Database Design Document - Team 5

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Objectives -

To design a database for a dating app which should support the following features:

- Users should be able to login/signup.
- Users should be able to add details like their city, state, phone number, photos, etc.
- Users should be able to like other users based on their gender and relationship type preference.
- Users should be able to rate another user, likewise also block someone they have matched with.
- Users should be able to chat with other users if they match.
- Users can take either free membership or premium membership.

Business Problem -

The business problem is to design a relational database for an online dating application. There are a few fundamental issues with online dating platforms where the rationale cannot be proven to be correct or incorrect. We'd like to address a few issues that could be resolved by making a few adjustments to the way data is collected, stored and used.

- The presence of an inactive customer database in the dating ecosystem results in a reduction in the total number of matches per day. Hence, resulting in a bad customer experience. Doing it manually is time consuming.
- The database of Dating Apps has few clients with terrible etiquette, which is resulting in a bad customer experience. As a result, these customer profiles need to be analyzed based on block actions and flagged.
- Unverified users and many accounts for a single user exist on matchmaking sites, which need to be governed. This causes data inconsistency.

Solution Strategy -

The proposed solution to the problems include -

- Using Database Design concepts, a FK reference with the ON DELETE CASCADE property is being used by us to delete all records associated with a user whose records are deleted from the user_detail table.
- Maintaining a block table to track the number of times a user gets blocked. A threshold can be decided based on which highly blocked users can be filtered and removed from the platform.
- To maintain data integrity at every level, we are using UNIQUE along with NOT NULL constraints to prevent users signing up with the same phone number and passport number. This also validates the genuineness of the user.
- For fast retrieval of the various types of information related to a user - we have divided it into smaller tables which can be joined using various PK-FK relationships.