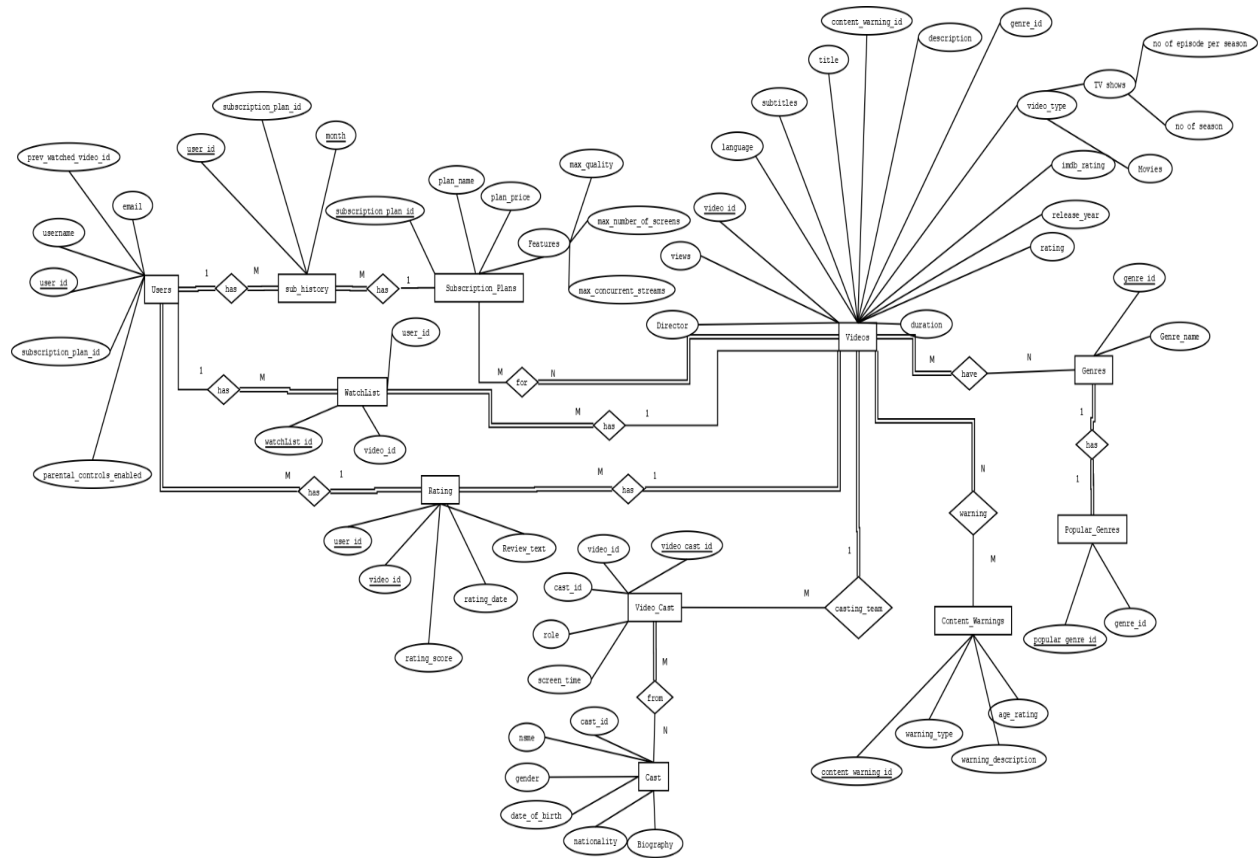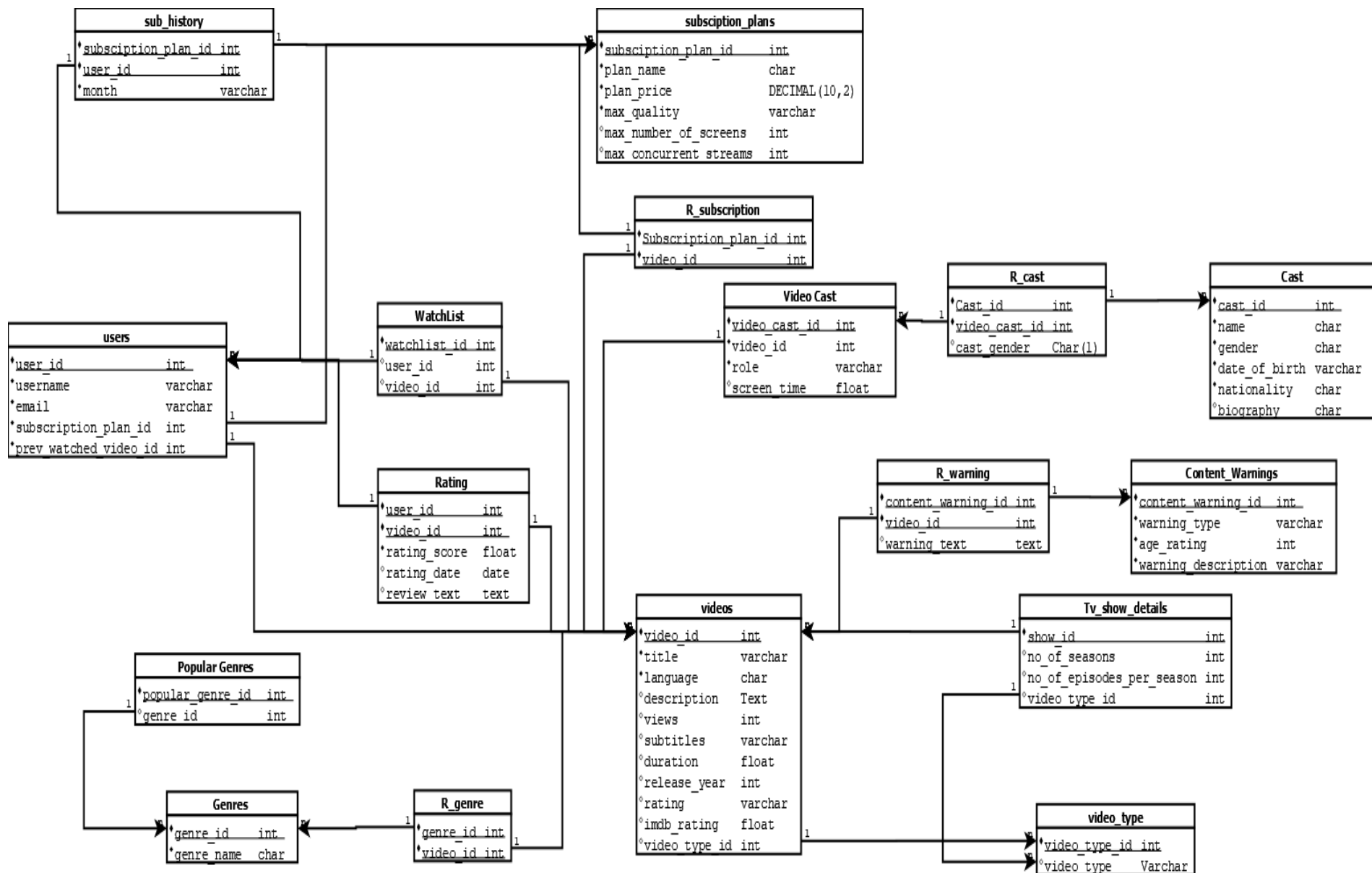# DATABASE PROJECT

<u>OTT (Over- The-Top) Platform</u>

- Group Number : 2
- Team ID : 7
- Members:
    1. Ridam Chhapiya - 202101113 (Representative) (Contact: 9587828713)
    2. Anshul Darediya - 202101107
    3. Adhya Desai - 202101111

(1)ERD

(2)RELATIONAL SCHEMA

sub_history

subscription_plan_id	int
user_id	int
month	varchar

subsciption_plans

subscription_plan_id	int
plan_name	char
plan_price	DECIMAL(10,2)
max_quality	varchar
max_number_of_screens	int
max_concurrent_streams	int

R_subscription

Subscription_plan_id	int
video_id	int

R_cast

Cast_id	int
video_cast_id	int
cast_gender	Char(1)

Cast

cast_id	int
name	char
gender	char
date_of_birth	varchar
nationality	char
biography	char

Video Cast

video_cast_id	int
video_id	int
role	varchar
screen_time	float

users

user_id	int
username	varchar
email	varchar
subscription_plan_id	int
prev_watched_video_id	int

WatchList

watchlist_id	int
user_id	int
video_id	int

Rating

user_id	int
video_id	int
rating_score	float
rating_date	date
review_text	text

R_warning

content_warning_id	int
video_id	int
warning_text	text

Content_Warnings

content_warning_id	int
warning_type	varchar
age_rating	int
warning_description	varchar

Popular Genres

popular_genre_id	int
genre_id	int

videos

video_id	int
title	varchar
language	char
description	Text
views	int
subtitles	varchar
duration	float
release_year	int
rating	varchar
imdb_rating	float
video_type_id	int

Tv_show_details

show_id	int
no_of_seasons	int
no_of_episodes_per_season	int
video_type_id	int

Genres

genre_id	int
genre_name	char

R_genre

genre_id	int
video_id	int

video_type

video_type_id	int
video_type	Varchar

(3)NORMALIZATION PROOFS

1.Video

video_id → {title, language, description, views, subtitles, duration, release year, rating, imdb_rating, video_type_id}

Functional dependency	Is the determinant super-key?
video_id → title	YES
video_id → language	YES
video_id → description	YES
video_id → views	YES
video_id → subtitles	YES
video_id → duration	YES
video_id → release year	YES
video_id → rating	YES
video_id → imdb_rating	YES
video_id →video_type_id	YES

Is the relation in BCNF?

→YES

2. Video_Cast

video_cast_id → {video_id, cast_id, role, screen_time}

Functional dependency	Is the determinant super-key?
video_cast_id → video_id	YES
video_cast_id → cast_id	YES
video_cast_id → role	YES
video_cast_id → screen_time	YES

Is the relation in BCNF?

→YES

3.Subscription_plans

subscription_plan_id → {plan_name, plan_price,max_quality, max_number_of_screens, max_concurrent_streams}

Functional dependency	Is the determinant super-key?
subscription_plan_id → plan_name	YES
subscription_plan_id → plan_price	YES
subscription_plan_id → max_quality	YES
subscription_plan_id → max_number_of_screens	YES
subscription_plan_id → max_concurrent_streams	YES

Is the relation in BCNF?

→YES

4.Watchlist

watchlist_id → {user_id,video_id}

Functional dependency	Is the determinant super-key?
watchlist_id → user_id	YES
watchlist_id → video_id	YES

Is the relation in BCNF?

→YES

5. Rating

user_id, video_id → {rating_score, rating_date, rating}

Functional dependency	Is the determinant super-key?
user_id, video_id → rating_score	YES
user_id, video_id → rating_date	YES
user_id, video_id → rating	YES

Is the relation in BCNF?

→YES

6. Cast

cast_id → {name, gender, date_of_birth, nationality, biography}

Functional dependency	Is the determinant super-key?
cast_id → name	YES
cast_id → gender	YES
cast_id → date_of_birth	YES
cast_id → nationality	YES
cast_id → biography	YES

Is the relation in BCNF?

→YES

7.R_warning

{content_warning_id,video,id} → {warning_text}

Functional dependency	Is the determinant super-key?
{content_warning_id,video,id} → {warning_text}	YES

Is the relation in BCNF?

→YES

8. Content_Warning

content_warning_id → {warning_type, age_rating, warning_description}

Functional dependency	Is the determinant super-key?
content_warning_id → warning_type	YES
content_warning_id → age_rating	YES
content_warning_id → warning_description	YES

Is the relation in BCNF?

→YES

9. Users

user_id→{username, email, subscription_plan_id, prev_watched_video_id}

Functional dependency	Is the determinant super-key?
user_id→username	YES
user_id→email	YES
user_id→sunscription_plan_id	YES
user_id→prev_watched_video_id	YES

Is the relation in BCNF?

→YES

10. **R_cast**

{Cast_id, video_cast_id} → {cast_gender}

Functional dependency	Is the determinant super-key?
{Cast_id, video_cast_id} → {cast_gender}	YES

Is the relation in BCNF?

→**YES**

11. **Video_Type**

Video_type_id→ {video_type}

Functional dependency	Is the determinant super-key?
Video_type_id→ {video_type}	YES

Is the relation in BCNF?

→**YES**

12. TV_show_details

show_id → {no_of_seasons, no_of_epsiodes_per_season, video_type_id}

Functional dependency	Is the determinant super-key?
show_id → no_of_seasons	YES
show_id → no_of_epsiodes_per_season	YES
show_id → video_type_id	YES

Is the relation in BCNF?

→YES

13. Sub_history

{subscription_plan_id, user_id} → {month}

Functional dependency	Is the determinant super-key?
{subscription_plan_id, user_id} → {month}	YES

Is the relation in BCNF?

→YES

14.**Genres**

genre_id → {genre_name}

Functional dependency	Is the determinant super-key?
genre_id → {genre_name}	YES

Is the relation in BCNF?

→YES

15.**Popular_genre**

popular_genre_id → {genre_id}

Functional dependency	Is the determinant super-key?
popular_genre_id → {genre_id}	YES

Is the relation in BCNF?

→YES

16. R_subscription

{subscription_plan_id, video_id} → {subscription_plan_id, video_id}

Functional dependency	Is the determinant super-key?
{subscription_plan_id, video_id} → subscription_plan_id	YES
{subscription_plan_id, video_id} → video_id	YES

Is the relation in BCNF?

→YES

17. R_genre

{genre_id, genre_name} → {genre_id, genre_name}

Functional dependency	Is the determinant super-key?
{genre_id, genre_name} → genre_id	YES
{genre_id, genre_name} → genre_name	YES

Is the relation in BCNF?
→YES