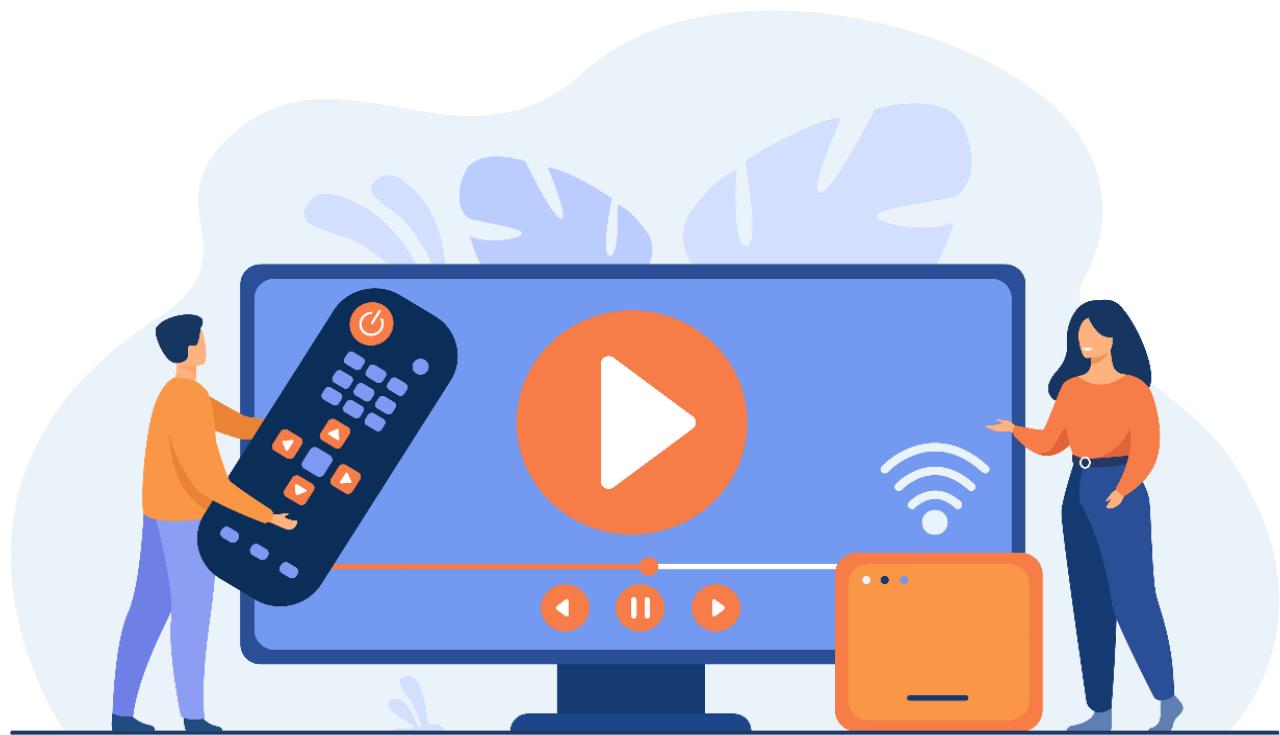


OVER THE TOP



INSTRUCTOR
MINAL BHISE

TEACHING ASSISTANT
KHUSHALI

TEAM ID 5.4

IT214
PROJECT

GROUP MEMBERS

DARSH GOPANI 202001065

ROHAN REDDY 202001076

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SECTION 1

Software Requirements Specification (SRS)

Introduction

Purpose

This document outlines both, functional and Non-functional requirements of Over the Top (OTT) media services.

This SRS Document basically gives us detailed overview of the working of the software product and how it is expected to perform. The document describes the product's user interface, hardware and software requirements.

It also describes the functionality the product needs to fulfil all the stakeholders(business,users),the system must adhere to all the requirements that are listed.

Intended Audience and Reading Suggestions

The intended audience for this document includes producers or content providers who want to get an idea about the amount of money earned from a particular movie or a show, the general likes or dislikes of people who consume the content.

Developers can use the feedback of the app/website to know what to improve in it, to make it more user-friendly.

Scope of Product

The intended software product maintains information about the content provider i.e someone who takes the material and prepares it for production.This includes developers who take the

content and combine them and the revenue earned for different kinds of contents and genres. It also contains most viewed content and most rated content and number of views and differentiates it by different languages.

It also includes data about the actors and star cast and directors such as revenue taken, total number of movies/shows directed or acted by them, number of popular shows were acted or directed by them

The revenue earned by the subscription of users

General Description

As we can see nowadays the rise of popularity of the OTT platforms as they can be accessed anywhere unlike TV where channels present programs only at particular times. As OTT are personalized and available on any screen. OTT platforms are social streaming services that provide content over the internet. The content includes entertainment or educational shows, movies, etc.

The software contains different data such as content, cost, rating total subscribers. It also contains multiple attributes such as number of views etc which can be used to perform analysis on a particular data.

They can also analyze the increase and decrease in subscribers after a particular month or year. They can also analyze what kind of trend is going with what genres are most watched and which star has more popular shows or in which language they are being watched which can be used in improving revenue.

The software is also useful to content creators. Production of a show or movie is a big task and it requires a lot of factors to be kept in mind. For example the budget for the movie or show, budget for its advertisements and marketing, salary for actors, etc. They also need to partner with the OTT to provide their content on the specific OTT platform.

When a New user signs up for the OTT, his/her email address, name and phone number,password,created date will be recorded and will be assigned a unique user id. Hence, their account contains all their details including their billing details and address, if they choose to subscribe to the OTT.

The data about the date or time of subscription, end of subscription and the renewal of the subscription will be stored about a particular user. Similarly, the release of every movie or show will create a new entry in the database.

The database will store information about the users who are subscribed to the OTT, for example the subscription plan chosen by them, subscription date, the duration of their plan, and its expiry date.

The users are allowed to simultaneously log in only on a certain number of devices which can display content based on their subscription plan, which creates the requirement to store the data about the device, and the plan chosen by the customer. The users who are subscribed to the OTT for more than two years get a special discount for their long time loyalty.

The users can choose the type of content that they like to watch, which includes their preferred language, genre, reviews or rating, favorite creator and actor or actress

The revenue generated by a particular show or movie will also be stored along with its other details such as age restrictions, release date, director, actor, genre,etc.

The database contains details about the advertisements such as product name, website, and number of views.

It also contains the groups which can be created by a premium user to enjoy content on multiple devices. The database of the group contains the name of the group and the created date of the group. And the user id has full access to the profiles of the group.

The details about the cast of the show or movie such as fees charged by them, name and shows acted by them are also stored in the database

The database also contains information about the creator of the content like the creator name.

Background Readings

Proposed DBMS Ott platforms:

Article: [Proposed DBMS for OTT platforms in line with new age requirements.](#)

Database management has become an enormous tool for on-demand content distribution services, proffering required information and providing custom services to the user. Also plays a major role for the platforms to manage their data in such a way that data redundancy is minimised. This paper emphasises improving the user experience for the platform by efficiently managing data. Keeping in mind all the new age requirements, especially after COVID-19 the sudden surge in subscription has led the stakeholders to try new things to lead the OTT market. Collection of shows being the root of the tree here, this paper improvises the currently existing branches via various tables and suggests some new features on how the data collected can be utilised for introducing new and much-required query results for the consumer.

References

- Article: [Netflix SRS Document with functional and non functional requirements](#)
- Article: [Proposed DBMS for OTT platforms in line with new age requirements](#)

Interviews

Interview plan-1

System: OTT

Project Reference: OTT/0310/22

Interviewee: 1) Rohith Rao(**Role Play**)

Designation: Subscriber of OTT

Interviewer:

1. Rohan Reddy

Designation: Development Executive- ITSolutions

2. Darsh Gopani

Designation: Developer - ITSolutions

Date: 01/10/2022 **Time:** 14:30

Duration: 30 minutes **Place:** Cafeteria

Purpose of Interview:

Preliminary meeting to identify problems and requirements regarding security at the OTT site and for understanding the problems with user and customer experience in using the platform, as well as improvements that can be made.

Agenda:

This meeting is scheduled to understand user and consumer experience while using the OTT software and problems encountered using the OTT software.

Documents to be Brought: Not applicable

Interview Summary-1

System: OTT

Project Reference: OTT/0310/22

Interviewee: 1) Rohith Rao(**Role Play**)

Designation: Subscriber of OTT

Interviewer:

1. Rohan Reddy

Designation: Development Executive- ITSolutions

2. Darsh Gopani

Designation: Developer - ITSolutions

Date: 01/10/2022 **Time:** 14:30

Duration: 30 minutes **Place:** Cafeteria

Purpose of Interview:

Preliminary meeting to identify problems and requirements regarding security at the OTT site and for understanding the problems with user and customer experience in using the platform, as well as improvements that can be made

Summary:

- OTT platform provides a wide range of programs, which is full of entertainment and educational content.
- Software often has glitches and crashes
- Content has low resolution even with good internet connection

- Software has bad interface and lacks streaming on multiple devices
- Maintenance of the system must be done regularly, and system files have large risk of getting corrupted due to frequent data updation
- Frequency of advertisements is a bit high
- Information about a content that is shown in the OTT software such as actors,directors,story description,crew etc that acted in the content

Interview Plan-2

System: OTT

Project Reference: OTT/0310/22

Interviewee: 1) Gangaraju(**Role Play**)

Designation: Employee of OTT

Interviewer:

1. Rohan Reddy

Designation: Development Executive- ITSolutions

2. Darsh Gopani

Designation: Developer - ITSolutions

Date: 01/10/2022 **Time:** 14:30

Duration: 30 minutes **Place:** Cafeteria

Purpose of Interview:

Preliminary meeting to identify the basic requirements and how content is selected and constraints to create an OTT platform database

Agenda:

This meeting is scheduled to understand Basic functions of OTT and what are the core functions of an OTT and what information is shared with an OTT and how content is sold to an OTT

Interview Summary-2

System: OTT

Project Reference: OTT/0310/22

Interviewee:

1) Gangaraju

Designation: Employee of OTT

Interviewer:

3. Rohan Reddy

Designation: Development Executive- ITSolutions

4. Darsh Gopani

Designation: Developer - ITSolutions

Date: 01/10/2022 **Time:** 14:30

Duration: 30 minutes **Place:** Cafeteria

Purpose of Interview:

Preliminary meeting to identify the basic requirements and how content is selected and constraints to create an OTT platform database

Summary:

- Content must generate revenue in order to make up production and advertising costs ex:-Benefits of running ads in the platform when we provide free contents to make up for costs

- The information shared with OTT like info about actors,producers,directors,crew etc.
- Content sold to OTT based on its popularity,number of subscriptions etc

Combined Requirements

- **Data Management and Scheduling**

Most complaints against the system are because of server lag and data management issues, i.e. slow data processing (adding, updating, deleting) on the database, causing frequent delays in obtaining data

- **Optimised data storage system**

From the interviews, we realised that data storage is the most important facet of OTT software. Maintenance of the system must be done regularly, and system files have large risk of getting corrupted due to frequent data updation

- **Implementing a user-friendly and stable software**

Our takeaway from user experience feedback of the Customer was that users desire ease of access. We thus need to create an software and a user interface that is easy to use and doesn't crash or have glitches

- **Efficient networking must be there in the software to get good resolution**

From the interviews,We realised that the software must utilise the network efficiently to give a good resolution.

Questionnaire

Google form

Over The Top (OTT) Database

* Required

1. Your Name *

2. What Age Group do you fall in *

Mark only one oval.

- 17 or Below
- 18-25
- 26-40
- 41-60
- Above 60

3. How often do you use OTT Platform *

Mark only one oval.

- Daily
- Twice or Thrice in a week Less than 5 times in a month
- Rarely

Never

4. What do you prefer *

Mark only one oval.

OTT

Platform

Cable

operator

s Other:

5. Do you frequently encounter ads *

Mark only one oval.

Yes

No

Maybe

6. Do you want reduce frequency of ads

Mark only one oval.

Yes

No

Maybe

7. What Genre do you prefer *

Check all that apply.

- Action
- Horror
- Comedy
- Romance
- Fantasy
- Drama
- Science Fiction
- Education

8. Which Language do you prefer *

Check all that apply.

- English
- Hindi
- Japanese
- Korean
- Other: _____

9. Do you have a an OTT Subscription *

Mark only one oval.

- Yes
- No

10. Daily watch Time *

Mark only one oval.



11. Do you watch a Show based on review or rating *

Mark only one oval.

Yes

No

Maybe

12. What is your favourite show (Give 3 preferences) *

13. What is your favourite Movie (Give 3 preferences) *

14. Who is your favourite actor or actress

15. Where do you think OTT platform can improve *

Check all that apply.

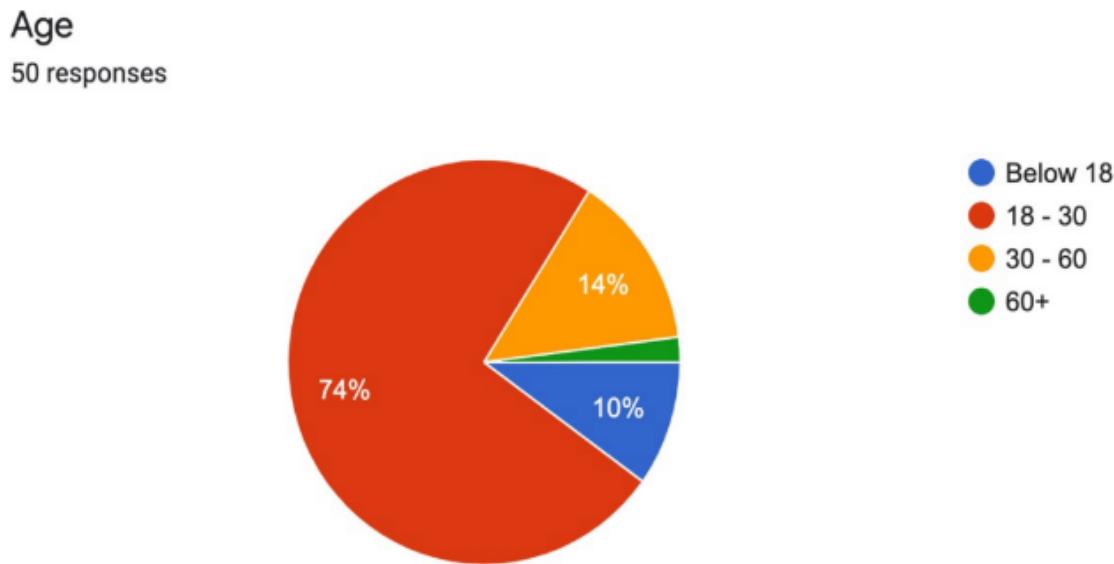
- Accessibility
- Affordability
- Quality Of Content Streaming
- User interface

16. Any other features you want to add on OTT

Google form Link : <https://forms.gle/nzYFJ2NsX1CsSFCLA>

Summary

1. What Age Group do you fall in

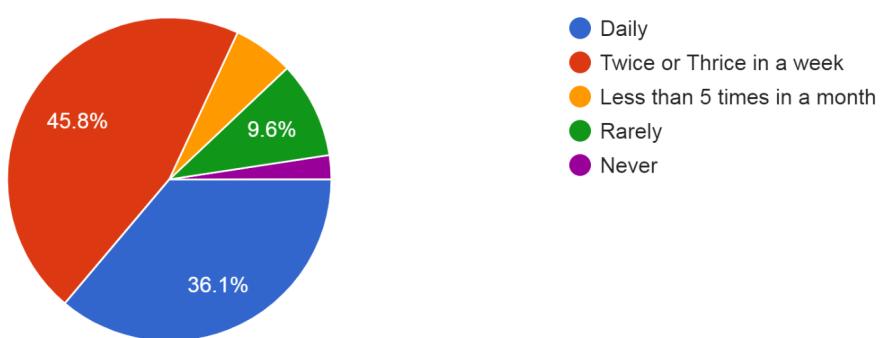


The majority of people who responded to the questionnaire belonged to the age group 18-30.

2. How often do you use OTT Platform

How often do you use OTT Platform

83 responses

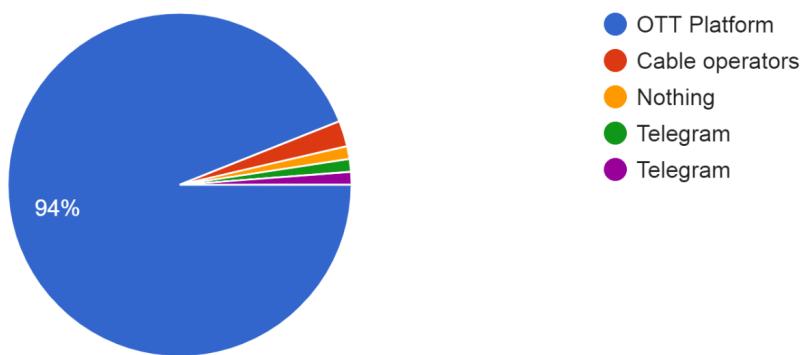


Most of the users use OTT platform daily or twice or thrice a week.

3. What do you prefer

What do you prefer

83 responses

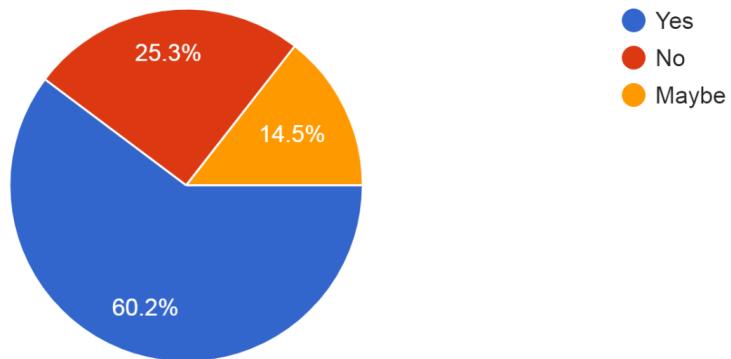


Majority of the people who gave the survey prefer OTT over other platforms.

4. Do you frequently encounter ads

Do you frequently encounter ads

83 responses

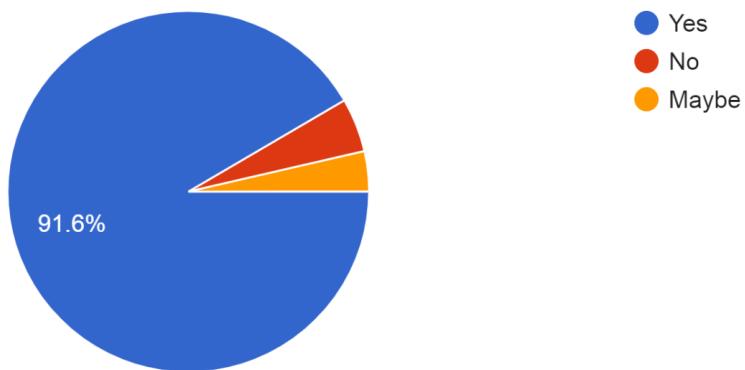


Most of the users encounter advertisements frequently and want to reduce the frequency of the advertisements.

5. Do you want reduce frequency of ads

Do you want reduce frequency of ads

83 responses

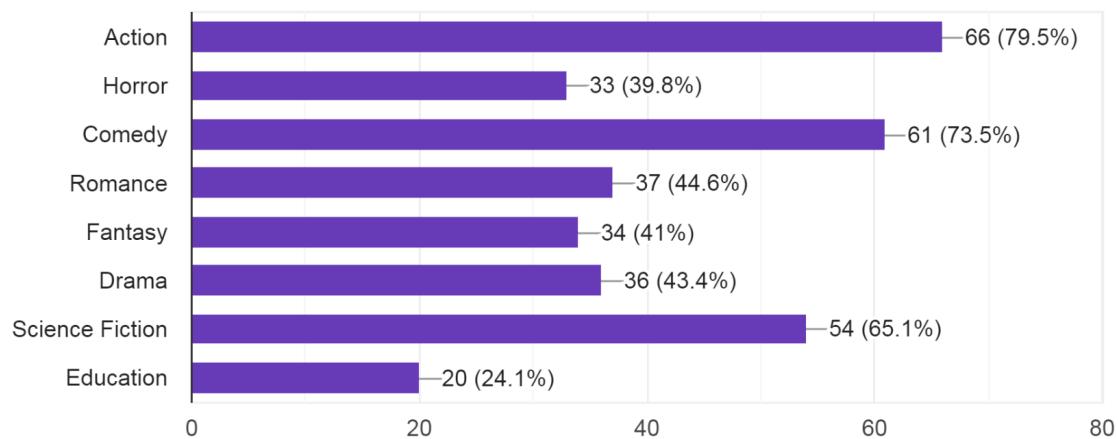


6. What Genre do you prefer

Action, horror and comedy are among the most preferred genres.

What Genre do you prefer

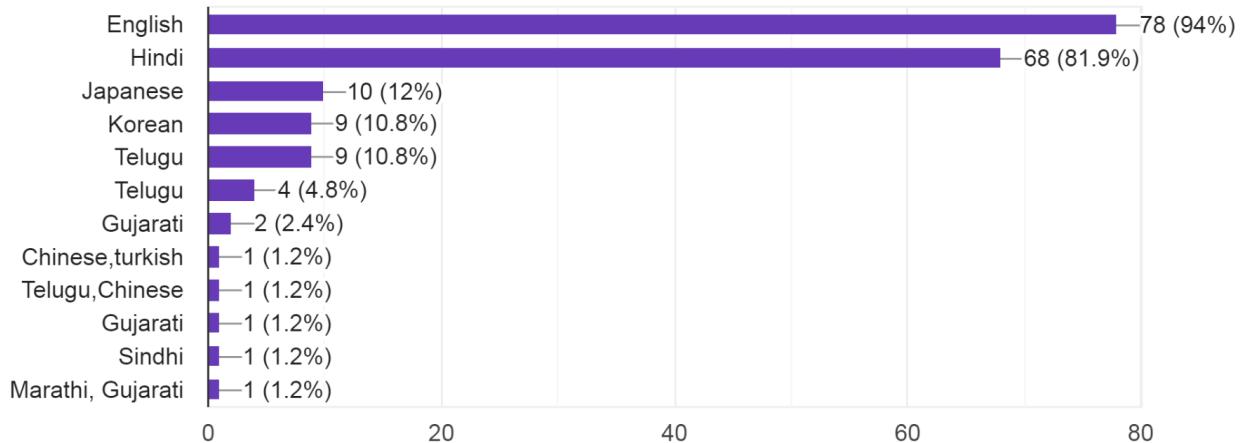
83 responses



7. Which Language do you prefer

Which Language do you prefer

83 responses

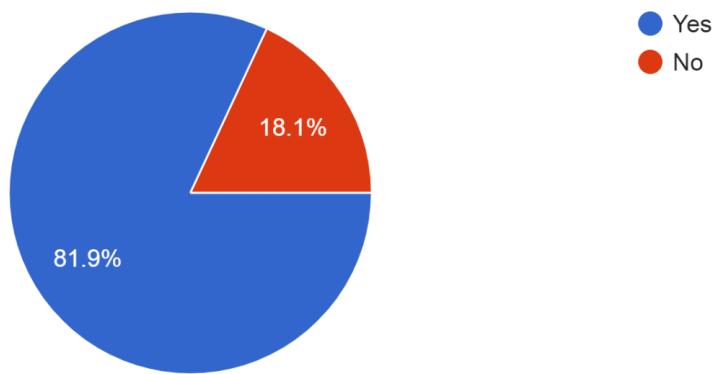


English and Hindi are the most preferred languages for watching content on OTT.

8. Do you have a an OTT Subscription

Do you have a an OTT Subscription

83 responses

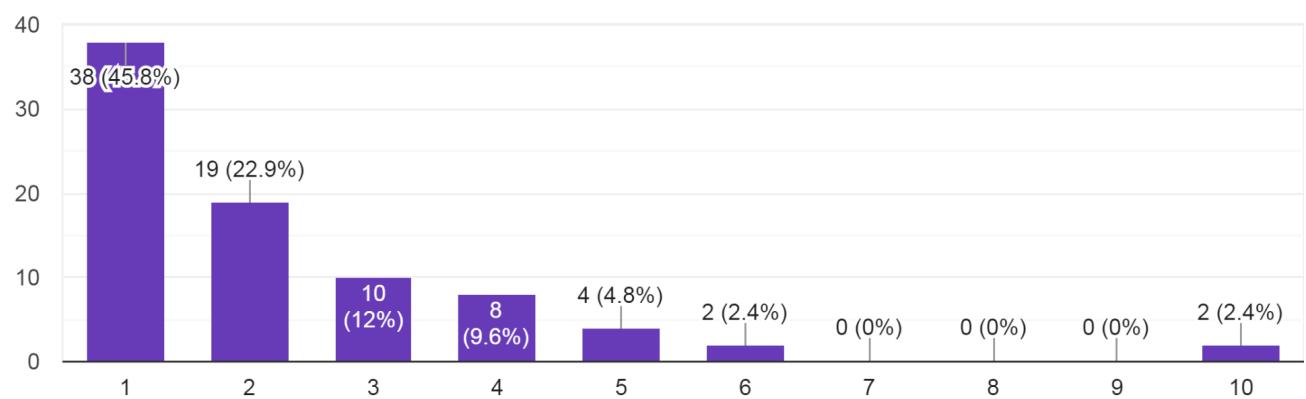


As we can see almost all the people participated in the survey have an ott subscription.

9. Daily watch Time

Daily watch Time

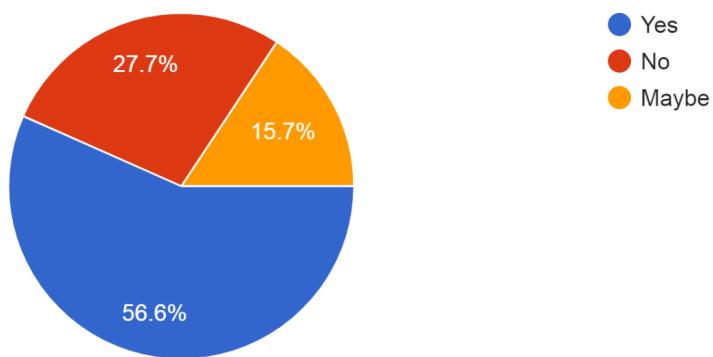
83 responses



10. Do you watch a Show based on review or rating

Do you watch a Show based on review or rating

83 responses



More people who gave survey watch a show or movie based on rating

11. What is your favourite show (Give 3 preferences)

What is your favourite show (Give 3 preferences)

83 responses

Lucifer,big bang theory, friends

The family guy, special ops, stranger things

Naruto, Big Bang Theory, The Office

One Piece,Demon Slayer,Dragon Ball Super

Chernobyl, Vincenzo, Law school

GOT, Peaky Blinders, Breaking Bad

Loki,asur,family man,invincible

How I met your Mother, Friends, Chernobyl

money heist,stranger things,suits

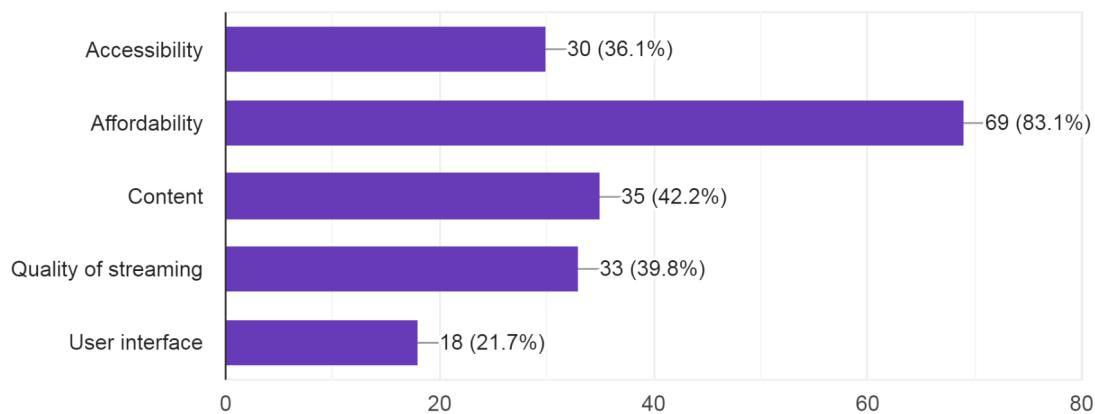
12. Who is your favourite actor or actress

Who is your favourite actor or actress

13. Where do you think OTT platform can improve

Where do you think OTT platform can improve

83 responses



Most of the people who gave the survey think the OTT software must have an affordable price

14. Any other features you want to add on OTT

Any other features you want to add on OTT

17 responses

-
Perfect
Review comments. So that I would not need to go to IMDB.
Access on multiple devices
Better Recommendations
Increase Number of devices
Nothing as now
Interesting content
Nope!!

Combined Requirements

- Review Comments. So that users need not go to any rating website

The review comments should be mentioned so that the users need not go to a rating website and check the comments

- Access on multiple devices

The OTT subscription which is taken by the users should have access on multiple devices at a time

- Software must be available on all devices(Ex: In mac most of ott apps are not available)

Software must be able to use on all devices with different kinds of OS

Observations

Observations System:OTT

Project Reference: OTT/0810/obs1

Observations by: Darsh Gopani

Designation: Employee at OTT

Date: 03/10/2022

Time: 12:30

Duration: 45 minutes

Place: OTT Office

Observations:

Noting-down things noticed by observers at the OTT site and interface. He/she can see the actual work-flow during visits or personal experiences to add/suggest more requirements which might have been missed during background reading, interviews, and questionnaires.

1. We observed that the popularity of OTT is increasing day by day and most of the people own at least one OTT subscription and it could affect educational and entertainment industry in a variety of ways
2. The OTT App has optimised data storage system and user-friendly interface
3. OTT software has ability to stream on multiple devices simultaneously

4. Users have the ability to resume the shows from where they left off last time they watched it.

Combined Requirements from observations:

- Database should be designed in such a way that it can be scaled according to the number of users.
- System should ensure consistency and integrity of the user's transactions.
- It should be possible to monitor the database from time to time.
- Users should have complete control on their account and the ability to manage their account on their multiple devices
 - Quality of videos uploaded by the content creators should be preserved without any compression or loss in quality

Fact Finding Chart

Objective	Technique	Subject	Time
To understand Basic function of OTT software	Interview, Background Reading	Employee of an OTT company, customers	6 Hours
To Find the improvements made to OTT Software	Interview, Google forms, Observations	Customers	1 Hour
To Understand the Latest trends about topic and its applications	Background Readings	Online Articles, Employee of an OTT	1 day
To Understand the details about the features to be provided to the users according to current technology	Interview	Employee of an OTT	1 Hour
To get a follow up on the idea About the implementation and functionalities	Interview, Background Readings	Employee Of an OTT, Online Article	3 hour
To Understand features that the users expect to have in their applications	Questionnaire	Google Forms	1 day
To Understand the mindset of proposed users about the functionalities to be provided by the application	Questionnaire	Google Forms	1 day

Requirements

- **Data Management and Scheduling**

Most complaints against the system are because of server lag and data management issues, i.e. slow data processing (adding, updating, deleting) on the database, causing frequent delays in obtaining data

- **Optimised data storage system**

From the interviews, we realised that data storage is the most important facet of OTT software. Maintenance of the system must be done regularly, and system files have large risk of getting corrupted due to frequent data updation

- **Implementing a user-friendly and stable software**

Our takeaway from user experience feedback of the Customer was that users desire ease of access. We thus need to create an software and a user interface that is easy to use and doesn't crash or have glitches

- **Efficient networking must be there in the software to get good resolution**

From the interviews,We realised that the software must utilise the network efficiently to give and a good resolution

- **Review Comments.So that users need not go to any rating website**

The review comments should be mentioned so that the users need not go to a rating website and check the comments

- **Access on multiple devices**

The OTT subscription which is taken by the users should have access on multiple devices at a time

- **Software must be available on all devices**

(Ex: In mac most of ott apps are not available)

Software must be able to use on all devices with different kinds of OS

- Database should be designed in such a way that it can be scaled according to the number of users.
- System should ensure consistency and integrity of the user's transactions.
- It should be possible to monitor the database from time to time.
- Users should have complete control on their account and the ability to manage their account on their multiple devices
- Quality of videos uploaded by the content creators should be preserved without any compression or loss in quality

User Categories and Privileges

1. Subscribers of OTT

The users would be using the software to stream different types of shows or movies. The subscriber can stream it on a maximum of 4 devices.

2. Free user of OTT

The user would be an account where they can watch free content with ads

3. Administrator

The administrator has authority to view ,update or delete about the information of the user in the software

4. Employee

Employee will have Limited Access i.e they can have the information required by them

Assumptions

- The Software should have good user-friendly interface
- The Software should have good networking system to get a good resolution
- Software must be available on all devices and should be working perfectly
- It must be able to stream on multiple devices simultaneously
- It must be able to provide features like HDR and Dolby vision on supported devices
- The software is free of any security threats.

Business Constraints

- A user with a subscription can create only 1 password protected account which can be shared to 3 other users/devices
- The storage limit of Database should be scaled as the amount of content increases because it requires a lot of storage for movies/shows from multiple content creators. This may raise the cost of maintenance.
- The subscribed members can discontinue their subscription anytime.
- The subscribed members would be notified 2 days before their subscription expires. The subscription fees will be automatically deducted from the account of the user if he/she does not discontinue the membership before it gets renewed
- Strong and expensive servers which can serve multiple users at the same time are required as it needs to send huge data in the form of videos.
- If long time subscribers wish to discontinue their subscription, they will be provided with a discount so as to increase the customer satisfaction, and increase the revenue.
- Producers must share some percent of their revenue generated through advertisements, donations, etc with the OTT platform.

SECTION 2

Problem Description and Noun Analysis

Final Problem Description

As we can see nowadays the rise of popularity of the OTT platforms as they can be accessed anywhere unlike TV where channels present programs only at particular times. As OTT are personalized and available on any screen. OTT platforms are social streaming services that provide content over the internet. The content includes entertainment or educational shows, movies, etc.

The software contains different data such as content, cost, rating total subscribers. It also contains multiple attributes such as number of views etc which can be used to perform analysis on a particular data.

They can also analyze the increase and decrease in subscribers after a particular month or year. They can also analyze what kind of trend is going with what genres are most watched and which star has more popular shows or in which language they are being watched which can be used in improving revenue.

The software is also useful to content creators. Production of a show or movie is a big task and it requires a lot of factors to be kept in mind. For example the budget for the movie or show, budget for its advertisements and marketing, salary for actors, etc. They also need to partner with the OTT to provide their content on the specific OTT platform.

When a New user signs up for the OTT, his/her email address, name and phone number,password,created date will be recorded and will be assigned a unique user id. Hence, their account contains all their details including their billing details and address, if they choose to subscribe to the OTT.

The data about the date or time of subscription, end of subscription and the renewal of the subscription will be stored about a particular

user. Similarly, the release of every movie or show will create a new entry in the database.

The database will store information about the users who are subscribed to the OTT, for example the subscription plan chosen by them, subscription date, the duration of their plan, and its expiry date.

The users are allowed to simultaneously log in only on a certain number of devices which can display content based on their subscription plan, which creates the requirement to store the data about the device, and the plan chosen by the customer. The users who are subscribed to the OTT for more than two years get a special discount for their long time loyalty.

The users can choose the type of content that they like to watch, which includes their preferred language, genre, reviews or rating, favorite creator and actor or actress

The revenue generated by a particular show or movie will also be stored along with its other details such as age restrictions, release date, director, actor, genre,etc.

The database contains details about the advertisements such as product name, website, and number of views.

It also contains the groups which can be created by a premium user to enjoy content on multiple devices. The database of the group contains the name of the group and the created date of the group. And the user id has full access to the profiles of the group.

The details about the cast of the show or movie such as fees charged by them, name and shows acted by them are also stored in the database

The database also contains information about the creator of the content like the creator name.

Noun and Verb analysis

Noun	Verb
content	watching
devices	screening
group	Profiles created
rating	reviewing
cost	spending
Revenue	Earning money
Product name	Advertised product
website	Advertised website
Advertisement views	No. of times seen by user
Budget	initialization
Data	Updating
System	crashing
New user	Signing in
Status	Using
advertisement	marketing
account	contains
screen	displaying
plan	chosen
Email address	recorded
details	recorded
show	Being watched
age	restricted
user	choose
created date	account created
Subscription date	Account subscribed
User id	assigned

subscriber	Log in
entry	create
user	assigned
Premium user	Subscription taken
name	take
date	released
OTT	streaming
creator	Creating content
Phone number	take
views	No. of times content seen
star	Actor or actress
group	Accounts created
Preference list	Favourites chosen

2. Table 2 (Accepted nouns and verbs list)

Candidate entity set	Candidate attribute set	Candidate relationship set
users	User id name email Phone number password Created date	Details of the user
Premium user	Subscription period Subscription date User id	Subscribed user
group	Group name Created date User id	Created by user
ads	Product name website times_shown	Advertisements shown

creator	Creator name	Content creator
star	Star name Revenue charged	actor
content	views Content name genre language rating Revenue earned Age restriction Release date Star name Creator name	Movie or show
Preference list	User id Content name Creator name Star name language genre	List created by user

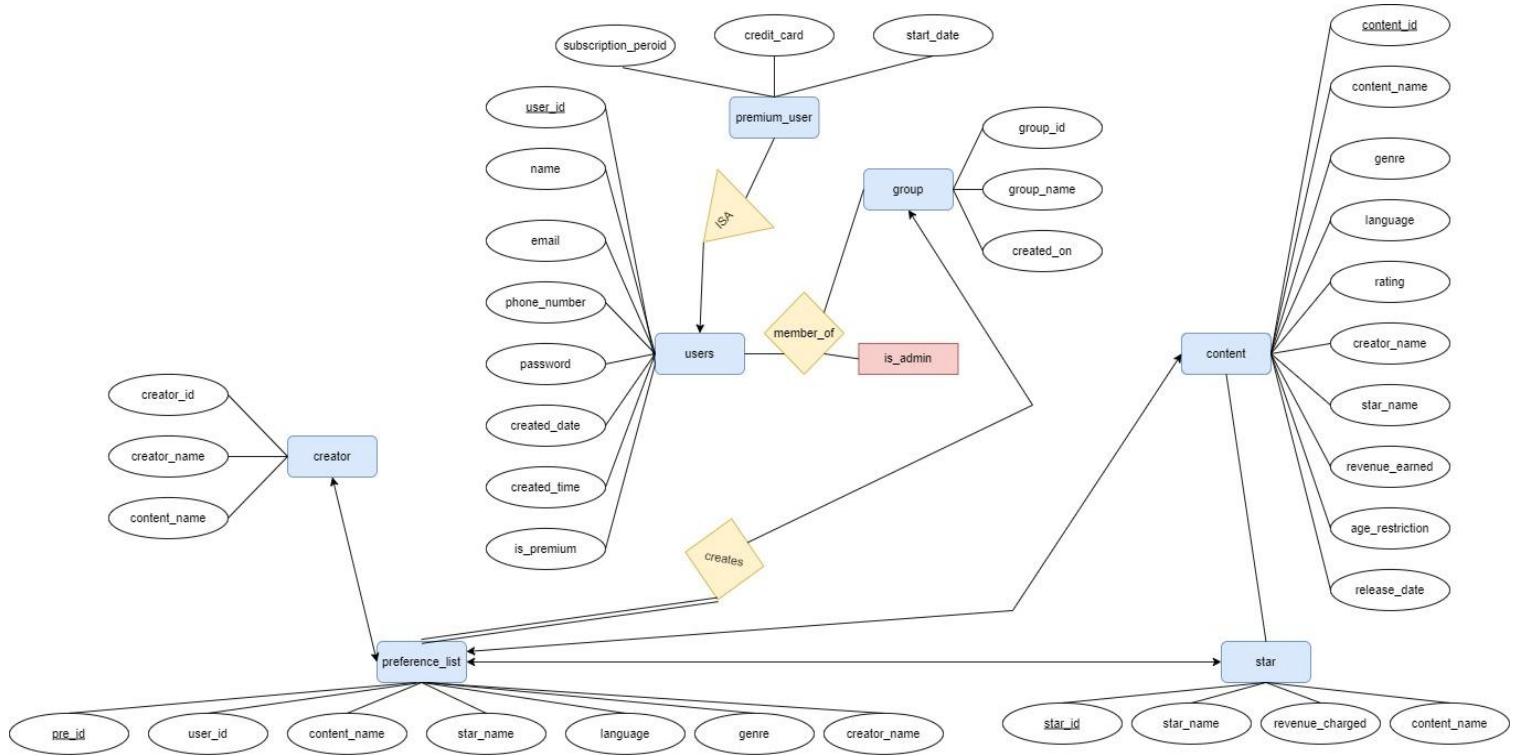
Table (Rejected Nouns)

Noun and Verb analysis

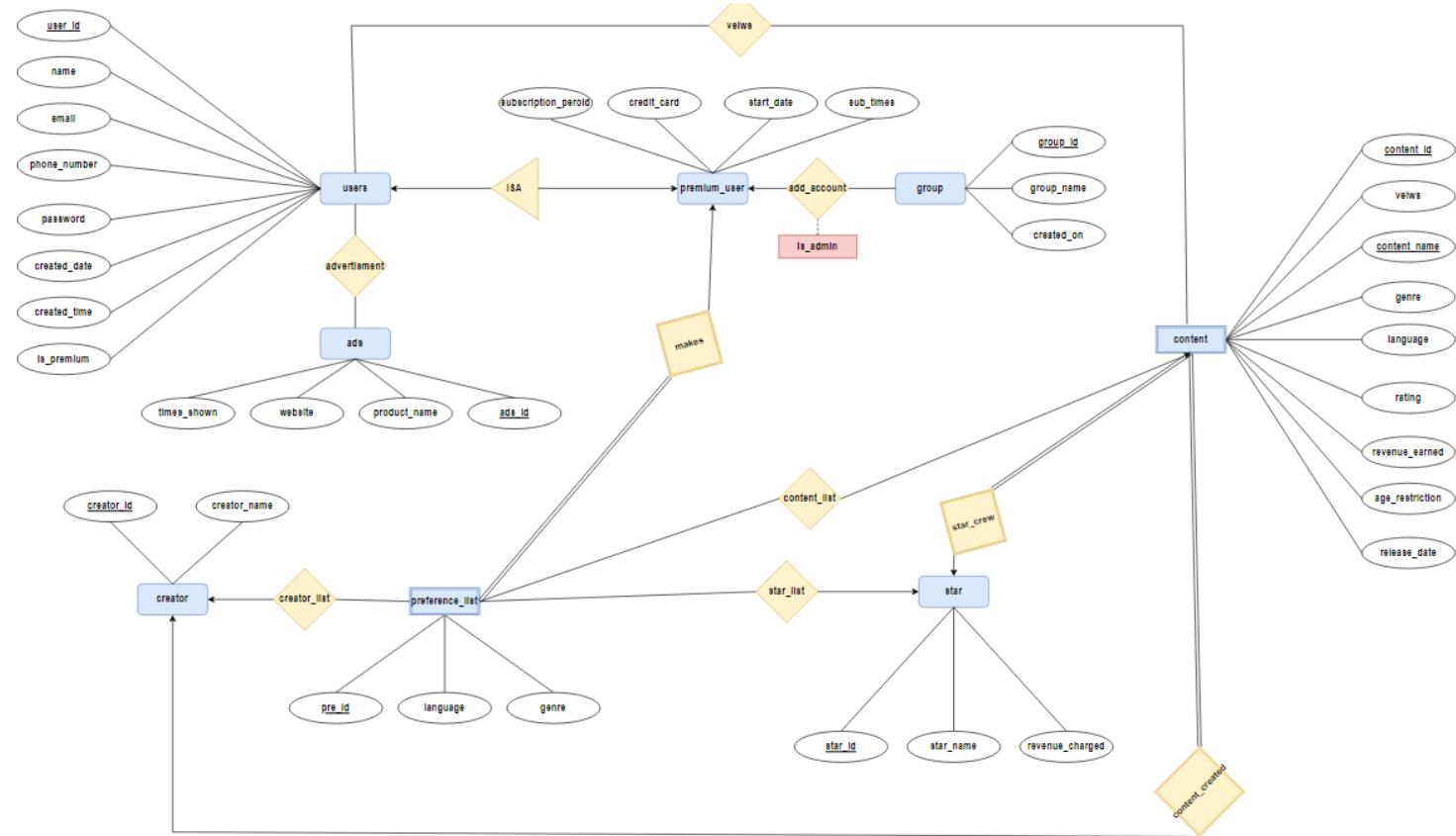
Noun	Rejection reason
devices	General
rating	attribute
cost	General
Revenue	Attribute
Product name	attribute
website	attribute
Advertisement views	attribute
Budget	General
Data	General
System	General
Status	General
account	General
screen	General
plan	General
Email address	attribute
details	general
show	general
age	general
User id	Attribute
created date	attribute
Subscription date	attribute
subscriber	General
entry	Vague
name	Attribute
date	attribute

OTT	General
Phone number	attribute
views	attribute

ER diagram (version 1)



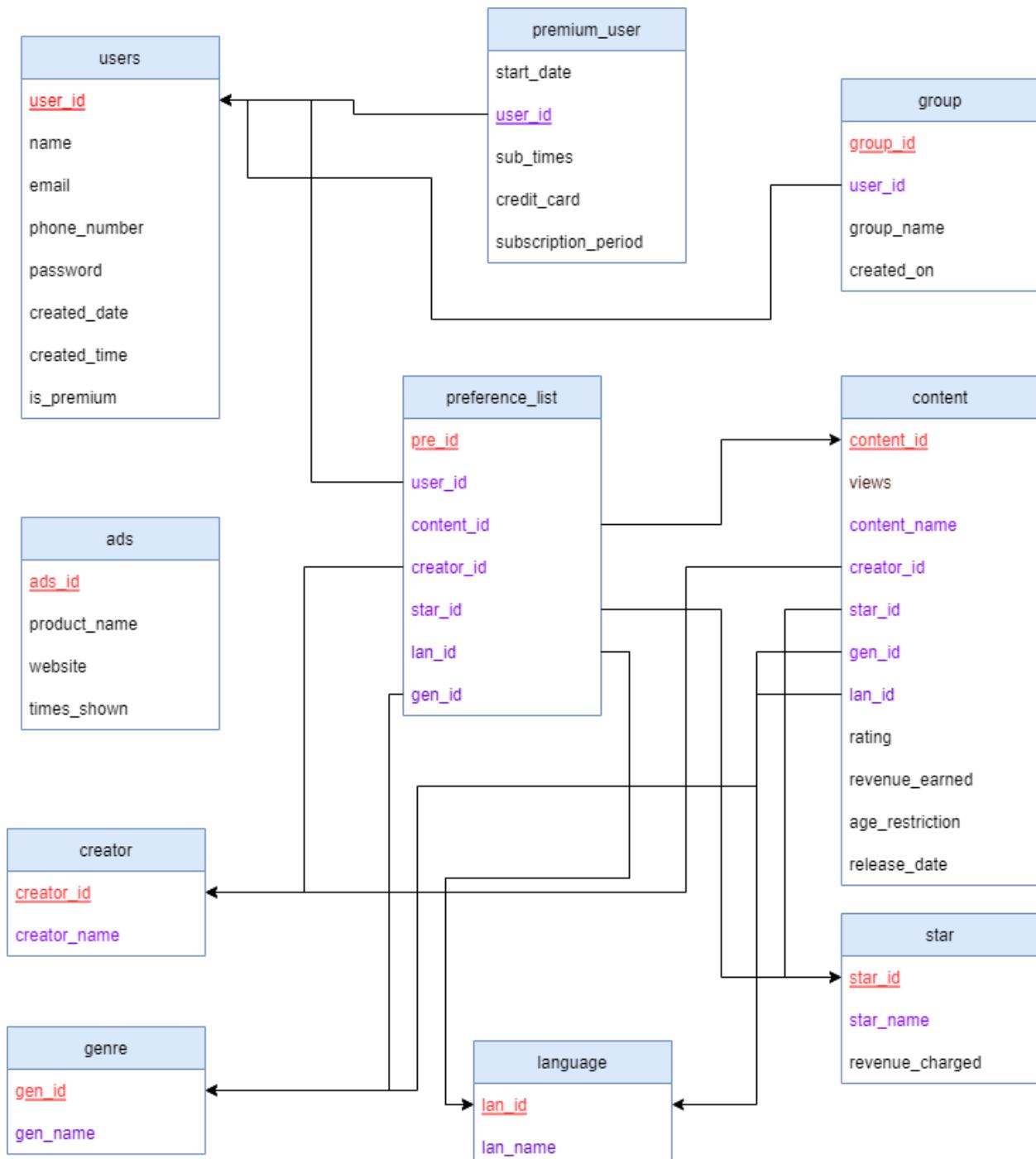
ER diagram (version 2)



SECTION 3

Relational Model, Normalisation and Schema Refinement

Relational Schema



DDL Scripts

```
1. CREATE TABLE IF NOT EXISTS ott.users
(
    password VARCHAR (50) not null,
    email VARCHAR (150) not null,
    name VARCHAR (50) not null,
    user_id numeric (10,0) not null,
    phone_number numeric (10,0),
    created_datetime VARCHAR(50) not null,
    Is_premium BOOL,
    PRIMARY KEY(user_id)
)

2. CREATE TABLE IF NOT EXISTS ott.premium_user
(
    user_id numeric (10,0) not null,
    start_date character varying(50) not null,
    credit_card numeric(10),
    sub_times numeric(10) not null,
    subscription_period numeric(10) not null,
    CONSTRAINT user_id_pK PRIMARY KEY (user_id),
    FOREIGN KEY(user_id) REFERENCES ott.users ON UPDATE CASCADE ON DELETE
    CASCADE
);

3. CREATE TABLE IF NOT EXISTS ott.group
(
    user_id numeric (10,0) not null,
    group_id numeric (10,0) not null,
    group_name character varying(50) not null,
    created_on character varying(50) not null,
    CONSTRAINT group_id_PK PRIMARY KEY (group_id),
    CONSTRAINT user_id_FK FOREIGN KEY (user_id)
    REFERENCES ott.users(user_id) ON UPDATE CASCADE ON DELETE CASCADE
);
```

```
4. CREATE TABLE IF NOT EXISTS ott.creator
(
creator_id numeric (10,0) not null,
creator_name character varying(50) not null,
CONSTRAINT creator_id_PK PRIMARY KEY (creator_id)
);

5. CREATE TABLE IF NOT EXISTS ott.star
(
star_id numeric (10,0) not null,
star_name character varying(50) not null,
revenue_charged numeric(10,0) not null,
CONSTRAINT star_id_PK PRIMARY KEY (star_id)
);

6. CREATE TABLE IF NOT EXISTS ott.genre
(
gen_id numeric (10,0) not null,
gen_name character varying(50) not null,
CONSTRAINT genre_id_PK PRIMARY KEY (gen_id)
);

7. CREATE TABLE IF NOT EXISTS ott.language
(
lan_id numeric (10,0) not null,
lan_name character varying(50) not null,
CONSTRAINT language_id_PK PRIMARY KEY (lan_id)
);

8. CREATE TABLE IF NOT EXISTS ott.ads
(
ads_id numeric (10,0) not null,
product_name character varying(50) not null,
website character varying(50) not null,
times_shown numeric(10) not null,
CONSTRAINT ads_id_PK PRIMARY KEY (ads_id)
```

```
) ;

9. CREATE TABLE IF NOT EXISTS ott.content
(
content_id numeric (10,0) not null,
veiws numeric (10,0) not null,
content_name character varying(50) not null,
creator_id numeric (10,0) not null,
star_id numeric (10,0) not null,
gen_id numeric (10,0) not null,
lan_id numeric (10,0) not null,
rating numeric (10,0) not null,
revene_earned numeric (10,0) not null,
age_restriction numeric (10,0) not null,
release_date character varying(50) not null,
CONSTRAINT content1_id_PK PRIMARY KEY (content_id,creator_id),
FOREIGN KEY (creator_id) REFERENCES ott.creator ON UPDATE CASCADE ON
DELETE CASCADE
FOREIGN KEY(star_id) REFERENCES ott.star ON UPDATE CASCADE ON DELETE
CASCADE
FOREIGN KEY(gen_id) REFERENCES ott.genre ON UPDATE CASCADE ON DELETE
CASCADE
FOREIGN KEY(lan_id) REFERENCES ott.language ON UPDATE CASCADE ON
DELETE CASCADE
);

```

```
10. CREATE TABLE IF NOT EXISTS ott.preference_list
(
pre_id numeric (10,0) not null,
user_id numeric (10,0) not null,
content_id numeric (10,0) not null,
creator_id numeric (10,0) not null,
star_id numeric (10,0) not null,
gen_id numeric (10,0) not null,
lan_id numeric (10,0) not null,
CONSTRAINT pre_id_PK PRIMARY KEY (pre_id,user_id),
FOREIGN KEY (user_id) REFERENCES ott.users ON UPDATE CASCADE ON DELETE
CASCADE
FOREIGN KEY (creator_id) REFERENCES ott.creator ON UPDATE CASCADE ON
DELETE CASCADE

```

```
FOREIGN KEY (content_id) REFERENCES ott.creator ON UPDATE CASCADE ON
DELETE CASCADE
FOREIGN KEY(star_id) REFERENCES ott.star ON UPDATE CASCADE ON DELETE
CASCADE
FOREIGN KEY(gen_id) REFERENCES ott.genre ON UPDATE CASCADE ON DELETE
CASCADE
FOREIGN KEY(lan_id) REFERENCES ott.language ON UPDATE CASCADE ON
DELETE CASCADE
);
```

Final Design and Database

```
1). users (user_id, name, email, phone_number, password, created_datetime,  
is_premium)  
2). premium_user (user_id, start_date, sub_times, credit_card,  
subscription_period)  
3). group (group_id, user_id, group_name, created_on)  
4). creator (creator_id, creator_name)  
5). star (star_id, star_name, revenue_charged)  
6). genre (gen_id, gen_name)  
7). language (lan_id, lan_name)  
8). ads (ads_id, product_name, website, times_shown)  
9). content (content_id, views, content_name, creator_id, star_id, gen_id,  
lan_id, rating, revenue_earned, age_restriction, release_date)  
10). Preference_list (pre_id, user_id, content_id, creator_id, star_id,  
lan_id, gen_id).
```

Normalisation and schema refinement

1). `users (user_id, name, email, phone_number, password, created_datetime, is_premium)`

PK dependency:

`user_id → name, email, phone_number, password, created_datetime, is_premium`

Functional Dependencies:

`user_id → name`

`user_id → email`

`user_id → password`

`user_id → phone_number`

`user_id → created_datetime`

`user_id → is_premium`

Partial Key Dependency: None

Transitive Dependency: None

Redundancies: None

Anomalies:

Insert – None.

Update – None.

Delete – None.

In this table, every attribute is single-valued (scalar) making it already in 1NF.

There is no partial dependency here, so it is in 2NF as well.

2NF Redundancies: None

Since there is no transitive dependency, it is also in 3NF.

Thus, our final table remains the same.

For a relation to be in BCNF,

a. It should be in the third normal form (3NF).

b. For any dependency $A \rightarrow B$, A must be a super key.

Hence, this relation is in BCNF as well.

2). `premium_user (user_id, start_date, sub_times, credit_card, subscription_period)`

PK dependency:

`user_id → start_date, sub_times, credit_card, subscription_period`

Functional Dependencies:

`user_id → start_date`

`user_id → sub_times`

`user_id → credit_card`

`user_id → subscription_period`

Partial Key Dependency: None

Transitive Dependency: None

Redundancies: None

Anomalies:

Insert – None.

Update – None.

Delete – None.

In this table, every attribute is single-valued (scalar) making it already in 1NF.

There is no partial dependency here, so it is in 2NF as well.

2NF Redundancies: None

Since there is no transitive dependency, it is also in 3NF.

Thus, our final table remains the same.

For a relation to be in BCNF,

a. It should be in the third normal form (3NF).

b. For any dependency $A \rightarrow B$, A must be a super key.

Hence, this relation is in BCNF as well.

3). `group (group_id, user_id, group_name, created_on)`

PK dependency:

`user_id → start_date, sub_times, credit_card, subscription_period`

Functional Dependencies:

`group_id → group_name`

`group_id → created_on`

Partial Key Dependency: None

Transitive Dependency: None

Redundancies: None

Anomalies:

Insert – None.

Update – None.

Delete – None.

In this table, every attribute is single-valued (scalar) making it already in 1NF. There is no partial dependency here, so it is in 2NF as well.

2NF Redundancies: None

Since there is no transitive dependency, it is also in 3NF.
Thus, our final table remains the same.

For a relation to be in BCNF,

- a. It should be in the third normal form (3NF).
 - b. For any dependency $A \rightarrow B$, A must be a super key.
- Hence, this relation is in BCNF as well.

4). **creator** (creator_id, creator_name)

PK dependency:

creator_id \rightarrow creator_name

Functional Dependencies:

creator_id \rightarrow creator_name

Partial Key Dependency: None

Transitive Dependency: None

Redundancies: None

Anomalies:

Insert – None.

Update – None.

Delete – None.

In this table, every attribute is single-valued (scalar) making it already in 1NF. There is no partial dependency here, so it is in 2NF as well.

2NF Redundancies: None

Since there is no transitive dependency, it is also in 3NF.

Thus, our final table remains the same.

For a relation to be in BCNF,

- a. It should be in the third normal form (3NF).
 - b. For any dependency $A \rightarrow B$, A must be a super key.
- Hence, this relation is in BCNF as well.

5). **star** (star_id, star_name, revenue_charged)

PK dependency:

$\text{star_id} \rightarrow \text{star_name, revenue_charged}$

Functional Dependencies:

$\text{star_id} \rightarrow \text{star_name}$

$\text{star_id} \rightarrow \text{revenue_charged}$

Partial Key Dependency: None

Transitive Dependency: None

Redundancies: None

Anomalies:

Insert – None.

Update – None.

Delete – None.

In this table, every attribute is single-valued (scalar) making it already in 1NF.

There is no partial dependency here, so it is in 2NF as well.

2NF Redundancies: None

Since there is no transitive dependency, it is also in 3NF.

Thus, our final table remains the same.

For a relation to be in BCNF,

a. It should be in the third normal form (3NF).

b. For any dependency $A \rightarrow B$, A must be a super key.

Hence, this relation is in BCNF as well.

6). genre (gen_id, gen_name)

PK dependency:

$\text{gen_id} \rightarrow \text{gen_name}$

Functional Dependencies:

$\text{gen_id} \rightarrow \text{gen_name}$

Partial Key Dependency: None

Transitive Dependency: None

Redundancies: None

Anomalies:

Insert – None.

Update – None.

Delete – None.

In this table, every attribute is single-valued (scalar) making it already in 1NF.

There is no partial dependency here, so it is in 2NF as well.

2NF Redundancies: None

Since there is no transitive dependency, it is also in 3NF.

Thus, our final table remains the same.

For a relation to be in BCNF,

- a. It should be in the third normal form (3NF).
- b. For any dependency $A \rightarrow B$, A must be a super key.

Hence, this relation is in BCNF as well.

7). `language (lan_id, lan_name)`

PK dependency:

$\text{lan_id} \rightarrow \text{lan_name}$

Functional Dependencies:

$\text{lan_id} \rightarrow \text{lan_name}$

Partial Key Dependency: None

Transitive Dependency: None

Redundancies: None

Anomalies:

Insert – None.

Update – None.

Delete – None.

In this table, every attribute is single-valued (scalar) making it already in 1NF.

There is no partial dependency here, so it is in 2NF as well.

2NF Redundancies: None

Since there is no transitive dependency, it is also in 3NF.

Thus, our final table remains the same.

For a relation to be in BCNF,

- a. It should be in the third normal form (3NF).
- b. For any dependency $A \rightarrow B$, A must be a super key.

Hence, this relation is in BCNF as well.

8). `ads (ads_id, product_name, website, times_shown)`

PK dependency:

$\text{ads_id} \rightarrow \text{product_name}, \text{website}, \text{times_shown}$

Functional Dependencies:

$\text{ads_id} \rightarrow \text{product_name}$

$\text{ads_id} \rightarrow \text{website}$

$\text{ads_id} \rightarrow \text{times_shown}$

Partial Key Dependency: None

Transitive Dependency: None

Redundancies: None

Anomalies:

Insert – None.

Update – None

Delete – None.

In this table, every attribute is single-valued (scalar) making it already in 1NF.

There is no partial dependency here, so it is in 2NF as well.

2NF Redundancies: None

Since there is no transitive dependency, it is also in 3NF.

Thus, our final table remains the same.

For a relation to be in BCNF,

a. It should be in the third normal form (3NF).

b. For any dependency $A \rightarrow B$, A must be a super key.

Hence, this relation is in BCNF as well.

9). content (content_id, veiws, content_name, creator_id, creator_id, star_id, gen_id, lan_id, rating, revenue_earned, age_restriction, release_date)

PK dependency:

$\text{content_id} \rightarrow \text{veiws}, \text{content_name}, \text{creator_id}, \text{star_id}, \text{gen_id}, \text{lan_id}, \text{rating}, \text{revenue_earned}, \text{age_restriction}, \text{release_date}$

Functional Dependencies:

$\text{content_id} \rightarrow \text{content_name}$

$\text{content_id} \rightarrow \text{veiws}$

$\text{content_id} \rightarrow \text{creator_id}$

$\text{content_id} \rightarrow \text{star_id}$

$\text{content_id} \rightarrow \text{gen_id}$

$\text{content_id} \rightarrow \text{lan_id}$

$\text{content_id} \rightarrow \text{rating}$

$\text{content_id} \rightarrow \text{revenue_earned}$

$\text{content_id} \rightarrow \text{age_restriction}$

$\text{content_id} \rightarrow \text{release_date}$

Partial Key Dependency: None

Transitive Dependency: None

Redundancies: None

Anomalies:

Insert – None.

Update – If a tuple is updated from the referenced relation and a referenced attribute value is used by referencing another attribute in the relation, updating the tuple is not allowed. For example, the creator_name cannot be deleted

Delete – If a tuple is deleted from the referenced relation and a referenced attribute value is used by referencing another attribute in the relation, deleting the tuple is not allowed. For example, the creator_name cannot be deleted.

In this table, every attribute is single-valued (scalar) making it already in 1NF.

There is no partial dependency here, so it is in 2NF as well.

2NF Redundancies: None

Since there is no transitive dependency, it is also in 3NF.

Thus, our final table remains the same.

For a relation to be in BCNF,

- a. It should be in the third normal form (3NF).
- b. For any dependency $A \rightarrow B$, A must be a super key.

Hence, this relation is in BCNF as well.

10). Preference_list (pre_id, user_id, content_id, creator_id, star_id, lan_id, gen_id)

PK dependency:

$\text{pre_id}, \text{user_id} \rightarrow \text{content_id}, \text{creator_id}, \text{star_id}, \text{lan_id}, \text{gen_id}$

Functional Dependencies:

$\text{user_id} \rightarrow \text{pre_id}$

$\text{pre_id} \rightarrow \text{content_id}$

$\text{pre_id} \rightarrow \text{creator_id}$

$\text{pre_id} \rightarrow \text{star_id}$

$\text{pre_id} \rightarrow \text{lan_id}$

$\text{pre_id} \rightarrow \text{gen_id}$

Partial Key Dependency: None

Transitive Dependency: None

Redundancies: None

Anomalies:

Insert – None.

Update – If a tuple is updated from the referenced relation and a referenced attribute value is used by referencing another attribute in the relation, updating the tuple is not allowed. For example, the creator_name cannot be deleted.

Delete – If a tuple is deleted from the referenced relation and a referenced attribute value is used by referencing another attribute in the relation, deleting the tuple is not allowed. For example, the creator_name cannot be deleted.

In this table, every attribute is single-valued (scalar) making it already in 1NF. There is no partial dependency here, so it is in 2NF as well.

2NF Redundancies: None

Since there is no transitive dependency, it is also in 3NF.
Thus, our final table remains the same.

For a relation to be in BCNF,

- a. It should be in the third normal form (3NF).
- b. For any dependency $A \rightarrow B$, A must be a super key.

Hence, this relation is in BCNF as well.

SECTION 4

Final DDL Scripts, Select Queries and SQL Queries

Final DDL Scripts

1).

```
CREATE TABLE IF NOT EXISTS ott.users
(
    password VARCHAR (50) not null,
    email VARCHAR (150) not null,
    name VARCHAR (50) not null,
    user_id numeric (10,0) not null,
    phone_number numeric (10,0),
    created_datetime VARCHAR(50) not null,
    Is_premium BOOL,
    PRIMARY KEY(user_id)
)
```

```
CREATE TABLE
```

Query returned successfully in 54 msec.

2).

```
CREATE TABLE IF NOT EXISTS ott.premium_user
(
    user_id numeric (10,0) not null,
    start_date character varying(50) not null,
    credit_card numeric(10),
    sub_times numeric(10) not null,
    subscription_period numeric(10) not null,
    CONSTRAINT user_id_pK PRIMARY KEY (user_id),
    FOREIGN KEY(user_id) REFERENCES ott.users ON UPDATE CASCADE ON DELETE CASCADE
);
```

```
CREATE TABLE
```

Query returned successfully in 54 msec.

3).

```
CREATE TABLE IF NOT EXISTS ott.group
(
    user_id numeric (10,0) not null,
    group_id numeric (10,0) not null,
    group_name character varying(50) not null,
    created_on character varying(50) not null,
    CONSTRAINT group_id_PK PRIMARY KEY (group_id),
    CONSTRAINT user_id_FK FOREIGN KEY (user_id)
        REFERENCES ott.users(user_id) ON UPDATE CASCADE ON DELETE CASCADE
);
```

CREATE TABLE

Query returned successfully in 54 msec.

4).

```
CREATE TABLE IF NOT EXISTS ott.creator
(
    creator_id numeric (10,0) not null,
    creator_name character varying(50) not null,
    CONSTRAINT creator_id_PK PRIMARY KEY (creator_id)
);
```

CREATE TABLE

Query returned successfully in 54 msec.

5).

```
CREATE TABLE IF NOT EXISTS ott.star
(
    star_id numeric (10,0) not null,
    star_name character varying(50) not null,
    revenue_charged numeric(10,0) not null,
    CONSTRAINT star_id_PK PRIMARY KEY (star_id)
);
```

CREATE TABLE

Query returned successfully in 54 msec.

6).

```
CREATE TABLE IF NOT EXISTS ott.genre
(
gen_id numeric (10,0) not null,
gen_name character varying(50) not null,
CONSTRAINT genre_id_PK PRIMARY KEY (gen_id)
);
```

```
CREATE TABLE
```

Query returned successfully in 54 msec.

7).

```
CREATE TABLE IF NOT EXISTS ott.language
(
lan_id numeric (10,0) not null,
lan_name character varying(50) not null,
CONSTRAINT language_id_PK PRIMARY KEY (lan_id)
);
```

```
CREATE TABLE
```

Query returned successfully in 54 msec.

8).

```
CREATE TABLE IF NOT EXISTS ott.ads
(
ads_id numeric (10,0) not null,
product_name character varying(50) not null,
website character varying(50) not null,
times_shown numeric(10) not null,
CONSTRAINT ads_id_PK PRIMARY KEY (ads_id)
);
```

```
CREATE TABLE
```

Query returned successfully in 54 msec.

9).

```
CREATE TABLE IF NOT EXISTS ott.content
(
content_id numeric (10,0) not null,
veiws numeric (10,0) not null,
content_name character varying(50) not null,
creator_id numeric (10,0) not null,
```

```
star_id numeric (10,0) not null,
gen_id numeric (10,0) not null,
lan_id numeric (10,0) not null,
rating numeric (10,0) not null,
revene_earned numeric (10,0) not null,
age_restriction numeric (10,0) not null,
release_date character varying(50) not null,
CONSTRAINT content1_id_PK PRIMARY KEY (content_id,creator_id),
FOREIGN KEY (creator_id) REFERENCES ott.creator ON UPDATE CASCADE ON
DELETE CASCADE
FOREIGN KEY(star_id) REFERENCES ott.star ON UPDATE CASCADE ON DELETE
CASCADE
FOREIGN KEY(gen_id) REFERENCES ott.genre ON UPDATE CASCADE ON DELETE
CASCADE
FOREIGN KEY(lan_id) REFERENCES ott.language ON UPDATE CASCADE ON
DELETE CASCADE
);

CREATE TABLE
```

Query returned successfully in 54 msec.

10).

```
CREATE TABLE IF NOT EXISTS ott.preference_list
(
pre_id numeric (10,0) not null,
user_id numeric (10,0) not null,
content_id numeric (10,0) not null,
creator_id numeric (10,0) not null,
star_id numeric (10,0) not null,
gen_id numeric (10,0) not null,
lan_id numeric (10,0) not null,
CONSTRAINT pre_id_PK PRIMARY KEY (pre_id,user_id),
FOREIGN KEY (user_id) REFERENCES ott.users ON UPDATE CASCADE ON DELETE
CASCADE
FOREIGN KEY (creator_id) REFERENCES ott.creator ON UPDATE CASCADE ON
DELETE CASCADE
FOREIGN KEY (content_id) REFERENCES ott.creator ON UPDATE CASCADE ON
DELETE CASCADE
FOREIGN KEY(star_id) REFERENCES ott.star ON UPDATE CASCADE ON DELETE
CASCADE
FOREIGN KEY(gen_id) REFERENCES ott.genre ON UPDATE CASCADE ON DELETE
CASCADE
```

```
FOREIGN KEY(lan_id) REFERENCES ott.language ON UPDATE CASCADE ON  
DELETE CASCADE  
);
```

```
CREATE TABLE
```

```
Query returned successfully in 54 msec.
```

Snapshots of select * query

1). users (user_id, name, email, phone_number, password, created_datetime is_premium)

	<u>user_id</u> [PK] numeric (10)	<u>name</u> character varying (50)	<u>email</u> character varying (150)	<u>password</u> character varying (50)	<u>phone_number</u> numeric (10)	<u>created_datetime</u> character varying (50)	<u>is_premium</u> boolean
1	1	Mozelle Blonfield	mblonfield@comsenz.com	DoeeHA2CY	1368943736	1/23/2023	false
2	2	Deanne Frederick	dfrederick1@whitehouse.gov	EF15ynlm	4086975730	11/25/2023	false
3	3	Sherwynd Bedbrough	sbedbrough2@jigsy.com	jZdWExkRVvg0	3372164633	6/28/2023	false
4	4	Gabriel Minelli	gminelli3@dedecms.com	KHa8P5fb	6365640101	05-08-2023	false
5	5	Nadean Geal	ngeal4@cbsnews.com	oUVswhtQCHYQ	8196741794	10/29/2023	true
6	6	Jerrilee Grenshields	jgrenshields5@cpanel.net	y4EAz1TE	5003791331	10-04-2023	true
7	7	Cortney Extall	cextall6@time.com	50SIhHbn0tlv	1235896914	10/21/2023	false
8	8	Mayne Barthrop	mbarthrop7@gnu.org	E9Cj75N6GY	3852805755	11/28/2023	true
9	9	Allister Riglar	ariglar8@tripod.com	diwAcTualkz	9654043339	10/14/2023	true
10	10	Elyssa Tatton	etatton9@prweb.com	sR29PTK	2126318132	06-12-2023	true
11	11	Binnie Hebson	bhebsona@indiegogo.com	zWdXaEND	8894119529	05-07-2023	false
12	12	Winston Beeswing	wbeeswingb@simplemachin...	bkwwbo9DROK	1488747115	11/27/2022	true
13	13	Mag Nan Carrow	mnanc@flavors.me	ZKRMGos02uh	3242793165	11-01-2022	true
14	14	Ara Morrison	amarrisond@jmndo.com	Tmmd85qHZ7ZN	6125735466	11-01-2023	false
15	15	Kelly Solloway	ksollowaye@yellowpages.com	nOrfKBaE	2585167424	12/16/2022	false
16	16	Aristotle Lafontaine	alafontainef@tinyurl.com	h9sZ0xPe4eWW	7122798851	11-09-2022	true
17	17	Marco Garrique	mgarriqueg@bbc.co.uk	rLviewpGK	4577576159	11/28/2022	false
18	18	Erik Mallion	emallionh@plala.or.jp	In8hALc2S	4765159123	03-09-2023	false
19	19	Trixie Threadgould	tthreadgouldi@marriott.com	TbLw99	8157228059	08-12-2023	true
20	20	Nessie de Vaen	ndej@blog.com	rgyUZx9VzSL	4305201523	3/29/2023	true
21	21	Kym Atkinson	katkinsonk@ebay.com	N4yWPPe0	8601742969	4/25/2023	false

No of tuples: 50

2). premium_user (user_id, start_date, sub_times, credit_card, subscription_period)

	<u>user_id</u> [PK] numeric (10)	<u>start_date</u> character varying (50)	<u>credit_card</u> character varying (50)	<u>sub_times</u> numeric (10)	<u>subscription_period</u> numeric (10)
1	5	10/28/2023	2.02E+14	4	3
2	6	11-10-2023	3.74E+14	2	3
3	9	11/17/2023	5.38E+15	4	3
4	10	06-10-2022	3.55E+15	1	1
5	12	5/23/2023	3.53E+15	1	1
6	13	02-03-2023	4.91E+15	5	3
7	16	12-05-2021	2.02E+14	2	2
8	19	5/29/2022	3.54E+15	4	1
9	20	7/29/2023	5.26E+15	2	3
10	23	9/25/2022	5.60E+15	4	2
11	25	09-02-2023	5.60E+15	2	1
12	27	09-03-2022	3.54E+15	1	3
13	28	1/22/2022	3.02E+13	3	3
14	29	11-11-2023	6.33E+15	3	2
15	30	6/17/2023	4.94E+18	4	3
16	32	04-06-2023	3.54E+15	5	1
17	35	1/26/2023	5.61E+16	1	3
18	38	4/29/2023	3.56E+15	4	3
19	41	8/21/2023	3.54E+15	4	1
20	42	4/30/2022	3.57E+15	4	2
21	43	11-12-2023	5.60E+18	3	2

No of tuples: 27

3). group (group_id, user_id, group_name, created_on)

	<u>user_id</u> numeric (10)	<u>group_id</u> [PK] numeric (10)	<u>group_name</u> character varying (50)	<u>created_on</u> character varying (50)
1	41	1	SkinCeuticals Sport U...	6/18/2023
2	45	2	Pain Relief PM	6/22/2022
3	30	3	Irinotecan Hydrochlor...	8/30/2022
4	13	4	Johnson Grass	04-07-2023
5	9	5	Mineral Oil	09-11-2022
6	38	6	Covergirl Queen Colle...	6/20/2023
7	19	7	Diltiazem Hydrochlori...	01-05-2022
8	13	8	Synthroid	04-11-2022
9	46	9	Carvedilol	09-01-2022
10	9	10	Warfarin Sodium	3/21/2022
11	28	11	Opana ER	8/22/2023
12	47	12	donepezil hydrochlori...	10/21/2022
13	9	13	Senna Laxative	10-04-2023
14	13	14	Prevail-FX One Step	01-12-2023
15	16	15	AMRIX	9/16/2022
16	19	16	Frankincense and Myr...	7/19/2023
17	9	17	Nephron FA	06-09-2022
18	49	18	Diovan HCT	09-05-2022
19	6	19	bareMinerals Blemish...	5/31/2023
20	35	20	Warm Sap Patch	10/30/2022
21	20	21	Vandetanib	1/22/2023

✓ Successfully run. Total query runtime: 57 msec. 50 rows affected.

No of tuples: 50

4). creator (creator_id, creator_name)

	<u>creator_id</u> [PK] numeric (10)	<u>creator_name</u> character varying (50)
1	1	Alley Minton
2	2	Marleen Hairsnape
3	3	Felix Leyes
4	4	Babbie Falconbridge
5	5	Ephraim Swannick
6	6	Dede Showalter
7	7	Kris Loines
8	8	Jonathon Kunisch
9	9	Priscilla Tickel
10	10	Nadeen Hains
11	11	Shanan Livesey
12	12	Vallie Gergolet
13	13	Lorrie Pariso
14	14	Peterus Dahill
15	15	Lyndsie Firbank
16	16	Bobbye Kilshaw
17	17	Samuel Slatten
18	18	Tadd Grunwall
19	19	Addy Bernardos
20	20	Floria Clepluch
21	21	Rogers Razzell

✓ Successfully run. Total query runtime: 46 msec. 50 rows affected.

No of tuples: 50

5). star (star_id, star_name, revenue_charged)

	<u>star_id</u> [PK] numeric (10)	<u>star_name</u> character varying (50)	<u>revenue_charged</u> numeric (10)
1	1	Rheta Ganing	56317
2	2	Katrina Rawkesby	35113
3	3	Clarie Ewing	51412
4	4	Crysta Gaunter	48835
5	5	Morissa Bramble	20940
6	6	Gifford Barkhouse	25168
7	7	Staford Crichtmere	19101
8	8	Irv Drakes	56235
9	9	Aubrette Nice	55842
10	10	Mayor Cogzell	52391
11	11	Gwennie Shakesby	33108
12	12	Tatiania MacArdle	39335
13	13	Euphemia Tweedle	18181
14	14	Caddric Posner	34501
15	15	Minnie Heaney	22888
16	16	Jehu Clash	40317
17	17	Yasmin Luscott	27968
18	18	Siffre Jewks	15194
19	19	Torry Tott	12479
20	20	Elisha Neagle	12505
21	21	Ilene Drews	56834

✓ Successfully run. Total query runtime: 44 msec. 50 rows affected.

No of tuples: 50

6). genre (gen_id, gen_name)

	<u>gen_id</u> [PK] numeric (10)	<u>gen_name</u> character varying (50)
1	1	Crime Drama
2	2	Comedy Romance
3	3	Adventure Comedy Fa...
4	4	Drama Musical Roma...
5	5	Crime Horror Mystery ...
6	6	Horror Thriller
7	7	Drama Romance
8	8	Comedy
9	9	Comedy Romance
10	10	Animation Musical
11	11	Action Crime Mystery
12	12	Comedy Drama Roma...
13	13	Action Comedy
14	14	Comedy Fantasy
15	15	Fantasy Horror
16	16	Drama
17	17	Horror Thriller
18	18	Adventure Fantasy Th...
19	19	Action
20	20	Comedy Drama
21	21	Comedy Musical Rom...

✓ Successfully run. Total query runtime: 46 msec. 50 rows affected.

No of tuples: 50

7). language (lan_id, lan_name)

	lan_id [PK] numeric (10)	lan_name character varying (50)
1	1	Oriya
2	2	Hebrew
3	3	German
4	4	Pashto
5	5	Tetum
6	6	Arabic
7	7	Kyrgyz
8	8	Swedish
9	9	Filipino
10	10	Khmer
11	11	Korean
12	12	Telugu
13	13	Azeri
14	14	Spanish
15	15	Nepali
16	16	Bulgarian
17	17	Bosnian
18	18	Tok Pisin
19	19	Tswana
20	20	Albanian
21	21	Kashmiri
...

✓ Successfully run. Total query runtime: 44 msec. 50 rows affected.

No of tuples: 50

8). ads (ads_id, product_name, website, times_shown)

	ads_id [PK] numeric (10)	product_name character varying (50)	website character varying (50)	times_shown numeric (10)
1	1	Oil - Cooking Spray	Devpulse	9
2	2	Sambuca - Opal Nera	Avabee	6
3	3	Beef - Ox Tail, Frozen	Quinu	4
4	4	Foam Espresso Cup P...	Linktype	3
5	5	Wine - Tribal Sauvignon	Latz	10
6	6	Flower - Commercial ...	Devpulse	3
7	7	Compound - Raspberry	Edgeclub	2
8	8	Sponge Cake Mix - Va...	Ntags	1
9	9	Beans - Fava Fresh	Skyba	2
10	10	Bread - Mini Hamburg...	Oodoo	10
11	11	The Pop Shoppe Pina...	Dynabox	6
12	12	Oil - Shortening - All - ...	Kare	10
13	13	Bread - Triangle White	Oba	3
14	14	Cheese Cloth	Oba	4
15	15	Kale - Red	Bubblebox	6
16	16	Pail - 15l White, With ...	Devify	6
17	17	Pasta - Cappellini, Dry	Mita	2
18	18	Wine - Chateauneuf D...	Blognation	5
19	19	Daves Island Stinger	Tagtune	3
20	20	Broom Handle	Jetpulse	7
21	21	Water Chestnut - Can...	Meembee	8
...

No of tuples: 50

9). content (content_id, views, content_name, creator_id, star_id, gen_id, lan_id, rating, revenue_earned, age_restriction, release_date)

	content_id [PK] numeric (10)	views numeric (10)	content_name character varying (50)	creator_id [PK] numeric (10)	star_id numeric (10)	gen_id numeric (10)	lan_id numeric (10)	revenue_earned numeric (10)	age_restriction numeric (10)	release_date character varyi
1	1	14	Rasputin	1	50	7	38	45027	8	8/20/2023
2	2	63	Alice's Adventures in ...	2	46	23	40	25119	18	5/16/2022
3	3	86	Wedding Trough (Vas...	3	28	7	49	33905	11	10-01-2023
4	4	37	Dawn of the Dead	4	5	45	9	49344	18	02-07-2022
5	5	69	End of Violence, The	5	7	11	13	19095	16	04-05-2022
6	6	65	My Brother the Terrori...	6	37	42	3	37762	8	8/26/2023
7	7	90	Rock-a-Bye Baby	7	18	29	27	38584	7	2/19/2022
8	8	56	Fatso	8	11	42	3	43777	18	06-07-2023
9	9	65	Spies Like Us	9	14	15	39	49976	5	07-05-2022
10	10	9	Old Man and the Sea, ...	10	6	24	36	35888	15	10-10-2022
11	11	37	Tyler Perry's Why Did ...	11	7	18	11	4619	18	7/14/2022
12	12	83	Blitz	12	6	38	37	24626	14	9/16/2023
13	13	31	King Kong	13	50	20	38	32140	7	1/14/2022
14	14	93	Notre jour viendra	14	6	33	47	9433	18	02-02-2022
15	15	42	Tarzan	15	20	22	47	17677	19	6/16/2022
16	16	3	Thieves, The (Dodore...	16	47	6	12	54820	12	11/29/2022
17	17	13	Cuban Fury	17	24	32	48	39375	7	12/14/2022
18	18	91	Green Years, The	18	4	28	7	59992	12	01-10-2023
19	19	24	Life Is a Long Quiet Ri...	19	28	2	18	30030	8	11/13/2021
20	20	52	Triumph of Love, The	20	42	46	27	10013	16	12/14/2022
21	21	20	Alamo Bay	21	41	19	10	10013	16	12/14/2022

No of tuples: 50

10). Preference_list (pre_id, user_id, content_id, creator_id, star_id, lan_id, gen_id)

	pre_id [PK] numeric (10)	user_id [PK] numeric (10)	content_id numeric (10)	creator_id numeric (10)	star_id numeric (10)	gen_id numeric (10)	lan_id numeric (10)
1	1	1	33	1	36	34	49
2	2	2	31	46	11	12	2
3	3	3	45	18	30	26	32
4	4	4	35	50	11	15	12
5	5	5	34	24	11	37	29
6	6	6	43	16	23	27	41
7	7	7	2	24	26	32	48
8	8	8	9	23	12	36	41
9	9	9	33	36	40	15	22
10	10	10	13	5	38	39	27
11	11	11	46	32	11	33	14
12	12	12	41	24	33	35	43
13	13	13	37	10	50	1	2
14	14	14	41	15	20	6	41
15	15	15	38	9	21	48	32
16	16	16	6	40	19	15	40
17	17	17	49	17	22	46	6
18	18	18	26	16	20	18	29
19	19	19	31	45	19	11	15
20	20	20	10	5	1	13	25
21	21	21	8	13	42	19	10

✓ Successfully run. Total query runtime: 55 msec. 50 rows affected

No of tuples: 50

20 SQL Queries

Q1) Display all the data of first 5 users

```
select *
from ott.users
limit 5
```

	user_id [PK] numeric (10)	name character varying (50)	email character varying (150)	password character varying (50)	phone_number numeric (10)	created_datetime character varying (50)	is_premium boolean
1	1	Mozelle Blonfield	mblonfield0@comsenz...	DoeeHA2CY	1368943736	1/23/2023	false
2	2	Deanne Frederick	dfrederick1@whitehou...	EFl5ynlm	4086975730	11/25/2023	false
3	3	Sherwynd Bedbrough	sbedbrough2@jigsy.com	jZdWEExkRVvg0	3372164633	6/28/2023	false
4	4	Gabriel Minelli	gminelli3@dedecms.c...	KHa8P5fb	6365640101	05-08-2023	false
5	5	Nadean Geal	ngeal4@cbsnews.com	oUVswhQCHYQ	8196741794	10/29/2023	true

Q2). Display users who have taken premium membership

```
select *
from ott.users
where is_premium='True'
```

	user_id [PK] numeric (10)	name character varying (50)	email character varying (150)	password character varying (50)	phone_number numeric (10)	created_datetime character varying (50)	is_premium boolean
1	5	Nadean Geal	ngeal4@cbsnews.com	oUVswhQCHYQ	8196741794	10/29/2023	true
2	6	Jerrilee Grenshields	jgrenshields5@cpanel...	y4EAz1tE	5003791331	10-04-2023	true
3	8	Mayne Barthrop	mbarthrop7@gnu.org	E9Cj75N6GY	3852805755	11/28/2023	true
4	9	Allister Riglar	ariglar8@tripod.com	diwAc1auKz	9654043339	10/14/2023	true
5	10	Elyssa Tatton	etatton9@prweb.com	sR29PTK	2126318132	06-12-2023	true
6	12	Winston Beeswing	wbeeswingb@simplem...	bkvvbo9DROK	1488747115	11/27/2022	true
7	13	Mag Nan Carrow	mnanc@flavors.me	ZKRMGos02uh	3242793165	11-01-2022	true
8	16	Aristotle Lafontaine	alafontainef@tinyurl.c...	h9sZ0xPe4eWW	7122798851	11-09-2022	true
9	19	Trixie Threadgould	tthreadgould@marriot...	TbLw99	8157228059	08-12-2023	true
10	20	Nessie de Vaen	ndej@blog.com	rgyUZx9VzSL	4305201523	3/29/2023	true
11	23	Kerstin Ferrai	kferraim@kickstarter.c...	66nxbrZ0	8753502853	01-05-2023	true
12	25	Junie Weepers	jweeperso@etsy.com	ja18tZ3KHKn	3734788767	11/20/2022	true
13	27	Nikki Rastall	nrastallq@reddit.com	TUFjOs	1315884846	2/14/2023	true
14	28	Jorie Kuschek	jkuschekr@bloomberg....	0XooQe	5055118636	5/29/2023	true
15	29	Banky Lates	blatesss@mit.edu	ttvGm73	3387855529	8/23/2023	true
16	30	Ferris Ramsdale	framsdalet@smh.com....	1YT9GLaYA	3588242186	12/20/2022	true
17	32	Tedi Huske	thuskev@woothemes.c...	eSSdrSNFvnE	5155423408	11/23/2022	true
18	35	Mame Burril	mburrily@pagesperso...	0wQoaGHa	4717542905	05-03-2023	true
19	38	Cally Getcliff	cgetcliff11@yellowboo...	nghztfqAyrqj	6011933757	7/17/2023	true
20	41	Aleen Hoyer	ahoyer14@surveymon...	10NHxMbBL	3326876322	04-02-2023	true
21	42	Westbrooke Tramel	wtramel15@rediff.com	E0oYY7G0	9729857817	11/17/2023	true

Total rows: 27 of 27 Query complete 00:00:00.196

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Q3). How many users have taken premium membership

```
select count(user_id)
from ott.users
where is_premium!=True
```

	count	bigint
1	27	

Q4).Display all the data of the content with content_id=4

```
select *
from ott.content
where content_id=4
```

	content_id [PK] numeric (10)	views numeric (10)	content_name character varying (50)	creator_id [PK] numeric (10)	star_id numeric (10)	gen_id numeric (10)	lan_id numeric (10)	revene_earned numeric (10)	age_restriction numeric (10)	release_date character varying (50)
1	4	37	Dawn of the Dead	4	5	45	9	49344	18	02-07-2022

Q5).what is the revenue earned by the content whose content_id=8

```
select revene_earned
from ott.content
where content_id=8
```

	revene_earned numeric (10)
1	43777

Q6).What is the max revenue earned by any content

```
select max(revene_earned)
from ott.content
```

	max numeric
1	59992

Q7).what is the group name of group_id=8

```
select group_name  
from ott.group  
where group_id=8
```

	group_name character varying (50)
1	Synthroid

Q8).what is the product name and website name of the ad with ads_id=8

```
select product_name,website  
from ott.ads  
where ads_id=8
```

	product_name character varying (50)	website character varying (50)
1	Beans - Fava Fresh	Skyba

Q9).what is the product name and number of times shown of the ad with ads_id=16

```
select product_name,times_shown  
from ott.ads  
where ads_id=16
```

	product_name character varying (50)	times_shown numeric (10)
1	Pail - 15l White, With ...	6

Q10).what is the star name with star_id=45

```
select star_name  
from ott.star  
where star_id=45
```

	star_name character varying (50)
1	Morgan Lyste

Q11).Display all the data of the content where the stars acted in the content have revenue charged >35113

```
select *
from ott.content
INNER JOIN ott.star ON star.star_id=content.star_id
where revenue_charged>35113
```

	content_id numeric (10)	views numeric (10)	content_name character varying (50)	creator_id numeric (10)	star_id numeric (10)	gen_id numeric (10)	lan_id numeric (10)	revenue_earned numeric (10)	age_restriction numeric (10)	release_date character varying (50)	rating numeric (10)	star_id numeric (10)	star_name character varying (50)
1	2	63	Alice's Adventures in ...	2	46	23	40	25119	18	5/16/2022	2	46	Felipa Brownbridg
2	6	65	My Brother The Terrori...	6	37	42	3	37762	8	8/26/2023	4	37	Sonny Angear
3	17	13	Cuban Fury	17	24	32	48	39375	7	12/14/2022	4	24	Walther Dulgan
4	18	91	Green Years, The	18	4	28	7	59992	12	01-10-2023	2	4	Crysta Gaunter
5	20	52	Triumph of Love, The	20	42	46	27	10013	16	12/14/2022	2	42	Hayley Bassam
6	26	47	Daddy Long Legs	26	9	19	48	23072	7	3/26/2022	3	9	Aubrette Nice
7	29	78	Big Bad Mama	29	10	30	4	20515	17	10-04-2022	4	10	Mayor Cogzell
8	31	4	Slipstream	31	3	8	43	53547	12	05-08-2022	2	3	Clarie Ewing
9	32	60	Top Secret!	32	33	18	28	28700	15	6/23/2023	5	33	Reade Jilkes
10	37	37	Camille	37	48	43	30	1505	7	10/13/2022	1	48	Johnette Bernade
11	43	3	Katzelmacher	43	4	31	34	19467	5	05-04-2022	4	4	Crysta Gaunter
12	48	50	Ginger Snaps: Unleas...	48	42	23	48	17134	21	11/30/2021	2	42	Hayley Bassam
13	49	7	Sword and the Sorcer...	49	39	27	16	52973	7	12/30/2021	2	39	Silvan Newlands
14	50	90	Decalogue, The (Deka...	50	10	28	33	2279	8	9/25/2022	3	10	Mayor Cogzell

Q12).Display all the data from preference list where language name is tamil

```
select *
from ott.preference_list
INNER JOIN ott.language ON language.lan_id=preference_list.lan_id
where lan_name='Tamil'
```

	pre_id numeric (10)	user_id numeric (10)	content_id numeric (10)	creator_id numeric (10)	star_id numeric (10)	gen_id numeric (10)	lan_id numeric (10)	lan_id numeric (10)	lan_name character varying (50)
1	20	20	10	5	1	13	25	25	Tamil
2	44	44	25	12	29	16	25	25	Tamil

Q13).Display info of the users whose no times subscribed is greater than 2

```
select *
from ott.users
INNER JOIN ott.premium_user ON premium_user.user_id=users.user_id
where sub_times>2
```

	user_id	name	email	password	phone_number	created_datetime	is_premium	user_id	start_date	credit_card	sub_times	sub_id
	numeric (10)	character varying (50)	character varying (150)	character varying (50)	numeric (10)	character varying (50)	boolean	numeric (10)	character varying (50)	character varying (50)	numeric (10)	num
1	5	Nadean Geal	ngeal4@cbsnews.com	oUVswhtQCHYQ	8196741794	10/29/2023	true	5	10/28/2023	2.02E+14	4	
2	9	Allister Riglar	ariglar8@tripod.com	diwAcualkz	9654043339	10/14/2023	true	9	11/17/2023	5.38E+15	4	
3	13	Mag Nan Carrow	mnanc@flavors.me	ZKRMGos02uh	3242793165	11-01-2022	true	13	02-03-2023	4.91E+15	5	
4	19	Trixie Threadgould	tthreadgould@marriot...	Tblw99	8157228059	08-12-2023	true	19	5/29/2022	3.54E+15	4	
5	23	Kerstin Ferrai	kferraim@kickstarter.c...	66nxbr20	8753502853	01-05-2023	true	23	9/25/2022	5.60E+15	4	
6	28	Jorie Kuschek	jkuschek@bloomberg...	JKooQe	5055118636	5/29/2023	true	28	1/22/2022	3.02E+13	3	
7	29	Banky Lates	blates@mit.edu	ttvGm73	3308755529	8/23/2023	true	29	11-11-2023	6.33E+15	3	
8	30	Ferris Ramsdale	framsdale@smh.com....	1YT9GLaYA	3588242186	12/20/2022	true	30	6/17/2023	4.94E+18	4	
9	32	Tedi Huske	thuskev@woothemes.c...	eSSdrSNFvnE	5155423408	11/23/2022	true	32	04-06-2023	3.54E+15	5	
10	38	Cally Getcliff	cgetcliff11@yellowboo...	nghztfqAyrqj	6011933757	7/17/2023	true	38	4/29/2023	3.56E+15	4	
11	41	Aleen Hoyer	ahoyer14@surveymon...	10NHxMbbL	3326876322	04-02-2023	true	41	8/21/2023	3.54E+15	4	
12	42	Westbrooke Tramel	wtramel15@rediff.com	EOoYYV7G0	9729857817	11/17/2023	true	42	4/30/2022	3.57E+15	4	
13	43	Lois Place	lplace16@va.gov	XKAQpk	9678670593	07-08-2023	true	43	11-12-2023	5.60E+18	3	
14	45	Kinnie Edgcombe	kedgcombe18@ebay.c...	qkT0dgb	4055369813	12/13/2022	true	45	06-11-2023	5.61E+16	4	
15	47	Stillman McGeady	smcgeady1a@blogs.c...	Or10MI9	9502551772	1/20/2023	true	47	07-12-2023	5.60E+18	5	
16	49	Eugenius Gile	egile1c@umich.edu	fQJ6tU	2968534701	6/18/2023	true	49	3/17/2023	3.58E+15	4	

Q14). Display the info of stars who acted in the content which has max rating

```
select *
from ott.star
INNER JOIN ott.content ON content.star_id=star.star_id
where rating=(select max(rating) from ott.content)
```

	star_id	star_name	revenue_charged	content_id	views	content_name	creator_id	star_id	gen_id	lan_id	revene_earned	age_restriction	release_date
	numeric (10)	character varying (50)	numeric (10)	numeric (10)	numeric (10)	character varying (50)	numeric (10)	numeric (10)	character vary				
1	41	Chelsie Beevers	13862	21	20	Alamo Bay	21	41	38	35	54994	9	01-11-2023
2	28	Beaufort Gethyn	3561	25	47	Can Mr. Smith Get to ...	25	28	34	33	5799	12	4/14/2022
3	33	Reade Jilkes	37233	32	60	Top Secret!	32	33	18	28	28700	15	6/23/2023
4	34	Inna Rosenschein	31896	35	33	Fear City: A Family-St...	35	34	21	42	44407	17	5/23/2023

Q15). What is the max revenue charged by a star and display the details of the star

```
select *
from ott.star
where revenue_charged=(select max(revenue_charged) from ott.star)
Loading...
```

	star_id	star_name	revenue_charged
	[PK] numeric (10)	character varying (50)	numeric (10)
1	23	Lyda Sneed	59812

Q16). Display the details of preference list where the content has age restriction greater than

18 years

```
select *
from ott.preference_list
inner join ott.content on content.content_id=preference_list.content_id
where age_restriction>18
```

	pre_id	user_id	content_id	creator_id	star_id	gen_id	lan_id	content_id	views	content_name	creator_id	star_id	gen_id	lan_id
	numeric (10)	character varying (50)	numeric (10)	numeric (10)	numeric (10)	numeric (10)								
1	1	1	33	1	36	34	49	33	60	Through the Olive Tre...	33	20	19	
2	9	9	33	36	40	15	22	33	60	Through the Olive Tre...	33	20	19	
3	26	26	48	22	28	23	48	48	50	Ginger Snaps: Unleas...	48	42	23	
4	28	28	27	42	28	48	3	27	97	Paradox	27	18	1	
5	30	30	15	50	46	34	35	15	42	Tarzan	15	20	22	
6	39	39	44	48	5	14	20	44	72	Little Witches	44	14	31	

Q17). Create a function to find all the contents with a rating greater than 3

```

create or replace function "Find_users3"()
returns table(content_id1 int,veiws1 int,content_name1 VARCHAR)
language 'plpgsql'
as $body$
declare
list_item record;
begin
create temp table Temp_Table(content_id1 int,veiws1 int,content_name1 VARCHAR) on commit drop;
for list_item in (select * from
ott.content where "rating">>3)
loop
insert into Temp_Table (content_id1,veiws1,content_name1) values
(list_item."content_id",list_item."veiws",list_item."content_name");
end loop;
return query table Temp_Table;
end;
$body$;
select * from "Find_users3"();

```

	content_id1 integer	veiws1 integer	content_name1 character varying
1	4	37	Dawn of the Dead
2	5	69	End of Violence, The
3	6	65	My Brother the Terrorist
4	8	56	Fatso
5	9	65	Spies Like Us
6	10	9	Old Man and the Sea, The
7	14	93	Notre Jour viendra
8	17	13	Cuban Fury
9	21	20	Alamo Bay
10	25	47	Can Mr. Smith Get to Washington Anymo...
11	27	97	Paradox
12	29	78	Big Bad Mama
13	32	60	Top Secret!
14	33	60	Through the Olive Trees
15	34	52	Comedy Central Roast of Bob Saget
16	35	33	Fear City: A Family-Style Comedy
17	43	3	Katzelmacher
18	23	6	New One-Armed Swordsman, The

Q18). Create a procedure to increment the number of views of a content with the given content_id.

```

CREATE OR REPLACE PROCEDURE ott.increase_views(IN
pid integer)
LANGUAGE 'plpgsql'
AS $BODY$
begin
update ott.content
set veiws=veiws+1
where content_id=pid;
end
$BODY$;
call ott.increase_views(23);
select * from ott.content where content_id=23;

```

content_id [PK] numeric (10)	veiws numeric (10)	content_name character varying (50)	creator_id [PK] numeric (10)	star_id numeric (10)	gen_id numeric (10)	lan_id numeric (10)	revene_earned numeric (10)	age_restriction numeric (10)	release_date character varying (50)	rat
1	23	6 New One-Armed Swor...	23	30	46	33	7657	14	3/28/2023	

Q19).Create a column status in users.Create a trigger to insert 'Active' for premium user and 'Not Active' for non premium user

```

CREATE OR REPLACE FUNCTION MyTrigFunc7()
RETURNS trigger
LANGUAGE 'plpgsql'
AS $BODY$
begin
if (new.is_premium=true)
then
new."status"='Active';
ELSE
new."status"='Not Active';
end if;
return new;
end;
$BODY$;
|
CREATE OR REPLACE TRIGGER MyTrigger
BEFORE INSERT
ON ott.users
FOR EACH ROW
EXECUTE FUNCTION MyTrigFunc7();
insert into ott.users("user_id","name","email","password","phone_number","created_datetime","is_premium") values(51,'Deanne Frederick','dfrerick@whitehouse.gov')
)
select * from ott.users;

```

	user_id	name	email	password	phone_number	created_datetime	is_premium	status
31	31	Farrel Dosdill	fdosdillu@facebook.co...	9dGNMupLR	4278541426	6/28/2023	false	[null]
32	32	Tedi Huske	thuskev@woothemes.c...	eSSdrSNFvnE	5155423408	11/23/2022	true	[null]
33	33	Aeriel Frushard	afrushardw@shinystat...	42afFQWCkzJA	7486224758	6/13/2023	false	[null]
34	34	Filmer Bremmell	fbremmellx@toplist.cz	rIKZJ4FC	6604769762	03-03-2023	false	[null]
35	35	Mame Burril	mburrily@pagesperso...	0wQoaGHa	4717542905	05-03-2023	true	[null]
36	36	Marietta Minchin	mminchinz@archive.org	48gM8ZrWmARQ	5277001728	7/22/2023	false	[null]
37	37	Arlyne Lean	alean10@uiuc.edu	jns8ioEz	5021062565	3/19/2023	false	[null]
38	38	Cally Getcliff	cgetclif11@yellowboo...	nghztfqAyrqj	6011933757	7/17/2023	true	[null]
39	39	Rutledge Mordan	rmordan12@ted.com	kYwAjO	3056863584	02-08-2023	false	[null]
40	40	Caren Howood	chowood13@mail.ru	zGlip8XDg	5188154855	01-06-2023	false	[null]
41	41	Aleen Hoyer	ahoyer14@surveymon...	10NHxMbBL	3326876322	04-02-2023	true	[null]
42	42	Westbrooke Tramel	wtramel15@rediff.com	EOoYV7G0	9729857817	11/17/2023	true	[null]
43	43	Lois Place	lplace16@va.gov	XKADpk	9678670593	07-08-2023	true	[null]
44	44	Jarrett Dufer	jdufer17@bloglovin.com	hQuLqCyc2w	6163014518	06-01-2023	false	[null]
45	45	Kinnie Edcombe	kedcombe18@ebay.c...	qkT0dbgb	4055369813	12/13/2022	true	[null]
46	46	Verene Iacomo	viacomo19@chronoen...	vi2pItjZ1BgR	2442292078	05-07-2023	true	[null]
47	47	Stillman McGeady	smcgready1a@blogs.c...	Or10MI9	9502551772	1/20/2023	true	[null]
48	48	Issiah Wooff	iwooff1b@globo.com	sD7dBFG	4524577360	11/28/2023	true	[null]
49	49	Eugenius Gile	egile1c@umich.edu	fQJ6tU	2968534701	6/18/2023	true	[null]
50	50	Herb Beaston	hbeaston1d@mit.edu	YwY65NNZrDs5	9931226679	9/28/2023	false	[null]
51	51	Deanne Frederick	dfrerick1@whitehou...	EFISynlm	4086975730	0	false	Not Active

Q20).Create a trigger function for users to set the default values for is_premium status to false. Check the trigger by inserting a new user with id 51, name Amit Shah, email amitshah@gmail.com,password asder4ern, mobile 9999999999 and date 11/13/2021

```

CREATE FUNCTION ott.set_user_default_folders1()
RETURNS trigger
LANGUAGE 'plpgsql'
AS $BODY$
begin
if new."is_premium" is null
then
new."is_premium"=false;
end if;
return new;
end;
$BODY$;
CREATE TRIGGER InsertUser
BEFORE INSERT
ON ott.users
FOR EACH ROW
EXECUTE FUNCTION ott.set_user_default_folders1();
insert into ott.users values
(51,'Amit','amitshah@gmail.com','asder4ern',9999999999,'11/13/2021'
)

select * from ott.users

```

	user_id [PK] numeric (10)	name character varying (50)	email character varying (150)	password character varying (50)	phone_number numeric (10)	created_datetime character varying (50)	is_premium boolean
31	31	Farrel Dosdill	fdosdillu@facebook.co...	9dGNMupLR	4278541426	6/28/2023	false
32	32	Tedi Huske	thuskev@woothemes.c...	eSSdrSNFvnE	5155423408	11/23/2022	true
33	33	Aeriel Frushard	afrushardw@shinystat...	42afFOWCkzJA	7486224758	6/13/2023	false
34	34	Filmer Bremmell	fbremmellx@toplist.cz	rIkZJ4FC	6604769762	03-03-2023	false
35	35	Mame Burril	mburril@pagesperso-...	0wQoaGHa	4717542905	05-03-2023	true
36	36	Marietta Minchin	mminchinz@archive.org	48gM8ZrWmARQ	5277001728	7/22/2023	false
37	37	Arlayne Lean	alean10@uiuc.edu	jns8ioEz	5021062565	3/19/2023	false
38	38	Cally Getcliff	cgetcliff11@yellowboo...	nghztfqAyrqj	6011933757	7/17/2023	true
39	39	Rutledge Mordan	rmordan12@ted.com	kYwAjO	3056863584	02-08-2023	false
40	40	Caren Howood	chowood13@mail.ru	zGlip8XDg	5188154855	01-06-2023	false
41	41	Aleen Hoyer	ahoyer14@surveymon...	1ONHxMbBL	3326876322	04-02-2023	true
42	42	Westbrooke Tramel	wtramel15@rediff.com	EOoYV7G0	9729857817	11/17/2023	true
43	43	Lois Place	lplace16@va.gov	XKADpk	9678670593	07-08-2023	true
44	44	Jarrett Dufer	jdufer17@bloglovin.com	h0UlLqCyc2w	6163014518	06-01-2023	false
45	45	Kinnie Edgcombe	kedgcombe18@ebay.c...	qkT0dbg	4055369813	12/13/2022	true
46	46	Verene Iacomo	viacomo19@chronoen...	vi2pltjZ1BgR	2442292078	05-07-2023	true
47	47	Stillman McGeady	smcgeady1a@blogs.c...	Or10M9	9502551772	1/20/2023	true
48	48	Issiah Wooff	iwooff1b@globo.com	sD7dBFG	4524577360	11/28/2023	true
49	49	Eugenius Gile	egile1c@umich.edu	fQJ6tU	2968534701	6/18/2023	true
50	50	Herb Beaston	hbeaston1d@mit.edu	YwY65NNZrDs5	9931226679	9/28/2023	false
51	51	Amit	amitshah@gmail.com	asder4ern	9999999999	11/13/2021	false

SECTION 5

FRONTEND DEVELOPMENT

FRONTEND DEVELOPMENT USING VISUAL STUDIO CODE

The Code used for connecting database to the site and for performing insert, updation and deletion fuctions

```
import psycopg2
from flask_session import Session
from json import dumps
from datetime import date
app = Flask(__name__)
app.config["SESSION_PERMANENT"] = False
app.config["SESSION_TYPE"] = "filesystem"
app.static_folder='static'
Session(app)
conn = psycopg2.connect(host='localhost', database='ott',
                        user='postgres', password='saritha')
cursor = conn.cursor()
user_id = 0

@app.route('/')
def hello_world():
    return render_template('signin.html')

@app.route('/register_form')
def rform():
    return render_template('register.html')

@app.route('/register', methods=['post'])
def register():
    print("Hello")
    if request.method == 'POST':
        name = request.form.get('name')
        phone_number = request.form.get('phone_number')
        email = request.form.get('email')
        password = request.form.get('password')
        created_datetime=date.today()
        cursor.execute('select count(*) from ott.users')
        result = cursor.fetchone()
```

```

count = result[0]+1
insert_query = """ INSERT INTO
ott.users(user_id,name,email,password,phone_number,created_datetime,is_premium)
VALUES (%s,%s,%s,%s,%s,%s,%s)"""
try:
    record = (int(count), name, email, password, int(phone_number),created_datetime,
False)
    cursor.execute(insert_query, record)
    conn.commit()
    count = cursor.rowcount
    print(count, "Record inserted successfully into user table")
    session['phone_number']=phone_number
except:
    return "Invalid details"
return redirect('/')

```

```

@app.route('/login', methods=['GET', 'POST'])
def login():
    phone_number = request.form.get('phone_number')
    password = request.form.get('password')
    try:
        phone_number = int(phone_number)
    except:
        return "Invalid details"
    if phone_number and password:
        query = "select * from ott.users where phone_number = {0} ".format(phone_number)
        cursor.execute(query)
        print(query)
        result = cursor.fetchone()
        print(result)
        if result is None:
            return "Invalid Details"
        pswd = result[3]
        is_premium=result[6]
        if pswd == password:
            uname=result[1]
            session['phone_number']=phone_number
            query="select * from ott.preference_list where user_id={0}".format(result[0])
            cursor.execute(query)

```

```

        result=cursor.fetchall()
        print(result)
        return
    render_template('user.html',name=username,pre_list=result,is_premium=is_premium)
else:
    return "Invalid details"
return "OK Check"

@app.route('/delete_account')
def delete():
    if 'phone_number' in session:
        phone_number=session['phone_number']
        query="delete from ott.users where phone_number = {0}".format(phone_number)
        print(query)
        cursor.execute(query)
        conn.commit()
        count = cursor.rowcount
        print(count, "Record deleted ")
        return "Deleted successfully"
    return "Invalid user"

@app.route('/get_all_photos')
def get_photos():
    if 'phone_number' in session:
        query="select user_id from ott.users where phone_number =
{0}".format(session['phone_number'])
        cursor.execute(query)
        print(query)
        if cursor.pgresult_ptr is not None:
            uid=cursor.fetchone()
            query="select * from ott.group where user_id={0}".format(uid[0])
            cursor.execute(query)
            print(query)
            result=cursor.fetchall()
            print(result)
            return dumps(result,default=str)
        return jsonify("")

@app.route('/premium',methods=['post'])
def update_premium():

```

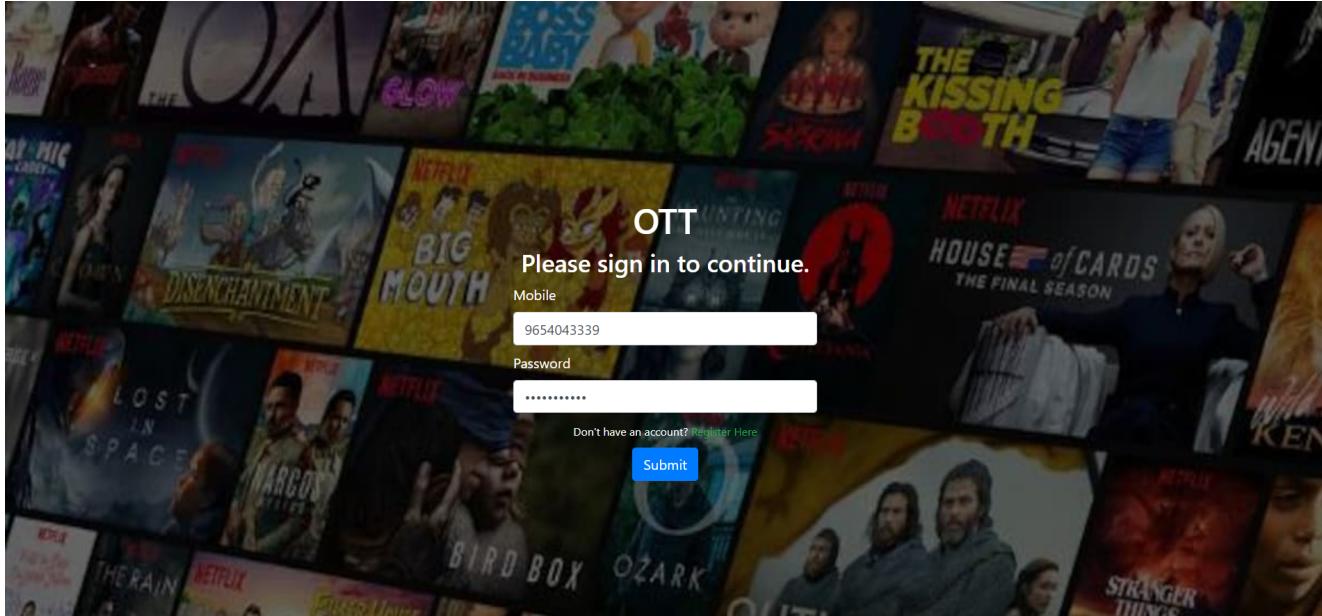
```

if 'phone_number' in session:
    mob=session['phone_number']
    cd=request.form.get('credit_card')
    periods=request.form.get('subscription_period')
    start_date=date.today()
    print(str(start_date),str(cd),periods,mob)
    update_query="update ott.users set is_premium=true where phone_number =
{0}".format(mob)
    cursor.execute(update_query)
    cursor.execute('select user_id from ott.users where phone_number =
{0}'.format(mob))
    uid=cursor.fetchone()[0]
    insert_query="insert into ott.premium_user values
({0},{1},{2},{3},{4})".format(uid,start_date,cd,1,periods)
    cursor.execute(insert_query)
    conn.commit()
    return "Subscibed succesfully"
    return "Invalid page"

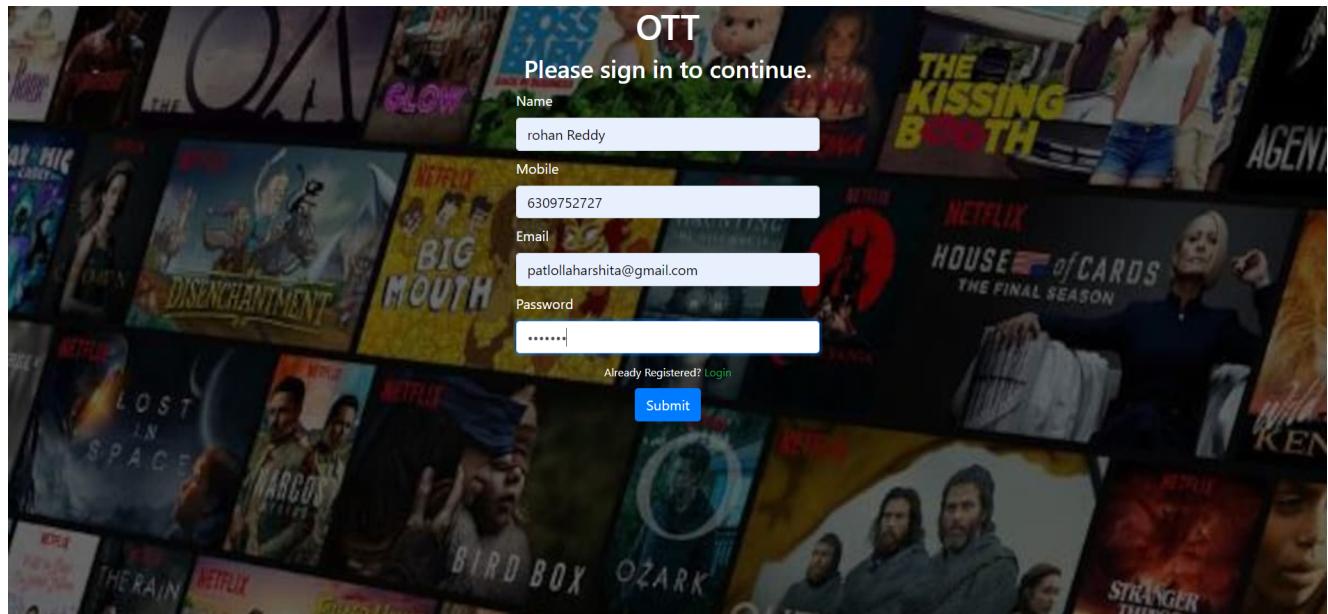
if __name__ == '__main__':
    app.run(debug=True)

```

The user interface of the website will look like this



Here the user can register by clicking the register here link



After registering the data is updated in the users table in the database

Before inserting

		name character varying (50)	email character varying (150)	password character varying (50)	phone_number numeric (10)	created_datetime character varying (50)	is_premium boolean
31	31	eric (10)	farrei vosdill	taosaiii@facebook.co...	9aGNMUpLk	42/8541426	b/28/2023
32	32	Tedi Huske	thuskev@woothemes.c...	eSSdrSNFvnE	5155423408	11/23/2022	true
33	33	Aeriel Frushard	afrushardw@shinystat....	42affFQWCkzJA	7486224758	6/13/2023	false
34	34	Filmer Bremmell	fbremmellx@toplister.cz	rlkZJ4FC	6604769762	03-03-2023	false
35	35	Mame Burril	mburrily@pagesperso-...	0wQoaGHa	4717542905	05-03-2023	true
36	36	Marietta Minchin	mminchin@archive.org	48gM8ZrWmARQ	5277001728	7/22/2023	false
37	37	Arleyne Lean	alean10@uiuc.edu	jns8ioEz	5021062565	3/19/2023	false
38	38	Cally Getcliff	cgetcliff11@yellowboo...	nghztfqAyrqj	6011933757	7/17/2023	true
39	39	Rutledge Mordan	rmordan12@ted.com	kYwAjO	3056863584	02-08-2023	false
40	40	Caren Howood	chowood13@mail.ru	zGlip8XDg	5188154855	01-06-2023	false
41	41	Aleen Hoyer	ahoyer14@surveymon...	10NHxMbBL	3326876322	04-02-2023	true
42	42	Westbrooke Tramel	wtramel15@rediff.com	EOoYV7G0	9729857817	11/17/2023	true
43	43	Lois Place	lplace16@va.gov	XKADpk	9678670593	07-08-2023	true
44	44	Jarrett Dufer	jdufer17@bloglovin.com	hQuLqCyc2w	6163014518	06-01-2023	false
45	45	Kinnie Edgcombe	kedgcombe18@ebay.c...	qkTOdbgb	4055369813	12/13/2022	true
46	46	Verene Iacomo	viacomo19@chronoen...	vi2pltz1BgR	2442292078	05-07-2023	true
47	47	Stillman McGeady	smcgeady1a@blogs.c...	Or10MI9	9502551772	1/20/2023	true
48	48	Issiah Wooff	iwooff1b@globo.com	sD7dBFG	4524577360	11/28/2023	true
49	49	Eugenius Gile	egile1c@umich.edu	fQJ6tU	2968534701	6/18/2023	true
50	50	Herb Beaston	hbeaston1d@mit.edu	YwY65NNZrDs5	9931226679	9/28/2023	false
51	51	Amit	amitshah@gmail.com	asder4ern	9999999999	11/13/2021	false

Total rows: 51 of 51 Query complete 00:00:00.186

Ln 1, Col 1

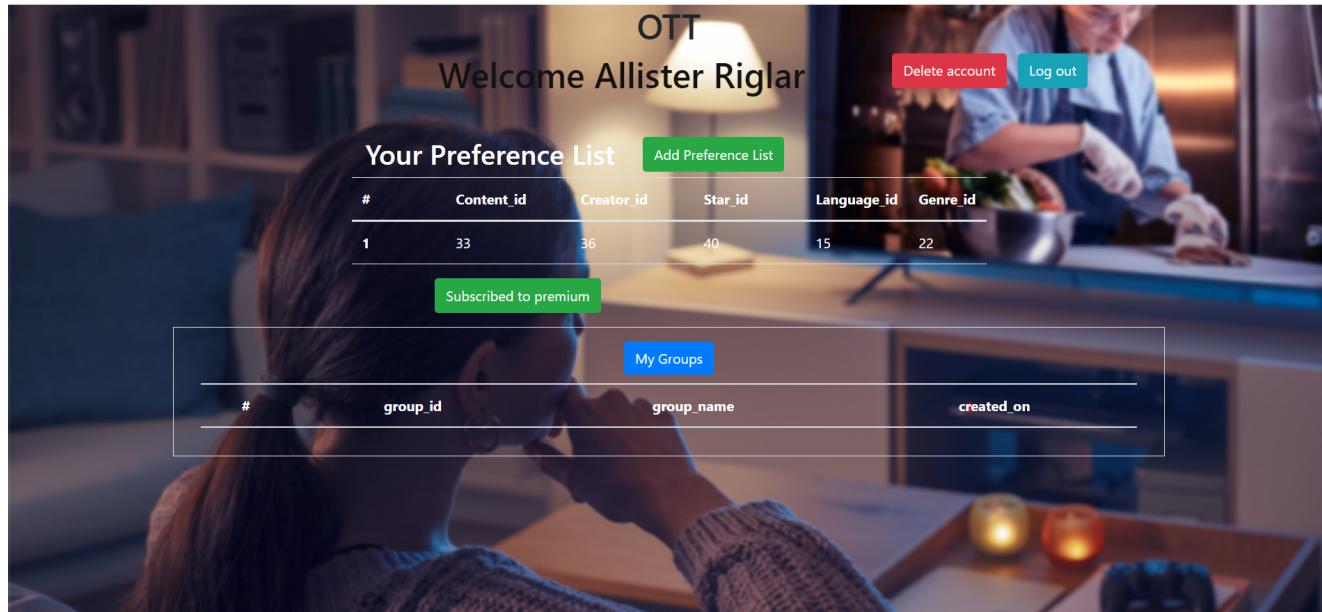
After inserting

	user_id [PK] numeric (10)	name character varying (50)	email character varying (150)	password character varying (50)	phone_number numeric (10)	created_datetime character varying (50)	is_pre boole
33	33	Aeriel Frushard	afrushardw@shinystat....	42afFQWCkzJA	7486224758	6/13/2023	false
34	34	Filmer Bremmell	fbremmellx@toplist.cz	rIkZJ4FC	6604769762	03-03-2023	false
35	35	Mame Burril	mburrily@pagesperso-...	0wQoaGHa	4717542905	05-03-2023	true
36	36	Marietta Minchin	mminchinz@archive.org	48gM8ZrWmARQ	5277001728	7/22/2023	false
37	37	Arleyne Lean	alean10@uiuc.edu	jns8IoEz	5021062565	3/19/2023	false
38	38	Cally Getcliff	cgetcliff11@yellowboo...	nghztfqAyrqj	6011933757	7/17/2023	true
39	39	Rutledge Mordan	rmordan12@ted.com	kYwAjO	3056863584	02-08-2023	false
40	40	Caren Howood	chowood13@mail.ru	zGlip8XDg	5188154855	01-06-2023	false
41	41	Aleen Hoyer	ahoyer14@surveymon...	10NHxMbBL	3326876322	04-02-2023	true
42	42	Westbrooke Tramel	wtramel15@rediff.com	EOoYYV7G0	9729857817	11/17/2023	true
43	43	Lois Place	lplace16@va.gov	XKADpk	9678670593	07-08-2023	true
44	44	Jarrett Dufer	jdufer17@bloglovin.com	hQuLqCyc2w	6163014518	06-01-2023	false
45	45	Kinnie Edgcombe	kedgcombe18@ebay.c...	qkTOdbgb	4055369813	12/13/2022	true
46	46	Verene Iacomo	viacomo19@chronoen...	vi2pItjZ1BgR	2442292078	05-07-2023	true
47	47	Stillman McGeady	smcgeady1a@blogs.c...	Or10MI9	9502551772	1/20/2023	true
48	48	Issiah Wooff	iwooff1b@globo.com	sD7dBFG	4524577360	11/28/2023	true
49	49	Eugenius Gile	egile1c@umich.edu	fQQ6tU	2968534701	6/18/2023	true
50	50	Herb Beaston	hbeaston1d@mit.edu	YwY65NNNrDs5	9931226679	9/28/2023	false
51	51	Amit	amitshah@gmail.com	asder4ern	9999999999	11/13/2021	false
52	52	rohan Reddy	patlollaharshita@gmail...	saritha	6309752727	2022-11-23	false

Total rows: 52 of 52 Query complete 00:00:00.128

Ln 1, Col 1

Here by pressing the submit button we get the information about the user



Here by pressing my groups button we get the groups made by the user

The screenshot shows the OTT application's user profile page. At the top, it says "OTT Welcome Allister Riglar". On the right, there are "Delete account" and "Log out" buttons. Below the header, there's a section titled "Your Preference List" with a "Add Preference List" button. A table displays a single row of preference data:

#	Content_id	Creator_id	Star_id	Language_id	Genre_id
1	33	36	40	15	22

Below this table is a green button labeled "Subscribed to premium". To the right of the main content area, there's a sidebar titled "My Groups" containing a table with five rows of group information:

#	group_id	group_name	created_on
1	5	Mineral Oil	09-11-2022
2	10	Warfarin Sodium	3/21/2022
3	13	Senna Laxative	10-01-2023
4	17	Nephron FA	06-09-2022
5	23	Ketoprofen	4/18/2022

Here `subscribed_to_premium` button tells us whether the user has subscribed to the ott or not

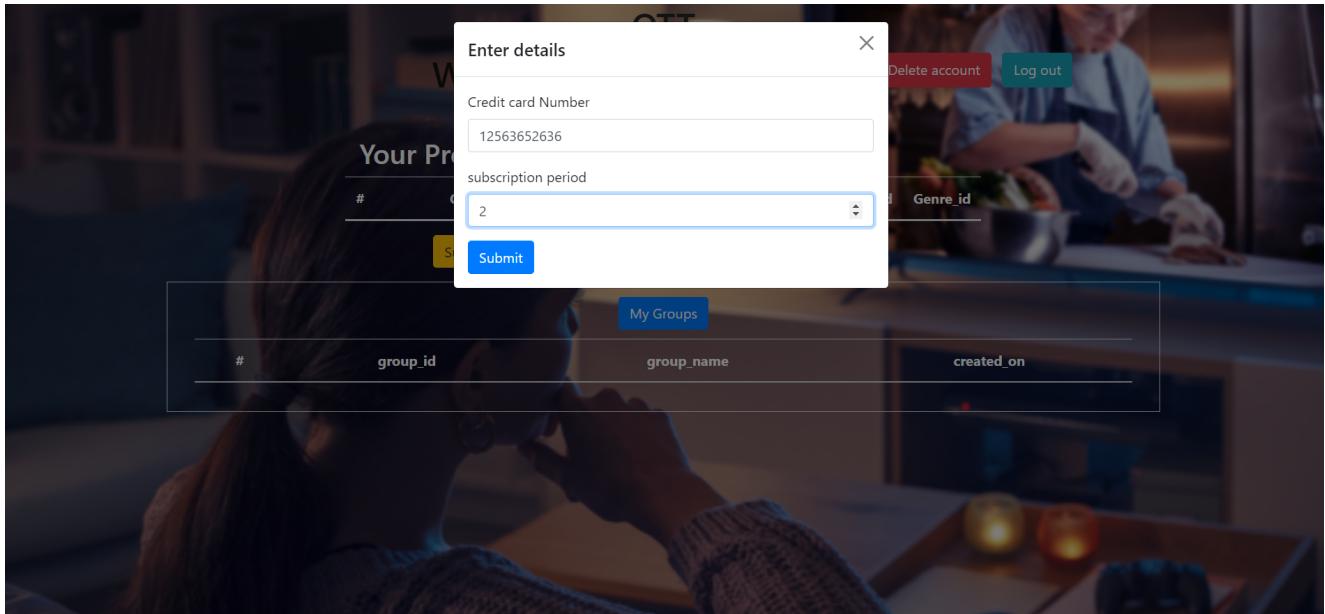
If the user has not subscribed to the ott

The screenshot shows the OTT application's user profile page. At the top, it says "OTT Welcome rohan Reddy". On the right, there are "Delete account" and "Log out" buttons. Below the header, there's a section titled "Your Preference List" with a "Add Preference List" button. A yellow button labeled "Subscribe to Premium" is present. Below this is a table for "My Groups" which is currently empty.

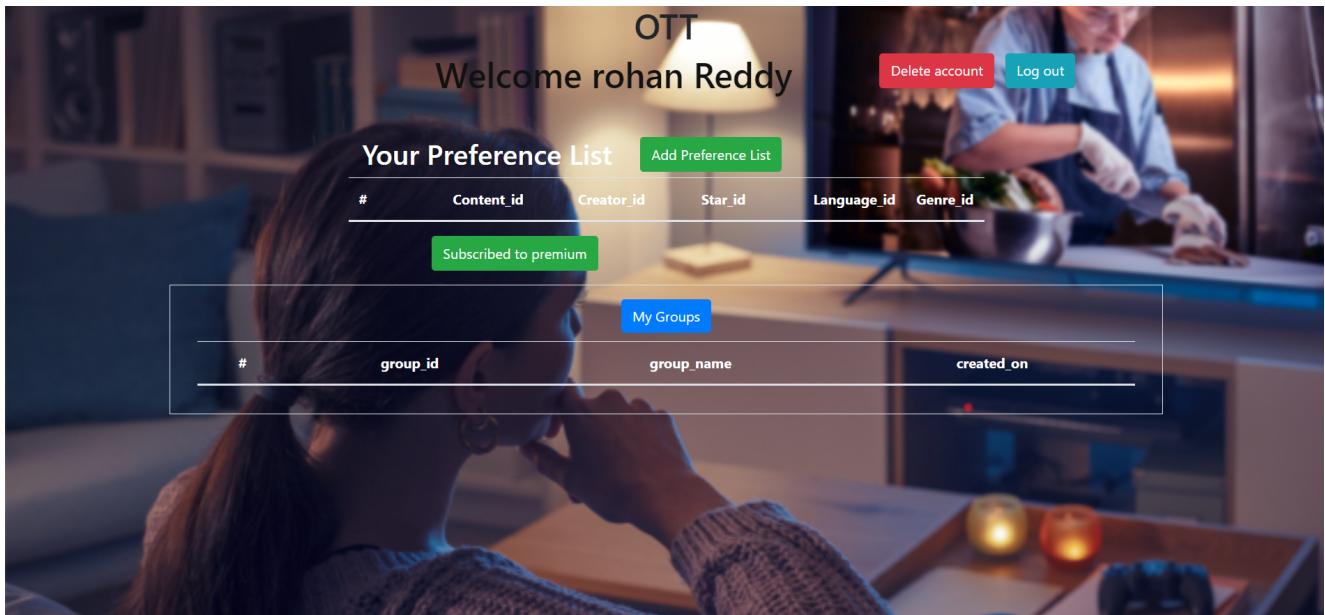
#	group_id	group_name	created_on

If the user has not subscribed we get `subscribe_to_premium` button where the user can subscribe to the ott

When the `subscribe_to` button is clicked we get



After subscribing we get



When the subscription is successful we get

The data is also updated in the database

Subscibed succesfully

Before subscribing

	eric (10)	name character varying (50)	email character varying (150)	password character varying (50)	phone_number numeric (10)	created_datetime character varying (50)	is_premium boolean
33	33	Aeriel Frushard	afrushardw@shinystat....	42afFQWCkzJA	7486224758	6/13/2023	false
34	34	Filmer Bremmell	fbremmellx@toplist.cz	rlkJZJ4FC	6604769762	03-03-2023	false
35	35	Mame Burril	mburrily@pagesperso-...	0wQoaGHa	4717542905	05-03-2023	true
36	36	Marietta Minchin	mminchinz@archive.org	48gM8ZrWmARQ	5277001728	7/22/2023	false
37	37	Arleyne Lean	alean10@uiuc.edu	jns8ioEz	5021062565	3/19/2023	false
38	38	Cally Getcliff	cgetcliff11@yellowboo...	nghztfqAyrqj	6011933757	7/17/2023	true
39	39	Rutledge Mordan	rmordan12@ted.com	kYwAjO	3056863584	02-08-2023	false
40	40	Caren Howood	chowood13@mail.ru	zGlip8XDg	5188154855	01-06-2023	false
41	41	Aleen Hoyer	ahoyer14@surveymon...	10NHxMbBL	3326876322	04-02-2023	true
42	42	Westbrooke Tramel	wtramel15@rediff.com	EOoYV7G0	9729857817	11/17/2023	true
43	43	Lois Place	lplace16@va.gov	XKADpk	9678670593	07-08-2023	true
44	44	Jarrett Dufer	jdufer17@bloglovin.com	hQuLqCyc2w	6163014518	06-01-2023	false
45	45	Kinnie Edgcombe	kedgcombe18@ebay.c...	qkT0dbgb	4055369813	12/13/2022	true
46	46	Verene Iacomo	viacomo19@chronoen...	vi2pltjZ1BgR	2442292078	05-07-2023	true
47	47	Stillman McGeady	smcgeady1a@blogs.c...	Or10MI9	9502551772	1/20/2023	true
48	48	Issiah Wooff	iwooff1b@globo.com	sD7dBFG	4524577360	11/28/2023	true
49	49	Eugenius Gile	egile1c@umich.edu	fQJ6tU	2968534701	6/18/2023	true
50	50	Herb Beaston	hbeaston1d@mit.edu	YwY65NNZrDs5	9931226679	9/28/2023	false
51	51	Amit	amitshah@gmail.com	asder4ern	9999999999	11/13/2021	false
52	52	rohan Reddy	patiollaharshita@gmail...	saritha	6309752727	2022-11-23	false

Total rows: 52 of 52 Query complete 00:00:00.128

Ln 1, Col 1

After subscribing

		name character varying (50)	email character varying (150)	password character varying (50)	phone_number numeric (10)	created_datetime character varying (50)	is_premium boolean
40	40	eric (10) verene racomo	viacomo19@chronoen...	V1ZPIUZ1B9K	24422920/8 05-07-2023		true
47	47	Stillman McGeady	smcgeady1a@blogs.c...	Or10MI9	9502551772	1/20/2023	true
48	48	Issiah Wooff	iwooff1b@globo.com	sD7dBFG	4524577360	11/28/2023	true
49	49	Eugenius Gile	egile1c@umich.edu	fQJ6tU	2968534701	6/18/2023	true
50	50	Herb Beaston	hbeaston1d@mit.edu	YwY65NNZrDs5	9931226679	9/28/2023	false
51	51	Amit	amitshah@gmail.com	asder4ern	9999999999	11/13/2021	false
52	52	rohan Reddy	patlollaharshita@gmail...	saritha	6309752727	2022-11-23	true

Total rows: 52 of 52

Query complete 00:00:00.215

Ln 1, Col 1

Here as we can see for user_id=52 is premium is turned from false to true and the premium user table is also updated

	user_id [PK] numeric (10)	start_date character varying (50)	credit_card character varying (50)	sub_times numeric (10)	subscription_period numeric (10)
21	43	11-12-2023	5.60E+18	3	2
22	45	06-11-2023	5.61E+16	4	3
23	46	3/14/2023	3.54E+15	2	2
24	47	07-12-2023	5.60E+18	5	3
25	48	4/20/2022	3.55E+15	2	1
26	49	3/17/2023	3.58E+15	4	2
27	52	2022-11-23	12563652636	1	2

Total rows: 27 of 27

Query complete 00:00:00.159

Ln 1, Col 1

Deleted successfully

Here by pressing the delete button the account is deleted. It is updated in the database Before deleting

	user_id [PK] numeric (10)	name character varying (50)	email character varying (150)	password character varying (50)	phone_number numeric (10)	created_datetime character varying (50)	is_premium boolean
33	33	Aeriel Frushard	afrushardw@shinystat....	42afFQWCkzJA	7486224758	6/13/2023	false
34	34	Filmer Bremmell	fbremmellx@toplist.cz	rIkZJ4FC	6604769762	03-03-2023	false
35	35	Mame Burril	mburrily@pagesperso-...	0wQoaGHa	4717542905	05-03-2023	true
36	36	Marietta Minchin	mminchinz@archive.org	48gM8ZrWmARQ	5277001728	7/22/2023	false
37	37	Arleyne Lean	alean10@uiuc.edu	jns8ioEz	5021062565	3/19/2023	false
38	38	Cally Getcliff	cgetcliff11@yellowboo...	nghztfqAyrqj	6011933757	7/17/2023	true
39	39	Rutledge Mordan	rmordan12@ted.com	kYwAjO	3056863584	02-08-2023	false
40	40	Caren Howood	chowood13@mail.ru	zGlip8XDg	5188154855	01-06-2023	false
41	41	Aleen Hoyer	ahoyer14@surveymon...	10NHxMbBL	3326876322	04-02-2023	true
42	42	Westbrooke Tramel	wtramel15@rediff.com	EOoYY7G0	9729857817	11/17/2023	true
43	43	Lois Place	lplace16@va.gov	XKADpk	9678670593	07-08-2023	true
44	44	Jarrett Dufer	jdufer17@bloglovin.com	hQuLqCyc2w	6163014518	06-01-2023	false
45	45	Kinnie Edgcombe	kedgcombe18@ebay.c...	qkT0dbgb	4055369813	12/13/2022	true
46	46	Verene Iacomo	viacomo19@chronoen...	vi2pltzJ1BgR	2442292078	05-07-2023	true
47	47	Stillman McGeady	smcgeady1a@blogs.c...	Or10MI9	9502551772	1/20/2023	true
48	48	Issiah Wooff	iwooff1b@globo.com	sD7dBFG	4524577360	11/28/2023	true
49	49	Eugenius Gile	egile1c@umich.edu	fQJ6tU	2968534701	6/18/2023	true
50	50	Herb Beaston	hbeaston1d@mit.edu	YwY65NNZrDs5	9931226679	9/28/2023	false
51	51	Amit	amitshah@gmail.com	asder4ern	9999999999	11/13/2021	false
52	52	rohan Reddy	patlollaharshita@gmail...	saritha	6309752727	2022-11-23	false

Total rows: 52 of 52 Query complete 00:00:00.128

Ln 1, Col 1

After deleting

	user_id [PK] numeric (10)	name character varying (50)	email character varying (150)	password character varying (50)	phone_number numeric (10)	created_datetime character varying (50)	is_premium boolean
43	43	Kinnie Edgcombe	kedgcombe18@ebay.c...	qkT0dbgb	4055369813	12/13/2022	true
46	46	Verene Iacomo	viacomo19@chronoen...	vi2pltzJ1BgR	2442292078	05-07-2023	true
47	47	Stillman McGeady	smcgeady1a@blogs.c...	Or10MI9	9502551772	1/20/2023	true
48	48	Issiah Wooff	iwooff1b@globo.com	sD7dBFG	4524577360	11/28/2023	true
49	49	Eugenius Gile	egile1c@umich.edu	fQJ6tU	2968534701	6/18/2023	true
50	50	Herb Beaston	hbeaston1d@mit.edu	YwY65NNZrDs5	9931226679	9/28/2023	false
51	51	Amit	amitshah@gmail.com	asder4ern	9999999999	11/13/2021	false

Total rows: 51 of 51 Query complete 00:00:00.238

Ln 1, Col 1

As we subscribed for user_id=52 in the above steps the data is also deleted from premium user table in the database

	user_id [PK] numeric (10)	start_date character varying (50)	credit_card character varying (50)	sub_times numeric (10)	subscription_period numeric (10)
20	42	4/30/2022	3.57E+15	4	2
21	43	11-12-2023	5.60E+18	3	2
22	45	06-11-2023	5.61E+16	4	3
23	46	3/14/2023	3.54E+15	2	2
24	47	07-12-2023	5.60E+18	5	3
25	48	4/20/2022	3.55E+15	2	1
26	49	3/17/2023	3.58E+15	4	2

Total rows: 26 of 26 Query complete 00:00:00.175

Ln 1, Col 1

The Logout button will send the user to the login page.