Movie and TV Shows Recommendation Web Application

1) Domain Description

Our project is a web application that gives the user the functionality to create a personalized list of titles he/she has watched. It also shows the user the trending titles based on what shows are the most popular and most importantly it gives recommendations based on titles he/she likes/wants.

This website will be helpful for all the people who want to quickly make a list of TV shows or movies they want to watch or have already watched. They will be able to see what all the other users are currently watching.

We will be asking users for Email Address, User Name and alpha-numeric password to make an account.

2) Functionality supported

- A user can sign up providing his/her registration details along with a username and password.
- Once a user is logged in, he/she can view/search different movie recommendations based on their preferences.(Genre, Name, Release Date etc)
- Users can also maintain a common list of all the movies which they have already watched.
- Users can also write reviews on the shows they have watched.

3) Database Description

Each USER has a unique uid, username (unique),name (firstname , lastname),joining date, their favourite movies,already watched movies, movies they want to watch later and the various REVIEWS they have given so far as attributes and relations.

Each MOVIE will have a movid (unique),movie name, status (Released/ Ongoing), episodes (1 if it is a movie),airdate (release date, enddate),genre it belongs to, studio that has produced it, duration , rating , number of users that have marked the movie/tv show as their favourite, the

synopsis and cast of the movie/tv show ,and the various REVIEWS given to it by different users.(derived attributes arent mentioned)

The web application does not recommend or contain upcoming movies.

Each user has to login by providing their email (unique), username(unique) & password(Has to contain at least 1 capital letter,1 small letter,1 special character and 1 number and has to be of a minimum length of 8 characters).Each user has to be given a unique id when they login.

The web application recommends the user top 5 trending movies belonging to the genre that the user has watched the most movies from.

It also makes the assumption that admin is not a user and if a user is deleted their posts/reviews will remain intact and will not be deleted.

4) ER Diagram

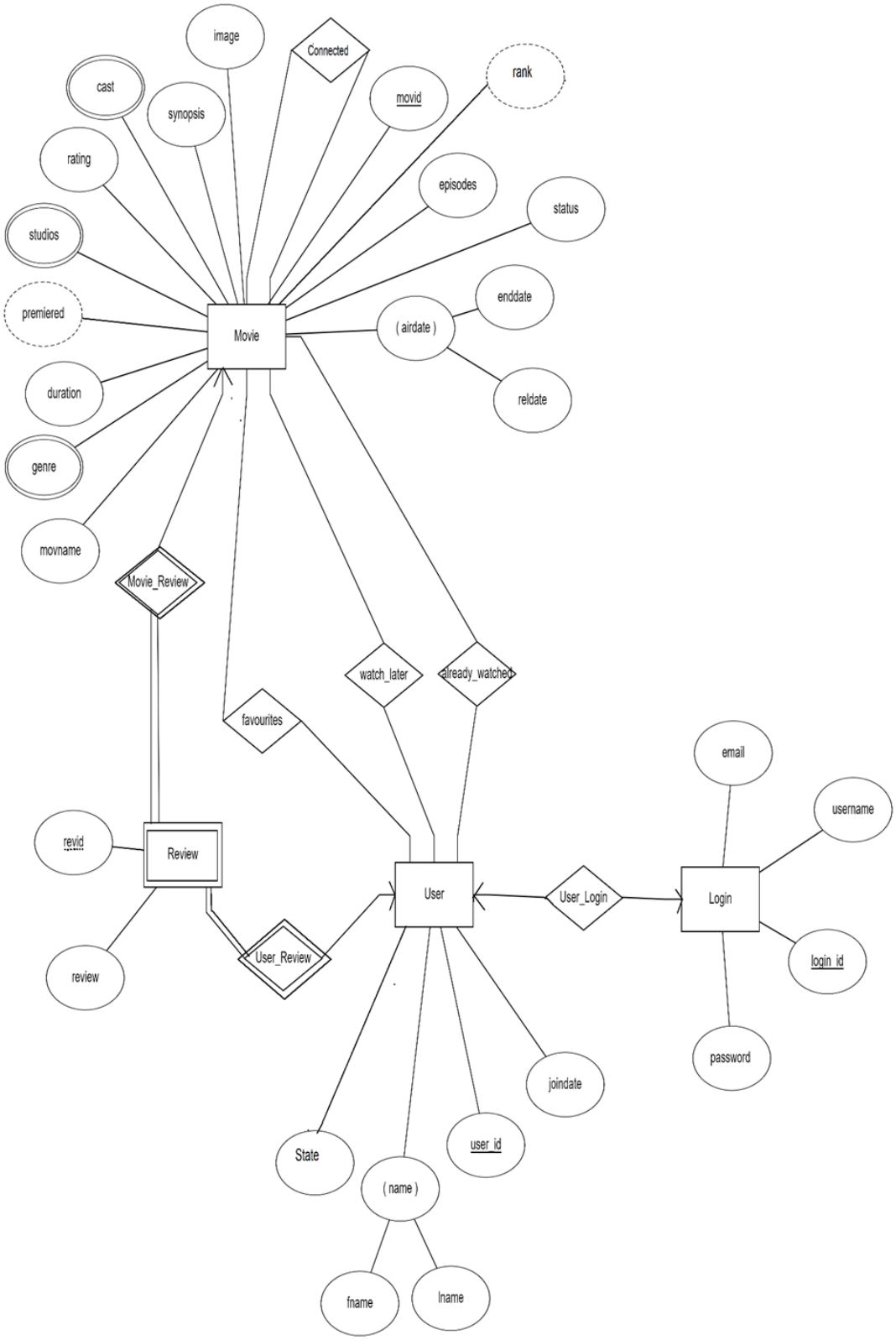


image
Connected
cast
synopsis
movid
rank
rating
episodes
status
studios
premiered
Movie
(airdate)
enddate
reldate
duration
genre
movname
Movie_Review
watch_later
already_watched
favourites
email
username
revid
Review
User
User_Login
Login
review
User_Review
login_id
password
joindate
State
user_id
(name)
fname
lname

5) Relational Schema (Derived From ER Diagram)

Movie (movid , movname ,status ,episodes ,reldate, enddate ,duration ,rating, no_of_fav ,synopsis, image)

Movie_genre (movid genre)

Movie_ cast (movid cast)

Movie_ studios (movid studios)

Login(login_id, username, email, password)

User(user_id,fname,lname,joindate,State)

Review(revid movid user_id , review)

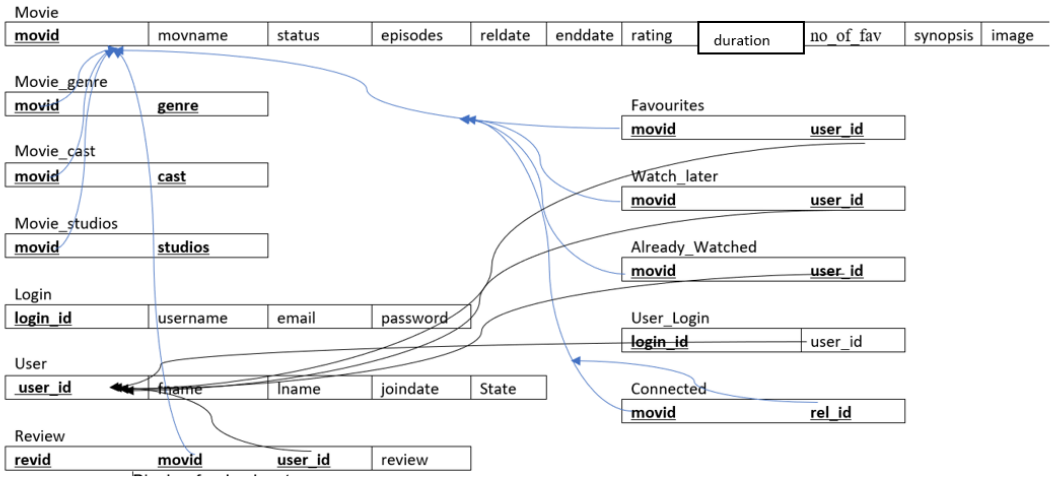
Favourites(movid user_id)

Watch_later (movid user_id)

Already_Watched(movid user_id)

User_Login(login_id,user_id)

Connected(mov_id, rel_id)



(arrows represent foreign key pointing to table with attribute as primary key)

6) Functional Dependencies

(a) Movie

movid -> movname status episodes reldate enddate duration rating no_of_fav synopsis image

(b) Movie_genre

movid genre-> movid genre (Trivial Functional dependency)

(c) Movie_ cast

movid cast-> movid cast (Trivial Functional dependency)

(d) Movie_ studios

movid studios-> movid studios (Trivial Functional dependency)

(e) Login

login_id -> username, email, password

username-> login_id, email, password

email-> login_id, username, password

(f) User

user_id -> fname lname joindate State

(g) **Review**

revid-> review

(h) **Favourites**

movid user_id -> movid user_id (Trivial Functional dependency)

(i) **Watch_later**

movid user_id -> movid user_id (Trivial Functional dependency)

(j) **Already_Watched**

movid user_id -> movid user_id (Trivial Functional dependency)

(k) **User_Login**

login_id -> user_id

(l) **Connected**

movid rel_id -> movid rel_id (Trivial Functional dependency)

ABOVE DECOMPOSITION IS IN 3NF

7) Table Schema (3NF)

1) **Movie**

movid,	PK,INT
status	VARCHAR(N)
episodes	INT
reldate	DATE
enddate	DATE
duration	TIME
rating	DOUBLE
no_of_fav	INT
movname	VARCHAR(N)
image	VARCHAR(N)

Sypnosis	TEXT

2) **Movie_genre**

	PK
movid	INT, FK(MOVIE)
genre	VARCHAR(N)

3) **Movie_ cast**

	PK
movid	IN, FK(MOVIE)
cast	VARCHAR(N)

4) **Movie_ studios**

	PK,
movid	INT, FK(MOVIE)
studios	VARCHAR(N)

5) **Login**

login_id	PK, INT
email	UNIQUE, VARCHAR(N)
username	UNIQUE, VARCHAR(N)
password	VARCHAR(N)

6) **User**

user_id	PK,INT
fname	VARCHAR(N)
lname	VARCHAR(N)
joindate	DATE
State	VARCHAR(N)

7) **Review**

revid movid user_id	PK INT , FK(REVIEW_DESC) UNIQUE INT , FK(MOVIE) INT, FK(USER)
review	VARCHAR(N)

8) **Favourites**

movid user_id	PK INT, FK(MOVIE) INT, FK(USER)

9) **Watch_later**

movid	PK
user_id	INT, FK(MOVIE)
	INT, FK(USER)

10) **Already_Watched**

movid	PK
user_id	INT, FK(MOVIE)
	INT, FK(USER)

11) **User_Login**

login_id	PK , INT
user_id	INT, FK(USER)

12) **Connected**

mov_id	PK
rel_id	INT, FK(MOVIE)
	INT , FK(MOVIE)

Homepage

Home Search Profile Details Watch Later Favourites Already Watched Logout

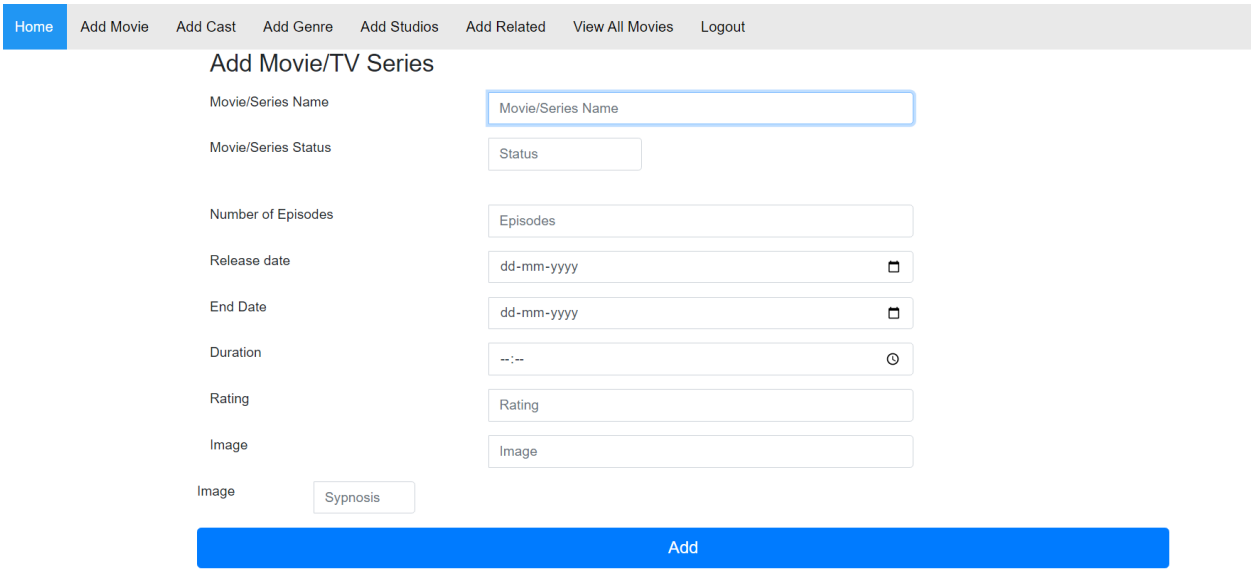
TOP MOVIES RECOMMENDED FOR YOU

Name	
Naruto	View
InuYasha	View
Pokemon Journey	View
Dear Diana	View
wewd	View

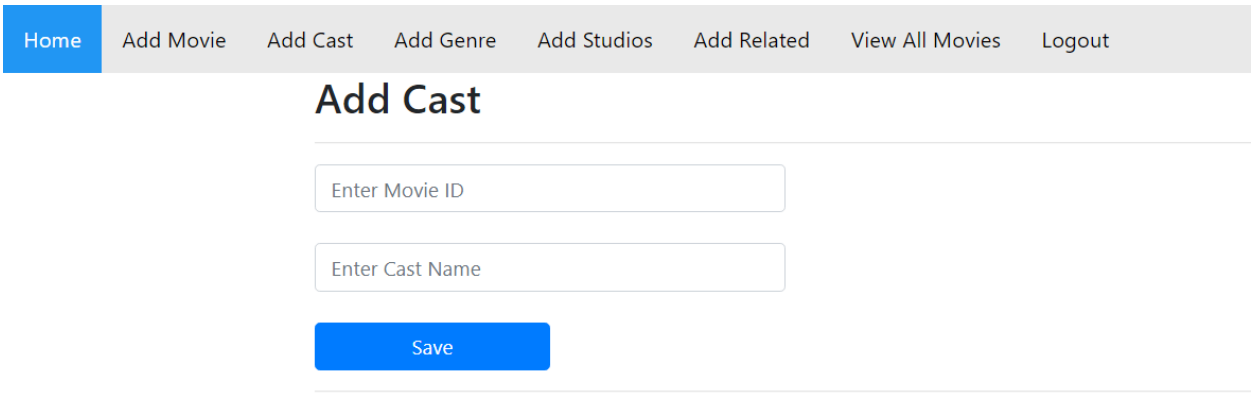
Delete Account

ADMIN FUNCTIONS

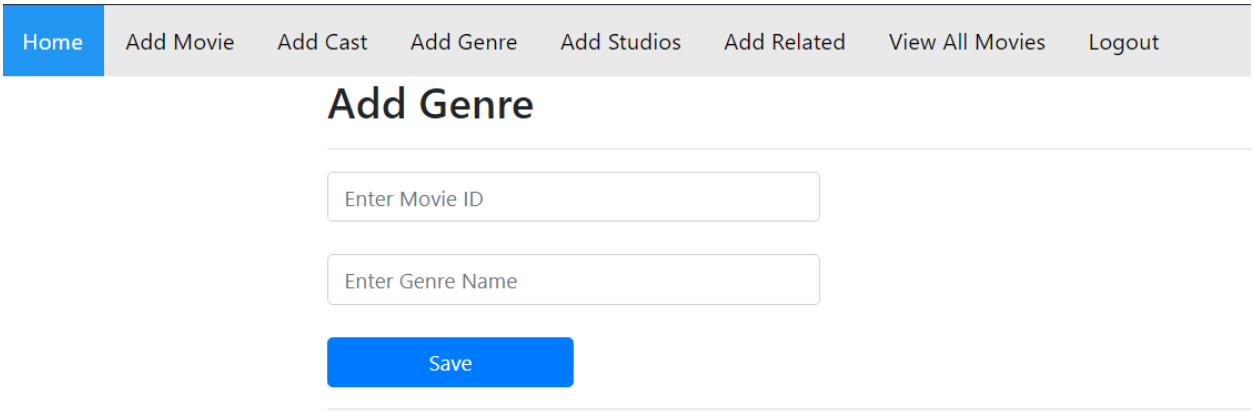
1) Add Movie/Series



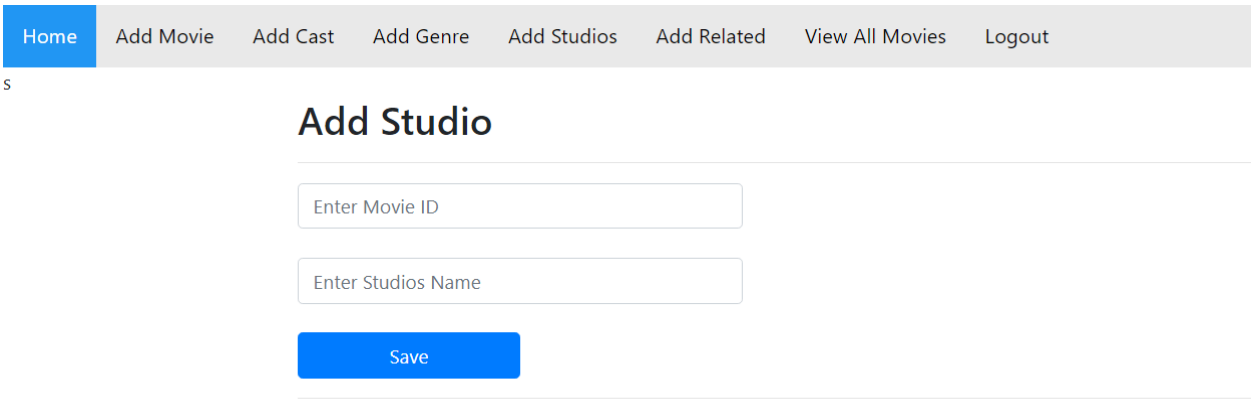
2) Add Cast



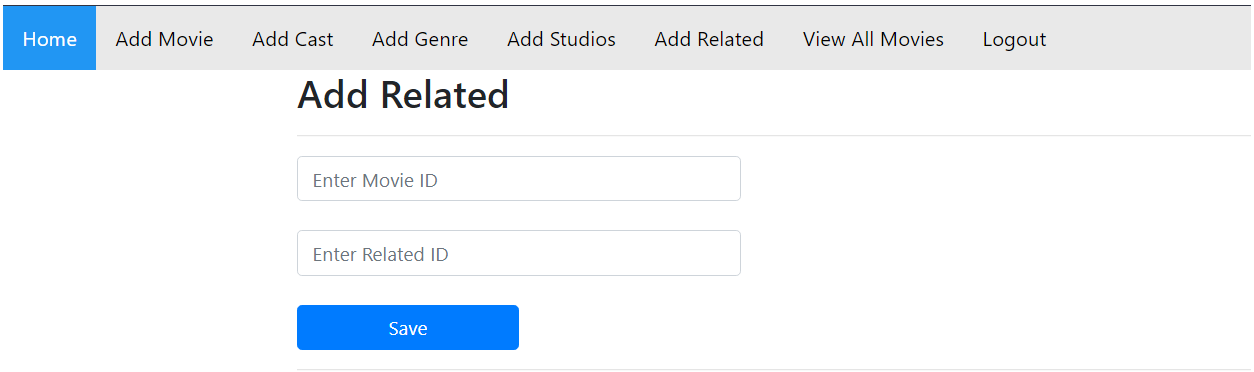
3) Add Genre



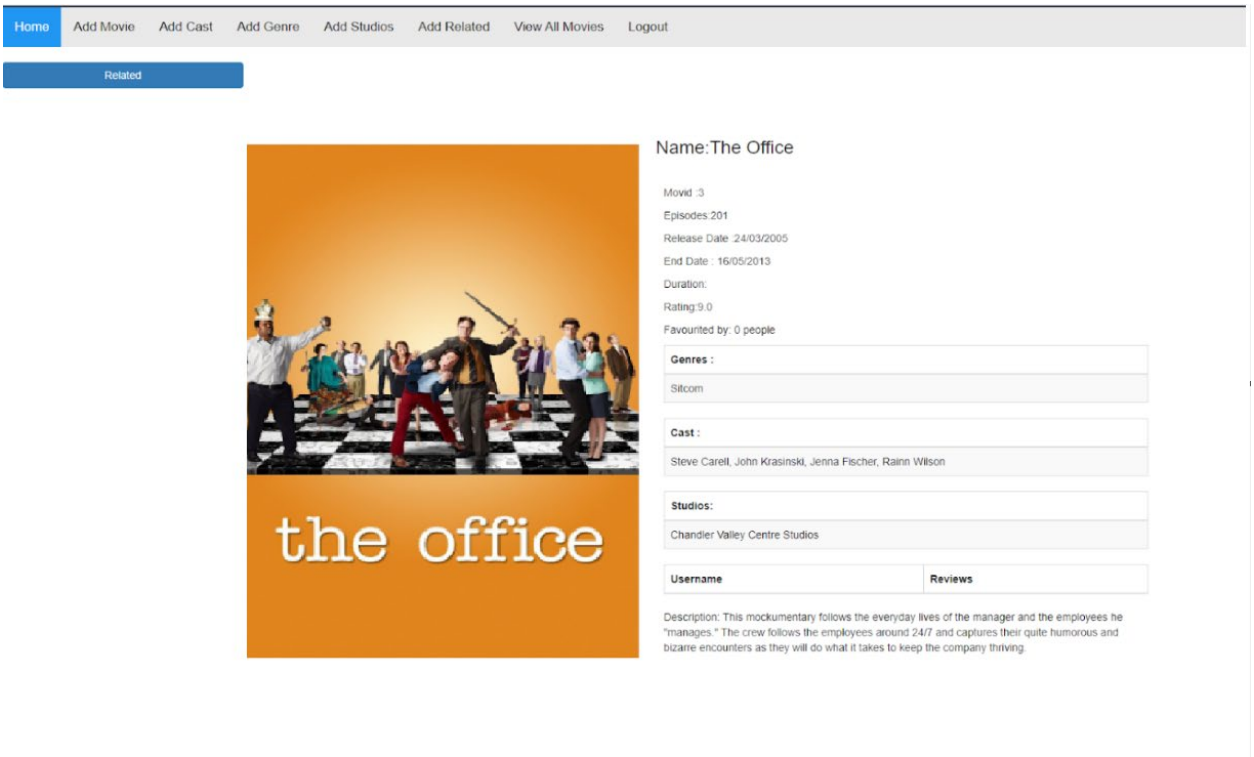
4) Add Studios



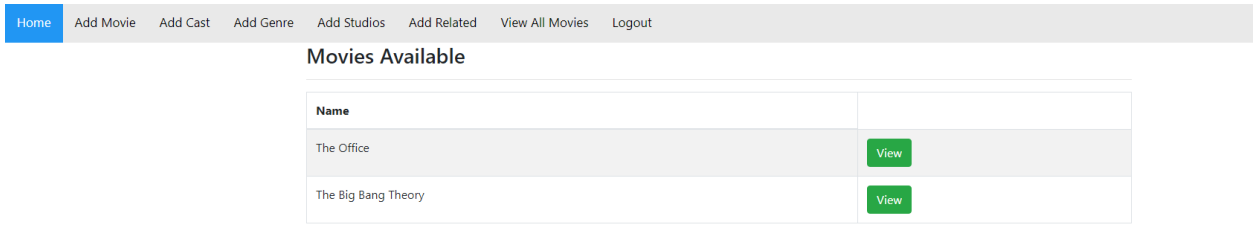
5) Add Related



6) Title Details

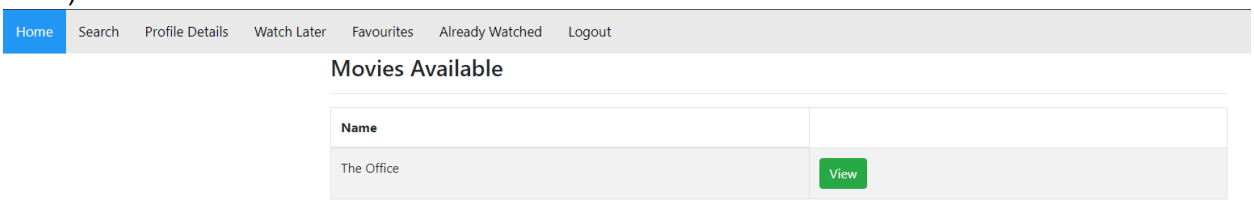


7) View all Movies/Series

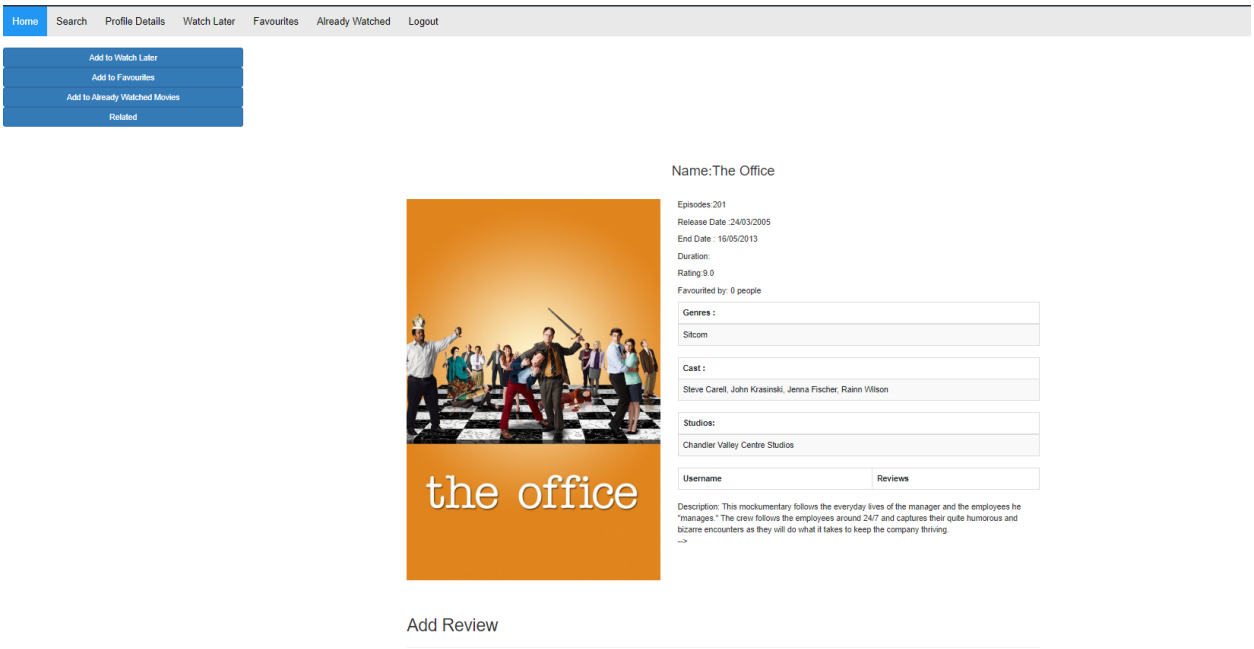


USER Panel

1) Search for Movies/Series



2) Title Details



3) My Profile

Home Search Profile Details Watch Later Favourites Already Watched Logout

Profile Details

User ID	2
First Name	Shantanu
Last Name	Kumar
Member Since	2022-04-27

Movie	Reviews
The Office	This is the most remarkable and hilarious workplace comedy created in this decade unarguably.

Back

4) Search Movies WatchLater List

Home Search Profile Details Watch Later Favourites Already Watched Logout

Search For Movies

Search for Movies

Search

MOVIE IN YOUR WATCH LATER LIST

The Office View

5) Search Movies

Home Search Profile Details Watch Later Favourites Already Watched Logout

Search For Movies

Search for Movies

Search

MOVIE IN YOUR FAVORITE LIST

The Big Bang Theory View

Home Search Profile Details Watch Later Favourites Already Watched Logout

Search for a Movie/TV Series

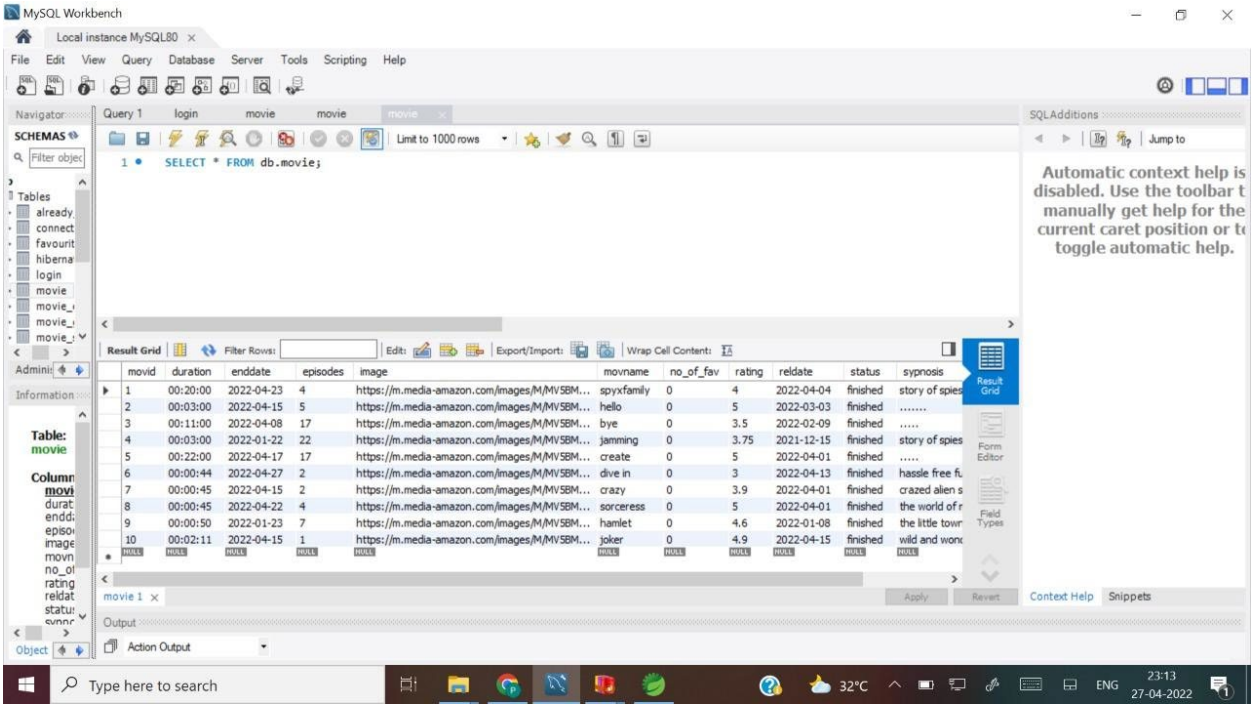
Movie/Series Name	Movie/Series Name
Movie/Series Status	Status
Number of Episodes	Episodes
Release date	dd-mm-yyyy
End Date	dd-mm-yyyy
Duration	--:--
Rating	Rating
Genre	Genre
Cast	Cast
Studio Name	Studios

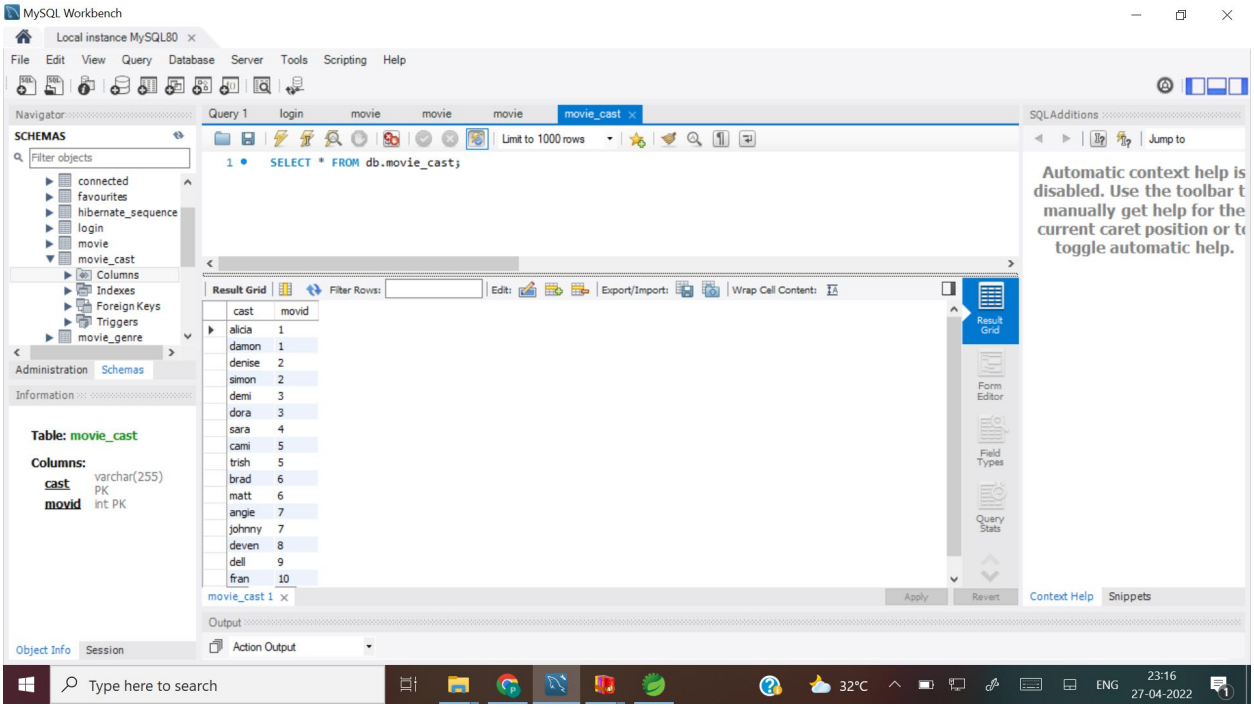
Search

Search for a User

Search

Screenshots capturing tables data through select queries




MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
connected
favourites
hibernate_sequence
login
movie
movie_cast
Columns
Indexes
Foreign Keys
Triggers
movie_genre
Administration Schemas
Information
Table: movie_cast
Columns:
cast varchar(255) PK
movid int PK
Object Info Session
Query 1 login movie movie movie movie_cast
Limit to 1000 rows
1 SELECT * FROM db.movie_cast;
Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:
cast movid
alicia 1
damon 1
denise 2
simon 2
demi 3
dora 3
sara 4
cami 5
trish 5
brad 6
matt 6
angie 7
johnny 7
deven 8
dell 9
fran 10
movie_cast 1
Apply Revert
Output
Action Output
SQLAdditions
Jump to
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.
Context Help Snippets
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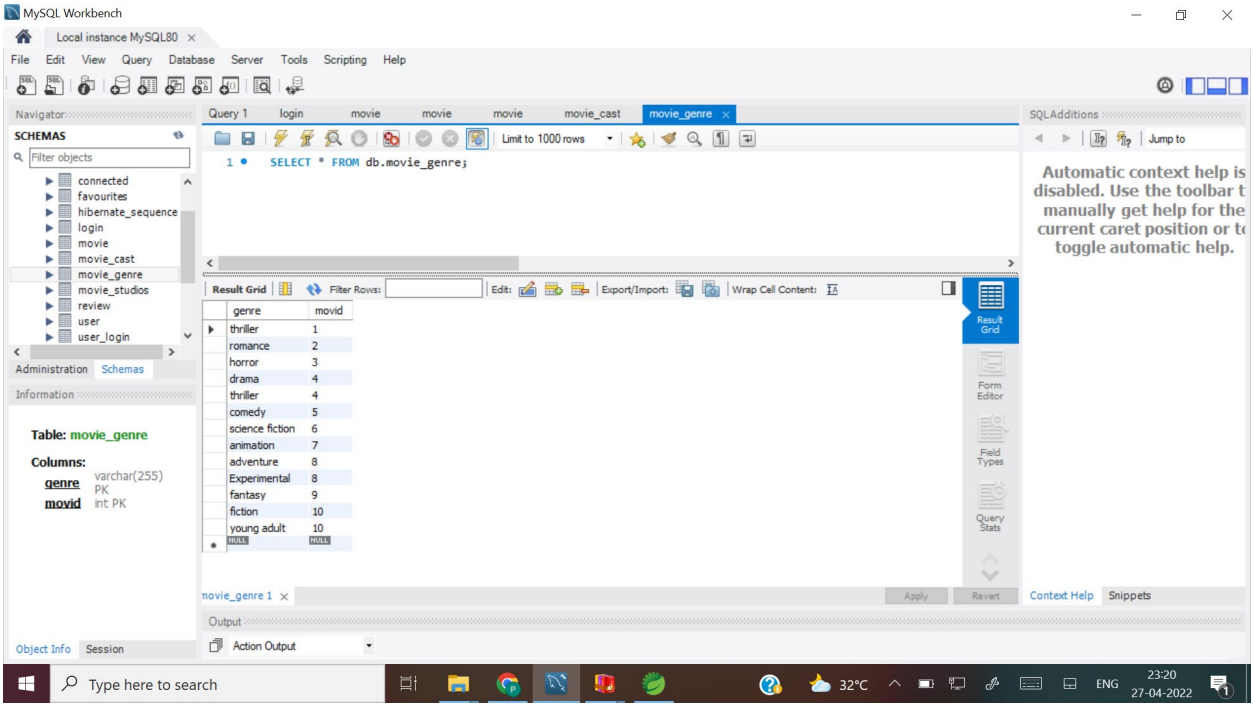
27-04-2022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connected
favourites
hibernate_sequence
login
movie
movie_cast
movie_genre
movie_studios
review
user
user_login
Administration Schemas
Information
Table: movie_genre
Columns:
genre varchar(255) PK
movid int PK
Object Info Session
Query 1 login movie movie movie movie_cast movie_genre
Limit to 1000 rows
1 SELECT * FROM db.movie_genre;
Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:
genre movid
thriller 1
romance 2
horror 3
drama 4
thriller 4
comedy 5
science fiction 6
animation 7
adventure 8
Experimental 8
fantasy 9
fiction 10
young adult 10
NULL NULL
movie_genre 1
Apply Revert
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Action Output
SQLAdditions
Jump to
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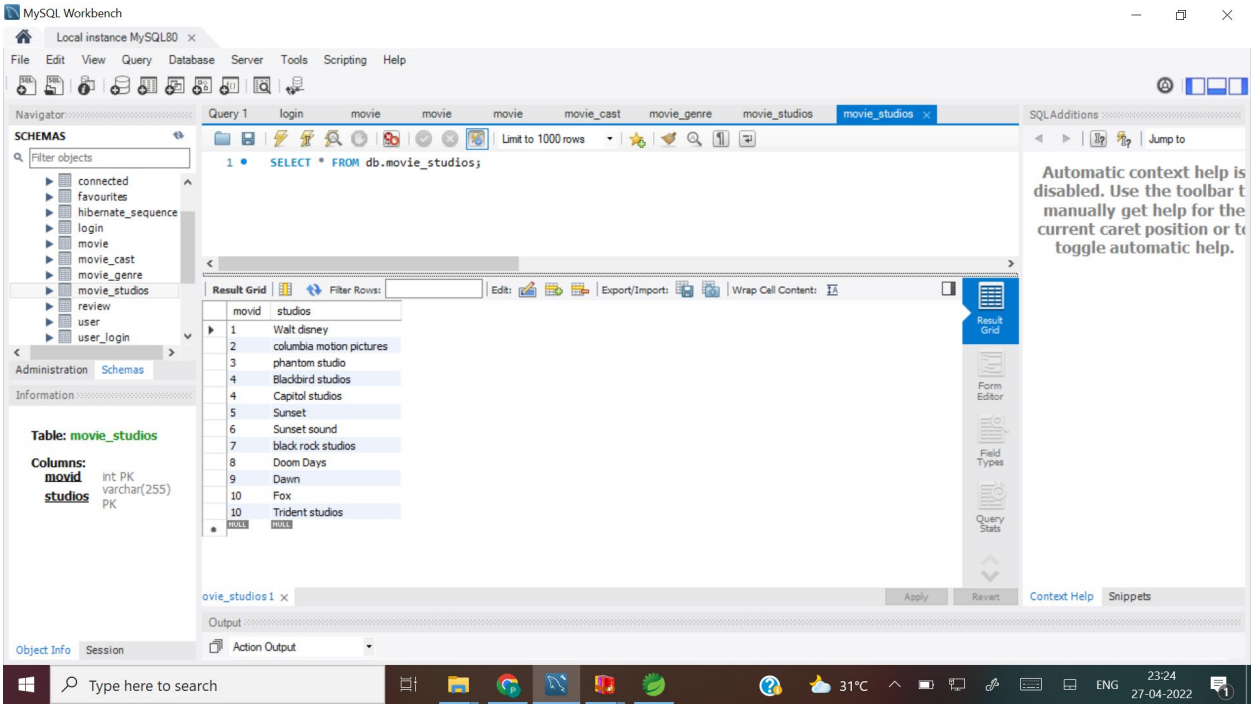
27-04-2022


MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
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Filter objects
connected
favourites
hibernate_sequence
login
movie
movie_cast
movie_genre
movie_studios
review
user
user_login
Administration Schemas
Information
Table: movie_studios
Columns:
movid int PK
studios varchar(255) PK
Object Info Session
Query 1 login movie movie movie movie_cast movie_genre movie_studios movie_studios
Limit to 1000 rows
1 SELECT * FROM db.movie_studios;
Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:
movid studios
1 Walt disney
2 columbia motion pictures
3 phantom studio
4 Blackbird studios
4 Capitol studios
5 Sunset
6 Sunset sound
7 black rock studios
8 Doom Days
9 Dawn
10 Fox
10 Trident studios
Apply Revert
Output
Action Output
SQLAdditions
Jump to
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Context Help Snippets
Type here to search
31°C
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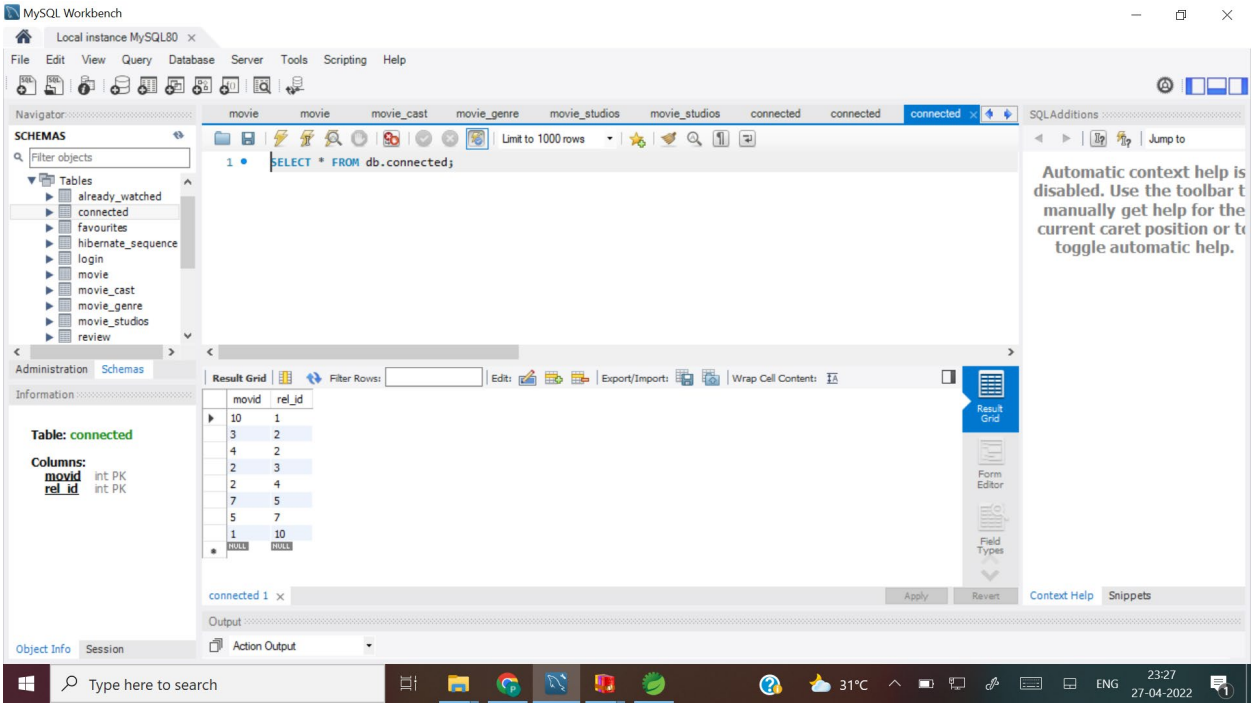
MySQL Workbench
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File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
Tables
already_watched
connected
favourites
hibernate_sequence
login
movie
movie_cast
movie_genre
movie_studios
review
Administration Schemas
Information
Table: connected
Columns:
movid int PK
rel_id int PK
Object Info Session
movie movie movie_cast movie_genre movie_studios movie_studios connected connected connected
Limit to 1000 rows
1 SELECT * FROM db.connected;
Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:
movid rel_id
10 1
3 2
4 2
2 3
2 4
7 5
5 7
1 10
Apply Revert
Output
Action Output
SQLAdditions
Jump to
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Context Help Snippets
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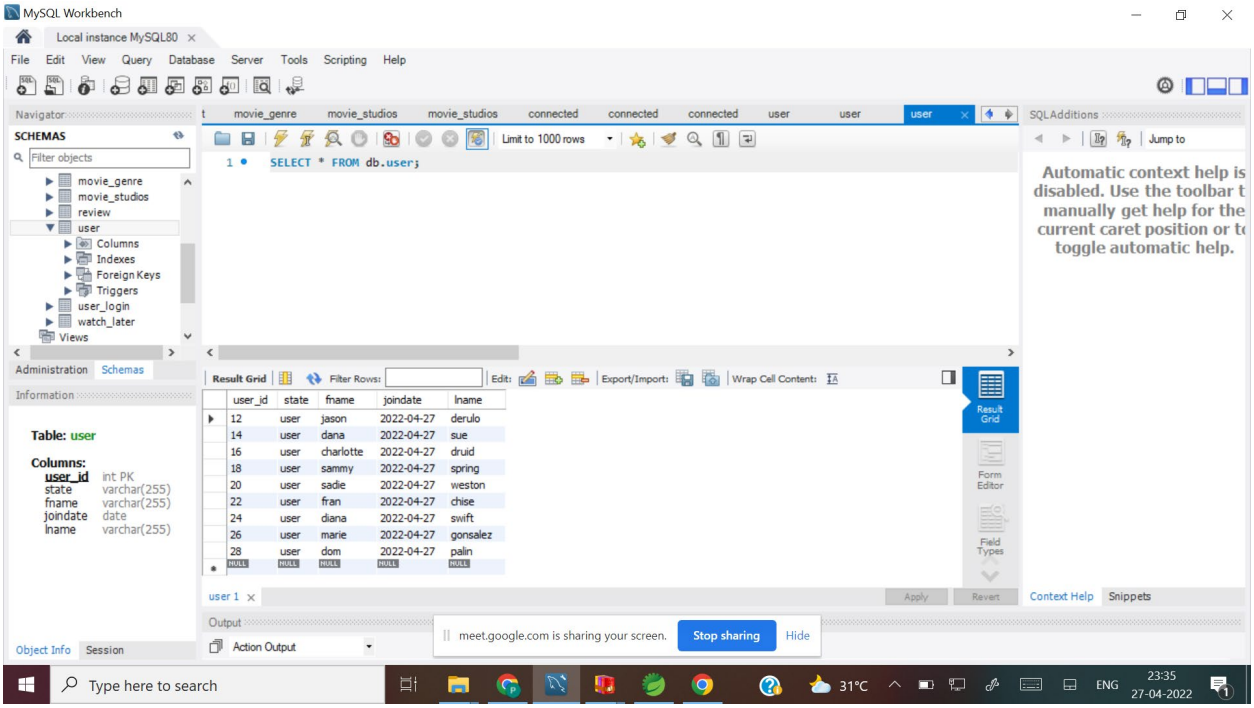
27-04-2022


MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
movie_genre
movie_studios
review
user
Columns
Indexes
Foreign Keys
Triggers
user_login
watch_later
Views
Administration Schemas
Information
Table: user
Columns:
user_id int PK
state varchar(255)
fname varchar(255)
joindate date
lname varchar(255)
Object Info Session
Limit to 1000 rows
1 SELECT * FROM db.user;
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
user_id state fname joindate lname
12 user jason 2022-04-27 derulo
14 user dana 2022-04-27 sue
16 user charlotte 2022-04-27 druid
18 user sammy 2022-04-27 spring
20 user sadie 2022-04-27 weston
22 user fran 2022-04-27 chise
24 user diana 2022-04-27 swift
26 user marie 2022-04-27 gonsalez
28 user dom 2022-04-27 palin
user 1
Apply
Revert
SQLAdditions
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Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.
Context Help Snippets
Output
Action Output
meet.google.com is sharing your screen.
Stop sharing
Hide
Type here to search
31°C
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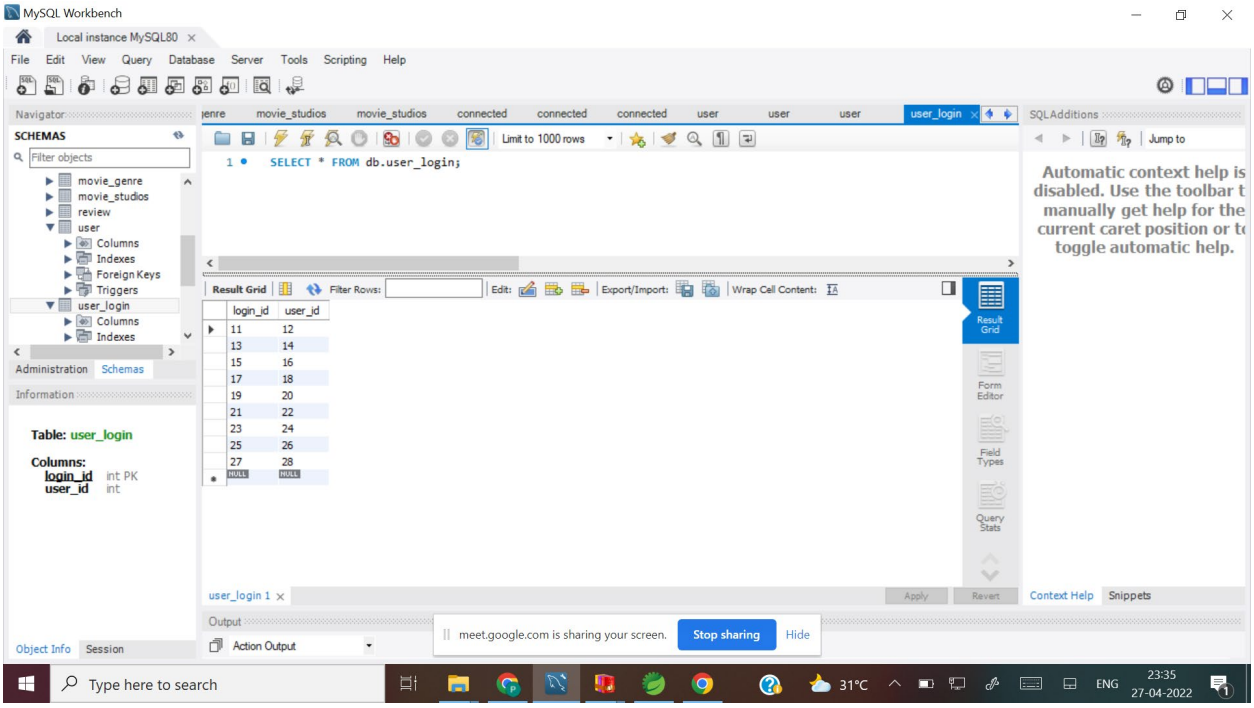
27-04-2022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movie_genre
movie_studios
review
user
Columns
Indexes
Foreign Keys
Triggers
user_login
Columns
Indexes
Administration Schemas
Information
Table: user_login
Columns:
login_id int PK
user_id int
Object Info Session
Limit to 1000 rows
1 SELECT * FROM db.user_login;
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
login_id user_id
11 12
13 14
15 16
17 18
19 20
21 22
23 24
25 26
27 28
user_login 1
Apply
Revert
SQLAdditions
Jump to
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Stop sharing
Hide
Type here to search
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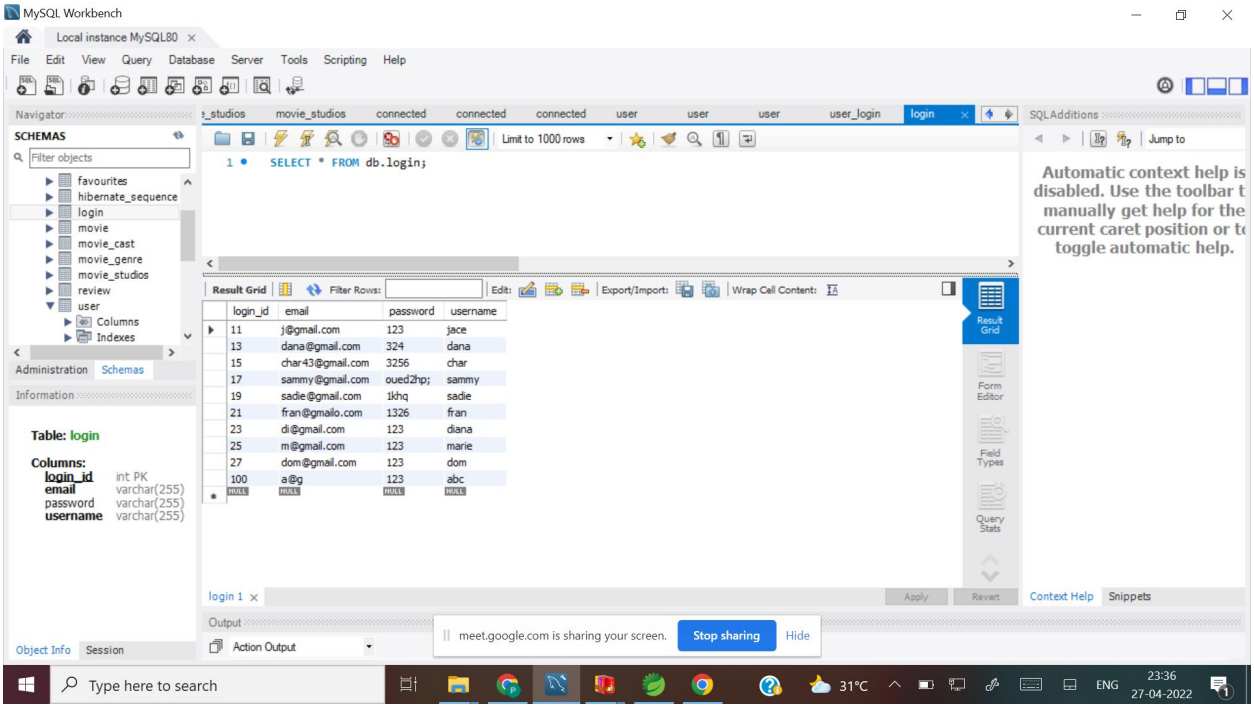
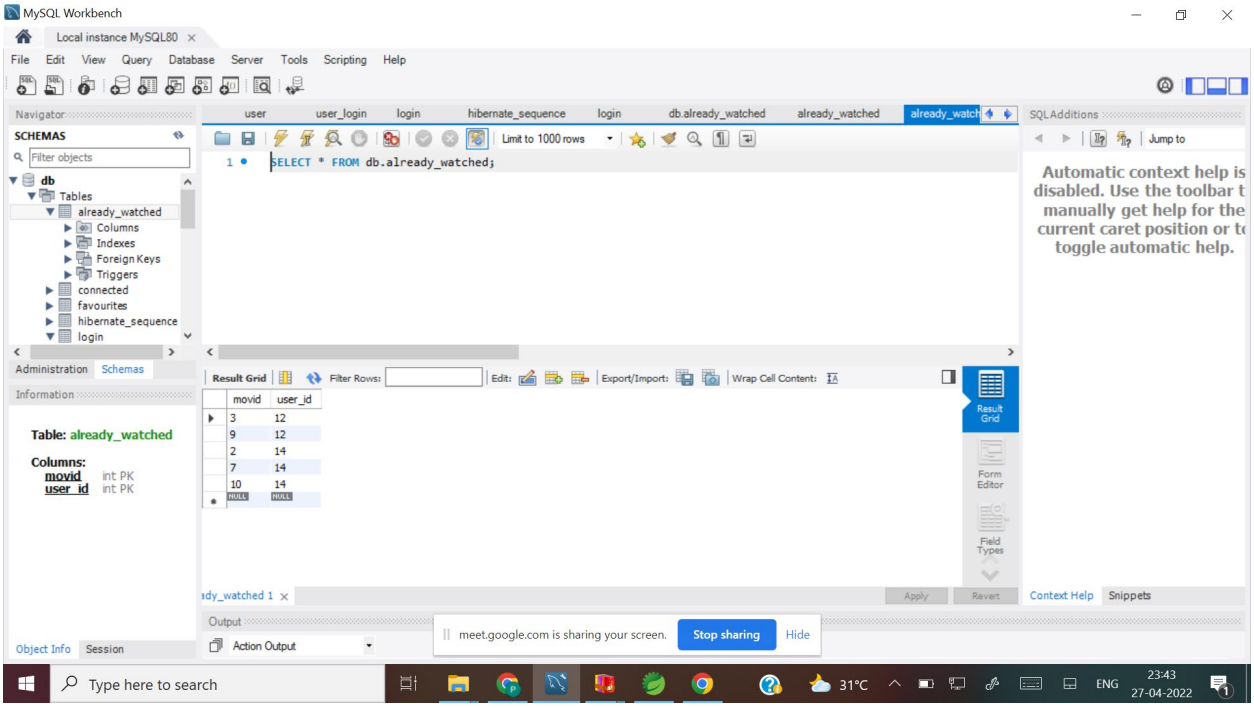
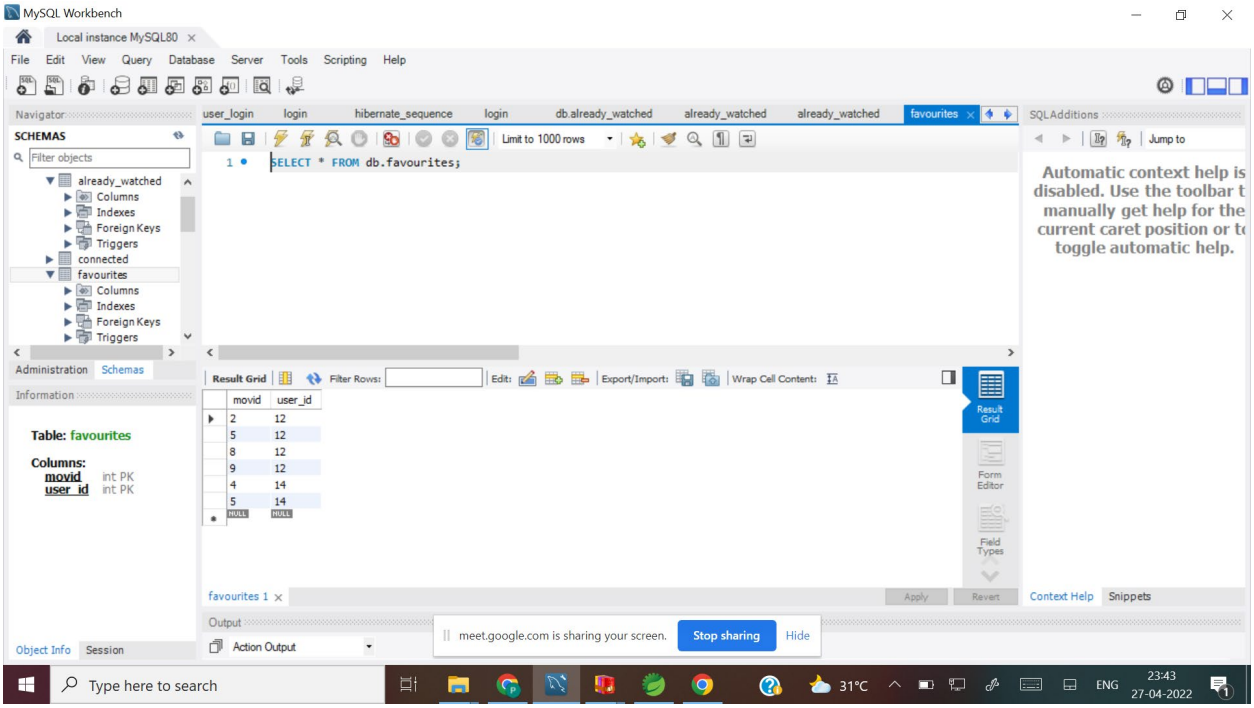
27-04-2022


MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
SELECT * FROM db.login;
Table: login
Columns:
login_id int PK
email varchar(255)
password varchar(255)
username varchar(255)
login_id email password username
11 j@gmail.com 123 jace
13 dana@gmail.com 324 dana
15 char43@gmail.com 3256 char
17 sammy@gmail.com oued2hp; sammy
19 sadie@gmail.com 1khq sadie
21 fran@gmailo.com 1326 fran
23 di@gmail.com 123 diana
25 m@gmail.com 123 marie
27 dom@gmail.com 123 dom
100 a@g 123 abc
meet.google.com is sharing your screen.
Stop sharing
Hide
Type here to search
31°C
ENG
23:36
27-04-2022


MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
SELECT * FROM db.already_watched;
Table: already_watched
Columns:
movid int PK
user_id int PK
movid user_id
3 12
9 12
2 14
7 14
10 14
meet.google.com is sharing your screen.
Stop sharing
Hide
Type here to search
31°C
ENG
23:43
27-04-2022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SCHEMAS
Filter objects
already_watched
Columns
Indexes
Foreign Keys
Triggers
connected
favourites
Columns
Indexes
Foreign Keys
Triggers
Administration Schemas
Information
Table: favourites
Columns:
movid int PK
user_id int PK
Object Info Session
user_login login hibernate_sequence login db.already_watched already_watched already_watched favourites
Limit to 1000 rows
1 SELECT * FROM db.favourites;
Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:
movid user_id
2 12
5 12
8 12
9 12
4 14
5 14
NULL NULL
favourites 1
Apply Revert
Output
Action Output
meet.google.com is sharing your screen. Stop sharing Hide
SQLAdditions
Jump to
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Context Help Snippets
Type here to search
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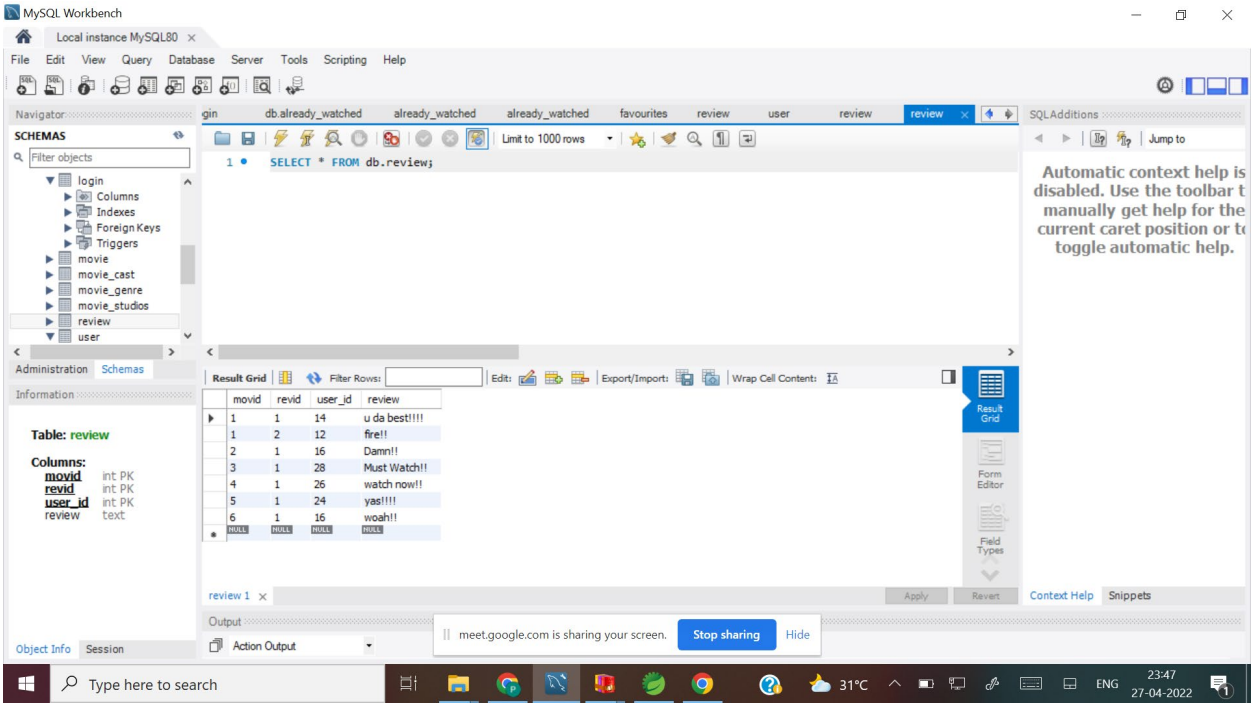
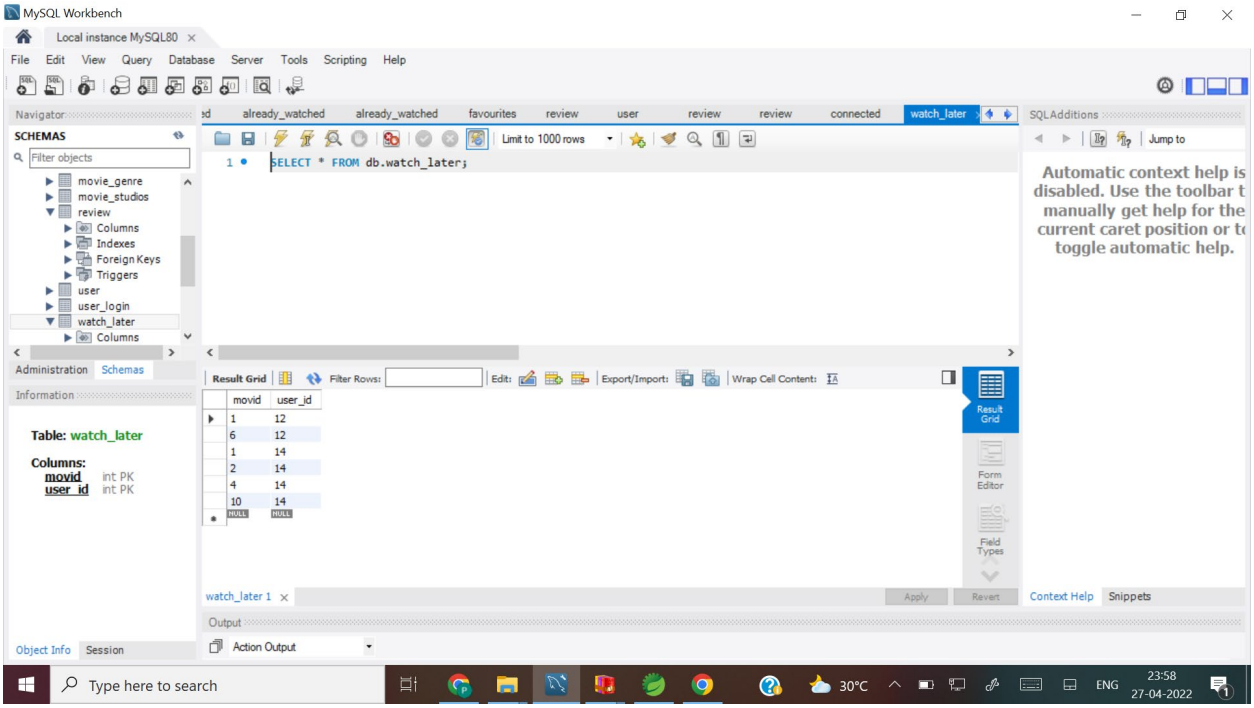
23:43
27-04-2022


MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Navigator
SCHEMAS
Filter objects
login
Columns
Indexes
Foreign Keys
Triggers
movie
movie_cast
movie_genre
movie_studios
review
user
Administration Schemas
Information
Table: review
Columns:
movid int PK
revid int PK
user_id int PK
review text
Object Info Session
gin db.already_watched already_watched already_watched favourites review user review review
Limit to 1000 rows
1 SELECT * FROM db.review;
Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:
movid revid user_id review
1 1 14 u da best!!!!
1 2 12 fire!!
2 1 16 Damn!!
3 1 28 Must Watch!!
4 1 26 watch now!!
5 1 24 yas!!!!
6 1 16 woah!!
NULL NULL NULL NULL
review 1
Apply Revert
Output
Action Output
meet.google.com is sharing your screen. Stop sharing Hide
SQLAdditions
Jump to
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.
Context Help Snippets
Type here to search
31°C
ENG
23:47
27-04-2022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Navigator
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Filter objects
movie_genre
movie_studios
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Foreign Keys
Triggers
user
user_login
watch_later
Columns
Administration Schemas
Information
Table: watch_later
Columns:
movid int PK
user_id int PK
Object Info Session
already_watched already_watched favourites review user review review connected watch_later
Limit to 1000 rows
SELECT * FROM db.watch_later;
Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:
movid user_id
1 12
6 12
1 14
2 14
4 14
10 14
NULL NULL
watch_later 1
Apply Revert
Output
Action Output
SQLAdditions
Jump to
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.
Context Help Snippets
Type here to search
30°C
ENG
23:58
27-04-2022