

# CineConnect

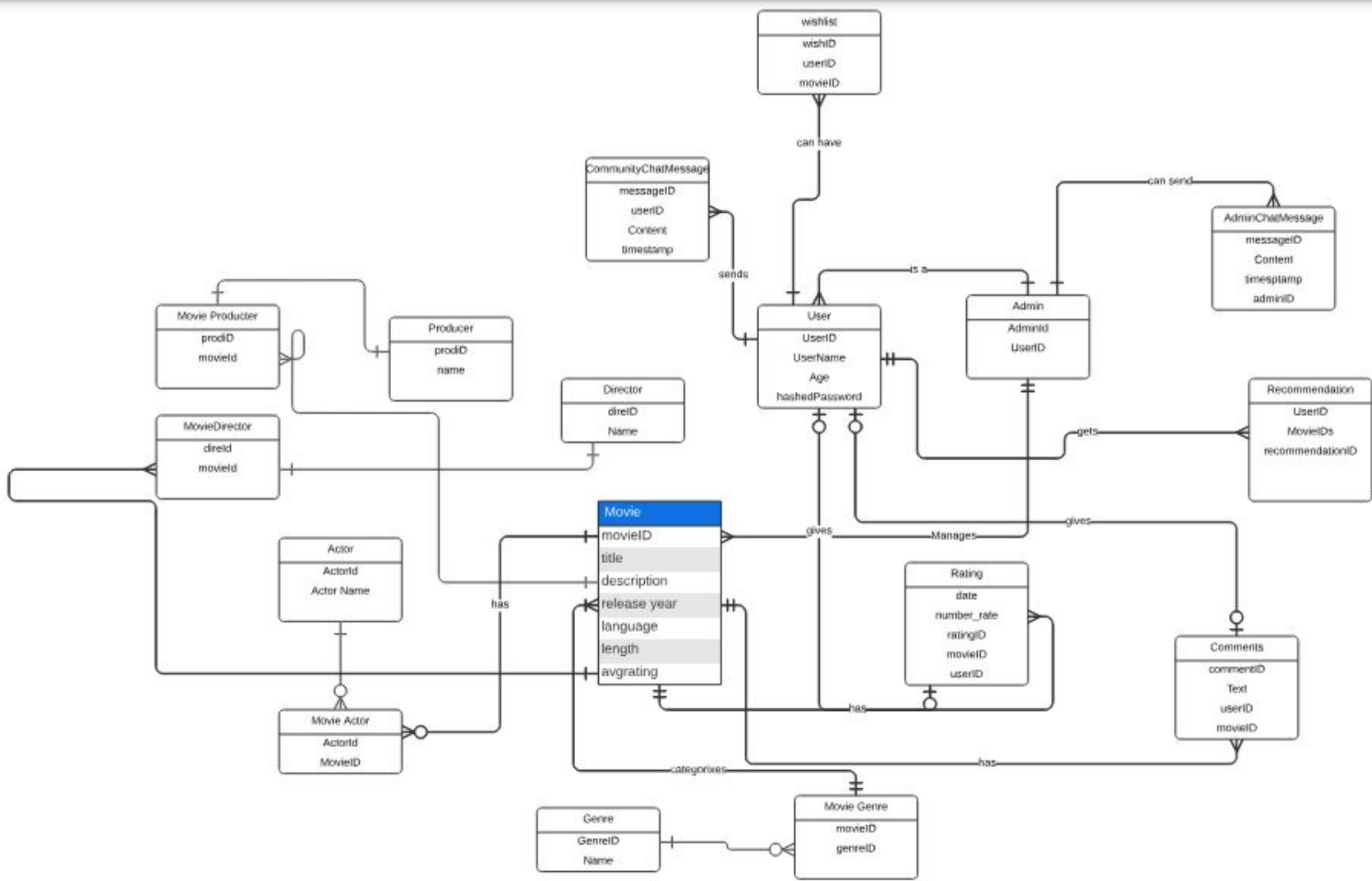
By

BSCS22030: Syed Muhammad Murtaza Kazmi

BSCS22128: Hoor Khalid

# Objective

The objective of this project is to develop a movie recommendation system using an SQL database and Python as the backend, with a front end built using Bootstrap and HTML. The system will provide users with personalized movie recommendations based on their viewing history and ratings.



# Languages and Toolkit

1. **Python:** Used for backend development and implementing recommendation algorithms.
2. **SQL:** Used for designing and querying the database.
3. **Flask:** Python web framework for handling server-side operations.
4. **Jinja templating:** For integration
5. **HTML and Bootstrap:** For building a responsive and interactive user interface.
6. Dataset from TMDB

# Features

## User Management:

- Registration and login for users.
- Different roles: Admin, regular User.new user, old user
- Profile management for users to update their information.
- Signup
- Login
- Search
- Admin and community chat

## Movie Management:

- CRUD operations for movies (Create, Read, Update, Delete).
- Ability for admin to add/edit/delete movies.
- Detailed information about each movie including title, description, release year, language, length, and average rating.

### Recommendation System:

- Algorithm to recommend movies based on user preferences, ratings, and viewing history.  
Personalized recommendations for each user.
- Integration with external APIs for enhanced recommendation features.

### Genre Management:

- Association of genres with movies for categorization.
- Filter movies by genre.

### Actor Management:

- Association of actors with movies for cast information.
- View movies by actors.

### Rating and Reviews:

- Users can rate movies on a numerical scale and provide written reviews.
- Average rating calculation for each movie.
- Option to view and filter reviews.
- Community Chat

# Recommendation Algorithm

## User Based Collaborative Filtering:

- Used to make automatic predictions (recommendations) about a user's interests by collecting preferences from many users
- Matrix – Rows : Users, Columns: Movies
- Cells : Ratings
- Cosine Similarity
- Users as points in space: Cosine similarity measures angles between those points
- If two users rated movies in similar way, the angle between them is small
- Find most similar users. Recommend what hasn't been rated



# Sign Up for CineConnect

Username:

Email:

Password:

Age:

Sign Up

Already a user? [Click here to login](#)

Registration successful, please login

# Login to CineConnect

Email:

Password:

Login

[Sign up here](#)



User with this email address already exists. Please try another email!

# Sign Up for CineConnect

Username:

Email:

Password:

Age:

Sign Up

Already a user? [Click here to login](#)

Invalid email or password

# Login to CineConnect

Email:

Password:

Login

[Sign up here](#)

# Welcome to Our Movie Collection

Discover a vast selection of movies. Explore,  
rate, and find your favorites!

[Search](#)[Genre ▾](#)

Sr	Title	Length (Minutes)	Language	Rate and Comment
1	Kingdom of the Planet of the Apes	0	en	<a href="#">Rate and Comment</a>
2	Civil War	0	en	<a href="#">Rate and Comment</a>
3	Godzilla x Kong: The New Empire	0	en	<a href="#">Rate and Comment</a>
4	Tarot	0	en	<a href="#">Rate and Comment</a>

# Search Results

Results for "God"

Sr	Title	Length (Minutes)	Language	Rate and Comment
1	Godzilla x Kong: The New Empire	0	en	<a href="#">Rate and Comment</a>
2	Godzilla Minus One	0	ja	<a href="#">Rate and Comment</a>
3	Creation of the Gods I: Kingdom of Storms	0	zh	<a href="#">Rate and Comment</a>



# Kingdom of the Planet of the Apes

Several generations in the future following Caesar's reign, apes are now the dominant species and live harmoniously while humans have been reduced to living in the shadows. As a new tyrannical ape leader builds his empire, one young ape undertakes a harrowing journey that will cause him to question all that he has known about the past and to make choices that will define a future for apes and humans alike.

**Release Date:** 2024-05-08

**Language:** en

**Length:** 0 minutes

**Average Rating:** 6.88

## Actors

- Owen Teague
- Freya Allan
- Kevin Durand
- Peter Macon
- William H. Macy
- Eka Darville
- Travis Jeffery
- Lydia Peckham
- Neil Sandilands
- Ras-Samuel Welda'abzgi
- Sara Wiseman

- Action

## Directors

- Wes Ball

## Producers

## Comments

- Good Movie - Test

## Add a Comment

Comment:

Submit

## Rate this Movie

Rating:

Submit



- Wes Ball

## Producers

## Comments

- Good Movie - Test

You have already rated this movie.

## Add a Comment

Comment:

Submit

## Rate this Movie

Rating:

Submit

# Movie Recommendations

Enjoy the movies according to your  
preferred taste!!

Search

Sr	Title	Length (Minutes)	Language	Rate and Comment
1	Spitfire Over Berlin	0	en	<button>Rate and Comment</button>
2	Exhuma	0	ko	<button>Rate and Comment</button>

## Community Chat

2024-06-09 10:28:51

**noob:**  
i am new here  
2024-06-09 10:28:58

**new:**  
You can go for The Lord of the rings  
2024-06-09 20:32:28

**new:**  
defo the greatest trilogy ever  
2024-06-09 20:32:43

**You:**  
Hello. I am new here  
2024-06-10 08:30:15

Type your message here...

Send

# Welcome to Our Movie Collection

Discover a vast selection of movies. Explore,  
rate, and find your favorites!

Search

Genre ▾

Sr	Title	Length (Minutes)	Language	Rate and Comment
1	Kingdom of the Planet of the Apes	0	en	<button>Rate and Comment</button>
2	Civil War	0	en	<button>Rate and Comment</button>
3	Godzilla x Kong: The New Empire	0	en	<button>Rate and Comment</button>
4	Tarot	0	en	<button>Rate and Comment</button>

# Insert Movie

Title

New Movie

Description

New movie Desc

Release Date

06/10/2024

Language

en

Length (in minutes)

120

120

### Actors

Actor 1

Add

Actor 2

Remove

### Directors

Director 1

Add

### Producers

Producer 1

Add

### Genres

Action

Add

Comedy

Remove

Submit

# Admin Movie Management

Manage the movie collection with ease.  
Explore, update, and delete movies as  
needed.

Movie inserted successfully



Search

Genre ▾

Sr	Title	Length (Minutes)	Language	Update	Delete
1	Kingdom of the Planet of the Apes	0	en	<button>Update</button>	<button>Delete</button>
2	Civil War	0	en	<button>Update</button>	<button>Delete</button>
3	Godzilla x Kong: The New Empire	0	en	<button>Update</button>	<button>Delete</button>
4	Tarot	0	en	<button>Update</button>	<button>Delete</button>

# Admin Search Results

Results for "New Movie"

Sr	Title	Length (Minutes)	Language	Update	Delete
1	New Movie	120	en	<button>Update</button>	<button>Delete</button>



# Update Movie

Title

New Movie

Description

New movie Desc

Release Date

06/10/2024

Language

en

Length (in minutes)

120

Actors

Actor 1	Remove
Actor 2	Remove
Enter actor name	Add

# Update Movie

Movie updated successfully!

Title

New Movie

Description

New movie Desc2

Release Date

06/10/2024



Language

en

Length (in minutes)

120

# New Movie

New movie Desc2

**Release Date:** 2024-06-10

**Language:** en

**Length:** 120 minutes

**Average Rating:** 0.00

## Actors

- Actor 1
- Actor 2
- Actor 3

## Genres

- Action

## Directors

- Director 1

## Producers

- Producer 1

127.0.0.1:5000 says

Are you sure you want to delete this movie?

OK

Cancel

# Admin Search Results

Results for "New Movie"

Sr	Title	Length (Minutes)	Language	Update	Delete
1	New Movie	120	en	<button>Update</button>	<button>Delete</button>

# Admin Movie Management

Manage the movie collection with ease.  
Explore, update, and delete movies as  
needed.

Movie deleted successfully



Search

Genre ▾

Sr	Title	Length (Minutes)	Language	Update	Delete
1	Kingdom of the Planet of the Apes	0	en	<button>Update</button>	<button>Delete</button>
2	Civil War	0	en	<button>Update</button>	<button>Delete</button>

# Admin Search Results

Results for "New Movie"

Sr	Title	Length (Minutes)	Language	Update	Delete
No movies found for "New Movie"					

# Admin User Management

Manage user roles and accounts with ease.

Search

Username	Email	Is Admin	Actions	
ADMIN	admin@gmail.com	Yes	<button>Assign Admin Role</button>	<button>Delete User</button>
new	new@gmail.com	No	<button>Assign Admin Role</button>	<button>Delete User</button>
new2	new2@gmail.com	No	<button>Assign Admin Role</button>	<button>Delete User</button>
noob	noob@gmail.com	Yes	<button>Assign Admin Role</button>	<button>Delete User</button>
hehe	hehe@gmail.com	No	<button>Assign Admin Role</button>	<button>Delete User</button>
Test	Test@gmail.com	Yes	<button>Assign Admin Role</button>	<button>Delete User</button>

User new has been assigned as admin.



Search users...

Search

Username	Email	Is Admin	Actions	
ADMIN	admin@gmail.com	Yes	Assign Admin Role	Delete User
new	new@gmail.com	Yes	Assign Admin Role	Delete User
new2	new2@gmail.com	No	Assign Admin Role	Delete User
noob	noob@gmail.com	Yes	Assign Admin Role	Delete User
hehe	hehe@gmail.com	No	Assign Admin Role	Delete User
Test	Test@gmail.com	Yes	Assign Admin Role	Delete User

[Back to top](#)



127.0.0.1:5000 says

Are you sure you want to delete this user?

OK

Cancel

User new has been assigned as admin.



Search users...

Search

Username	Email	Is Admin	Actions	
ADMIN	admin@gmail.com	Yes	Assign Admin Role	Delete User
new	new@gmail.com	Yes	Assign Admin Role	Delete User
new2	new2@gmail.com	No	Assign Admin Role	Delete User
noob	noob@gmail.com	Yes	Assign Admin Role	Delete User
hehe	hehe@gmail.com	No	Assign Admin Role	Delete User
Test	Test@gmail.com	Yes	Assign Admin Role	Delete User

[Back to top](#)

# User Management

Manage user roles and accounts with ease.

User new2 and all associated data have been deleted.



Search

Username	Email	Is Admin	Actions	
ADMIN	admin@gmail.com	Yes	Assign Admin Role	Delete User
new	new@gmail.com	Yes	Assign Admin Role	Delete User
noob	noob@gmail.com	Yes	Assign Admin Role	Delete User
hehe	hehe@gmail.com	No	Assign Admin Role	Delete User
Test	Test@gmail.com	Yes	Assign Admin Role	Delete User

[Back to top](#)

# User Management

Manage user roles and accounts with ease.

An admin cannot be deleted.



Search

Username	Email	Is Admin	Actions	
ADMIN	admin@gmail.com	Yes	Assign Admin Role	Delete User
new	new@gmail.com	Yes	Assign Admin Role	Delete User
noob	noob@gmail.com	Yes	Assign Admin Role	Delete User
hehe	hehe@gmail.com	No	Assign Admin Role	Delete User
Test	Test@gmail.com	Yes	Assign Admin Role	Delete User

[Back to top](#)

## Admin Chat

2024-06-09 10:37:01

**ADMIN:**

so what

2024-06-09 11:11:18

**noob:**

heyo

2024-06-09 11:12:19

**noob:**

too bad

2024-06-09 11:14:49

**You:**

Hello, i want to add a movie

2024-06-10 08:42:43

Type your message here...

Send

## User Profile

Username

Test

Email

Test@gmail.com

Age

18

New Password

New Password

Confirm New Password

Confirm New Password

Update Profile

## User Profile

Username

Test

Email

Test@gmail.com

Age

18

New Password

.....

Confirm New Password

test2

Update Profile

## User Profile

Profile updated successfully.

Username

Test

Email

Test@gmail.com

Age

18

New Password

New Password

Confirm New Password

Confirm New Password

Update Profile

## User Profile

Username already in use. Please choose another username.

Username

Test

Email

Test@gmail.com

Age

18

New Password

New Password

Confirm New Password

Confirm New Password

Update Profile



You have been logged out.

# Login to CineConnect

Email:

Password:

Login

Don't have an account yet? [Sign up here](#)

Invalid email or password

# Login to CineConnect

Email:

Password:

Login

Don't have an account yet? [Sign up here](#)

# Kingdom of the Planet of the Apes

Several generations in the future following Caesar's reign, apes are now the dominant species and live harmoniously while humans have been reduced to living in the shadows. As a new tyrannical ape leader builds his empire, one young ape undertakes a harrowing journey that will cause him to question all that he has known about the past and to make choices that will define a future for apes and humans alike.

**Release Date:** 2024-05-08

**Language:** en

**Length:** 0 minutes

**Average Rating:** 8.00

## Actors

- Owen Teague
- Freya Allan
- Kevin Durand
- Peter Macon
- William H. Macy
- Eka Darville
- Travis Jeffery
- Lydia Peckham



# Wishlist

Title	Length (Minutes)	Language	Actions
Kingdom of the Planet of the Apes	0	en	<a href="#">Remove from Wishlist</a>

127.0.0.1:5000 says

Are you sure you want to delete your account?

OK

Cancel

Logout



Cin

## User Profile

Username

Test

Email

Test@gmail.com

Age

18

New Password

New Password

Confirm New Password

Confirm New Password

Update Profile

Your account has been deleted.

# Sign Up for CineConnect

Username:

Email:

Password:

Age:

Sign Up

Already a user? [Click here to login](#)

THANK YOU