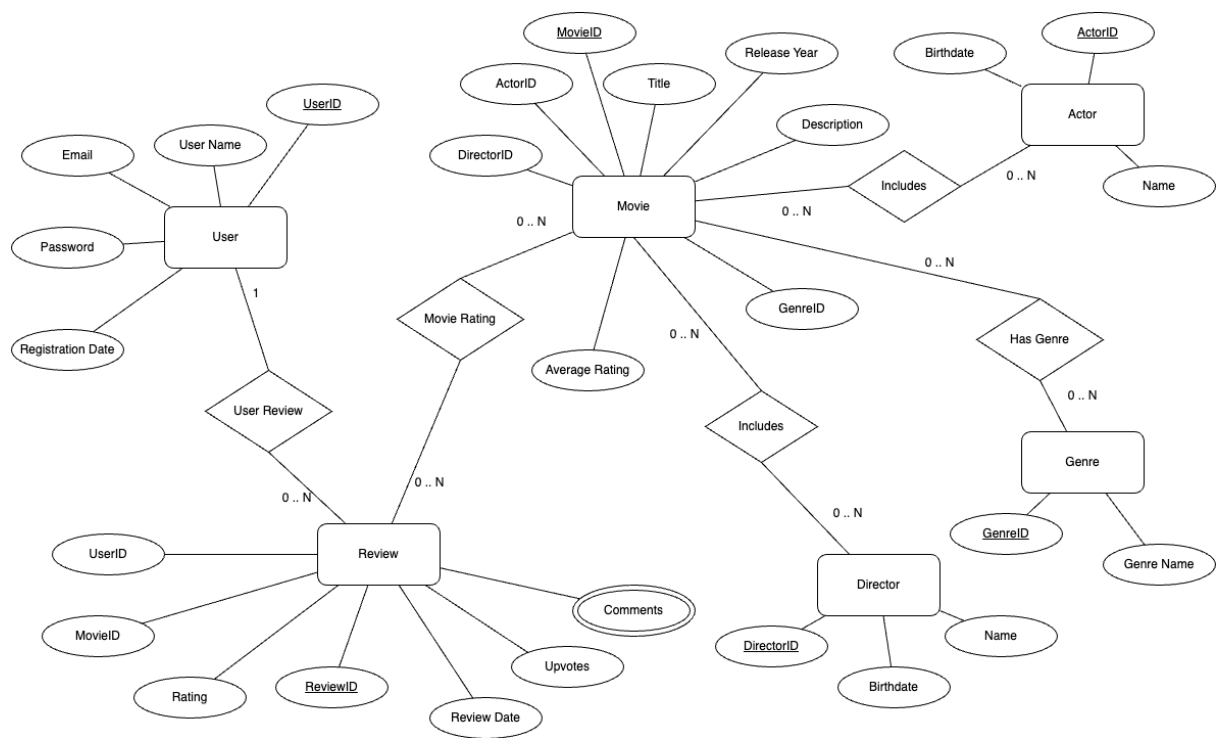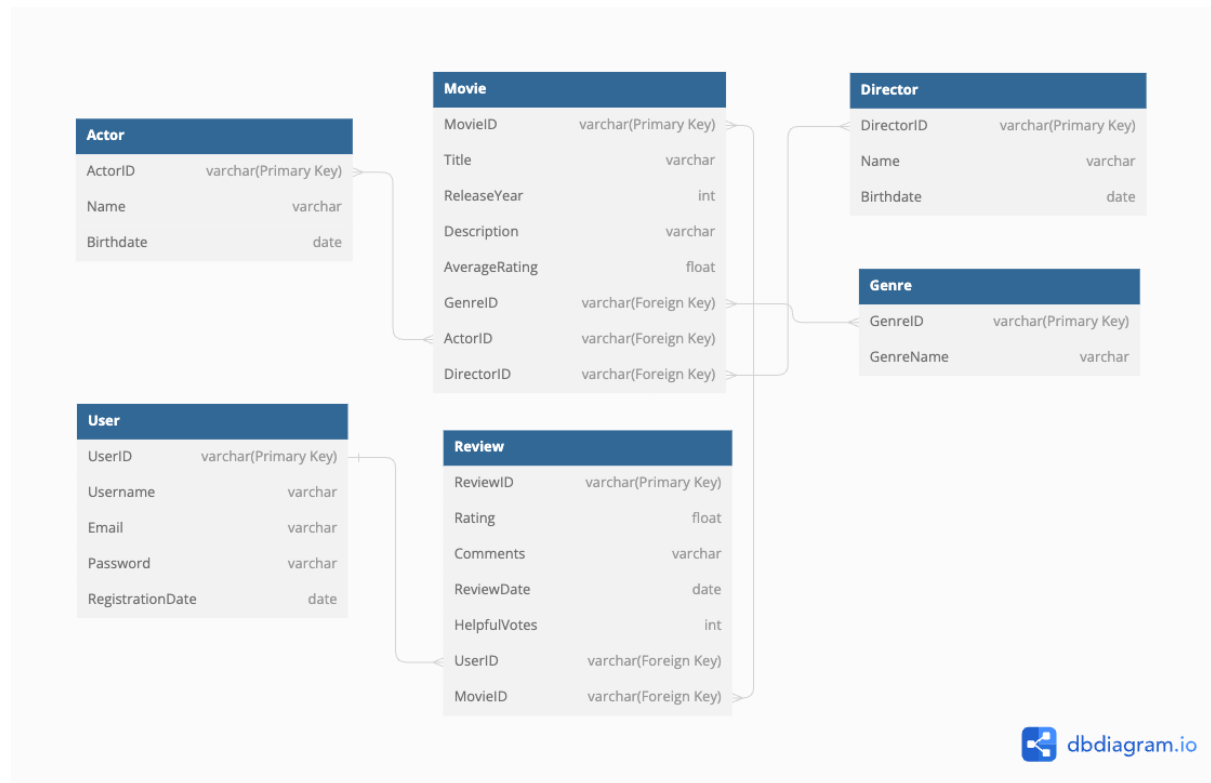# DBMS Project

Movie Review System

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ER Diagram

Relation Schema

The queries used to make the tables:

```
CREATE TABLE UserDB (
    UserID INT AUTO_INCREMENT PRIMARY KEY,
    Username VARCHAR(50) NOT NULL,
    Email VARCHAR(255) NOT NULL,
    Password VARCHAR(255) NOT NULL,
    RegistrationDate TIMESTAMP DEFAULT CURRENT_TIMESTAMP
);

CREATE TABLE GenreDB (
    GenreID INT AUTO_INCREMENT PRIMARY KEY,
    GenreName VARCHAR(50) NOT NULL
);

CREATE TABLE ActorDB (
    ActorID INT AUTO_INCREMENT PRIMARY KEY,
```

```sql
    Name VARCHAR(100) NOT NULL
);

CREATE TABLE DirectorDB (
    DirectorID INT AUTO_INCREMENT PRIMARY KEY,
    Name VARCHAR(100) NOT NULL
);

CREATE TABLE MovieDB (
    MovieID INT AUTO_INCREMENT PRIMARY KEY,
    Title VARCHAR(255) NOT NULL,
    ReleaseYear INT NOT NULL,
    Description TEXT,
    AverageRating DECIMAL(3, 2),
    GenreID INT,
    ActorID INT,
    DirectorID INT,
    FOREIGN KEY (GenreID) REFERENCES Genre(GenreID),
    FOREIGN KEY (ActorID) REFERENCES Actor(ActorID),
    FOREIGN KEY (DirectorID) REFERENCES Director(DirectorID)
);

-- Create the Review Table
CREATE TABLE ReviewDB (
    ReviewID INT AUTO_INCREMENT PRIMARY KEY,
    Rating INT NOT NULL,
    Comments TEXT,
    ReviewDate TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    UserID INT,
    MovieID INT,
    FOREIGN KEY (UserID) REFERENCES User(UserID),
    FOREIGN KEY (MovieID) REFERENCES Movie(MovieID)
);
```

Stored Procedure and trigger:

```sql
DELIMITER //
CREATE PROCEDURE Reviews(IN movie_title VARCHAR(255))
BEGIN
SELECT u.Username, r.Rating, r.Comments, r.ReviewDate
FROM ReviewDB r
JOIN UserDB u ON r.UserID = u.UserID
JOIN MovieDB m ON r.MovieID = m.MovieID
WHERE m.Title = movie_title;
END;
//


DELIMITER //
CREATE TRIGGER update_average_rating
AFTER INSERT ON ReviewDB
FOR EACH ROW
BEGIN
UPDATE MovieDB m
SET AverageRating = (
SELECT AVG(Rating)
FROM ReviewDB r
WHERE r.MovieID = NEW.MovieID
)
WHERE m.MovieID = NEW.MovieID;
END;
//
DELIMITER ;
```

Some of the inputs to the tables using python:

```python
"""

genres_data = [
    (1, 'Thriller'),
    (2, 'Action'),
    (3, 'Drama'),
    (4, 'Crime'),
    (5, 'Sci-Fi'),
    (6, 'Romance'),
    (7, 'Fantasy'),
```

```python
    (8, 'War'),
]


for genre in genres_data:
    cursor.execute("INSERT INTO GenreDB (GenreID, GenreName) VALUES (%s, %s)", genre)

actor = [
    (114, "Matthew McConaughey"),
    (115, "Jamie Fox"),
    (116, "Michael J Fox"),
    (117, "Arnold Schwarzenegger"),
    (118, "Harrison Ford")
]

for act in actor:
    cursor.execute("INSERT INTO ActorDB (ActorID, Name) VALUES (%s, %s)", act)


director_data = [
    (201, 'Christopher Nolan'),
    (202, 'Robert Zemeckis'),
    (203, 'Frank Darabont'),
    (204, 'Quentin Tarantino'),
    (205, 'Lana Wachowski'),
    (206, 'James Cameron'),
    (207, 'Francis Ford Coppola'),
    (208, 'Steven Spielberg'),
    (209, 'Peter Jackson'),
    (210, 'Jonathan Demme'),
    (211, 'Michel Gondry')
]


for director in director_data:
    cursor.execute("INSERT INTO DirectorDB (DirectorID, Name) VALUES (%s, %s)", director)

"""
```

```python
movies_data = [
    (str(random.randint(1000, 9999)), 'Interstellar', 2014, 'A space exploration epic', 1, 114, 201),
    (str(random.randint(1000, 9999)), 'Back to the Future', 1985, 'An iconic time-travel adventure', 2, 116, 202),
    (str(random.randint(1000, 9999)), 'The Green Mile', 1999, 'A supernatural drama', 3, 103, 203),
    (str(random.randint(1000, 9999)), 'Django Unchained', 2012, 'A western film by Quentin Tarantino', 4, 115, 204),
    (str(random.randint(1000, 9999)), 'The Revenant', 2015, 'A survival drama film', 2, 101, 212),
    (str(random.randint(1000, 9999)), 'The Terminator', 1984, 'A classic sci-fi film', 5, 117, 206),
    (str(random.randint(1000, 9999)), 'Indiana Jones and the Raiders of the Lost Ark', 1981, 'An adventure film', 8, 118, 208)
]


for movie in movies_data:
    cursor.execute("INSERT INTO MovieDB (MovieID, Title, ReleaseYear, Description, GenreID, ActorID, DirectorID) VALUES (%s, %s, %s, %s, %s, %s, %s)", movie)


db.commit()
```

Some screenshots:

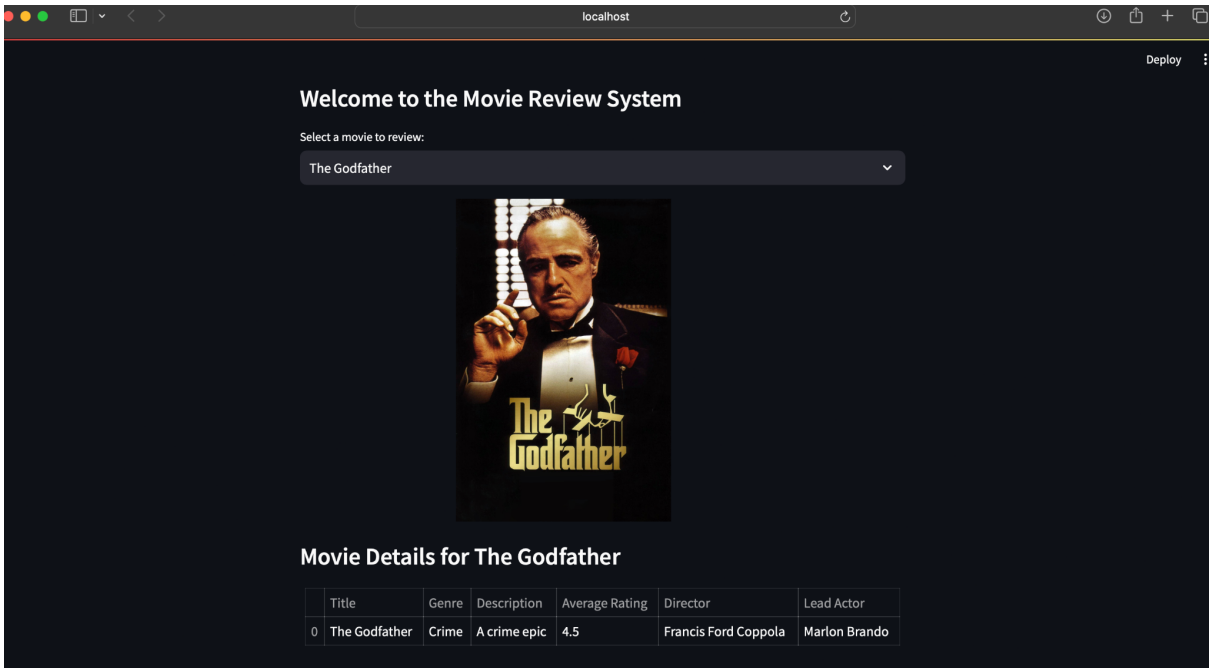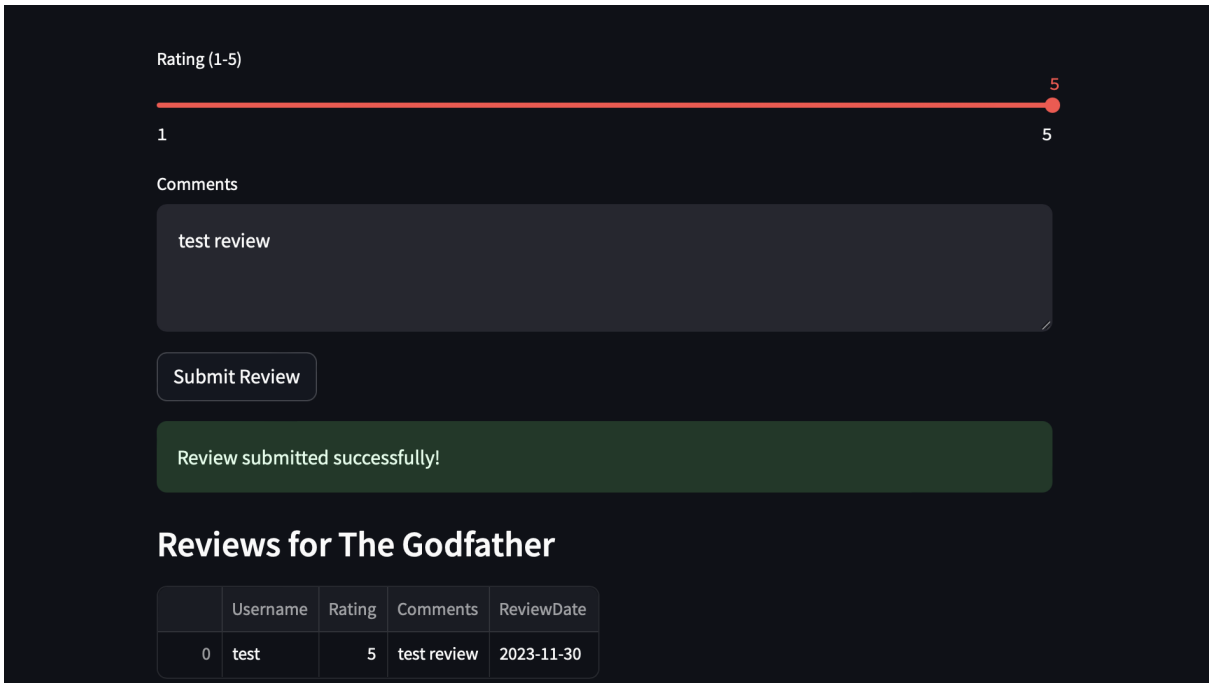Login/ Sign Up page:

The main page:

Submitting a review:

Additional features:

Movies by Actor

Select an actor to view movies:

Leonardo DiCaprio ⌄

Movies featuring Leonardo DiCaprio

	Title	Description	Average Rating	Director	Actor
0	Titanic	A romantic disaster film	3	James Cameron	Leonardo DiCaprio
1	The Revenant	A survival drama film	4.67	Alejandro González Iñárritu	Leonardo DiCaprio
2	Inception	A mind-bending thriller	4.68	Christopher Nolan	Leonardo DiCaprio

Average Rating for Leonardo DiCaprio: 4.12

Highest Rated Movie

	Movie Title	Average Rating	Director	Lead Actor	Genre
0	The Godfather	5	Francis Ford Coppola	Marlon Brando	Crime

Logout

Movies by Actor

Select an actor to view movies:

Tom Hanks ⌄

Movies featuring Tom Hanks

	Title	Description	Average Rating	Director	Actor	Genre	Review
0	The Green Mile	A supernatural drama	4.33	Frank Darabont	Tom Hanks	Drama	
1	Forrest Gump	A heartwarming drama	4	Robert Zemeckis	Tom Hanks	Drama	

Average Rating for Tom Hanks: 4.17

Admin Section:

Admin Section

Select a movie to delete reviews:

| Avatar | ⌄ |

Delete Reviews

Reviews for Avatar

	Username	Rating	Comments	ReviewDate
0	test	5	1122	2023-11-22
1	test	2	55	2023-11-22
2	test	3	test review	2023-11-22
3	test	5	tttttt	2023-11-22

Deleting reviews:

Admin Section

Select a movie to delete reviews:

| Interstellar | ⌄ |

Delete Reviews

Reviews for Interstellar deleted successfully!

No reviews available for Interstellar