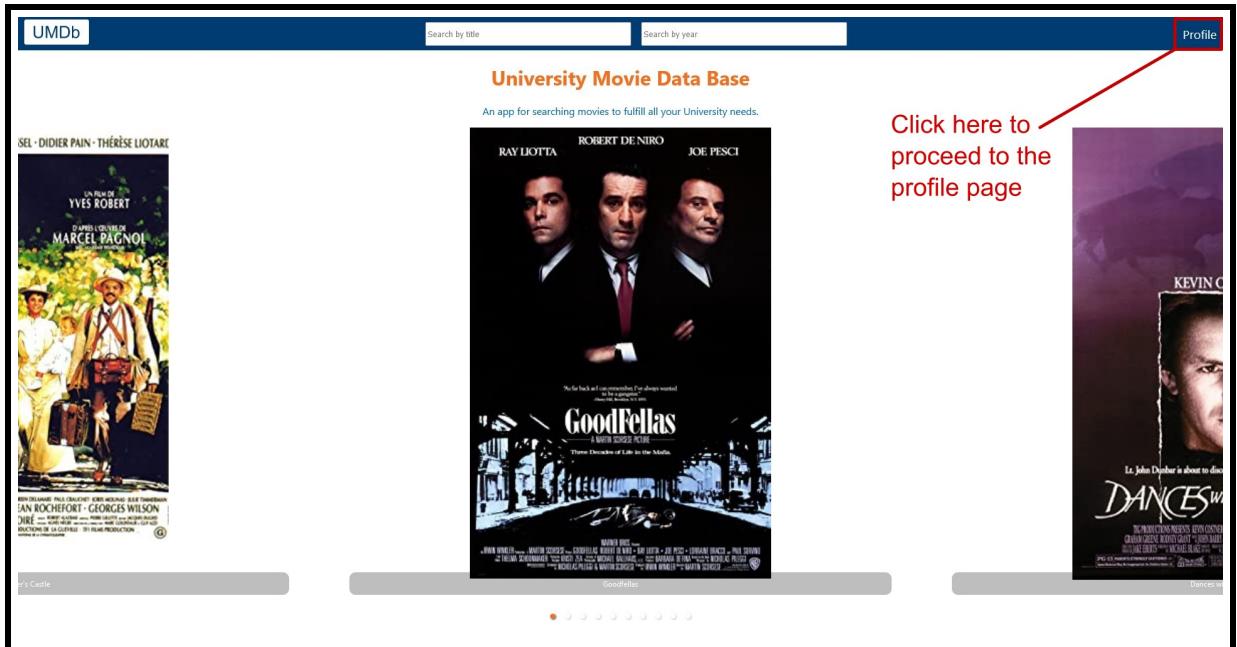


3. If the login is successful the page will be transitioned into the logged in state indicating the user has been logged in.



6.5 How to Logout

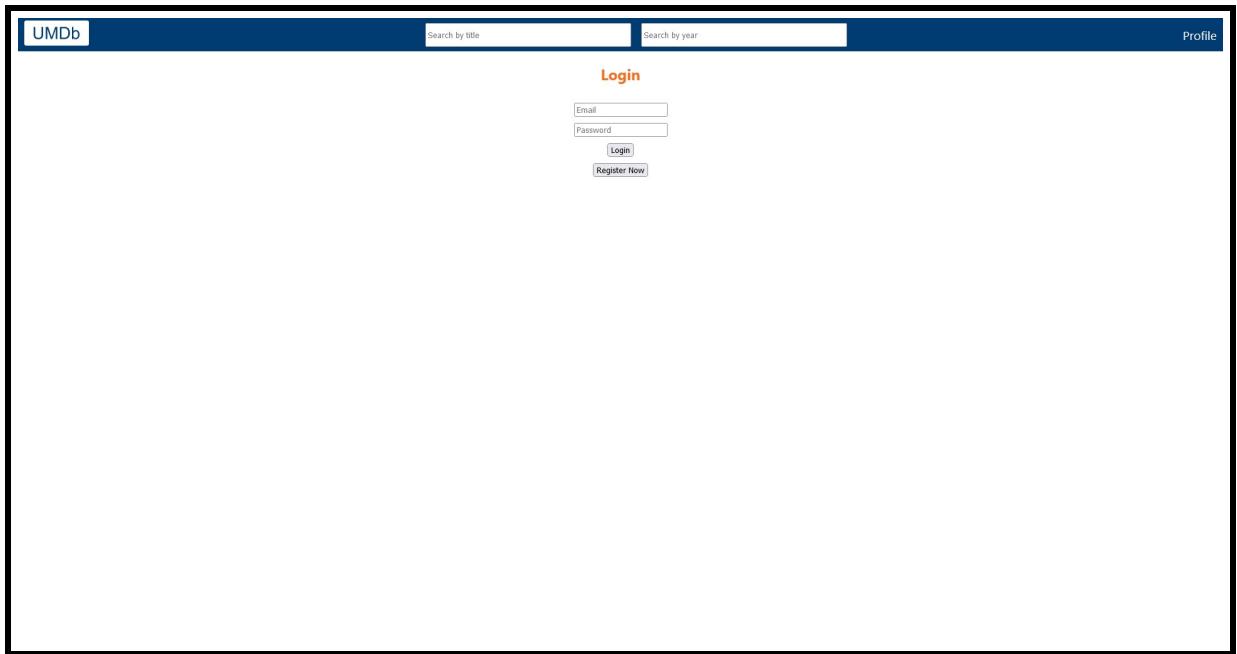
1. To logout, first proceed to the profile page while loggedin by clicking on the button at the top left of the screen.



2. When the profile page launches, click on the Logout button to logout.



3. If the logout is successful the page will be transitioned into the logged out state indicating the user has been logged out.



The screenshot shows the UMDb login interface. At the top, there is a dark blue header bar with the "UMDb" logo on the left, a search bar labeled "Search by title" and "Search by year" in the center, and a "Profile" link on the right. Below the header, the main content area has a white background. In the center, the word "Login" is displayed in orange. Below it are two input fields: "Email" and "Password", each with its respective label above it. To the right of the password field is a "Login" button. At the bottom right of the form area is a "Register Now" link.

7 Appendix

7.1 Appendix A - Introduction

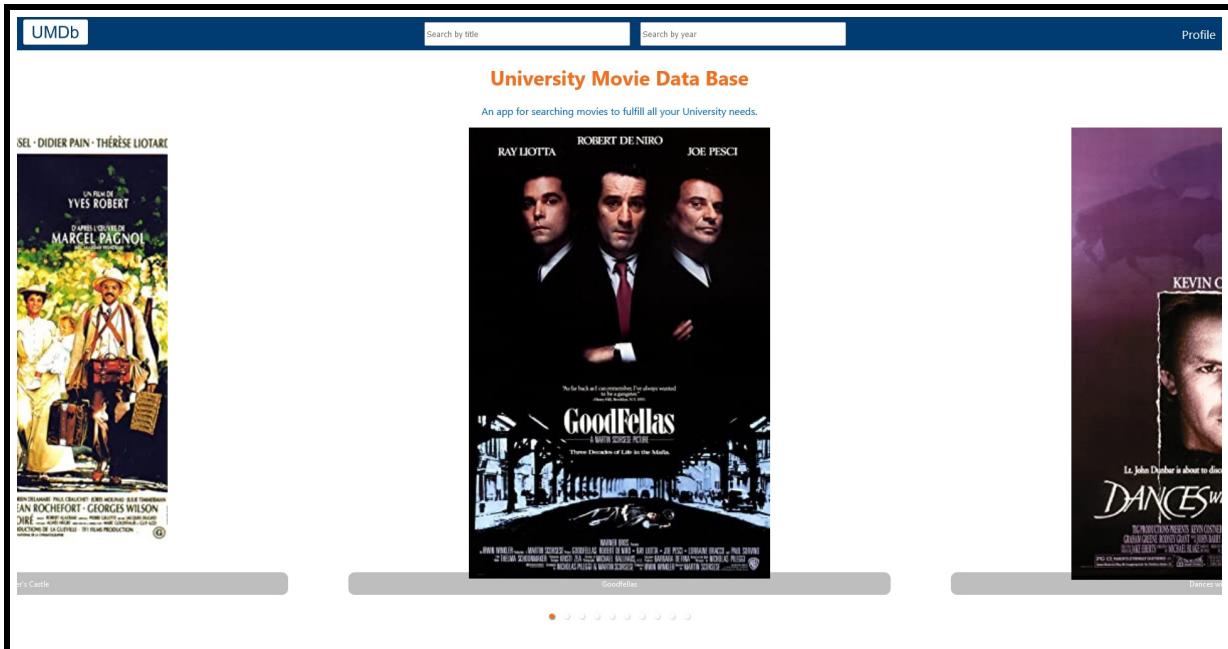


Figure 1: Landing Page of the Application

The image shows a detailed movie page for "Goodfellas" from the application. At the top, there is a navigation bar with tabs for "UMDb" (selected), "Search by title", "Search by year", and "Profile". Below the navigation bar, the movie's poster is shown, followed by the title "Goodfellas" in orange. Below the title, the year "Year: 1990", box office information "Box Office: \$46,909,721", runtime "Runtime: 145 minutes", genres "Genres: Biography, Crime, Drama", and country "Country: United States" are listed. A "Plot:" section follows, with a brief summary: "The story of Henry Hill and his life in the mob, covering his relationship with his wife Karen Hill and his mob partners Jimmy Conway and Tommy DeVito in the Italian-American crime syndicate." A "Cast:" section lists the main cast members: Thelma Schoonmaker (editor), Robert De Niro (actor) - James Conway, Ray Liotta (actor) - Henry Hill, Joe Pesci (actor) - Tommy DeVito, Lorraine Bracco (actress) - Karen Hill, Martin Scorsese (director), Nicholas Pileggi (writer), Irwin Winkler (producer), Michael Ballhaus (cinematographer), and James V. Kewis (editor). A "Ratings:" section shows the movie's ratings from various sources: Internet Movie Database: 8.7, Rotten Tomatoes: 96, Metacritic: 91.

Figure 2: Movie Page of the Movie "Goodfellas"

Person Details

Kevin Costner

Date of Birth: 1955
Death:

Roles:

Movie Name	Character	IMDb Rating
Dances with Wolves	Lieutenant Dunbar	8
Revenge	Cochran	6.2
JFK	Jim Garrison	8
Robin Hood: Prince of Thieves	Robin of Locksley	6.9
The Bodyguard	Frank Farmer	6.3
A Perfect World	Butch Haynes	7.5
Rapa Nui		6.4
The War	Stephen Simmons	6.7

Figure 3: Person Page of the Actor "Kevin Costner"

7.2 Appendix B - Use of End Points

Title	Year	IMDb Rating	Rotten Tomatoes Rating	Metacritic Rating	Classification
Goodfellas	1990	8.7	96	91	R
A Few Good Men	1992	7.7	84	62	R
The Good Son	1993	6.4	25	45	R
The Long Kiss Goodnight	1996	6.8	68	44	R
Good Burger	1997	5.7	33	41	PG
Good Will Hunting	1997	8.3	97	70	R
Midnight in the Garden of Good and Evil	1997	6.6	50	57	R
As Good as It Gets	1997	7.7	86	67	PG-13
Good Advice	2001	6.2	33		R
The Good Girl	2002	6.4		71	R
The Good Thief	2002	6.5	77	68	R
No Good Deed	2002	5.4	25		R
Good Bye Lenini!	2003	7.7	90	68	R
The Good Shepherd	2006	6.7	56	61	R
Goodbye, Dragon Inn	2003	7.1	81	83	N/A
A Good Woman	2004	6.5	37	53	PG
In Good Company	2004	6.5	82	66	PG-13
A Good Year	2006	6.9	26	47	PG-13

Figure 4: Movies Page of the Application

IMDb

Fight C Search by year Profile

Fight Club

Year: 1999
Box Office: \$37,030,102
Runtime: 139 minutes
Genres: Drama
Country: Germany, United States

Plot:
An insomniac office worker and a devil-may-care soap maker form an underground fight club that evolves into much more.

Cast:

- Art [Iacono](#)(producer)
- Brad Pitt([actor](#)) - Tyler Durden
- Edward Norton([actor](#)) - Narrator
- Meat Loaf([actor](#)) - Robert Paulsen
- Zach Grenier([actor](#)) - Richard Chesler (Regional Manager)
- David Fincher([director](#))
- Chuck Palahniuk([writer](#))
- Jim Uhly([writer](#))
- Ross Grayson Bell([producer](#))
- Cédric Chaffin([producer](#))

Ratings:
Internet Movie Database: 8.8
Rotten Tomatoes: 79
Metacritic: 66

Figure 5: Movie Page of the Movie "Fight Club"

IMDb

Search by title Search by year Profile

Person Details

Robert De Niro

Date of Birth: 1943
Death:
Roles:

Movie Name	Character	IMDb Rating
Awakenings	Leonard Lowe	7.8
Goodfellas	James Conway	8.7
Stanley & Iris	Stanley Cox	6.3
Backdraft	Donald Rimgale	6.7
Cape Fear	Max Cady	7.3
Guilty by Suspicion	David Merrill	6.5
Thunderheart	Lorenzo	6.8
A Bronx Tale		7.8

Figure 6: Person Page of the Actor "Robert De Niro"

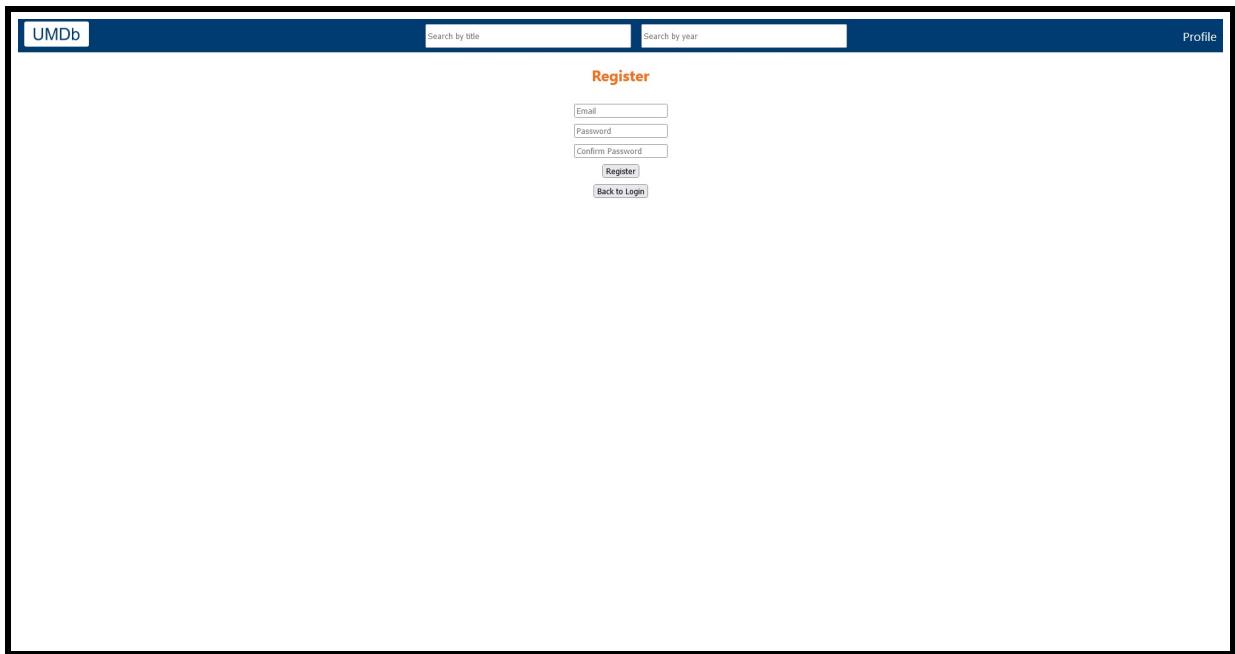


Figure 7: Profile Page in the Register State

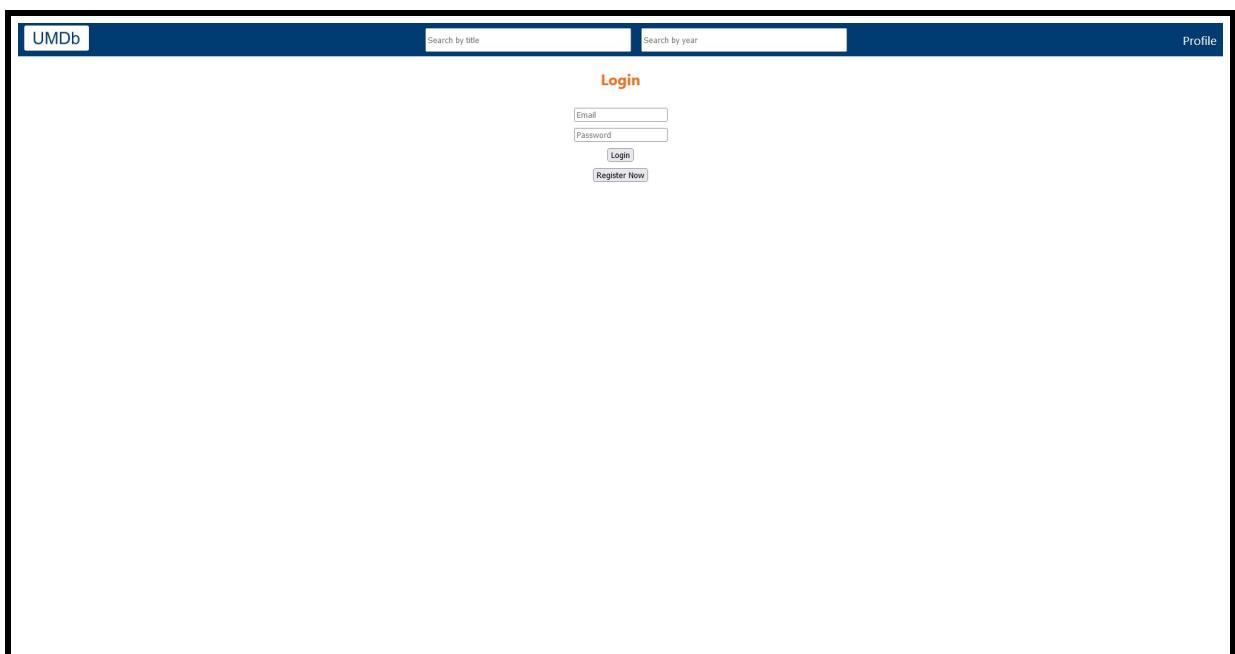


Figure 8: Profile Page in the Login State

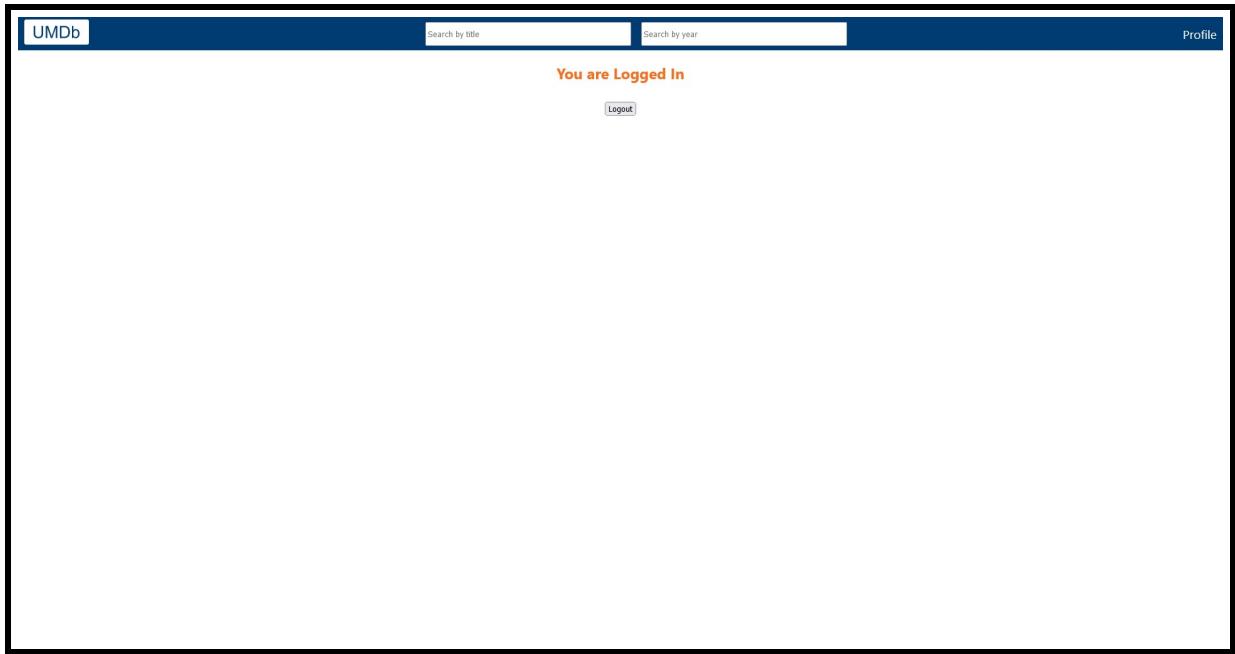


Figure 9: Profile Page Ready for the User to Logout

7.3 Appendix C - Application Design

A screenshot of an earlier version of the MoviePage. The page has a dark blue header bar with the 'IMDb' logo, a 'Movies' link, and a 'Profile' link. Below the header, the word 'Movies' is centered in red. There are two search input fields: 'Search by Title:' and 'Search by Year:', with '1996' entered in the year field. A 'Search' button is next to the year field. The main content is a table listing movies from 1996, with columns for Title, Year, IMDb Rating, Rotten Tomatoes Rating, Metacritic Rating, and Classification. The table includes rows for 'The Pillow Book', 'Poison Ivy II', 'Tromeo and Juliet', '101 Dalmatians', '2 Days in the Valley', 'The Adventures of Pinocchio', 'Alaska', 'Albino Alligator', 'All Dogs Go to Heaven 2', 'The Apartment', 'The Arrival', 'The Associate', 'Bad Moon', 'Barb Wire', 'Basquiat', 'Beautiful Girls', 'Beautiful Thing', 'Beavis and Butt-Head Do America', and 'Bed of Roses'. The 'Classification' column shows ratings like Not Rated, R, G, PG, PG-13, and PG-13.

Figure 10: An earlier version of the MoviePage

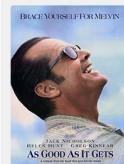
Search by title		Search by year		Profile	
					
Goodfellas	A Few Good Men	The Good Son	The Long Kiss Goodnight	Good Burger	Good Will Hunting
1990	1992	1993	1996	1997	1997
					
Good Advice	The Good Girl	The Good Thief	No Good Deed	Good Bye Lenin!	The Good Shepherd
2001	2002	2002	2002	2003	2006
					
Midnight in the Garden of Good and Evil	As Good as It Gets				
1997	1997				

Figure 11: An experimental version of the MoviesPage

Figure 12: Another experimental version of the MoviesPage

7.4 Appendix D - Test Plan

UMDb		Blade	Search by year	Profile	
Title	Year	IMDb Rating	Rotten Tomatoes Rating	Metacritic Rating	Classification
Sling Blade	1996	8	97	84	R
Blade	1998	7.1	57	47	R
Blade II	2002	6.7	57	52	R
Blade: Trinity	2004	5.8	24	38	R
The Hidden Blade	2004	7.7	84	76	R
Blades of Glory	2006	6.3	70	64	PG-13
Shinobi: Heart Under Blade	2005	6.8			R
14 Blades	2010	6.3	69	50	R
Blade Runner 2049	2017	8	88	81	R
Dragon Blade	2015	5.9	35	41	R
Blade of the Immortal	2017	6.7	86	72	R

Figure 13: Test 1 - Search by Title

UMDb		Search by title	2008	Profile	
Title	Year	IMDb Rating	Rotten Tomatoes Rating	Metacritic Rating	Classification
The Bank Job	2008	7.2	80	69	R
Berlin Calling	2008	7.2			N/A
Lymelife	2008	6.8	63	64	R
Babylon A.D.	2008	5.5	7	26	PG-13
The Red Baron	2008	6.3	17		PG-13
Indiana Jones and the Kingdom of the Crystal Skull	2008	6.2	78	65	PG-13
Four Christmases	2008	5.7	25	41	PG-13
Iron Man	2008	7.9	94	79	PG-13
Journey to the Center of the Earth	2008	5.8	61	57	PG
Che: Part Two	2008	6.8	79	64	Not Rated
Leatherheads	2008	6	52	56	PG-13
Synecdoche, New York	2008	7.5	69	67	R
The Onion Movie	2008	6.2			Not Rated
The Secret of Moonacre	2008	6	23		PG
Bolt	2008	6.8	90	67	PG
Far Cry	2008	3.2			R
My Sassy Girl	2008	6.2			PG-13
Rudo y Cursi	2008	6.7	73	67	R

Figure 14: Test 2 - Search by Year

The D						Profile
Title	Year	IMDb Rating	Rotten Tomatoes Rating	Metacritic Rating	Classification	
The Dark Knight	2008	9	94	84	PG-13	
The Mummy: Tomb of the Dragon Emperor	2008	5.2	13	31	PG-13	
The Duchess	2008	6.9	62	62	PG-13	
I Sell the Dead	2008	6	73	62	Not Rated	
Dance of the Dead	2008	5.8	80		R	
The Day the Earth Stood Still	2008	5.5	20	40	PG-13	

Figure 15: Test 3 - Search by Title and Year

UMDb
Blade
Search by year
Profile

Blade Runner 2049

Year: 2017
Box Office: \$92,071,675
Runtime: 164 minutes
Genres: Action, Drama, Mystery
Country: United States, United Kingdom, Canada, Spain

Plot:
Young Blade Runner K's discovery of a long-buried secret leads him to track down former Blade Runner Rick Deckard, who's been missing for thirty years.

Cast:

- Andrew A. Koszor (producer)
- Harrison Ford (actor) - Rick Deckard
- Ryan Gosling (actor) - K
- Ana de Armas (actress) - Joi
- Dave Bautista (actor) - Sapper Morton
- Denis Villeneuve (director)
- Hampton Fancher (writer)
- Michael Green (writer)
- Philip K. Dick (writer)
- Broderick Johnson (producer)

Ratings:

Internet Movie Database: 8
Rotten Tomatoes: 88
Metacritic: 81

Figure 16: Test 4 - Click on a Movie

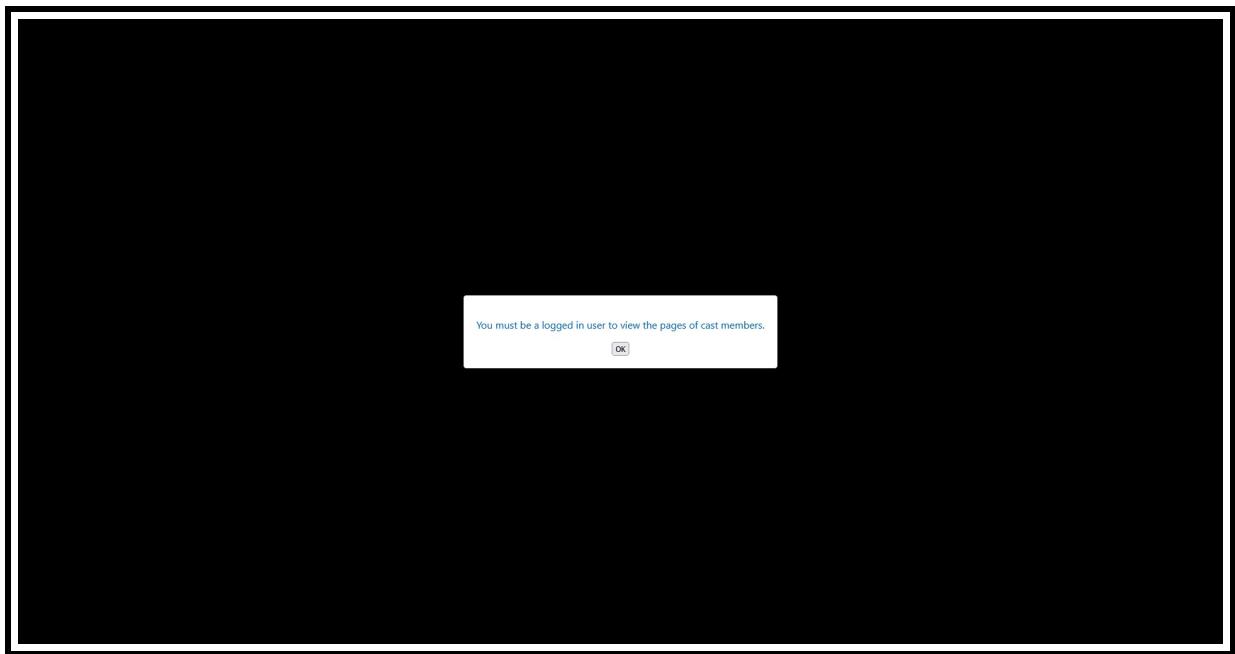


Figure 17: Test 5 - Click on a Cast Member (Logged Out)

A screenshot of the IMDb website showing the person details for Ray Liotta. The page includes basic information like date of birth and death, and a table of his movie roles with titles, characters, and IMDB ratings.

Movie Name	Character	IMDb Rating
Goodfellas	Henry Hill	8.7
Unlawful Entry	Officer Pete Davis	6.4
Corrina, Corrina	Manny Singer	6.6
No Escape	Capt. J.T. Robbins	6.1
Operation Dumbo Drop	Capt. T.C. Doyle	5.2
Unforgettable	David Crane	6
Cop Land	Gary Figgins	7
Turbulence	Ryan Weaver	4.9

Figure 18: Test 6 - Click on a Cast Member (Logged In)

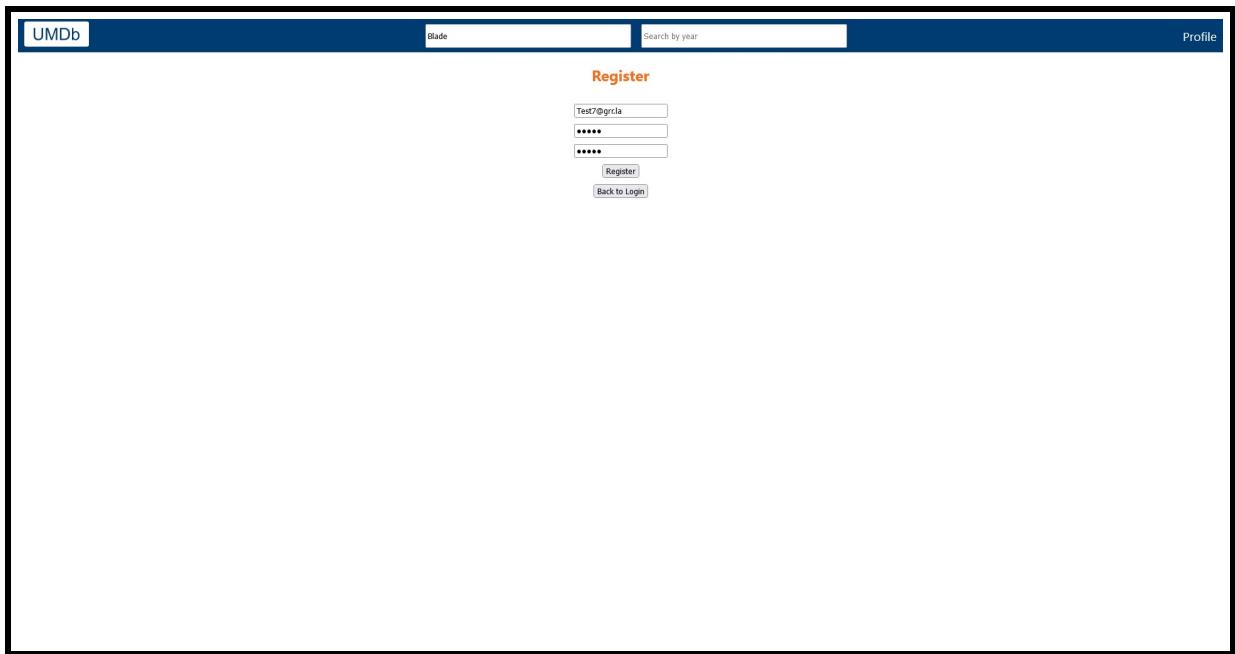


Figure 19: Test 7 - Register a New User

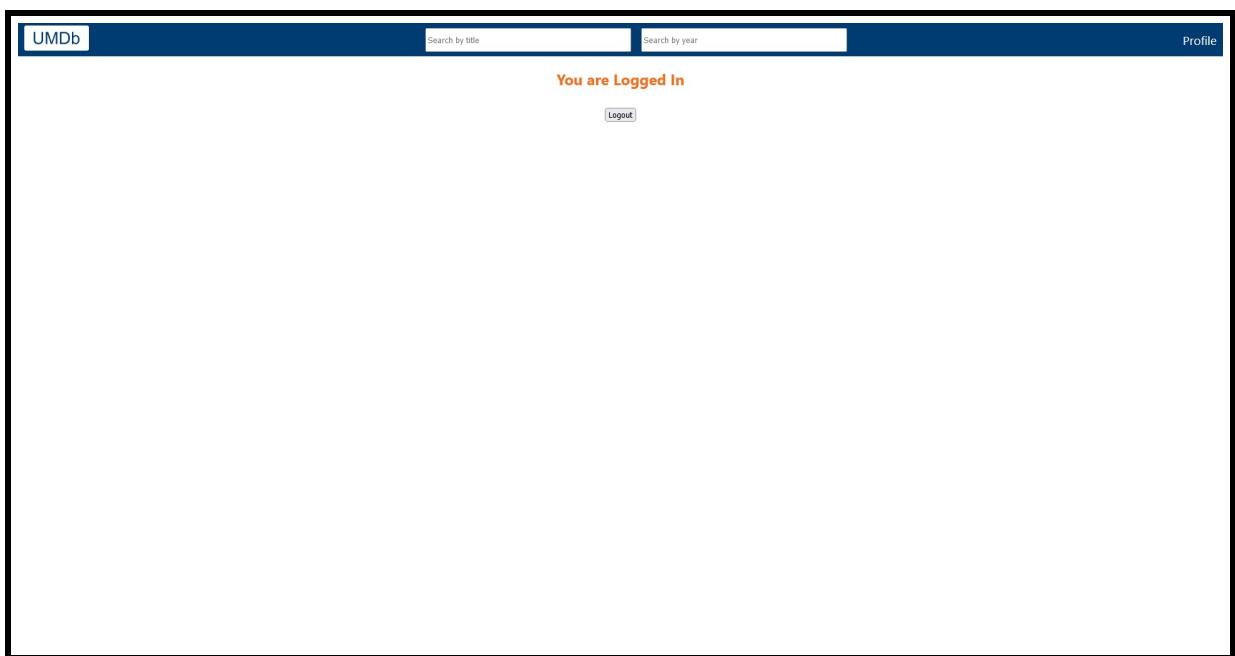


Figure 20: Test 7 - Logged in as a User

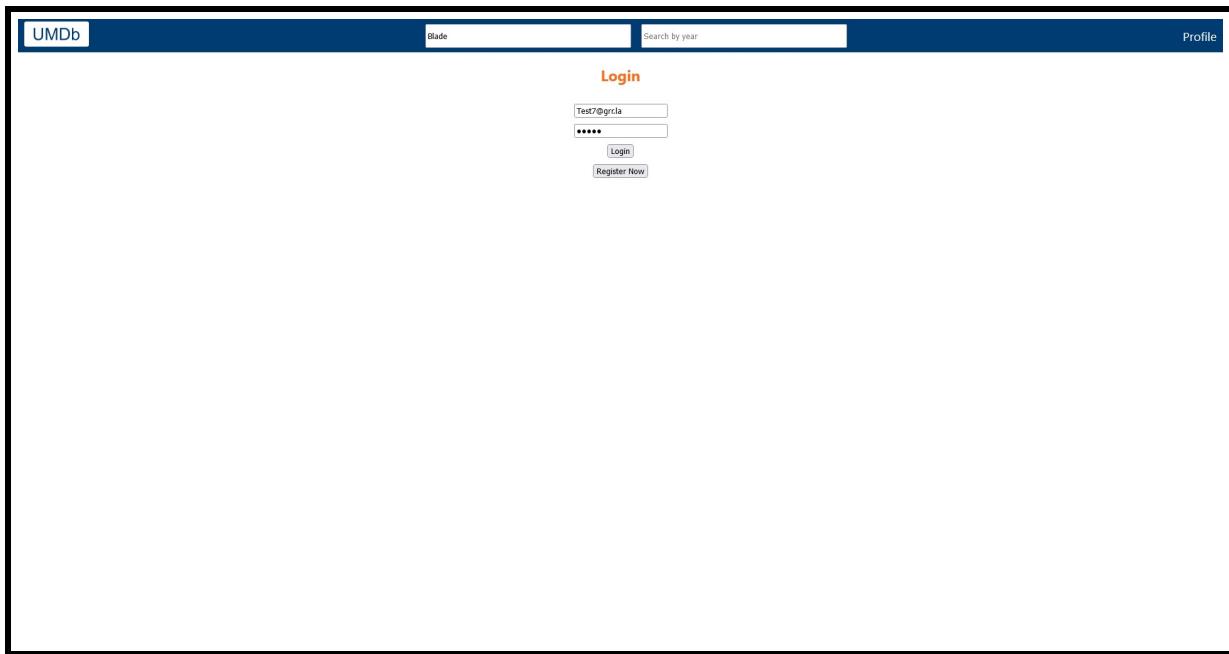


Figure 21: Test 8 - Login in as User

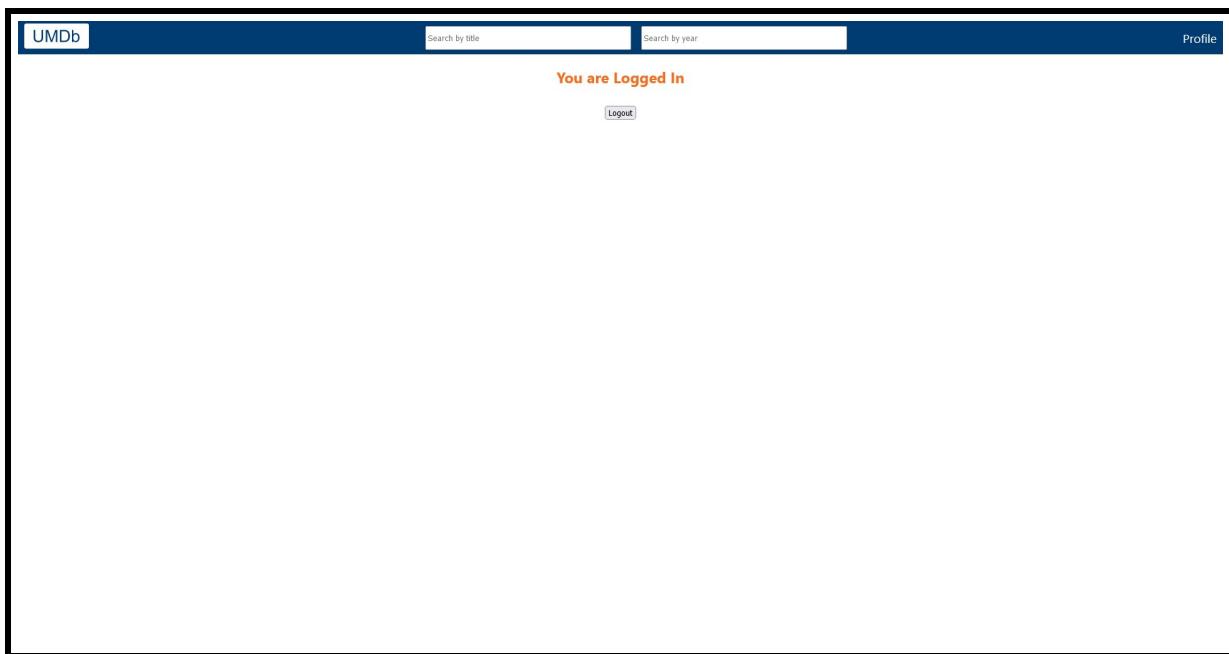


Figure 22: Test 8 - Logged in as a User

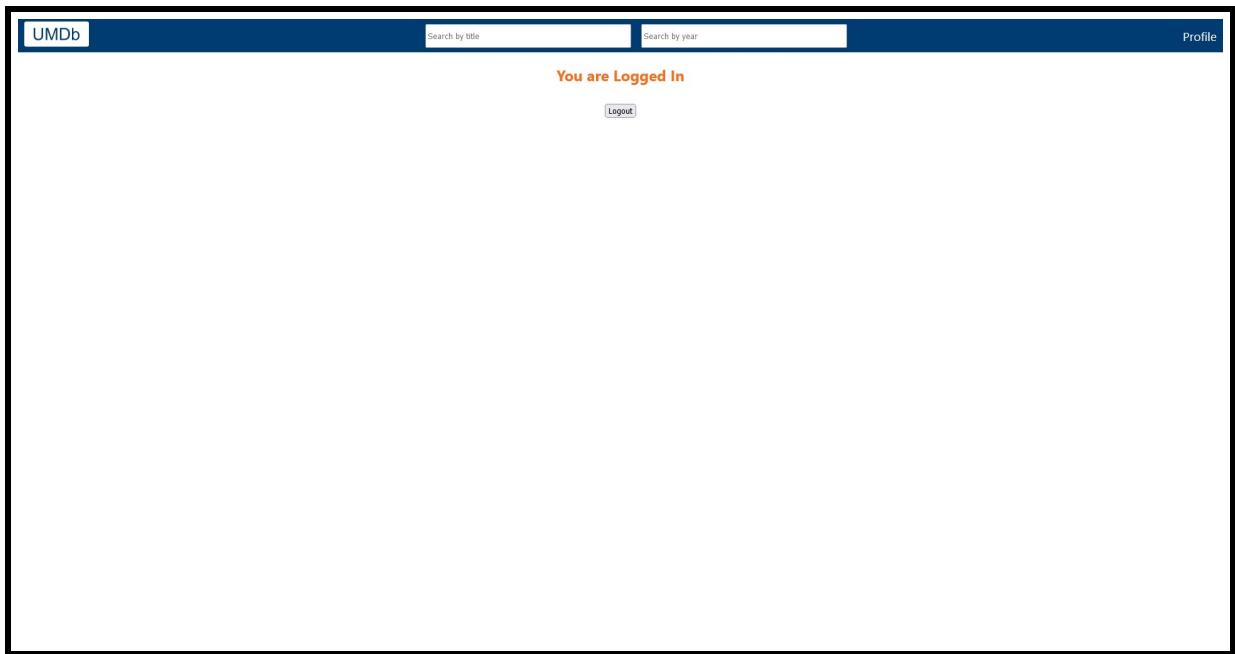


Figure 23: Test 9 - Ready to Logout

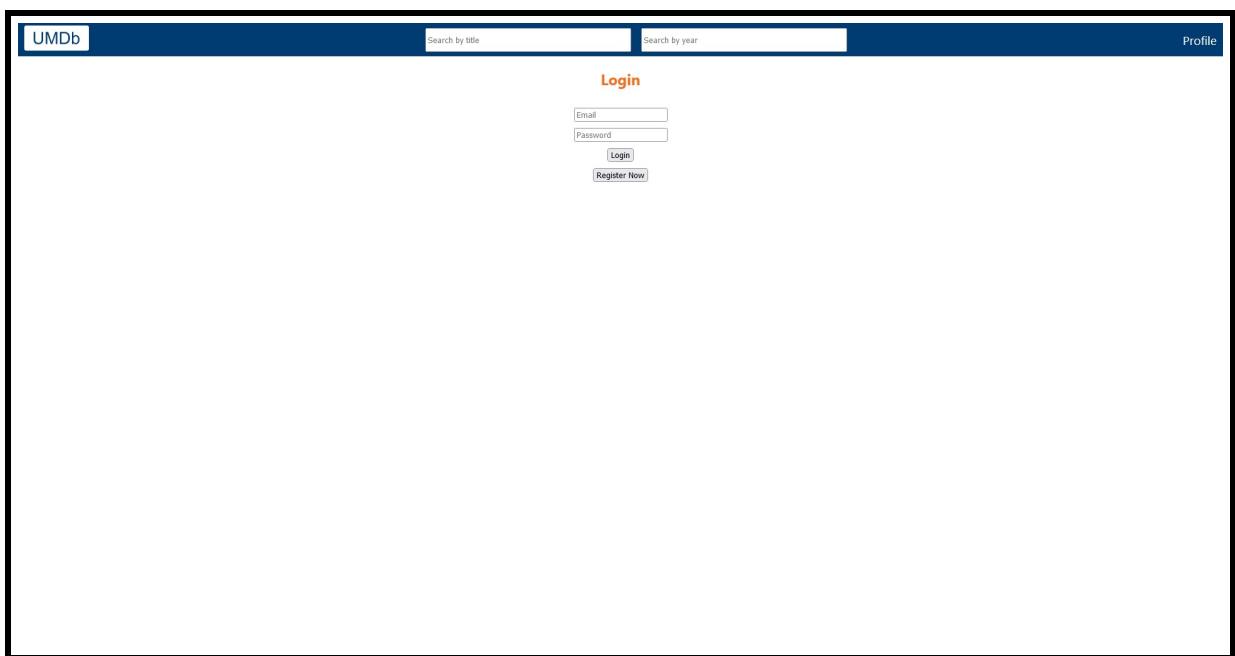


Figure 24: Test 9 - Logged Out