CNIT 372 Final Report

Group 4 chose to explore the social media platform,Youtube from the perspective of a content creator. In doing so, we wanted to understand how content creators utilize user data and statistics to improve their viewership and popularity. The questions range from those about measuring user attention span through video duration to predicting when other artists are releasing content to find optimal release dates. Each question paints a unique outlook on how creators use consumer analytics to curate quality content. We answered these questions using the knowledge gathered during our time in this course, CNIT 372. Calling upon our knowledge of concepts like cursors, functions, Packages, and triggers we were able to unravel how content creators employ user search history, genre popularity, and other user analytics to keep up with trends and maintain. In this report, we included the actual script within the function, however in the GitHub repository, you can see the entire package and functions all together.

Our database consists of 4 tables. These tables are users, videos, search history and watch history. The User table consists of two rows, userid and username. Userid is the primary key of this table. The Videos table consists of six rows, video_id, title, genre, release_date, duration_seconds, artist_youtuber. Video_id is the primary key of the videos table. The Search History table consists of six rows, search_id, userid, search_term, search_date, video_id, genre. This table has two foreign keys, userid and video_id. Our final table, the Watch History table, consists of four rows, history_id, user_id, video_id, and watch_date. The table utilizes two foreign keys, user_id and video_id.

From the option chosen, we generated 10 questions that can be used to gain meaningful insights that can be utilized by content creators on the platform. The first question we asked was "What are the peak hours for viewership on YouTube?”. We were able to see the hour of the day

that gets the most views from users on the platform. This can be helpful because youtubers can decide to release their content at hours that have the most activity and they can get more engagement on their channels. From our data, we could see that 10PM was the most popular time for watching videos on youtube, so content creators can plan to upload videos from 7PM onwards so that it is already out when the most people are on the platform. The code can be seen below and it is getting the number of hours a day and the amount of views that occurred during that hour from all users who's watch history we generated.

```
Question 1

SELECT
    TO_CHAR(watch_date, 'HH24') AS watching_times,
    COUNT(*) AS viewership_count
FROM
    watch_history
GROUP BY
    TO_CHAR(watch_date, 'HH24')
ORDER BY
    viewership_count DESC;
```

The results were:

```
WA VIEWERSHIP_COUNT
-- ----------------
22               55
14               53
12               45
17               43
19               39
16               38
18               35
09               33
11               29
20               27
10               21

WA VIEWERSHIP_COUNT
-- ----------------
08               19
21               19
13               12
15               10
07                8
23                4
```

```
17 rows selected.
```

The second question we asked was “What are the most watched videos on YouTube and what time are they watched?”. From this, we were able to see popular user favorites. This is insightful because it can help content creators see what is something that is a big hit amongst users and having the most recent watch time can let them know if that video is still trending and getting views or if it has already passed. As seen from our data, the most popular video is Culinary Adventure: Global Cuisine which tells content creators that cooking adventure types of videos are trending in popularity amongst users and they can try to release a related video to garner attention.

The code can be seen below and it counts the number of times that a video has been watched by counting views and then finds when the most recent time the video was watched.

```
SELECT *
FROM (
    SELECT
        v.title AS most_watched_video,
        COUNT(*) AS watch_count,
        MAX(h.watch_date) AS most_recent_watch_time
    FROM
        watch_history h
    JOIN
        videos v ON h.video_id = v.video_id
    GROUP BY
        v.title
    ORDER BY
        watch_count DESC
)

WHERE ROWNUM = 1;
```

The results were:

```
MOST_WATCHED_VIDEO
WATCH_COUNT MOST_RECENT_WATCH_TIME
————————————————————————————————————————————————————————————
---------
Culinary Adventure: Global Cuisine
2 25-SEP-23 10.15.00.000000000 AM
```

The third question asked was “"Based on the top 5 most popular genres searched, how would you say the users utilize youtube as a resource ?” This can be insightful in providing content creators insight on how users are using the platform and what it is that they are looking for. This way, they can make sure that their content hits those markings and is something that people want to see.

The code can be seen below and is counting the amount of times that a genre appeared in the user search history table. It displayed the top 5 genres. For our data, you can see that the top 5 genres are cooking, comedy, music, technology, and science.

```
SELECT
    genre,
    COUNT(*) AS search_count
FROM
    search_history
GROUP BY
    genre
ORDER BY
    search_count DESC
FETCH FIRST 5 ROWS ONLY;
```

The results are:

```
GENRE
SEARCH_COUNT
--------------------------------------------------------------------
------------------------------ ------------
Cooking
65
Comedy
64
Music
55
Technology
35
Science
20
```

The fourth question we asked was “Which category of videos is most popular and which time of year is it watched?” This is insightful to users because it allows for content creators to see not only the categories that are popular during which months, but also provides the count of views that the specific category got during the month and year. As seen from our data below, the most popular genre was DIY during April of 2023 with 12 views in that category. This is an example using our dummy data, which has over 60 genres.

The code can be seen below and it counts the number of times each video was watched, then takes the genre from them. The VideoPopularity function calculates watch count for the

combination of video category and month and with the outer select, it is choosing the one with the highest watch count per month.

```
WITH VideoPopularity AS (
    SELECT
        v.genre AS video_category,
        TO_CHAR(w.watch_date, 'YYYY-MM') AS watch_month,
        COUNT(*) AS watch_count
    FROM
        watch_history w
    JOIN
        videos v ON w.video_id = v.video_id
    GROUP BY
        v.genre, TO_CHAR(w.watch_date, 'YYYY-MM')
)
SELECT
    video_category,
    watch_month,
    watch_count
FROM (
    SELECT
        video_category,
        watch_month,
        watch_count,
        ROW_NUMBER() OVER (PARTITION BY watch_month ORDER BY
watch_count DESC) AS pop
    FROM
        VideoPopularity
)
WHERE
    pop = 1
ORDER BY
    watch_count DESC, watch_month, video_category;
```

The results were:

```
VIDEO_CATEGORY
WATCH_M WATCH_COUNT
--------------------------------------------------------------------------------
-------------------- ------- -----------
DIY
2023-04          12
Gaming
2023-01          11
Cooking
2023-02          10
Technology
2023-03          10
Gaming
2018-12           2
Cooking
2023-09           2
Sports
2018-03           1
```

```
Travel
2018-04           1
Music
2018-05           1
Education
2018-06           1
Funk
2018-07           1

VIDEO_CATEGORY
WATCH_M WATCH_COUNT
--------------------------------------------------------------------------------
-------------------- ------- -----------
Sports
2018-08           1
Sports
2018-10           1
Punk
2019-01           1
RndB
2019-02           1
Entertainment
2019-04           1
Education
2019-05           1
Entertainment
2019-07           1
Food nd Cooking
2019-08           1
Sports
2019-09           1
Sports
2019-10           1
J-Pop
2019-11           1

VIDEO_CATEGORY
WATCH_M WATCH_COUNT
--------------------------------------------------------------------------------
-------------------- ------- -----------
Gaming
2020-02           1
Philosophy
2020-03           1
Entertainment
2020-04           1
Fashion
2020-05           1
Bluegrass
2020-07           1
Documentary
2020-08           1
Gaming
2020-09           1
Sports
2020-11           1
```

```
Thriller
2020-12           1
Sports
2021-01           1
Sports
2021-02           1

VIDEO_CATEGORY
WATCH_M WATCH_COUNT
--------------------------------------------------------------------------------
-------------------- ------- -----------
Alternative
2021-03           1
Entertainment
2021-04           1
Sports
2021-06           1
Horror
2021-07           1
Gaming
2021-10           1
Entertainment
2021-11           1
History
2021-12           1
Gaming
2022-05           1
Entertainment
2022-06           1
Education
2022-07           1
Nature
2022-08           1

VIDEO_CATEGORY
WATCH_M WATCH_COUNT
--------------------------------------------------------------------------------
-------------------- ------- -----------
Fashion
2022-10           1
K-Pop
2023-05           1
Fitness
2023-06           1
Travel
2023-07           1
Gaming
2023-08           1
Art
2023-10           1
Art
2023-11           1
Education
2023-12           1
```

52 rows selected.

Question five. "Which popular artists or YouTubers are releasing content soon?" The query identifying upcoming content releases by popular artists or YouTubers is helpful to a content creator for strategic planning. It provides insights into future releases, allowing creators to synchronize their content schedule, explore collaboration opportunities, and engage with their audience effectively. we got no rows are selected and decided to leave this as an answer to show that there might be a few things concerning a question and why it cant be answered, this may be due to release dates being in the past, lack of popularity criteria, data quality issues, or misalignment with the defined criteria. It underscores the importance of accurate data and thoughtful planning to ensure the query aligns with the content creator's objectives and audience expectations.

```
CREATE OR REPLACE TRIGGER upcoming_releases_trigger
AFTER INSERT ON videos
FOR EACH ROW
BEGIN
    IF :new.release_date >= SYSDATE THEN
        INSERT INTO watch_history (user_id, video_id, watch_date)
        VALUES (:new.user_id, :new.video_id, :new.release_date);
    END IF;
END;
/

SELECT
    user_id,
    video_id,
    watch_date AS release_date
FROM
    watch_history
WHERE
    watch_date >= SYSDATE;
```

The results are:

```
no rows selected.
```

Question six was “How does the genre of videos change during different times of the year?” This provides a different type of insight as it focuses both on the popularity of genres and the rotational content that occurs each season, holiday, etc.. By getting information on how video genres change throughout the year, content creators have the opportunity to recognize seasonal trends and can create content that fits. This information would also help system managers determine which content will be more popular and when, helping them prepare for high page traffic on certain pages and within certain genres. The data could be used to monetize and advertise for different businesses, as well.

The code can be seen below and it counts the number of videos per genre and groups them by the month they were released.

```
SELECT
    EXTRACT(MONTH FROM release_date) AS month,
    genre,
    COUNT(*) AS genre_count
FROM
    videos
GROUP BY
    EXTRACT(MONTH FROM release_date),
    genre
ORDER BY
    EXTRACT(MONTH FROM release_date),
    genre;
```

The results are:

```
     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
         1 Acoustic
1
         1 Art
2
         1 Comedy
2
         1 Cooking
3
         1 DIY
5
         1 Education
3
         1 Entertainment
3
         1 Fitness
1
         1 Food nd Cooking
1
         1 Gaming
3
         1 Indie
1

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
         1 Literature
1
```

```
         1 Music
3
         1 Nature
1
         1 Photography
1
         1 Reggae
1
         1 Science
2
         1 Sports
4
         1 Technology
1
         1 Travel
7
         2 Art
1
         2 Comedy
2

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         2 Cooking
3
         2 Documentary
1
         2 Education
4
         2 Entertainment
3
         2 Fitness
1
         2 Funk
1
         2 Gaming
8
         2 History
1
         2 Literature
2
         2 Music
7
         2 Science nd Technology
1

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         2 Sports
3
```

```
         2 Street
1
         2 Technology
2
         2 Trap
1
         2 Travel
1
         2 Wellness
1
         3 Americana
1
         3 Art
1
         3 Books nd Literature
1
         3 Comedy
1
         3 Cooking
1

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         3 DIY
5
         3 Drama
1
         3 Education
2
         3 Entertainment
2
         3 Film
1
         3 Fitness
2
         3 Gaming
4
         3 Literature
3
         3 Nature
2
         3 RndB
1
         3 Science Fiction
1

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         3 Sports
2
```

```
         3 Technology
3
         3 Travel
1
         4 Art
3
         4 Comedy
4
         4 Cooking
5
         4 DIY
2
         4 Drama
1
         4 Education
2
         4 Entertainment
2
         4 Fitness
2

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         4 Gaming
4
         4 Gospel
1
         4 History
1
         4 Jazz Funk
1
         4 Literature
1
         4 Music
1
         4 Philosophy
1
         4 Photography
2
         4 Science
1
         4 Sports
2
         4 Technology
3

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         4 Wellness
1
```

```
         5 Adventure
2
         5 Art
6
         5 Cooking
3
         5 DIY
3
         5 Education
2
         5 Entertainment
2
         5 Fitness
2
         5 Gaming
3
         5 Literature
3
         5 Psychedelic
1

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         5 Punk
1
         5 Romance
1
         5 Science
2
         5 Science nd Technology
1
         5 Sports
3
         5 Theatre
2
         5 Travel
3
         5 Wellness
1
         6 Art
1
         6 Comedy
2
         6 Cooking
1

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         6 Education
2
```

```
         6 Entertainment
2
         6 Fantasy
1
         6 Film
1
         6 Fitness
2
         6 Gaming
6
         6 Hardcore
1
         6 History
1
         6 Music
2
         6 News nd Politics
1
         6 Photography
1

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         6 Science
5
         6 Science nd Technology
1
         6 Sports
1
         6 Talk Show
1
         6 Technology
2
         6 World
1
         7 Alternative
1
         7 Art
1
         7 Comedy
1
         7 Cooking
3
         7 Country
1

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         7 DIY
4
```

```
         7 Documentary
1
         7 Education
2
         7 Entertainment
3
         7 Fashion
1
         7 Film
1
         7 Fitness
2
         7 Gaming
3
         7 Health nd Fitness
1
         7 Literature
2
         7 Music
4

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         7 Nature
2
         7 Sports
2
         7 Thriller
1
         7 Travel
4
         7 Wellness
1
         8 Art
2
         8 Comedy
3
         8 Cooking
2
         8 DIY
6
         8 Education
2
         8 Entertainment
2

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         8 Film nd Animation
1
```

```
         8 Fitness
4
         8 Gaming
5
         8 History
1
         8 Horror
1
         8 J-Pop
1
         8 Literature
1
         8 Movie Reviews
1
         8 Music
4
         8 Photography
1
         8 Science
1

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         8 Sports
2
         8 Technology
1
         9 Art
1
         9 Bluegrass
1
         9 Comedy
1
         9 Cooking
2
         9 DIY
5
         9 Education
3
         9 Entertainment
3
         9 Fashion
1
         9 Fitness
3

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
         9 Gaming
4
```

```
         9 Literature
6
         9 Movie Reviews
1
         9 Music
4
         9 Pop
1
         9 Rock
1
         9 Science Fiction
1
         9 Sports
3
         9 Technology
1
         9 Theatre
1
         9 Travel
3

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
        10 Art
2
        10 Beauty nd Fashion
1
        10 Comedy
3
        10 Cooking
1
        10 DIY
5
        10 Dance
1
        10 Disco
1
        10 Education
2
        10 Entertainment
2
        10 Fantasy
1
        10 Fitness
1

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
---------------------- -----------
        10 Gaming
5
```

```
        10 Hip-Hop
1
        10 Literature
5
        10 Movie Reviews
1
        10 Music
3
        10 Science
1
        10 Sports
2
        10 Technology
3
        10 Wellness
1
        11 Action
1
        11 Art
2

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
        11 Blues
1
        11 Classical
1
        11 Comedy
3
        11 Cooking
2
        11 DIY
3
        11 Drama
1
        11 Drum and Bass
1
        11 Education
5
        11 Entertainment
3
        11 Fashion
2
        11 Film
2

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
        11 Fitness
3
```

```
        11 Gaming
4
        11 Literature
3
        11 Movie Reviews
1
        11 Music
2
        11 Nature
2
        11 Sports
3
        11 Technology
1
        11 Travel
2
        11 Wellness
1
        12 Art
2

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
        12 Books nd Literature
1
        12 Comedy
4
        12 Cooking
2
        12 Documentary
1
        12 Education
3
        12 Electronic
1
        12 Entertainment
3
        12 Film nd Animation
1
        12 Fitness
2
        12 Gaming
4
        12 History
2

     MONTH GENRE
GENRE_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
        12 Horror
1
```

```
        12 K-Pop
1
        12 Literature
1
        12 Metal
1
        12 Movie Reviews
1
        12 Music
3
        12 Sports
3
        12 Technology
2
        12 Travel
1

240 rows selected.
```

Question 7 is "What are the top 11 trending genres watched?" This data could help content creators come ups with names and tags that are correlated with trending keywords. This would make their content appear within these trending genres and searches, improving their numbers and viewerships.

The code seen below selects the watched genres and counts the videos watched to find the top 11 trending genres watched.

```
SELECT
    v.genre AS most_popular,
    count(h.User_id) AS total_views
FROM
    watch_history h
JOIN
    videos v ON h.video_ID = v.video_ID
GROUP BY
    genre
ORDER BY
    total_views DESC;

-MOST_POPULAR
TOTAL_VIEWS
--------------------------------------------------------------------------------
-------------------- -----------
Gaming
53
DIY
37
Music
32
Education
31
Sports
30
```

```
Entertainment
30
Cooking
29
Literature
28
Comedy
26
Art
24
Fitness
24
*/
```

The next one is question 8 and is “What type of video duration content are users mostly consuming?” This is insightful to content creators because it gives them knowledge of the attention span of the primary users on the platform. By seeing if reels or more longer style videos are popular, they are able to make sure their videos fit that sweet spot.

The code can be seen below and works by gathering the average watch duration of users from their watch history in seconds.

```
SELECT
    u.user_id,
    u.username,
    AVG(v.duration_seconds) AS average_duration
FROM
    users u
JOIN
    watch_history wh ON u.user_id = wh.user_id
JOIN
    videos v ON wh.video_id = v.video_id
GROUP BY
    u.user_id, u.username
ORDER BY
    average_duration DESC;
```

The result is:

```
USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
       298 dancey_dani
960
```

```
         5 sam_jackson
960
       258 liam_lagoon
960
        23 alex_cooper
960
       292 sophia_sculpture
900
       241 isabella_illuminate
900
       200 EliEpicExploration
900
       211 IslaIntrigueInsider
900
        30 aaliyah_martin
900
       137 ThumbsUpTwist
900
       252 william_whimsy
900

   USER_ID USERNAME
AVERAGE_DURATION
----------
--------------------------------------------------------------------------
------------------------------ ----------------
        12 linda_carter
900
       350 peter_parker
900
       341 grace_kelly
900
        35 jordan_perez
900
       272 maya_moonbeam
840
        19 kevin_turner
840
        44 zoey_brown
840
       261 mia_mirage
840
       247 mia_melody
840
```

```
       334 quentin_quotable
810
       224 SkylarSculptureStory
810

   USER_ID USERNAME
AVERAGE_DURATION
----------
--------------------------------------------------------------------------
------------------------------ ----------------
       216 OwenOdysseyOfficial
810
       222 SebastianSeekerShow
810
        42 grace_walker
780
        28 mia_hill
780
       233 emma_echo
780
       376 penny_penguin
765
       112 RetroReverieReviews
750
       330 winona_wondrous
750
       336 bob_marley
750
       402 parker_peach
740
       366 freddie_froggy
720

   USER_ID USERNAME
AVERAGE_DURATION
----------
--------------------------------------------------------------------------
------------------------------ ----------------
       250 elijah_enigma
720
       277 oliver_orbit
720
       178 TravelerTreasureTrove
720
```

```
        37 gavin_cook
720
       314 lola_labyrinth
720
       270 hannah_horizon
720
       285 leo_lullaby
720
        21 patrick_morgan
720
       219 LaylaLifestyleLogs
720
       338 diana_prince
720
       126 ComedyCanvasCraze
720

   USER_ID USERNAME
AVERAGE_DURATION
----------
--------------------------------------------------------------------------
------------------------------ ----------------
       245 sophia_serendipity
720
       263 brooke_blossom
720
       290 ella_essence
720
       296 lanie_kozlowski
720
        10 olivia_brown
720
        32 zoey_clark
720
       239 mia_muse
720
       213 MiaMelodicMoments
710
       265 sophie_solar
700
       232 AlexAdventureAwaits
693
       127 UrbanUmbrella360
690
```

```
   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
       319 nolan_nebula
690
       328 olivia_outstanding
690
       348 neil_armstrong
690
       237 ava_aesthetic
690
       295 kenny_daniels
690
       322 xena_xerox
690
       325 quincy_quintessence
690
         4 alice_walker
690
       208 VictorVoyageVision
690
       332 xavier_xclusive
690
       324 ursula_umbra
690

   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
       289 liam_labyrinth
690
       308 quentin_quasar
690
       279 max_meadow
680
       287 noah_nectar
675
       203 GracefulGlobeVibes
672
        16 natalie_green
660
```

```
       301 daisy_delta
660
       283 owen_odyssey
660
       310 oliver_onyx
660
       305 sasha_sphinx
660
       243 harper_harmony
660

   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
       220 NoahNomadNarrative
660
        49 william_nelson
660
       339 elvis_presley
660
       254 ethan_eclipse
660
       226 LeoLearningLegacy
660
       327 daniel_dapper
660
       268 emma_eden
660
        54 da_boys
660
         8 susan_miller
660
       229 MiaMelodicMoments
660
        34 amy_morris
660

   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
```

```
       398 logan_lavender
660
        26 hailey_taylor
660
       235 olivia_orbit
660
        39 mason_davis
660
       281 aiden_aurora
660
       171 CodeCraftsmanChronicles
660
       294 eric_cartman
660
       273 nathan_nestle
660
       190 ArtisticAscentAdventures
660
       372 lucas_lyric
645
       187 TechTrendTrailblazing
645

   USER_ID USERNAME
AVERAGE_DURATION
----------
--------------------------------------------------------------------
------------------------------ ----------------
       378 riley_rainbow
640
        58 TechExplorer365
630
       343 irene_adler
630
       207 LilyLandscapeLife
630
       214 CarterCraftsChronicle
630
       346 leonardo_daVinci
630
       354 tina_turner
630
       230 EvanExplorationEncounter
630
```

```
       227 LaylaLifestyleLogs
630
       347 marilyn_monroe
624
       421 isabel_iris
620

   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
        79 StarryEyedExplorer
615
        41 nathan_smith
600
       323 rhysand_thesecond
600
       304 zane_zephyr
600
       249 amelia_artistry
600
       321 floyd_fantasia
600
       198 AdrianArtistryAvenue
600
       154 EnchantedEvermore
600
       175 ElementalEpicExplorer
600
       275 ethan_echo
600
       320 willow_wonder
600

   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
       329 nicholas_noteworthy
600
       260 nolan_novel
600
```

```
         3 bob_jones
600
         1 john_doe
600
       267 jaxon_journey
600
        14 emma_hall
600
       256 owen_observatory
600
       349 olivia_wilde
600
       300 nolan_chris
600
       297 tashi_poo
593.333333
       169 EnchantedEra
585

   USER_ID USERNAME
AVERAGE_DURATION
----------
--------------------------------------------------------------------------
------------------------------ ----------------
       471 azriel_amethyst
585
       253 avery_anchor
585
       223 CarterCraftyChronicle
580
       259 zara_zephyr
576
       307 iris_iridescence
570
       210 EvanExplorationEncounter
570
       209 AvaArtisanAdventures
570
       312 nina_nyquist
570
       313 quincy_quantum
570
       316 emma_enigma
570
```

```
       231 IslaIntrigueInsider
570

   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
       228 VictorVoyageVision
570
        72 NatureEnthusiastTV
570
       205 PenelopePioneerPage
570
       311 isla_illusion
570
       417 emma_evergreen
570
       201 BellaBeyondBorders
570
       206 ChaseCraftyChronicle
570
       302 xavier_zeppelin
570
       303 amber_azure
570
       202 XavierExplorerTV
570
       215 SkylarSculptureStory
570

   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
       345 katherine_jones
570
       444 samwise_stardust
560
       174 GourmetGazelleGazette
560
       487 starfall_stardust
555
```

```
       317 dexter_dazzle
555
        91 VogueVoyagerHQ
555
       113 DIYDazzlerStudio
548.571429
       236 noah_narrative
540
       291 jacob_journey
540
         6 emily_white
540
       344 jack_johnson
540

   USER_ID USERNAME
AVERAGE_DURATION
----------
--------------------------------------------------------------------------
------------------------------- ----------------
       152 FearlessDreamer
540
       286 emma_enigma
540
       234 liam_lyric
540
       439 nancy_drew
540
       315 jason_jovial
540
       257 audrey_azure
540
       246 jackson_journey
540
        38 hannah_johnson
540
        45 adam_martinez
540
       217 RubyRhythmicRambles
540
        17 brian_morris
540

   USER_ID USERNAME
AVERAGE_DURATION
```

```
----------
------------------------------------------------------------------------
------------------------------ ----------------
       276 lily_lagoon
540
       264 evan_echelon
540
       251 chloe_canvas
540
        24 grace_kelly
540
        31 peter_robinson
540
       340 frank_sinatra
540
       498 amren_abyss
525
       422 jason_juniper
517.5
       335 alice_wonderland
510
       306 leo_lagoon
510
       218 LeoLearningLegacy
510

   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
         2 jane_smith
510
       138 SkinnyDipping
510
        86 BookishBardChannel
495
        33 eric_wright
480
       271 logan_lustrous
480
       293 nolan_nimbus
480
        25 brandon_fisher
480
```

```
       318 olivia_obsidian
480
       248 oliver_ode
480
       262 isaac_illusion
480
       282 mia_mirage
480

   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
       278 grace_galaxy
480
       299 nat_chamb
480
       326 emily_esteemed
480
       412 zachary_zephyr
480
        15 jason_king
480
         9 chris_evans
480
        36 lily_rivera
480
       288 isla_illuminate
480
       132 AlmostLoveAffair
480
       242 lucas_luminous
480
       331 felicity_fantastic
480

   USER_ID USERNAME
AVERAGE_DURATION
----------
------------------------------------------------------------------------
------------------------------ ----------------
        64 TravelTreasureHunter
480
```

```
       212 AlexAdventureAwaits
480
       333 uma_unique
480
       445 tony_tesseract
465
       225 RubyRhythmicRambles
450
       342 harry_potter
450
       337 charlie_chaplin
450
       238 logan_lyric
450
       309 marley_mirage
450
       204 IanInsightfulInnings
450
       148 RunAndHideSeek
440

   USER_ID USERNAME
AVERAGE_DURATION
----------
--------------------------------------------------------------------------
------------------------------ ----------------
        40 ella_jones
420
       255 lily_luminary
420
       244 aiden_artisan
420
       269 caleb_crescent
420
       266 mark_2
420
        13 ryan_clark
420
       351 quincy_jones
420
       221 StellaSerenityStudio
420
        27 daniel_nelson
420
```

```
        20 ava_stewart
420
       240 ethan_epic
420

   USER_ID USERNAME
AVERAGE_DURATION
----------
--------------------------------------------------------------------------
------------------------------ ----------------
       274 ava_avalanche
420
       284 ruby_rainforest
420
        18 sophia_martinez
360
        29 logan_wright
360
        43 owen_williams
360
       280 zoey_zephyr
360
       491 feyre_archerons
360
         7 david_jones
360
        22 victoria_wood
300
        11 michael_adams
300

241 rows selected.
```

Question 9 is "What are the most popular genres among users based on their watch history?" can be highly beneficial for content creators in several ways, the popularity of genres among users offers valuable insights that content creators can leverage to optimize their content strategy, enhance audience engagement, and make informed decisions about collaborations and monetization. This gives another option of how to find popular genres that give these creators more options.

```
DECLARE
    CURSOR genre_cursor IS
        SELECT DISTINCT genre FROM videos;

    genre_name videos.genre%TYPE;
    user_count INT;
```

```
BEGIN
    -- Open the cursor
    OPEN genre_cursor;

    -- Loop through genres
    LOOP
        -- Fetch the next genre
        FETCH genre_cursor INTO genre_name;

        -- Exit the loop if no more genres
        EXIT WHEN genre_cursor%NOTFOUND;

        -- Count the number of unique users for the genre
        SELECT COUNT(DISTINCT wh.user_id)
        INTO user_count
        FROM videos v
        JOIN watch_history wh ON v.video_id = wh.video_id
        WHERE v.genre = genre_name;

        -- Display the result
        DBMS_OUTPUT.PUT_LINE('Genre: ' || genre_name || ', Unique Users: ' ||
user_count);
    END LOOP;

    -- Close the cursor
    CLOSE genre_cursor;
END;
/


Genre: Gaming, Unique Users: 24
Genre: Adventure, Unique Users: 1
Genre: Philosophy, Unique Users: 1
Genre: Wellness, Unique Users: 7
Genre: Sports, Unique Users: 2
Genre: DIY, Unique Users: 35
Genre: Education, Unique Users: 2
Genre: Theatre, Unique Users: 2
Genre: Travel, Unique Users: 18
Genre: History, Unique Users: 4
Genre: Film, Unique Users: 4
Genre: Fitness, Unique Users: 23
Genre: Photography, Unique Users: 4
Genre: Comedy, Unique Users: 23
Genre: Cooking, Unique Users: 27
Genre: Art, Unique Users: 23
Genre: Literature, Unique Users: 27
Genre: Drama, Unique Users: 1
Genre: Science, Unique Users: 11
Genre: Music, Unique Users: 28
Genre: Technology, Unique Users: 19
Genre: Science Fiction, Unique Users: 1
Genre: Fashion, Unique Users: 1
Genre: Nature, Unique Users: 5
```

Next is question 10, and we asked the question “Is the content the user consuming diverse, or are they all from primarily a specific genre?” Thisit provides insights into the preferences and behavior of their audience. Understanding the diversity of content consumption can impact content creation strategies and decision-making in several ways. Understanding the diversity of content consumption is crucial for content creators to make informed decisions about content creation, audience engagement, and overall strategy. By leveraging this information, creators can build a more robust and sustainable relationship with their audience.

```
SELECT
    w.user_id,
    v.genre,
    COUNT(*) AS watch_count
FROM
    watch_history w
JOIN
    videos v ON w.video_id = v.video_id
GROUP BY
    w.user_id, v.genre;
```

```
   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
         3 Technology
1
         2 Technology
1
        16 DIY
1
        18 Comedy
1
        20 Gaming
1
        23 Science
1
        32 Science
2
        44 Cooking
1
       204 DIY
1
       227 Comedy
1
       229 Cooking
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       240 Literature
2
       201 Gaming
1
       224 Science
1
       232 Comedy
1
       254 Travel
1
       260 Art
1
       263 Gaming
1
       267 Comedy
1
       272 Literature
1
       275 Wellness
1
       297 DIY
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       301 Technology
1
       304 DIY
1
       307 Comedy
1
       316 Nature
1
       340 DIY
1
       343 Comedy
1
       305 Film
1
       307 Cooking
1
       308 Art
1
       313 DIY
1
       325 Travel
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       340 Technology
1
       344 Music
1
       346 Literature
1
       349 Music
1
         1 Comedy
1
         2 Gaming
1
         6 Fitness
1
        11 Technology
1
        37 Cooking
1
        38 Art
1
       217 Cooking
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       218 Art
1
       226 Literature
1
       231 DIY
1
       213 Wellness
1
       223 Art
1
       248 Art
1
       256 Fitness
1
       270 Music
1
       284 Travel
1
       285 Comedy
1
       287 Cooking
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       296 Fitness
1
       310 Music
1
       335 Cooking
1
       344 Fitness
1
       346 Art
1
       303 Music
1
       311 Literature
1
       324 Music
1
       327 Fitness
1
       331 Literature
1
       334 Music
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       347 Gaming
1
       223 Adventure
1
       412 Music
1
         4 Science
1
         1 Fitness
1
         3 Literature
1
         9 Comedy
1
        17 Literature
1
        21 Cooking
1
        28 Travel
1
       214 DIY
2

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       216 Gaming
1
       223 Science
1
       228 Sports
1
       237 Art
2
       238 Nature
2
       216 Cooking
1
       218 Education
1
       219 DIY
1
       221 Gaming
1
       225 Fitness
1
       227 Music
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       231 Literature
1
       244 Travel
1
       246 Fitness
1
       253 Music
1
       258 Literature
1
       286 Fitness
1
       306 Travel
1
       324 Fitness
1
       333 Comedy
1
       339 Gaming
1
       347 Technology
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       348 Literature
1
       302 DIY
1
       289 Drama
1
         1 Travel
2
         4 Comedy
1
         4 Art
1
        10 Travel
1
        24 Fitness
1
        25 DIY
1
        31 Art
1
        34 DIY
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
        45 Photography
1
       132 Technology
1
       178 Cooking
1
       205 Literature
1
       220 DIY
1
       222 Cooking
2
       225 DIY
1
       206 Fitness
1
       243 Music
1
       257 DIY
1
       274 Film
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       280 Literature
1
       282 DIY
1
       302 Literature
1
       319 Gaming
1
       322 Travel
1
       301 Gaming
1
       310 Technology
1
       342 Gaming
1
       343 DIY
1
       345 Technology
1
       350 Travel
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       126 Science Fiction
1
        54 Philosophy
1
       187 Music
1
        26 Literature
1
        35 Nature
1
        39 Science
1
        42 Literature
1
       215 Theatre
1
       232 Music
1
       207 DIY
1
       211 Photography
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       212 Gaming
1
       226 DIY
1
       241 Gaming
1
       242 DIY
1
       247 Cooking
1
       249 Technology
1
       261 Technology
1
       268 Fitness
1
       269 DIY
1
       273 History
1
       277 Art
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       279 Technology
1
       288 Art
1
       290 Literature
1
       291 Gaming
1
       293 Music
1
       300 Art
1
       308 Fitness
1
       313 Wellness
1
       314 Cooking
1
       317 Technology
1
       318 Literature
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       328 Literature
1
       342 Travel
1
       345 Cooking
1
       304 History
1
       312 Gaming
1
       314 Music
1
       315 Travel
1
       317 Fitness
1
       321 Literature
1
       322 Gaming
1
       326 Comedy
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       328 Cooking
1
       336 Comedy
1
         8 Literature
1
        12 Cooking
1
        14 Science
1
       213 Fitness
1
       233 History
2
       235 Fitness
2
       209 Comedy
1
       210 Cooking
1
       230 DIY
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       250 Literature
1
       252 DIY
1
       259 Gaming
1
       265 Music
1
       271 Science
1
       283 Music
1
       294 Travel
1
       299 Gaming
1
       315 Art
1
       326 Art
1
       330 DIY
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       331 Music
1
       334 Fitness
1
       337 Technology
1
       341 Music
1
       320 Technology
1
       329 Art
1
       332 Gaming
1
       341 Literature
1
       348 DIY
1
       351 Comedy
1
         2 Music
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
         3 Art
1
         3 Cooking
1
        19 Travel
1
        22 Art
1
        27 Comedy
1
        29 Gaming
1
        43 Comedy
1
       201 Cooking
1
       212 Science
1
       221 Music
1
       224 Wellness
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       230 Photography
1
       234 Film
2
       202 DIY
1
       203 Music
1
       204 Travel
1
       205 Comedy
1
       208 Literature
1
       215 Music
1
       251 Gaming
1
       255 Comedy
1
       264 DIY
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       278 Nature
1
       298 Literature
1
       305 Music
1
       312 Film
1
       320 DIY
1
       327 Technology
1
       329 Gaming
1
       336 Art
1
       318 Cooking
1
       319 Art
1
       339 Art
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       439 Music
1
         4 Cooking
1
         2 DIY
1
         5 Science
1
         7 DIY
1
        13 Art
1
        15 Fitness
1
        30 Cooking
1
        33 Fitness
1
        36 Gaming
1
        40 Fitness
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
        41 DIY
1
       200 Music
1
       202 Science
1
       203 Wellness
1
       206 Comedy
1
       207 Sports
1
       208 Cooking
1
       209 Photography
1
       210 DIY
1
       211 Music
1
       219 Education
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       236 Cooking
2
       239 Technology
2
       137 Wellness
1
       217 Art
1
       220 Theatre
1
       229 Fitness
1
       245 Comedy
1
       262 Literature
1
       276 Cooking
1
       289 Technology
1
       292 DIY
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
```

```
       295 Comedy
1
       303 Gaming
1
       309 DIY
1
       311 History
1
       321 Music
1
       325 Cooking
1
       332 Travel
1
       338 Literature
1
       306 Wellness
1
       309 Nature
1
       316 Comedy
1

   USER_ID GENRE
WATCH_COUNT
----------
--------------------------------------------------------------------------------
-------------------- -----------
       330 Technology
1
       333 DIY
1
       335 Travel
1
       337 Fitness
1
       338 Cooking
1
       376 Travel
1
       113 Fashion
1

293 rows selected.
```

The team has 3 members. Sarah Abrams is a Junior in CIT and worked on generating the dummy data and populating the Watch History table, she created the questions and queries for 5 and 7, wrote the background and database description, and contributed to updating the questions in the report. Victoria Nnaji is a junior in CIT and worked on

generating dummy data and populating the Video table, she created the questions and queries to answer 6, 8, 9 and 10, she contributed to adding the questions to the report and updating the repository. Daniella is a senior in CIT and worked on generating the dummy data, populating tables Search history and users with a script, and created the queries to answer questions 1, 2, 3, and 4, also working on adding the questions to the report and the readme file.