SOCIAL NETWORK SYSTEM

1. Scope

Social Network System is about conversations, community, connecting with the audience, and building relationships.

Social network allows individuals to keep in touch with friends and extended family. Some people will use it to network and find career opportunities, connect with people across the globe with like-minded interests, and share their thoughts, feelings, and insights online.

The scope of social networking is widening, and today it offers strong support to the companies in providing the much-desired touch of concern.

2. Description

Social Network System is a platform that allows users, who sign-up for free profiles by supplying a real name and valid email address, to connect with friends, work colleagues, or people they don't know online. It will then take you through the process of filling out your profile.

It allows users to share pictures, music, videos, and articles, as well as their own thoughts and opinions. Users can post almost anything to their "timeline", a snapshot of what is happening in their social circle at any given time. Likes and comments are additional ways users can interact with each other's content.

It provides a private messaging function, which lets you exchange messages with your friends. Users can also create and join pages that are based on shared interests and experiences.

Artists, public figures, businesses, brands, organizations, and non-profits can create pages to connect with their fans or customers. Users can like or follow other pages which interest them.

Following are sample queries the system is expected to answer:

1) View users' all posts and display the number of likes and number of comments to that post and comment likes.

2) Display the comments posted by the user.

3) Display the Page name, number of followers of that Page and admin of that Page.

4) Display User id and Username of the Members of the particular Page.

5) Display post which doesn't have any like.

6) Display post which doesn't have any comment.

7) Display Post ids to particular Page and also display the user's name who posted it in latest to old order.

8) Display All the details of Particular Post.(Like ,comment,comment like) 9) Display All users who have birthdays today.

10) Display All friend request of particular user.

11) Display All information of particular User.

12) Display user notifications of particular User in latest to old.

13) Display Saved post of particular User in latest to old.

14) Display counts total friend of particular User.

15) Display all page's details with more than 1000 followers.

16) Display All Users who are older than 18 years.

17) Display All This month saved post of particular User.

18) Display All last 7 saved post of particular User.

19) Display Age of Particular User.

20) Display All friends Details of Particular User.

21) Display messages of particular user by latest to old.

Queries

1) View users' all posts and display the number of likes and number of comments to that post and comment likes.

```
SELECT p.post_id,count(*) total_comments FROM "socialNetworkSystem"."Posts" p

LEFT JOIN "socialNetworkSystem"."PostComments" pc

ON p.post_id = pc.post_id

WHERE p.post_id

IN

(SELECT post_id FROM "socialNetworkSystem"."Posts" WHERE user_id = 1) GROUP

BY p.post_id;


SELECT p.post_id,count(*) total_likes FROM "socialNetworkSystem"."Posts" p

LEFT JOIN "socialNetworkSystem"."PostLikes" pl

ON p.post_id = pl.post_id

WHERE p.post_id

IN

(SELECT post_id FROM "socialNetworkSystem"."Posts" WHERE user_id = 1) GROUP

BY p.post_id;


SELECT pc.post_id,pc.comment_id,count(cl.user_id) total_comment_likes FROM
"socialNetworkSystem"."PostComments" pc

LEFT JOIN "socialNetworkSystem"."CommentLikes" cl

ON pc.comment_id = cl.comment_id

WHERE pc.post_id

IN

(SELECT post_id FROM "socialNetworkSystem"."Posts" WHERE user_id = 1) GROUP

BY pc.post_id,pc.comment_id;
```

2) Display the comments posted by the user.

```
SELECT post_id, comment_content, timestamp

FROM "socialNetworkSystem"."PostComments" WHERE

user_id = 10;
```

3) Display the Page name, number of followers of that Page and admin of that Page.

SELECT page_name, u.first_name || ' ' || u.lASt_name AS Admin, COUNT(DISTINCT f.user_id) AS total_followers

FROM "socialNetworkSystem"."Pages" AS p

LEFT JOIN "socialNetworkSystem"."Followers" AS f

ON p.page_id = f.page_id

JOIN "socialNetworkSystem"."Users" AS u

ON p.user_id = u.user_id

WHERE p.page_id = 2

GROUP BY p.page_name, u.first_name, u.laSt_name, u.user_id;

4) Display User id and Username of the Members of the particular Page.

SELECT u.user_id, u.first_name || ' ' || u.lASt_name AS username

FROM "socialNetworkSystem"."Followers" AS p

JOIN "socialNetworkSystem"."Users" AS u

ON u.user_id = p.user_id

WHERE p.page_id = 1

5) Display post which doesn't have any like.

SELECT p.post_id, COUNT(pl.user_id) total_likes

FROM "socialNetworkSystem"."Posts" p

LEFT JOIN "socialNetworkSystem"."PostLikes" pl

ON pl.post_id = p.post_id

GROUP BY p.post_id

HAVING COUNT(pl.user_id) < 1

6) Display post which don't have any comment.

```
SELECT p.post_id, COUNT(pc.user_id) total_comments
FROM "socialNetworkSystem"."Posts" p
LEFT JOIN "socialNetworkSystem"."PostComments" pc
ON pc.post_id = p.post_id
GROUP BY p.post_id
HAVING COUNT(pc.user_id) < 1
```

7) Display Post id's to particular Page and also display the user's name who posted it in latest to old order.

```
SELECT u.user_id,p.post_id, u.first_name || ' ' || u.last_name username
FROM "socialNetworkSystem"."Posts" p
JOIN "socialNetworkSystem"."Users" u
ON u.user_id = p.user_id
WHERE page_id = 1
ORDER BY timestamp DESC
```

8) Display All the details of Particular Post.(Like ,comment,comment like)

```
SELECT * FROM "socialNetworkSystem"."Posts" p
JOIN "socialNetworkSystem"."PostComments" pc
ON pc.post_id = p.post_id
WHERE p.post_id = 1


SELECT count(*) total_likes
FROM "socialNetworkSystem"."PostLikes"
WHERE post_id = 1


SELECT pc.comment_id ,COUNT(cl.user_id) total_comment_likes
FROM "socialNetworkSystem"."PostComments" pc
LEFT JOIN "socialNetworkSystem"."CommentLikes" cl
```

```
ON pc.comment_id = cl.comment_id

WHERE pc.comment_id IN

(SELECT comment_id FROM "socialNetworkSystem"."PostComments"

WHERE post_id = 1)

GROUP BY pc.comment_id
```

9) Display All information of particular User.

```
SELECT * FROM "socialNetworkSystem"."Users"

WHERE user_id = 1
```

10) Display user notifications of particular User in latest to old.

```
SELECT * FROM "socialNetworkSystem"."Notifications" n

JOIN "socialNetworkSystem"."UserNotification" un

ON n.notification_id = un.notification_id

WHERE user_id = 1

ORDER BY timestamp DESC
```

11) Display Saved post of particular User in latest to old.

```
SELECT * FROM "socialNetworkSystem"."SavedPosts"

WHERE user_id = 1

ORDER BY timestamp DESC
```

12) Display count total friend of partiular User.

```
SELECT COUNT(*) FROM "socialNetworkSystem"."Friends" f

JOIN "socialNetworkSystem"."Users" u

ON u.user_id = f.friend_id

WHERE (f.user_id = 2 or f.friend_id = 2) AND request_status = '1'
```

13) Display all page's details with more than 1000 followers.

```
SELECT * FROM "socialNetworkSystem"."Pages"
```

WHERE page_id IN

(SELECT f.page_id FROM "socialNetworkSystem"."Pages" p

JOIN "socialNetworkSystem"."Followers" f

ON p.page_id = f.page_id

GROUP BY f.page_id

HAVING COUNT(f.user_id) > 1000)

14) Display All users who have birthdays today.

SELECT first_name ||' ' || last_name AS user_name FROM "socialNetworkSystem"."Users"

WHERE EXTRACT(MONTH FROM dob) = EXTRACT(MONTH FROM CURRENT_DATE) AND

EXTRACT(DAY FROM dob) = EXTRACT(DAY FROM CURRENT_DATE)

15) Display All Users who are older than 18 years.

SELECT * FROM "socialNetworkSystem"."Users"

WHERE EXTRACT(YEAR FROM age(CURRENT_DATE,dob)) > 18

16) Display All This month saved post of particular User.

SELECT * FROM "socialNetworkSystem"."SavedPosts" sp

JOIN "socialNetworkSystem"."Posts" p

ON p.post_id = sp.post_id

WHERE EXTRACT(MONTH FROM sp.timestamp) = EXTRACT(MONTH FROM CURRENT_DATE)

AND EXTRACT(YEAR FROM sp.timestamp) = EXTRACT(YEAR FROM CURRENT_DATE)

17) Display All last 7 saved post of particular User.

SELECT * FROM "socialNetworkSystem"."SavedPosts" sp

JOIN "socialNetworkSystem"."Posts" p

ON p.post_id = sp.post_id

WHERE (CURRENT_DATE::date - sp.timestamp::timestamp::date) < 7

18) Display All friend request of particular user.

```
SELECT u.user_id, u.first_name || ' ' || u.last_name username

FROM "socialNetworkSystem"."Friends" f

JOIN "socialNetworkSystem"."Users" u

ON u.user_id = f.user_id

WHERE (f.friend_id = 1) AND request_status = '2'


UNION


SELECT u.user_id, u.first_name || ' ' || u.last_name username

FROM "socialNetworkSystem"."Friends" f

JOIN "socialNetworkSystem"."Users" u

ON u.user_id = f.friend_id

WHERE (f.user_id = 1) AND request_status = '2'
```

19)   Compute Age of Particular User.

```
SELECT AGE(CURRENT_DATE,dob) FROM "socialNetworkSystem"."Users"  WHERE

user_id = 2
```

20)   Display All friends Details of Particular User.

```
SELECT u.first_name || ' ' || u.lASt_name username,u.email,u.phONe_number,u.gender,u.dob
FROM "socialNetworkSystem"."Friends" f

JOIN "socialNetworkSystem"."Users" u

ON u.user_id = f.user_id

WHERE (f.friend_id = 2) AND request_status = '1'


UNION
```

```
SELECT u.first_name || ' ' || u.lASt_name username,u.email,u.phONe_number,u.gender,u.dob
FROM "socialNetworkSystem"."Friends" f

JOIN "socialNetworkSystem"."Users" u

ON u.user_id = f.friend_id

WHERE (f.user_id = 2) AND request_status = '1'
```

21)   Display messages of particular user by latest to old.

```
SELECT message,timestamp FROM "socialNetworkSystem"."Messages"

WHERE ((sender = 11 AND receiver = 14)

OR (sender = 14 AND receiver = 11))

ORDER BY timestamp DESC
```

22)   Display All comment Detail from particular comment.

```
SELECT * FROM "socialNetworkSystem"."PostComments" WHERE

comment_id = 1
```