DOKUZ EYLÜL UNIVERSITY

ENGINEERING FACULTY

DEPARTMENT OF COMPUTER ENGINEERING

<BIA Cinema Ticket Database Management System (BIA CT DBMS)>

CME3201 Database Management Systems

Final Project Report

Phase 3

2021-2022 FALL

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1. Abstract

The web application is a cinema ticket database system. Aim of the application is to help users to buy cinema tickets easily and profitably. The web application will be very useful for the ones who love to watch movies and discuss it. Users can see the movies that are shown in each cinema listed by hours. Also, the application helps the user to choose a movie with trailers, limited number of comments and the feature of listing movies in specific categories. The user can create a profile, then will have access to some features of the system such as buying tickets, reading all comments, writing comments and rating movies from 0-10. Users can tick a comment as a spoiler to avoid affecting other users. When the users add the movies they like to the favorites list, the system will recommend some movies which the user may like.

2. Completion Report

BIA CINEMA, which we laid the foundations of in the last quarter of 2021, is a cinema and ticket website that was established in a very short time. It offers convenience to its users with its easy interfaces. BIA CINEMA is also a site that allows users to buy tickets for the movies shown in the show from our available cinemas in current cities. In addition, our user can cancel his ticket whenever she/he wants. Also, the user can view information about the movies she/he likes and has watched before, watch movies in 12 different categories, and get advance information about the movies that will be released. It is a site where users can view the movies they watch the most, and where users can view the most liked movies with their votes. Our admins at BIA CINEMA can give the users registered on our site an admin authority when necessary, as well as terminate the admin role of any of our admins. Apart from this, our admins can view all users and user records can be deleted from the site. Admins have the authority to remove all movies on our site, edit and even add new movies. Admins can view all tickets purchased from our site, as well as make ticket cancellations. BIA CINEMA is a project that takes the vision of growth and development day by day and grows even more. We cannot accomplish a suggestion page based on the movies that the user watched and a chat page about the movies.

3. Functional Decomposition

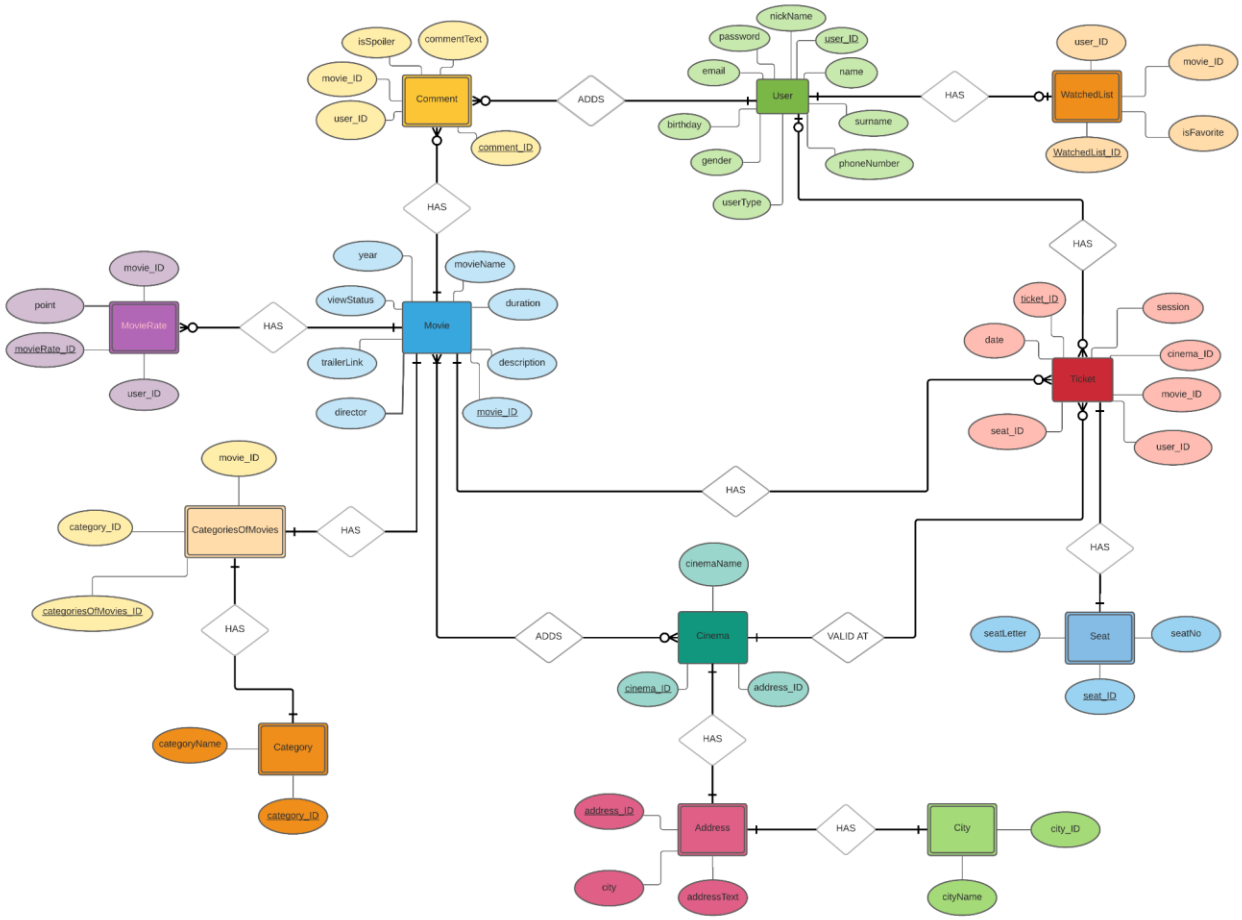


Figure 3.1 ER Diagram

In this project, MVC has been used and its layers are as follows:

- Models
- Views
- Controllers

In Model Layer:

In order to ensure that the database collections are used in the project, a model has been created for each data. These models are as follows.

❖ Cinema

- Cinema Name
- City
- Address

❖ City

- Movie Name
- Description
- Duration
- View Status
- Trailer Link
- Director
- Year
- Rate

❖ Review

- Comment Text
- Is spoiler
- Movie ID
- User ID
- Nickname
- Rate

❖ Ticket

- Ticket ID
- Cinema Name
- Movie Name
- User Name
- Seat Letter
- Seat No
- Date
- Session
- Card Owner Name
- Card Number
- Card Valid Date
- Card CVV

- User

- User ID
- Name
- Surname
- Nickname
- gender
- Email
- Phone Number
- Birthday
- Password
- User Type

In Views Layer:

View is the part that is presented to the user after the communication between the Controller-Model and the requests made by the users to the Controller structure in MVC structures. In other words, it is the part that the user sees on a web page.

In Controller Layer:

The relation between backend and frontend is created here. All database read, update and delete operations performed here. For each main model in the project we have a specific controller where all backend operations are performed.

4. High Level Organization

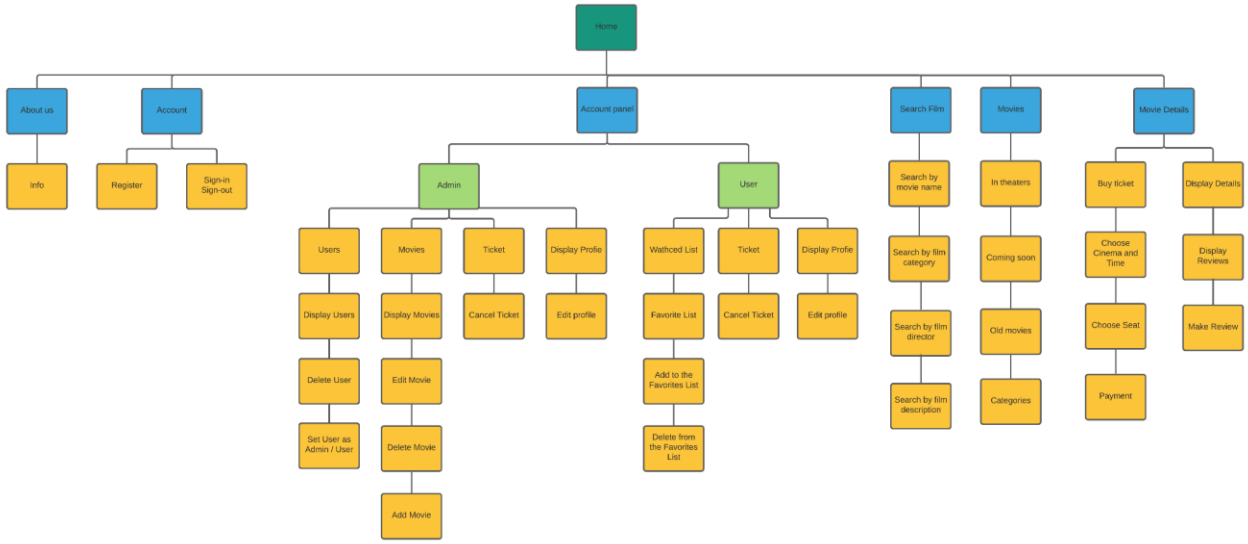


Figure 3.2 Site-map Diagram

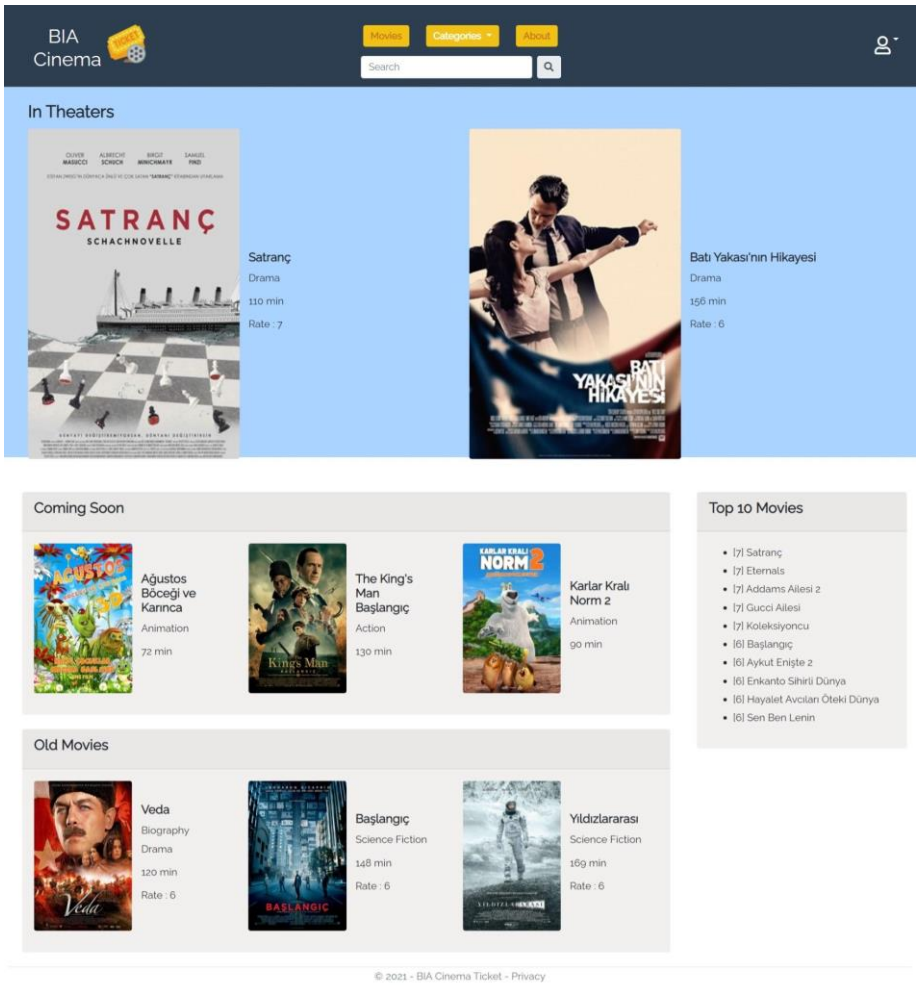
This diagram shows us the main pages on the website with their subpages and functionalities. Main pages are the home page, movies page, admin and user account panels and ticket sale pages. Users can see movie details and reviews without registering to the system. Users can buy tickets and review movies by signing and can list the movies they watched previously. Users can list the movies by their categories, view type and search a movie. Admin can list all users, movies and tickets and edit them.

5. Clickstreams

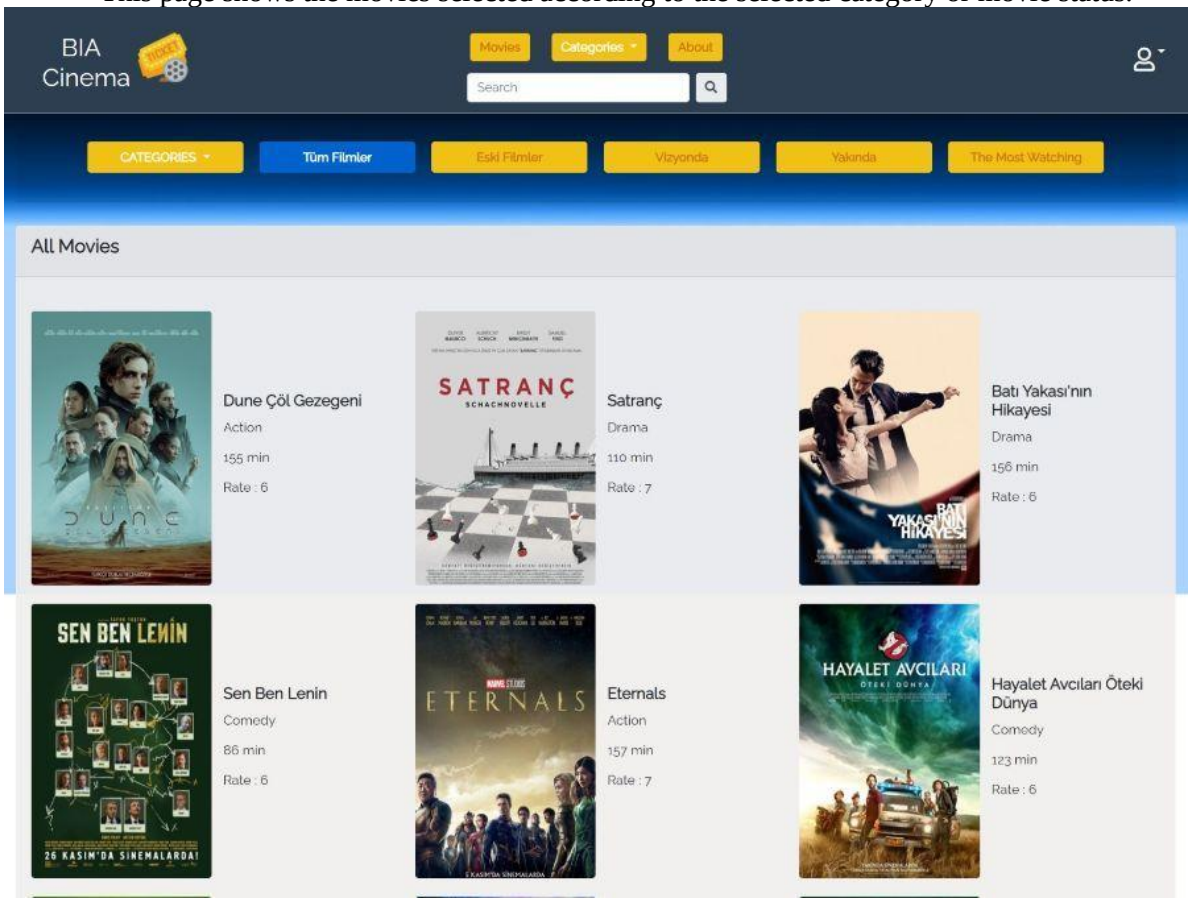
- Register: Necessary inputs are taken from the user and saved into the database.
- Log In: Checks if the email and password user entered is available in the database. If a match is found, the user enters the system.
- Buy Ticket: User chooses cinema, date and session then available seats are listed on screen. Payment screen appears on the screen after the seat selection and process is completed after the payment.
- Manage Movies: List, update, add and delete movies.
- Manage Users: Delete and set user as admin or user.
- Manage Tickets: List and delete tickets.
- Make Review: Users write comments about a movie and rate it.

6. Layout-Implementation

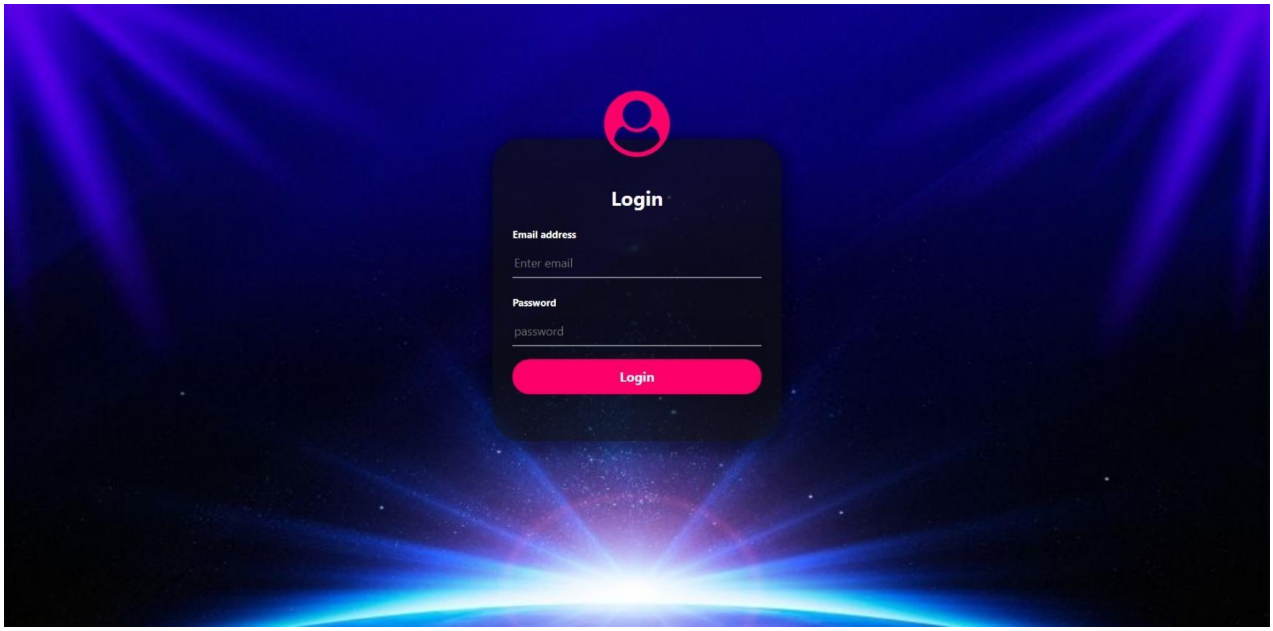
This is our main page and movies are listed according to their view status.At the top, navbar has a search bar, some buttons and an account logo. User name appears if user logged in.



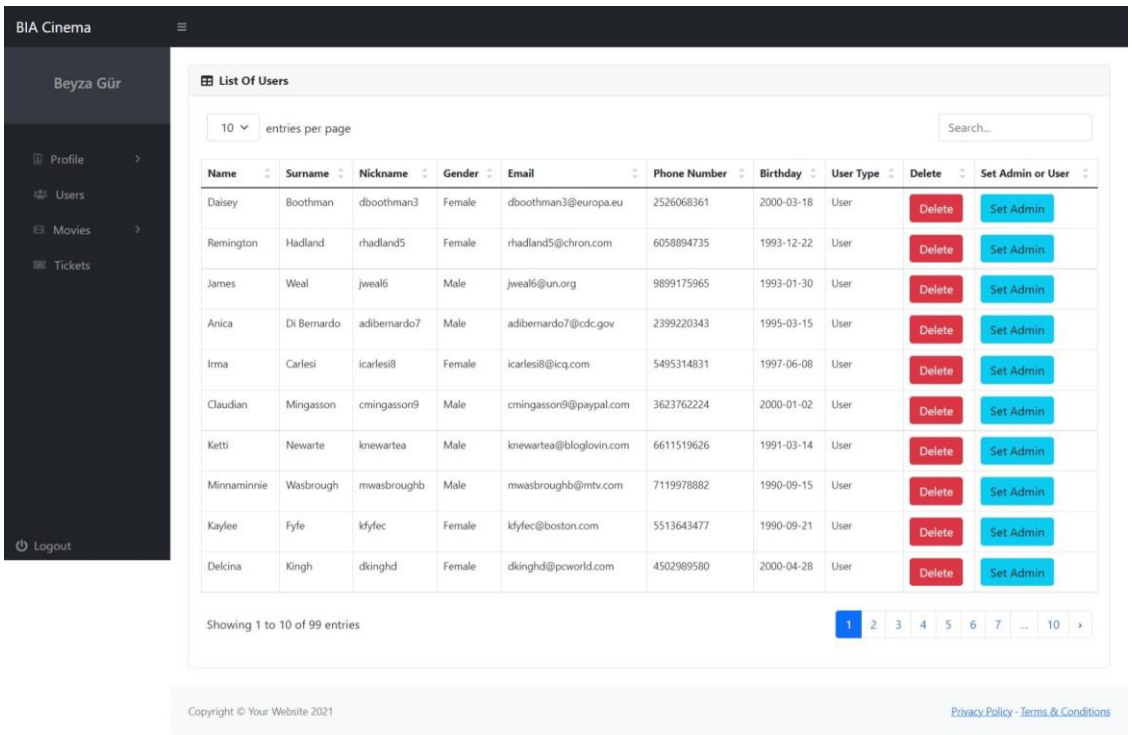
This page shows the movies selected according to the selected category or movie status.



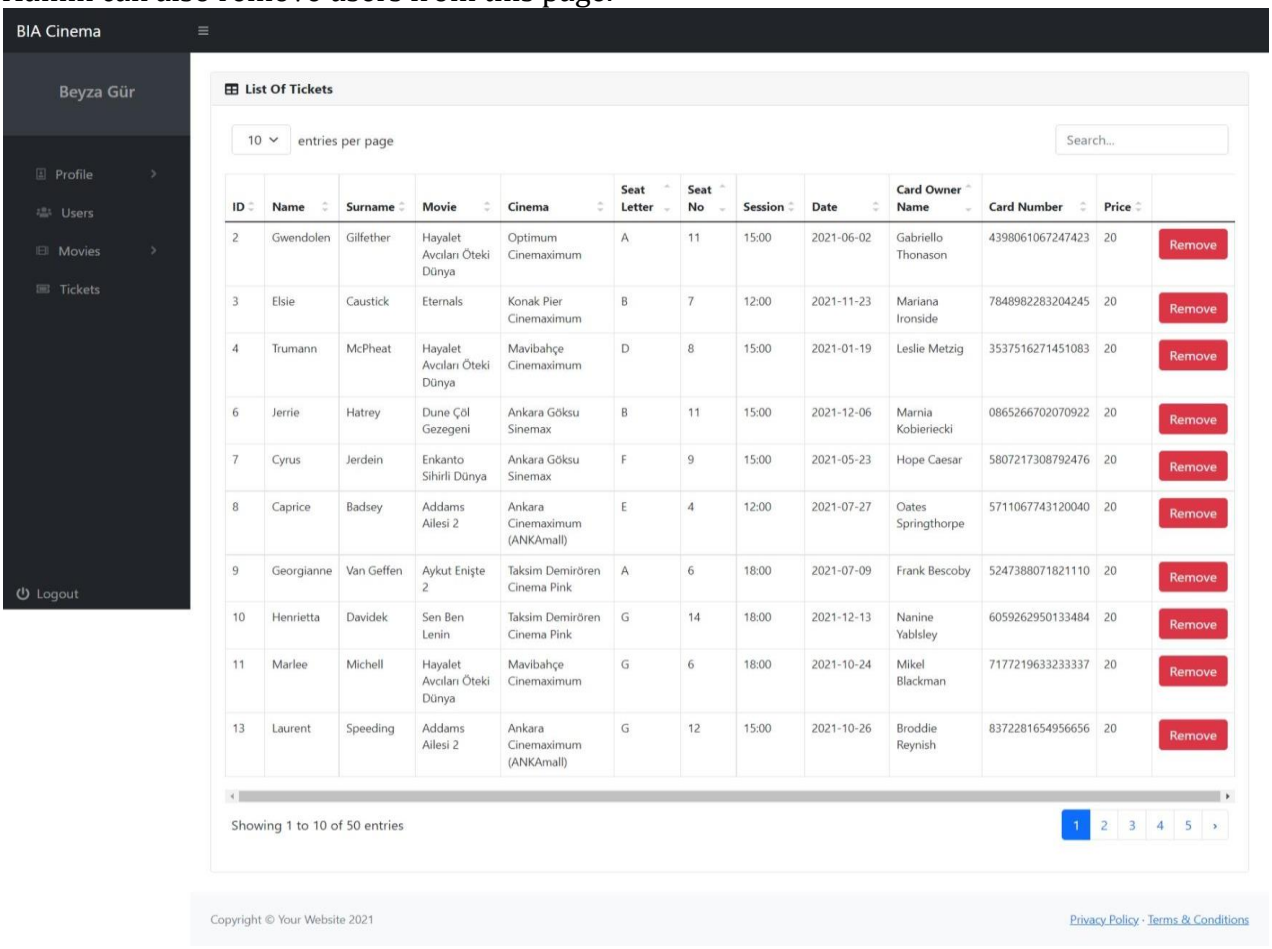
This page shows the Login page. The user logs in with their information.



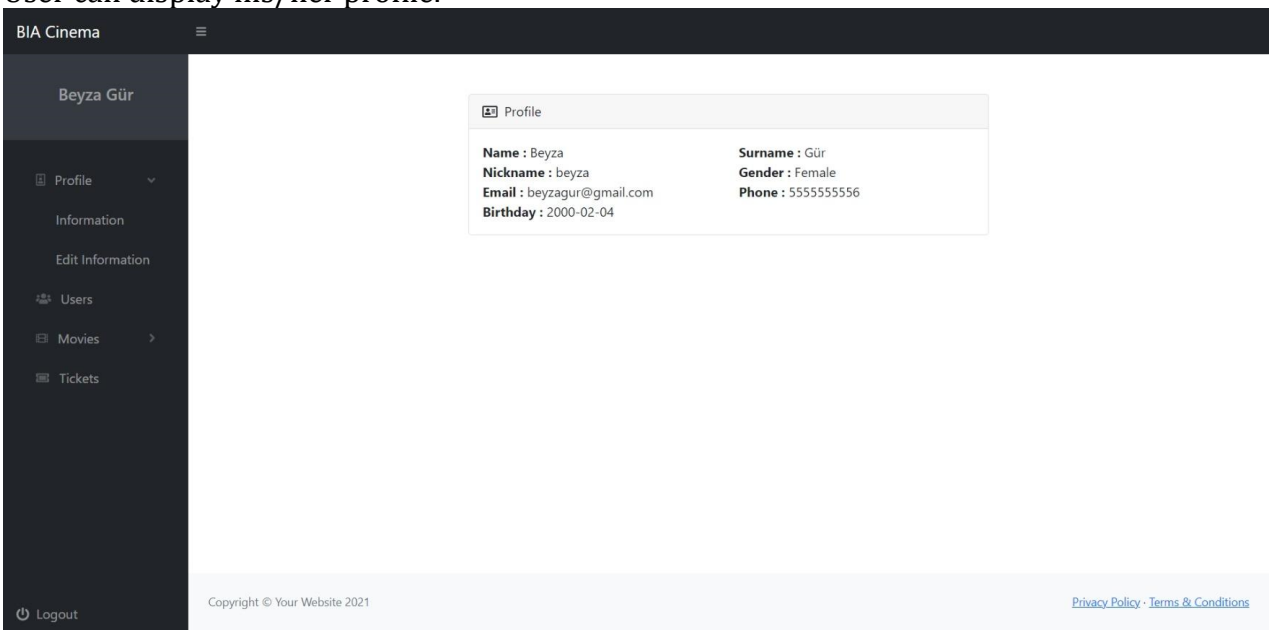
Admin can see a list of all users and delete a users.



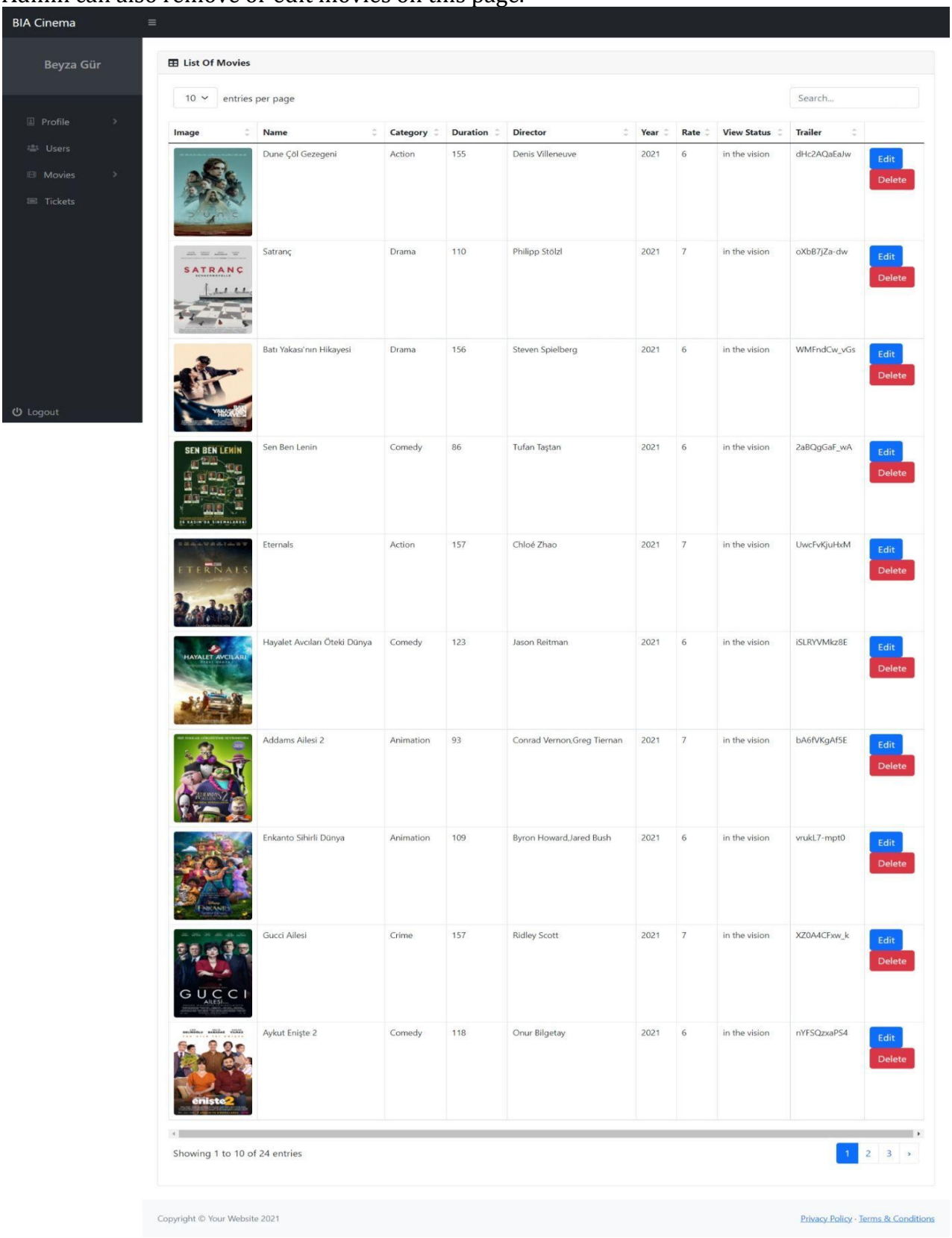
Admin can also remove users from this page.



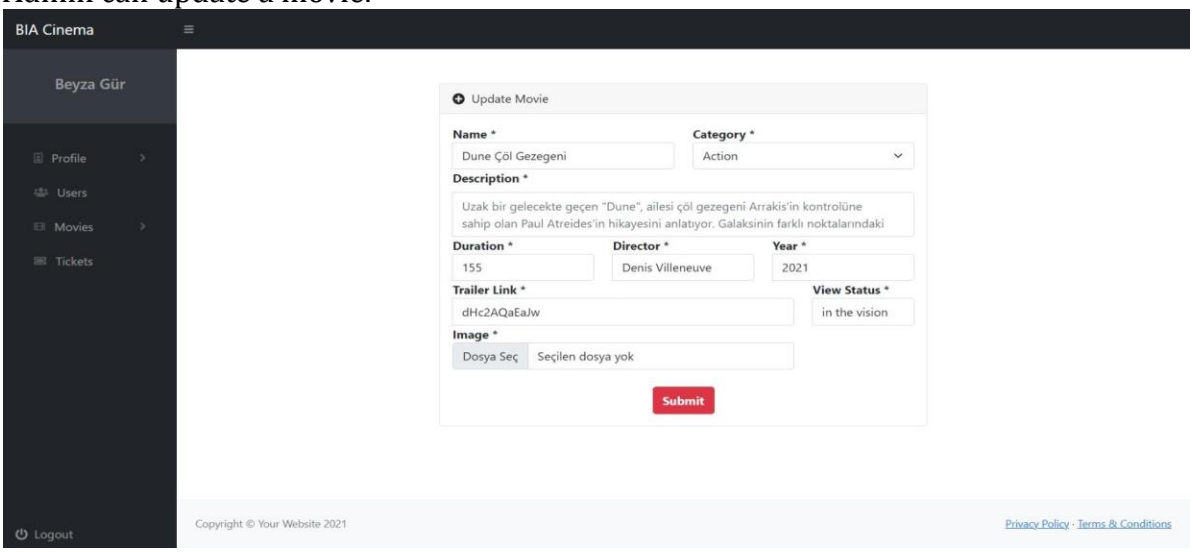
User can display his/her profile.



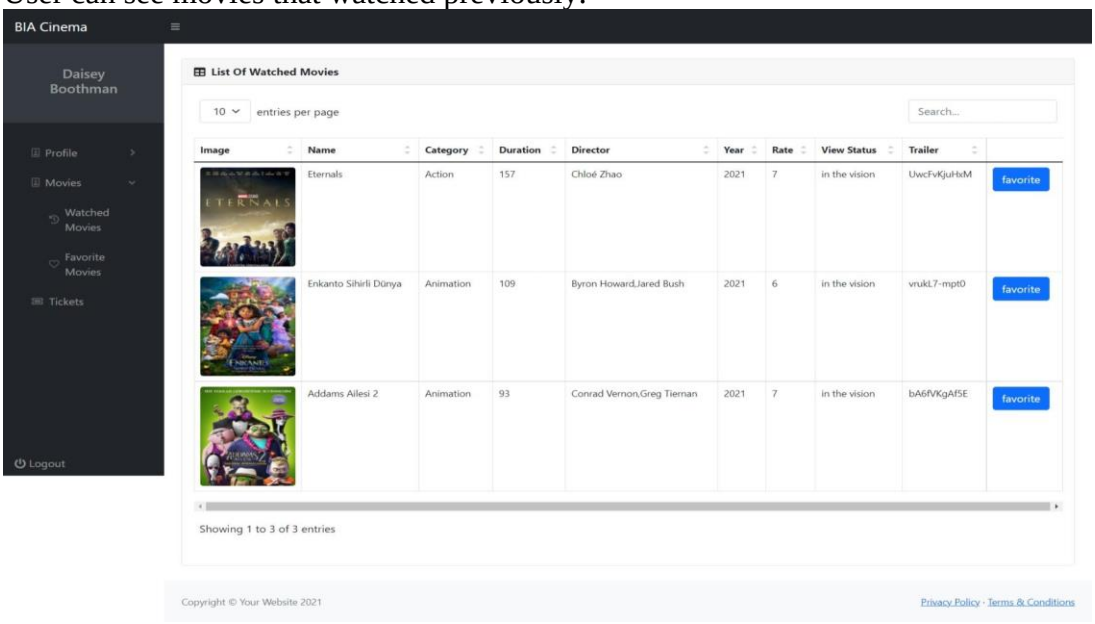
Admin can also remove or edit movies on this page.



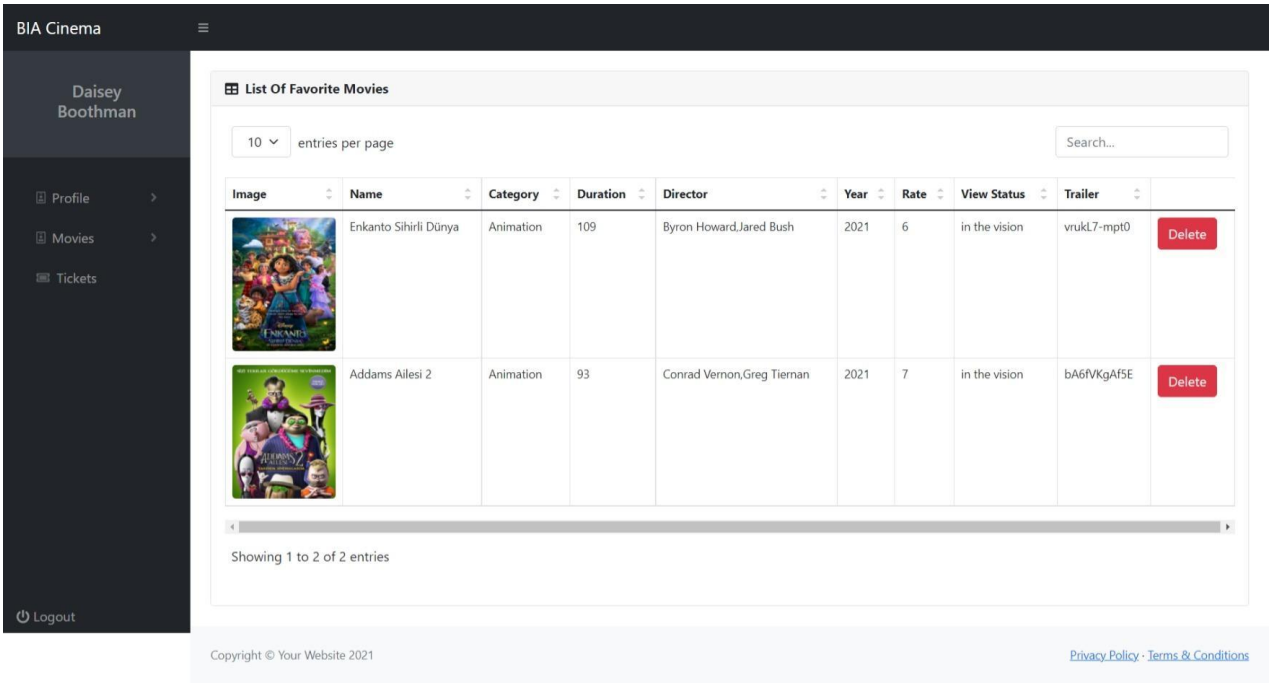
Admin can update a movie.



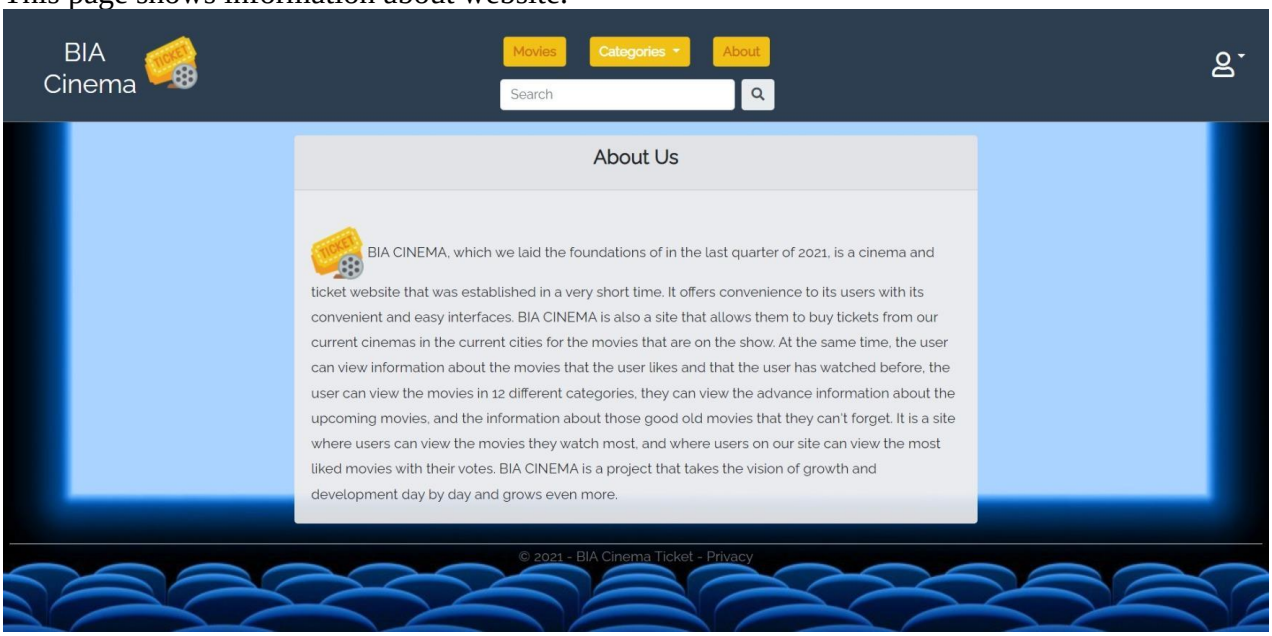
User can see movies that watched previously.



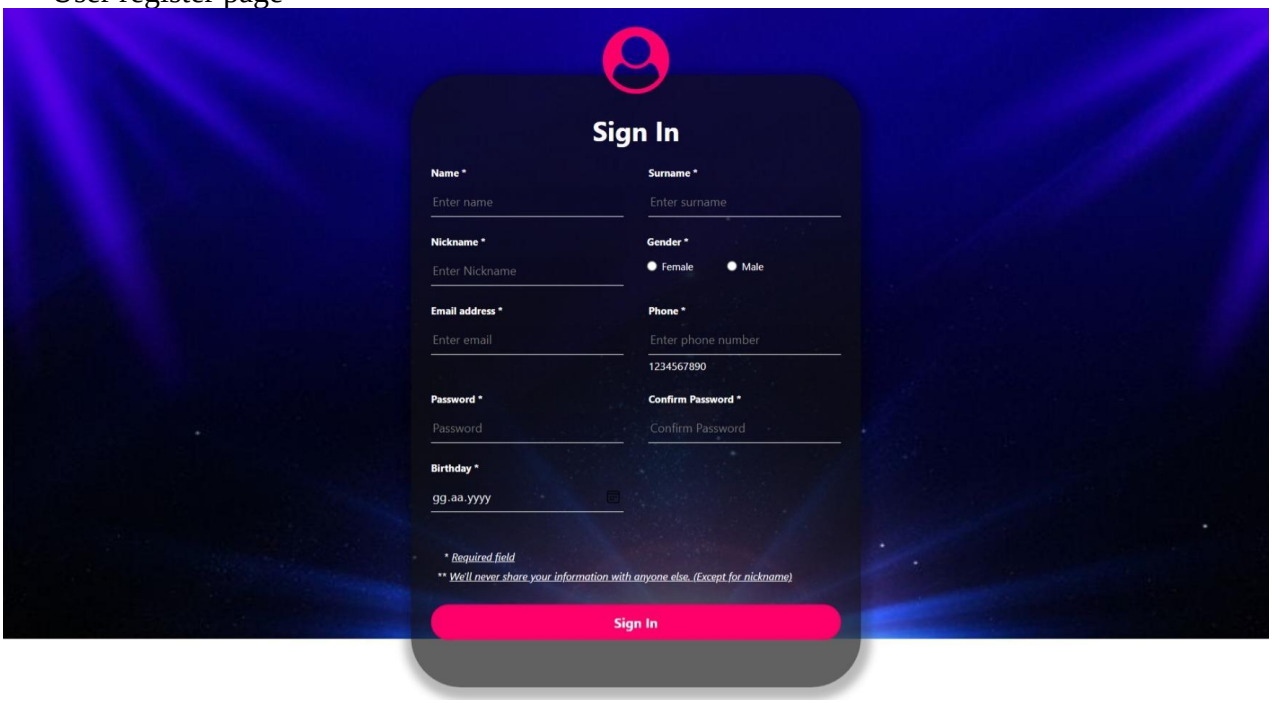
User can see favorite movies list.



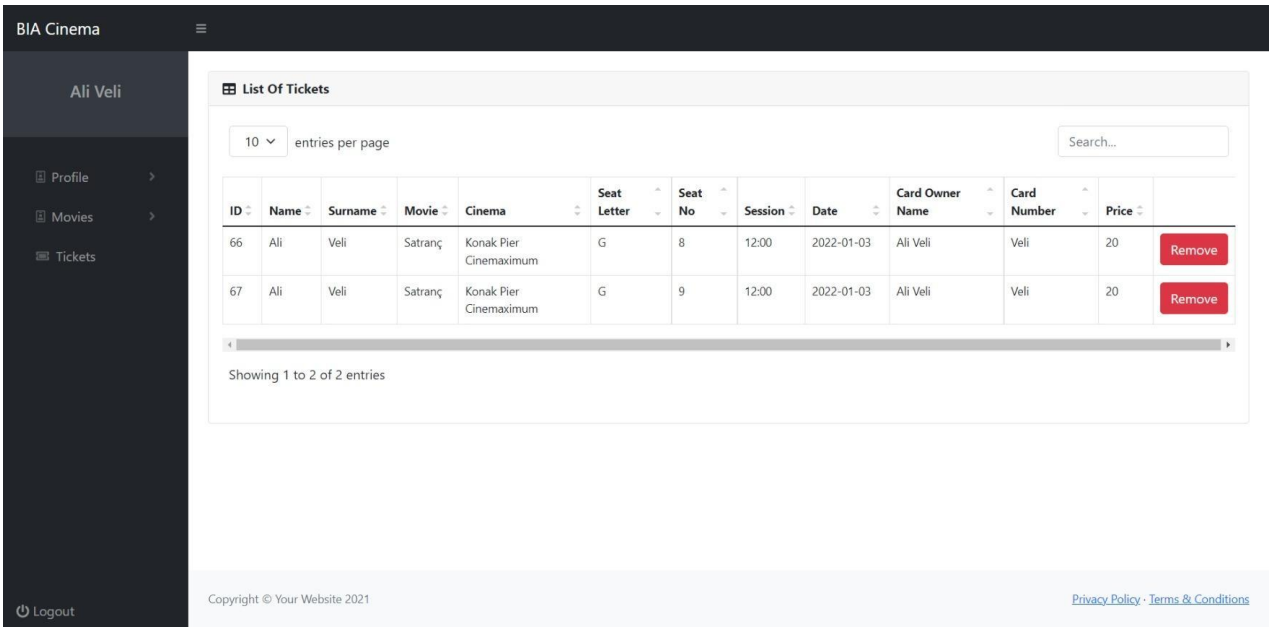
This page shows information about website.



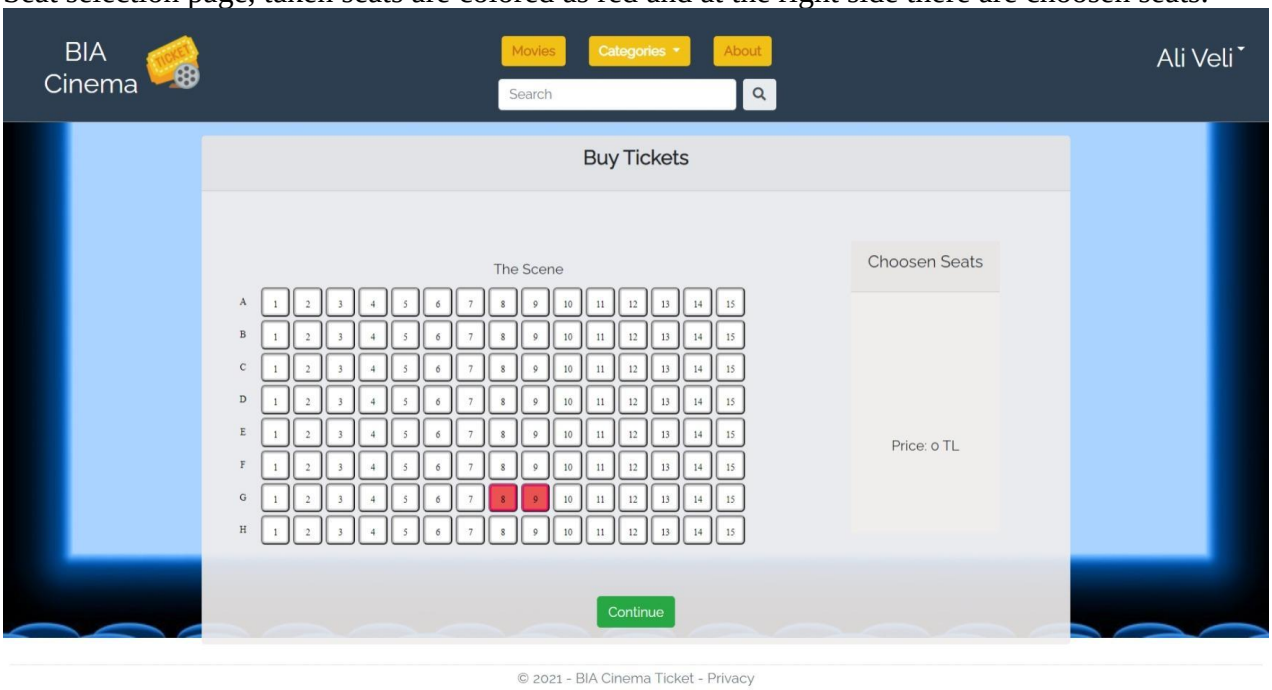
User register page



User can list tickets and cancel them if wants.



Seat selection page, taken seats are colored as red and at the right side there are choosen seats.



7. Future Work

If we had enough time, we would love to have a chat function between users who watched the same movie and a movie recommandation page in our system.