# **EntryControl360**

1. **Objective**:  
   A system to manage a smart door using Firebase Realtime Database, where:
   * Correct password opens the door and logs activity.
   * Door activity history is displayed in a separate activity.
2. **Core Features**:
   * **MainActivity**:
     + Password validation for door unlocking.
     + Logs activity (Opened/Closed) with timestamp into Firebase.
     + Includes a button to navigate to HistoryActivity.
   * **HistoryActivity**:
     + Displays door activity history in a RecyclerView by fetching data from Firebase.
3. **Technologies Used**:
   * **Firebase**: For real-time data storage and retrieval.
   * **Android Components**: Activities, RecyclerView, Intents.
4. **Key Steps**:
   * **Data Logging**: Door activities (status and timestamp) are logged under the door\_activity node in Firebase.
   * **History Display**: Fetching logged data and binding it to RecyclerView in HistoryActivity.
   * **UI Design**: Clear separation of functionalities using buttons for "Unlock" and "View History."
5. **Challenges Overcome**:
   * Firebase node structure corrected.
   * Handled real-time data binding issues.
   * Ensured proper navigation and UI updates.
6. **Outcome**:
   * A fully functional Smart Door Management System.
   * Password-protected access with a logged history display.
7. **Future Scope**:
   * Add user authentication for personalized histories.
   * Enhance UI/UX with material design.
   * Push notifications for door activity.