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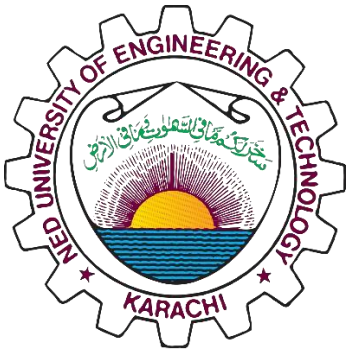

PROPERTY BOOKING SYSTEM

PROJECT REPORT

Database Management System (CT-261)

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1. INTRODUCTION

The Firebase Property Booking System is a web application designed to simulate Property bookings using **Firebase Realtime Database**. Users can select a Property, fill in personal information, and the booking data is saved and managed in Firebase. This project replicates basic Airbnb-like functionality for room reservations.

2. OBJECTIVES

- Build a user-friendly web interface for Property bookings.
- Enable users to input guest details and reserve rooms.
- Demonstrate real-time database functionality.
- Provide an administrative view for managing records.

3. TOOLS & TECHNOLOGIES

- **Frontend**: HTML, CSS
- **Backend**: Firebase Functions, Firebase Realtime Database, Java Script
- **Styling**: HTML, CSS, Bootstrap
- **Database**: Firebase Realtime Database
- **Deployment**: Firebase Hosting

4. SYSTEM ARCHITECTURE

Client Side
→ Form Inputs
→ Firebase SDK Integration

Firebase Realtime Database
→ Structured JSON Tree
→ Stores bookings keyed by auto-generated user ID
→ Allows real-time syncing across devices

5. MODULES OVERVIEW

- **Home Page**: Shows available Properties.
- **Book Now Form**: Form to enter guest details:
    - Name
    - Email
    - Room (amenities)
    - Phone Number
    - Message
- **Room Allocation Logic**: Assigns room number on submission.
- **Firebase Connection**: Auto-syncs and saves user info under a unique ID.

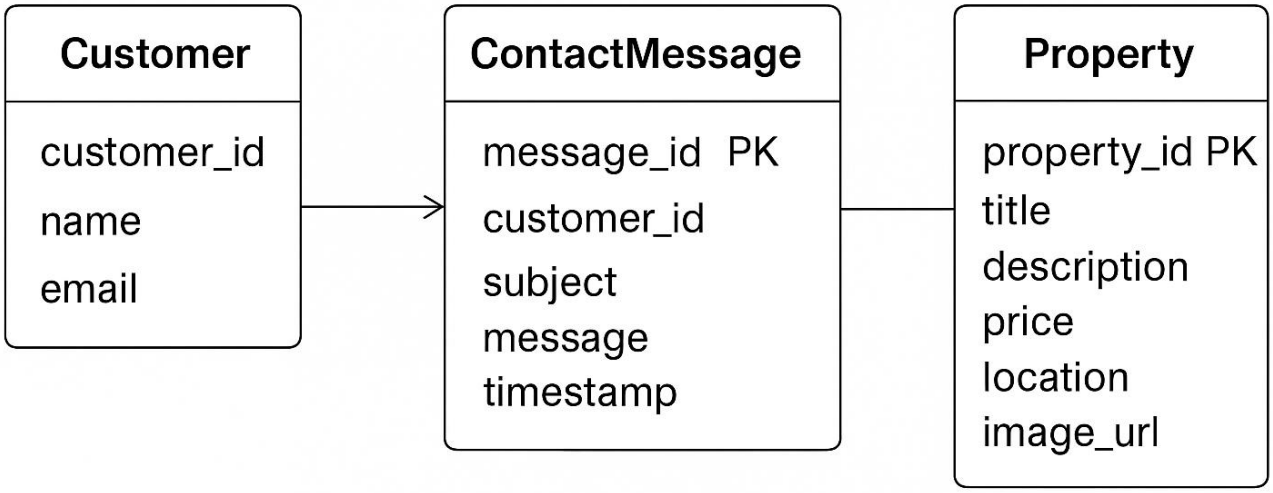
6. FIREBASE INTEGRATION

Firebase SDK is initialized using configuration keys and the app connects to Realtime Database. Booking data is pushed as follows:

```
firebase.database().ref("bookings").push({
  name,
  dob,
  gender,
  contact,
  email,
  roomNumber
});
```

Each record is assigned a unique ID and stored under /bookings/.

7. SCENARIO AND ERD



8. CHALLENGES FACED

- Integrating Firebase
- Structuring Firebase database with unique keys.
- Handling real-time data syncing and updates.

9. CONCLUSION

The Firebase Property Booking project is a compact, efficient demonstration of how modern web apps can use cloud databases for real-time data management. It covers user authentication, and responsive UI.

10. REFERENCES

- Firebase Docs
- Bootstrap CSS
- Stack Overflow, YouTube tutorials, and GitHub repositories