**Old Queries:**

1. **To get total number of participants in the groups**

Select count(user\_id), chat\_id from Group\_members group by Chat\_id;

1. **To get all the messages from users with id=9 which are starred**

Select m.content from messages m, Users\_stars\_messages s, users u where u.user\_id=9 and u.user\_id=s.user\_id and m.msg\_id=s.msg\_id;

1. **To get the receivers of a message sent by user with id=4 in a group with chat\_id=1**

Select user\_id from mynewdb1.group\_members where chat\_id=41 and user\_id!=4;

1. **Create view To get list of users with a particular string=”ram” in their name**

Create view Ram\_users as (select Name, user\_id from users where Name like "%ram%");

1. **To give the list of all the admins in a particular group(chat\_id=41)**

Select g.user\_id,u.name from users u,group\_members g where chat\_id=41 and is\_admin=1 and g.user\_id=u.user\_id;

1. **To retrieve the number of chats a person is currently in**

Select count(chat\_id) as Total\_chats,user\_id from users\_has\_chats where user\_id=4;

1. **To get the oldest message sent alongwith the user’s name**

Select min(m1.create\_time), u.name from messages m1, users u where m1.sender\_id = u.user\_id;

1. **To get the members of the personal chat in which the user (user\_id=’4’) has a direct message.**

Select d.part\_id1,d.part\_id2 from direct\_msg d, users\_has\_chats u where u.user\_id=4 and u.chat\_id=d.chat\_id;

1. **To make user(user\_id=’4’) admin in chat(chat\_id=’15’)**

Update group\_members set is\_admin=1 where user\_id=4;

1. **To get total number of messages sent in a group(id=50)**

Select count(m.msg\_id) as Total\_messages from messages m where m.chat\_id=50;

**New Queries:**

**Simple SQL Queries:**

1. **A particular user searching for a group from its name:**

Select g.gname, g.chats\_chat\_id from groups g, users\_has\_chats hc, chats c USE INDEX(idx\_chats\_type, idx\_groups\_name) where c.chat\_type=’GROUP’ and c.chat\_id = hc.chats\_chat\_id and g.chats\_chat\_id = hc.chats\_chat\_id and hc.users\_user\_id = ‘##’ and gname LIKE ‘%val%’;

1. **Searching name of a user from the name:**

Select \* from users USE INDEX(idx\_name\_users) where name LIKE ‘%val%’;

1. **Searching a message accessible to a particular user from its contents and displaying message info:**

Select u.name, m.msg\_id, m.content, m.create\_time from messages m, users u, users\_has\_chats hc USE INDEX (idx\_content\_messages) where hc.users\_user\_id = ‘##’ and hc.chats\_chat\_id = m.chats\_chat\_id and m.sender\_id = u.user\_id and m.content LIKE ‘%val%’;

1. **Searching a message from a particular chat from its contents and displaying message info:**

Select u.name, m.msg\_id, m.content, m.create\_time from messages m, users u where USE INDEX(idx\_chatcontent\_messages) u.user\_id = m.sender\_id and m.chats\_chat\_id = ‘##’ and m.content LIKE ‘%val%’;

1. **Searching for the receivers of a particular message:**

Select u.name from users u, users\_receive\_messages rm USE INDEX(\_idx\_rec\_receive) where rm.messages\_chats\_chat\_id = ‘##’ and rm.messages\_msg\_id = ‘##’ and u.name = rm.users\_user\_id;

1. **Updating a groupname:**

Update groups set gname = “###” where chats\_chat\_id = “\*\*\*”;

1. **Updating the name and status of a user:**

Update users set name = “new\_value”, status = “new\_status” where user\_id = “##”;

1. **Removing a member from the group:**

Delete from users\_has\_chats where users\_user\_id = “##” and chats\_chat\_id = “\*\*”;

1. **Unstarring a message:**

Delete from users\_stars\_messages where users\_user\_id = “##” and messages\_msg\_id = “$$”;

1. **Number of messages sent in a day per user:**

select count(msg\_id) as num, sender\_id from messages where create\_time > '1970-01-01 00:00:00' and create\_time < '1970-01-02 00:00:00' group by sender\_id;

**Embedded SQL Queries:**

1. **Inserting values into users table:**

Insert into alter\_ego.users values(${highest\_user\_id},'${data.name}','${data.email\_id}','${data.password}','${data.status}');

1. **Selecting DM chat ids for a particular user**:

Select u.chats\_chat\_id from alter\_ego.users\_has\_chats u,alter\_ego.chats c USE INDEX(idx\_chats\_type) where c.chat\_type='DM' and u.Users\_user\_id=${socket.userID} and u.Chats\_chat\_id=c.chat\_id;

1. **Selecting GROUP chat ids for a particular user**:

Select u.chats\_chat\_id from alter\_ego.users\_has\_chats u,alter\_ego.chats c USE INDEX(idx\_chats\_type) where c.chat\_type='GROUP' and u.Users\_user\_id=${socket.userID} and u.Chats\_chat\_id=c.chat\_id;

1. **Inserting values into messages table:**

Insert into alter\_ego.messages values(${msg\_id},'${data.content}','${current\_time}',${socket.userID},${data.chatID});

1. **Selecting usernames, user\_ids, chat\_ids of all the chats for a particular user:**

select a.name,u.users\_user\_id,u.chats\_chat\_id from alter\_ego.users a,alter\_ego.users\_has\_chats u where a.user\_id=u.Users\_user\_id and u.Users\_user\_id!=${socket.userID} and u.Chats\_chat\_id IN(${dm\_chats.map(chat => chat.chats\_chat\_id).toString()});

1. **Selecting group name, chat\_id for all the groups of a particular user:**

select gname,chats\_chat\_id from alter\_ego.groups where Chats\_chat\_id IN(${group\_chats.map(chat => chat.chats\_chat\_id).toString()});

1. **Selecting message info along with its sender for a particular chat\_id sorted in non-decreasing order of create\_time:**

select m.msg\_id,m.content,m.create\_time,m.sender\_id,u.name from messages m,users u where m.sender\_id=u.user\_id and m.Chats\_chat\_id=${chatid} order by m.create\_time;

1. **Selecting group info for a particular chat\_id:**

select gname, gdesc from alter\_ego.groups where chats\_chat\_id=${groupid};

1. **Selecting all the admins of a particular group:**

Select u.name,p.users\_user\_id from alter\_ego.users u,alter\_ego.users\_has\_chats p USE INDEX(idx\_isadmin\_uhc) where p.chats\_chat\_id=${groupid} and p.users\_user\_id=u.user\_id and p.admin=1;

1. **Selecting non-admin members of a particular group:**

Select u.name,p.users\_user\_id from alter\_ego.users u,alter\_ego.users\_has\_chats p USE INDEX(idx\_isadmin\_uhc) where p.chats\_chat\_id=${groupid} and p.users\_user\_id=u.user\_id and p.admin=0;

1. **Deleting a particular chat:**

DELETE FROM alter\_ego.chats WHERE chat\_id=${chat\_id};