**DBMS Project**

**Topic: Airbnb Rental Services**

**Group Members:**

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**Objective :**

The brief objective of database is to manage a platform that connects travellers with hosts who offer lodging accommodations, whether it be a room, apartment, house, or other accommodation options for a required amount of time. This service aims to facilitate experiences that are often relatively affordable than traditional hotel stays, catering a sense of community and cultural exchange among hosts and visitors.

**Application Users** :

1. Hosts
2. Guests
3. App Service Provider

**Scenario Description :**

Imagine you're going on a trip, but you don't want to stay in a hotel. Instead, you want to stay in someone's cosy home, maybe a apartment or a charming house. With the use of such database , you can do that! You go on respective website or app, browse through listings, and find the perfect place to stay. You book it, and then you get to enjoy your trip, feeling like a local in a new city.

**Use Cases :**

1. Host can register themselves by providing details about themselves and listing their properties. Property details like type, location, price per night, amenities, Availability. Hosts need to sign a duration of contract with Airbnb for the property listings. Airbnb will charge for using the platform and make commissions on each booking through the app.
2. Users/Guests can search properties based their preferences, location, dates, photos and other criteria.
3. Each host can list multiple properties on it and also need to list rules of house like check-in and checkout timings, smoking allowed or not. Drinking allowed or not. Also hosts can choose to rent a part of a property or whole property. The properties have different categories like homestay, rooms, villa etc. They can also decide the cancellation policy.
4. The guests can make bookings through the app. The system handles booking requests, confirmations and cancellations. After booking the host and guest can contact each other.
5. The host can manage bookings, view upcoming reservations and their earnings.
6. The guest can make the wish-list of the properties for future references.
7. Guests can give reviews and ratings of the properties they were hosted by and also give reviews about property owner. This allows other users to decide on their bookings and allows the property owner to improve on areas which they lack in.
8. Bookings and transactions need to be handled to through this system i.e., Booking date, amount of transaction, mode of payment, invoices, payment status, refund status can be done.
9. The data obtained from the database can be used to analyze popularity of app, revenue statistics of app and host, popular destinations.

10. Administrator/App management can review users, host, properties and monitor activities across the platform. They can resolve disputes and enforce policies.

**Queries:**

* List all property listings for owner
* Find Properties based on location, date, preferences, availability
* How many times properties are booked.
* Revenue generated through properties by host (filter based on monthly, yearly, overall)
* Booking history of a specific user
* Check for house rules, type of stay, number of rooms, no. of bathrooms and amenities of a property, check-in and checkout time.
* Sorting properties by reviews and ratings
* Revenue made by the app through commissions and monthly platform usage rate (i.e., AirBnB)
* Comparing properties / owners based on location, time, price, rating, reviews etc.
* Show users wish list
* Show the cancellation policy and refund status of the property.
* Identify properties in radius of some area.
* Find the duration of contracts between service provider and host.
* Identify total occupied days and empty days of a property since start of contract.