Database Design Documentation

1. Introduction

In the rapidly evolving landscape of the sharing economy, Airbnb has emerged as a leading platform that connects hosts offering accommodations with travelers seeking unique lodging experiences. As the platform continues to grow, the need for a robust and efficient database design becomes paramount. This documentation outlines the database design for Airbnb, detailing the structure, relationships, and functionalities necessary to support the platform's operations.

2. Entity-Relationship Diagram (ERD)

The following are the main entities and their relationships in the database:

1. **Users**
2. **Booking**
3. **Reviews**
4. **Property**
5. **Payments**

3. Database Entities

Users Table

Purpose: To store information about users, such as their personal data, email, and password

USERS	
userID	**PK**
username	**BIGINT**
phoneNumber	**VARCHAR**
password	**VARCHAR**
birthdate	**DATE**
role	**ENUM(user,host)**

Property Table

Purpose: To store information about properties.

PROPERTY	
propertyId	**PK**
userId	**FK**
propertyName	**VARCHAR**
propertyAddress	**VARCHAR**
description	**VARCHAR**

rating	**DECIMAL**

Booking Table

Purpose: To store information about bookings made by users.

PROPERTY	
bookingId	**PK**
propertyId	**FK**
userId	**FK**
checkoutdate	**DATE**
checkindate	**DATE**

Review Table

Purpose: To store reviews for listings.

Review	
reviewId	**PK**
propertyId	**FK**
userId	**FK**
bookinId	**FK**
rating	**DECIMAL**

5. Conclusion

This database design outlines the core entities, their relationships, and the mechanisms to identify within the system. By implementing these structures and maintaining a clean and consistent user experience.