NetFlix Database MySQL Assignment

Dr. Subramani

-- Create Database NetflixDB

CREATE DATABASE NetflixDB;

-- Use database

USE NetflixDB;

-- Create Table users

```sql
CREATE TABLE Users (
    user_id INT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(100) NOT NULL,
    email VARCHAR(150) UNIQUE NOT NULL,
    registration_date DATE NOT NULL,
    plan ENUM('Basic', 'Standard', 'Premium') DEFAULT 'Basic'
);
```


-- Create Table movies

```sql
CREATE TABLE Movies (
    movie_id INT PRIMARY KEY AUTO_INCREMENT,
    title VARCHAR(200) NOT NULL,
    genre VARCHAR(100) NOT NULL,
    release_year YEAR NOT NULL,
    rating DECIMAL(3, 1) NOT NULL
);
```


-- Create Table watchhistory

```sql
CREATE TABLE WatchHistory (
```

```sql
    watch_id INT PRIMARY KEY AUTO_INCREMENT,

    user_id INT,

    FOREIGN KEY (user_id) REFERENCES Users(user_id),

    movie_id INT,

    FOREIGN KEY (movie_id) REFERENCES Movies(movie_id),

    watched_date DATE NOT NULL,

    completion_percentage INT CHECK (completion_percentage >= 0 AND
completion_percentage <= 100)
);
```

```sql
CREATE TABLE Reviews (

    review_id INT PRIMARY KEY AUTO_INCREMENT,

    movie_id INT,

        FOREIGN KEY (movie_id) REFERENCES Movies(movie_id),

    user_id INT,

        FOREIGN KEY (user_id) REFERENCES Users(user_id),

    review_text TEXT,

    rating DECIMAL(2, 1) CHECK (rating >= 0 AND rating <= 5),

    review_date DATE NOT NULL
);
```

```sql
INSERT INTO Users (name, email, registration_date, plan)

VALUES

('John Doe', 'john.doe@example.com', '2024-01-10', 'Premium'),

('Jane Smith', 'jane.smith@example.com', '2024-01-15', 'Standard'),

('Alice Johnson', 'alice.johnson@example.com', '2024-02-01', 'Basic'),

('Bob Brown', 'bob.brown@example.com', '2024-02-20', 'Premium');
```

SELECT * FROM Users;

user_id	name	email	registration_date	plan
1	John Doe	john.doe@example.com	2024-01-10	Premium
2	Jane Smith	jane.smith@example.com	2024-01-15	Standard
3	Alice Johnson	alice.johnson@example.com	2024-02-01	Basic
4	Bob Brown	bob.brown@example.com	2024-02-20	Premium

-- INSERT data into Movies

INSERT INTO Movies (title, genre, release_year, rating)

VALUES

('Stranger Things', 'Drama', 2016, 8.7),

('Breaking Bad', 'Crime', 2008, 9.5),

('The Crown', 'History', 2016, 8.6),

('The Witcher', 'Fantasy', 2019, 8.2),

('Black Mirror', 'Sci-Fi', 2011, 8.8);

SELECT * FROM Movies;

movie_id	title	genre	release_year	rating
1	Stranger Things	Drama	2016	8.7
2	Breaking Bad	Crime	2008	9.5
3	The Crown	History	2016	8.6
4	The Witcher	Fantasy	2019	8.2
5	Black Mirror	Sci-Fi	2011	8.8

-- INSERT data into WatchHistory

INSERT INTO WatchHistory (user_id, movie_id, watched_date, completion_percentage)

VALUES

(1, 1, '2024-02-05', 100),

(2, 2, '2024-02-06', 80),

(3, 3, '2024-02-10', 50),

(4, 4, '2024-02-15', 100),

(1, 5, '2024-02-18', 90);

SELECT * FROM WatchHistory;

watch_id	user_id	movie_id	watched_date	completion_percentage
1	1	1	2024-02-05	100
2	2	2	2024-02-06	80
3	3	3	2024-02-10	50
4	4	4	2024-02-15	100
5	1	5	2024-02-18	90

-- INSERT data into Reviews

INSERT INTO Reviews (movie_id, user_id, review_text, rating, review_date)

VALUES

(1, 1, 'Amazing storyline and great characters!', 4.5, '2024-02-07'),

(2, 2, 'Intense and thrilling!', 5.0, '2024-02-08'),

(3, 3, 'Good show, but slow at times.', 3.5, '2024-02-12'),

(4, 4, 'Fantastic visuals and acting.', 4.8, '2024-02-16');

SELECT * FROM Reviews;

review_id	movie_id	user_id	review_text	rating	review_date
1	1	1	Amazing storyline and great characters!	4.5	2024-02-07
2	2	2	Intense and thrilling!	5.0	2024-02-08
3	3	3	Good show, but slow at times.	3.5	2024-02-12
4	4	4	Fantastic visuals and acting.	4.8	2024-02-16

SELECT name, email, plan

FROM Users

WHERE plan = 'Premium';

name	email	plan
John Doe	john.doe@example.com	Premium
Bob Brown	bob.brown@example.com	Premium

users

user_id	name	email	registration_date	plan
1	John Doe	john.doe@example.com	2024-01-10	Premium
2	Jane Smith	jane.smith@example.com	2024-01-15	Standard
3	Alice Johnson	alice.johnson@example.com	2024-02-01	Basic
4	Bob Brown	bob.brown@example.com	2024-02-20	Premium

Movies

movie_id	title	genre	release_year	rating
1	Stranger Things	Drama	2016	8.7
2	Breaking Bad	Crime	2008	9.5
3	The Crown	History	2016	8.6
4	The Witcher	Fantasy	2019	8.2
5	Black Mirror	Sci-Fi	2011	8.8

WatchHistory

watch_id	user_id	movie_id	watched_date	completion_percentage
1	1	1	2024-02-05	100
2	2	2	2024-02-06	80
3	3	3	2024-02-10	50
4	4	4	2024-02-15	100
5	1	5	2024-02-18	90

Reviews

review_id	movie_id	user_id	review_text	rating	review_date
1	1	1	Amazing storyline and great characters!	4.5	2024-02-07
2	2	2	Intense and thrilling!	5.0	2024-02-08
3	3	3	Good show, but slow at times.	3.5	2024-02-12
4	4	4	Fantastic visuals and acting.	4.8	2024-02-16

SELECT title, genre, rating

FROM Movies

WHERE genre = 'Drama' AND rating > 8.5;

title	genre	rating
Stranger Things	Drama	8.7

users

user_id	name	email	registration_date	plan
1	John Doe	john.doe@example.com	2024-01-10	Premium
2	Jane Smith	jane.smith@example.com	2024-01-15	Standard
3	Alice Johnson	alice.johnson@example.com	2024-02-01	Basic
4	Bob Brown	bob.brown@example.com	2024-02-20	Premium

Movies

movie_id	title	genre	release_year	rating
1	Stranger Things	Drama	2016	8.7
2	Breaking Bad	Crime	2008	9.5
3	The Crown	History	2016	8.6
4	The Witcher	Fantasy	2019	8.2
5	Black Mirror	Sci-Fi	2011	8.8

WatchHistory

watch_id	user_id	movie_id	watched_date	completion_percentage
1	1	1	2024-02-05	100
2	2	2	2024-02-06	80
3	3	3	2024-02-10	50
4	4	4	2024-02-15	100
5	1	5	2024-02-18	90

Reviews

review_id	movie_id	user_id	review_text	rating	review_date
1	1	1	Amazing storyline and great characters!	4.5	2024-02-07
2	2	2	Intense and thrilling!	5.0	2024-02-08
3	3	3	Good show, but slow at times.	3.5	2024-02-12
4	4	4	Fantastic visuals and acting.	4.8	2024-02-16

==-- 3. Find the average rating of all movies released after 2015:==

SELECT AVG(rating) AS average_rating

FROM Movies

WHERE release_year > 2015;

average_rating
8.50000

users

user_id	name	email	registration_date	plan
1	John Doe	john.doe@example.com	2024-01-10	Premium
2	Jane Smith	jane.smith@example.com	2024-01-15	Standard
3	Alice Johnson	alice.johnson@example.com	2024-02-01	Basic
4	Bob Brown	bob.brown@example.com	2024-02-20	Premium

Movies

movie_id	title	genre	release_year	rating
1	Stranger Things	Drama	2016	8.7
2	Breaking Bad	Crime	2008	9.5
3	The Crown	History	2016	8.6
4	The Witcher	Fantasy	2019	8.2
5	Black Mirror	Sci-Fi	2011	8.8

WatchHistory

watch_id	user_id	movie_id	watched_date	completion_percentage
1	1	1	2024-02-05	100
2	2	2	2024-02-06	80
3	3	3	2024-02-10	50
4	4	4	2024-02-15	100
5	1	5	2024-02-18	90

Reviews

review_id	movie_id	user_id	review_text	rating	review_date
1	1	1	Amazing storyline and great characters!	4.5	2024-02-07
2	2	2	Intense and thrilling!	5.0	2024-02-08
3	3	3	Good show, but slow at times.	3.5	2024-02-12
4	4	4	Fantastic visuals and acting.	4.8	2024-02-16

==-- 4. List the names of users who have watched the movie Stranger Things along with their completion percentage:==

SELECT

users.Name,

Movies.Title,

WatchHistory.Completion_percentage

FROM users

join WatchHistory ON users.user_id= WatchHistory.user_id

Join movies ON WatchHistory.movie_id = movies.movie_id

where movies.title = "Stranger Things";

Name	Title	Completion_percentage
John Doe	Stranger Things	100

users

user_id	name	email	registration_date	plan
1	John Doe	john.doe@example.com	2024-01-10	Premium
2	Jane Smith	jane.smith@example.com	2024-01-15	Standard
3	Alice Johnson	alice.johnson@example.com	2024-02-01	Basic
4	Bob Brown	bob.brown@example.com	2024-02-20	Premium

Movies

movie_id	title	genre	release_year	rating
1	Stranger Things	Drama	2016	8.7
2	Breaking Bad	Crime	2008	9.5
3	The Crown	History	2016	8.6
4	The Witcher	Fantasy	2019	8.2
5	Black Mirror	Sci-Fi	2011	8.8

WatchHistory

watch_id	user_id	movie_id	watched_date	completion_percentage
1	1	1	2024-02-05	100
2	2	2	2024-02-06	80
3	3	3	2024-02-10	50
4	4	4	2024-02-15	100
5	1	5	2024-02-18	90

Reviews

review_id	movie_id	user_id	review_text	rating	review_date
1	1	1	Amazing storyline and great characters!	4.5	2024-02-07
2	2	2	Intense and thrilling!	5.0	2024-02-08
3	3	3	Good show, but slow at times.	3.5	2024-02-12
4	4	4	Fantastic visuals and acting.	4.8	2024-02-16

-- 5. Find the name of the user(s) who rated a movie the highest among all reviews:

SELECT

users.Name,

reviews.Rating

FROM Users

JOIN reviews USING(user_id)

WHERE reviews.rating =(select MAX(rating) from reviews);

Name	Rating
Jane Smith	5.0

users

user_id	name	email	registration_date	plan
1	John Doe	john.doe@example.com	2024-01-10	Premium
2	Jane Smith	jane.smith@example.com	2024-01-15	Standard
3	Alice Johnson	alice.johnson@example.com	2024-02-01	Basic
4	Bob Brown	bob.brown@example.com	2024-02-20	Premium

Movies

movie_id	title	genre	release_year	rating
1	Stranger Things	Drama	2016	8.7
2	Breaking Bad	Crime	2008	9.5
3	The Crown	History	2016	8.6
4	The Witcher	Fantasy	2019	8.2
5	Black Mirror	Sci-Fi	2011	8.8

WatchHistory

watch_id	user_id	movie_id	watched_date	completion_percentage
1	1	1	2024-02-05	100
2	2	2	2024-02-06	80
3	3	3	2024-02-10	50
4	4	4	2024-02-15	100
5	1	5	2024-02-18	90

Reviews

review_id	movie_id	user_id	review_text	rating	review_date
1	1	1	Amazing storyline and great characters!	4.5	2024-02-07
2	2	2	Intense and thrilling!	5.0	2024-02-08
3	3	3	Good show, but slow at times.	3.5	2024-02-12
4	4	4	Fantastic visuals and acting.	4.8	2024-02-16

-- 6. Calculate the number of movies watched by each user and sort by the highest count:

SELECT

Users.Name, COUNT(WatchHistory.watch_id) AS Movies_watched

FROM Users

JOIN WatchHistory USING(user_id)

GROUP BY Users.user_id

ORDER BY movies_watched DESC;

Name	Movies_watched
John Doe	2
Jane Smith	1
Alice Johnson	1
Bob Brown	1

users ·

user_id	name	email	registration_date	plan
1	John Doe	john.doe@example.com	2024-01-10	Premium
2	Jane Smith	jane.smith@example.com	2024-01-15	Standard
3	Alice Johnson	alice.johnson@example.com	2024-02-01	Basic
4	Bob Brown	bob.brown@example.com	2024-02-20	Premium

Movies

movie_id	title	genre	release_year	rating
1	Stranger Things	Drama	2016	8.7
2	Breaking Bad	Crime	2008	9.5
3	The Crown	History	2016	8.6
4	The Witcher	Fantasy	2019	8.2
5	Black Mirror	Sci-Fi	2011	8.8

WatchHistory

watch_id	user_id	movie_id	watched_date	completion_percentage
1	1	1	2024-02-05	100
2	2	2	2024-02-06	80
3	3	3	2024-02-10	50
4	4	4	2024-02-15	100
5	1	5	2024-02-18	90

Reviews

review_id	movie_id	user_id	review_text	rating	review_date
1	1	1	Amazing storyline and great characters!	4.5	2024-02-07
2	2	2	Intense and thrilling!	5.0	2024-02-08
3	3	3	Good show, but slow at times.	3.5	2024-02-12
4	4	4	Fantastic visuals and acting.	4.8	2024-02-16

-- 7.List all movies watched by John Doe, including their genre, rating, and his completion percentage:

SELECT U.Name, M.Title, M.Genre, M.Rating, W.Completion_percentage

FROM Movies M

JOIN WatchHistory W USING(movie_id)

JOIN Users U USING(user_id)

WHERE U.name = 'John Doe';

Name	Title	Genre	Rating	Completion_percentage
John Doe	Stranger Things	Drama	8.7	100
John Doe	Black Mirror	Sci-Fi	8.8	90

users

user_id	name	email	registration_date	plan
1	John Doe	john.doe@example.com	2024-01-10	Premium
2	Jane Smith	jane.smith@example.com	2024-01-15	Standard
3	Alice Johnson	alice.johnson@example.com	2024-02-01	Basic
4	Bob Brown	bob.brown@example.com	2024-02-20	Premium

Movies

movie_id	title	genre	release_year	rating
1	Stranger Things	Drama	2016	8.7
2	Breaking Bad	Crime	2008	9.5
3	The Crown	History	2016	8.6
4	The Witcher	Fantasy	2019	8.2
5	Black Mirror	Sci-Fi	2011	8.8

WatchHistory

watch_id	user_id	movie_id	watched_date	completion_percentage
1	1	1	2024-02-05	100
2	2	2	2024-02-06	80
3	3	3	2024-02-10	50
4	4	4	2024-02-15	100
5	5	5	2024-02-18	90

Reviews

review_id	movie_id	user_id	review_text	rating	review_date
1	1	1	Amazing storyline and great characters!	4.5	2024-02-07
2	2	2	Intense and thrilling!	5.0	2024-02-08
3	3	3	Good show, but slow at times.	3.5	2024-02-12
4	4	4	Fantastic visuals and acting.	4.8	2024-02-16

-- 8.Update the movie's rating for Stranger Things:

UPDATE Movies

SET rating = 8.9

WHERE title = 'Stranger Things';

select * from movies;

movie_id	title	genre	release_year	rating
1	Stranger Things	Drama	2016	8.9
2	Breaking Bad	Crime	2008	9.5
3	The Crown	History	2016	8.6
4	The Witcher	Fantasy	2019	8.2
5	Black Mirror	Sci-Fi	2011	8.8

-- 9.Remove all reviews for movies with a rating below 4.0:

DELETE FROM reviews

WHERE rating < 4.0;

select * from reviews;

review_id	movie_id	user_id	review_text	rating	review_date
1	1	1	Amazing storyline and great characters!	4.5	2024-02-07
2	2	2	Intense and thrilling!	5.0	2024-02-08
4	4	4	Fantastic visuals and acting.	4.8	2024-02-16

review_id	movie_id	user_id	review_text	rating	review_date
1	1	1	Amazing storyline and great characters!	4.5	2024-02-07
2	2	2	Intense and thrilling!	5.0	2024-02-08
3	3	3	Good show, but slow at times.	3.5	2024-02-12
4	4	4	Fantastic visuals and acting.	4.8	2024-02-16

SELECT U.name, M.title, R.review_text ,W.completion_percentage

FROM Users U

JOIN Reviews R USING(user_id)

JOIN Movies M USING(movie_id)

LEFT JOIN WatchHistory W USING(movie_id)

WHERE (W.completion_percentage IS NULL OR W.completion_percentage < 100);

name	title	review_text	completion_percentage
Jane Smith	Breaking Bad	Intense and thrilling!	80

SELECT M.title, M.genre, W.completion_percentage

FROM Movies M

JOIN WatchHistory W ON M.movie_id = W.movie_id

JOIN Users U ON W.user_id = U.user_id

WHERE U.name = 'John Doe';

title	genre	completion_percentage
Stranger Things	Drama	100
Black Mirror	Sci-Fi	90

SELECT U.name, M.title, R.review_text, R.rating

FROM Users U

JOIN Reviews R ON U.user_id = R.user_id

JOIN Movies M ON R.movie_id = M.movie_id

WHERE M.title = 'Stranger Things';

name	title	review_text	rating
John Doe	Stranger Things	Amazing storyline and great characters!	4.5

-- 13. Fetch the watch history of all users, including their name, email, movie title,

-- genre, watched date, and completion percentage:

SELECT U.name, U.email, M.title, M.genre, W.watched_date, W.completion_percentage

FROM Users U

JOIN WatchHistory W ON U.user_id = W.user_id

JOIN Movies M ON W.movie_id = M.movie_id;

name	email	title	genre	watched_date	completion_percentage
John Doe	john.doe@example.com	Stranger Things	Drama	2024-02-05	100
John Doe	john.doe@example.com	Black Mirror	Sci-Fi	2024-02-18	90
Jane Smith	jane.smith@example.com	Breaking Bad	Crime	2024-02-06	80
Alice Johnson	alice.johnson@example.com	The Crown	History	2024-02-10	50
Bob Brown	bob.brown@example.com	The Witcher	Fantasy	2024-02-15	100

-- 14.List all movies along with the total number of reviews and average rating

-- for each movie, including only movies with at least two reviews:

SELECT M.title, COUNT(R.review_id) AS total_reviews, AVG(R.rating) AS average_rating

FROM Movies M

JOIN Reviews R ON M.movie_id = R.movie_id

GROUP BY M.movie_id

HAVING COUNT(R.review_id) >= 2;

title	total_reviews	average_rating