**M.JAGADEESH**

**CB.SC.I5DAS21030**

**DATABASE DESIGN – FACEBOOK**

**NORMALIZATION**

**1. Normalization to 1NF:**

1. Users: The Users table seems to be in 1NF as each column contains atomic values.

2. Login: The Login table also appears to be in 1NF as each column contains atomic values.

3. GroupChat: The GroupChat table seems to be in 1NF as each column contains atomic values.

4. Albums: The Albums table appears to be in 1NF as each column contains atomic values.

5. Photos: The Photos table seems to be in 1NF as each column contains atomic values. 6. Reactions: The Reactions table seems to be in 1NF as each column contains atomic values.

7. Posts: The Posts table seems to be in 1NF as each column contains atomic values.

8. Comments: The Comments table seems to be in 1NF as each column contains atomic values. 9. Likes: The Likes table seems to be in 1NF as each column contains atomic values.

10. Friendships: The Friendships table seems to be in 1NF as each column contains atomic values.

11. Messages: The Messages table seems to be in 1NF as each column contains atomic values.

12. Notifications: The Notifications table seems to be in 1NF as each column contains atomic values.

**2. Normalization to 2NF: To achieve 2NF, we need to make sure that all non-key attributes are fully functionally dependent on the entire primary key.**

1. Users: The Users table seems to be in 2NF as there's only one candidate key (user\_id) and no partial dependencies.

2. Login: The Login table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (login\_id).

3. GroupChat: The GroupChat table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (group\_id).

4. Albums: The Albums table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (album\_id).

5. Photos: The Photos table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (photo\_id).

6. Reactions: The Reactions table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (reaction\_id).

7. Posts: The Posts table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (post\_id).

8. Comments: The Comments table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (comment\_id).

9. Likes: The Likes table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (like\_id).

10. Friendships: The Friendships table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (friendship\_id).

11. Messages: The Messages table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (message\_id).

12. Notifications: The Notifications table seems to be in 2NF as each non-key attribute is fully dependent on the entire primary key (notification\_id).

**3. Normalization to 3NF: To achieve 3NF, we need to make sure that all non-key attributes are transitively dependent on the primary key through the candidate keys.**

1. Users: The Users table seems to be in 3NF as there's only one candidate key (user\_id) and no transitive dependencies.

2. Login: The Login table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (login\_id).

3. GroupChat: The GroupChat table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (group\_id).

4. Albums: The Albums table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (album\_id).

5. Photos: The Photos table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (photo\_id).

6. Reactions: The Reactions table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (reaction\_id).

7. Posts: The Posts table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (post\_id).

8. Comments: The Comments table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (comment\_id).

9. Likes: The Likes table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (like\_id).

10. Friendships: The Friendships table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (friendship\_id).

11. Messages: The Messages table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (message\_id).

12. Notifications: The Notifications table seems to be in 3NF as each non-key attribute is directly dependent on the primary key (notification\_id).