**VIEWS**

1. **View → All chats and chat types for a particular user id**

CREATE VIEW user\_chats AS

(SELECT c.chat\_id, c.chat\_type

FROM users\_has\_chats as u

INNER JOIN chats as c

ON u.chats\_chat\_id = c.chat\_id

WHERE u.users\_user\_id = '####');

1. **View → All group members(names) and admins of a particular group name**

CREATE VIEW list\_group\_members AS

(SELECT g.gname, u.name, hc.admin

FROM groups as g

INNER JOIN users\_has\_chats as hc

ON g.chats\_chat\_id = hc.chats\_chat\_id

INNER JOIN users as u

ON hc.users\_user\_id = u.user\_id

WHERE g.gname = '####');

1. **View → All the messages that a particular user(with *user\_id*) has access to**

CREATE VIEW all\_user\_messages AS

( SELECT hc.users\_user\_id, m.msg\_id, m.content

FROM users\_has\_chats as hc

INNER JOIN messages as m

WHERE hc.users\_user\_id = '###' );

1. **View → recipients of a particular message sent in a group.**

CREATE VIEW msg\_receivers AS

(SELECT u.name

FROM users\_receive\_messages as rm

INNER JOIN users as u

ON u.user\_id = rm.users\_user\_id

WHERE rm.messages\_msg\_id = '###';

**5. View -> no. of messages in each chat:**

create view messages\_chat\_1 as

(select Chats\_chat\_id, count(msg\_id) as msg\_no from messages group by Chats\_chat\_id having Chats\_chat\_id in (SELECT c.chat\_id

FROM users\_has\_chats as u

INNER JOIN chats as c

ON u.chats\_chat\_id = c.chat\_id

WHERE u.users\_user\_id = '1'));

**ROLES:**

1. Create role company\_admin;
2. Create role employees;

**GRANTS:**

1. GRANT ALL PRIVILEGES ON users TO Company\_Admin;
2. GRANT ALL PRIVILEGES ON users\_has\_chats TO Company\_Admin;
3. GRANT ALL PRIVILEGES ON users\_receive\_messages TO Company\_Admin;
4. GRANT ALL PRIVILEGES ON users\_stars\_messages TO Company\_Admin;
5. GRANT ALL PRIVILEGES ON messages TO Company\_Admin;
6. GRANT ALL PRIVILEGES ON alter\_ego.groups TO Company\_Admin;
7. GRANT ALL PRIVILEGES ON chats TO Company\_Admin;
8. GRANT SELECT ON user\_chats TO employees;
9. GRANT SELECT ON list\_group\_members TO employees;
10. GRANT SELECT ON msg\_receivers TO employees;
11. GRANT SELECT ON all\_user\_messages TO employees;
12. GRANT SELECT ON messages\_chat\_1 TO employees;