📄 Product Requirements Document (PRD)

🏷️ Project Overview

Name (working title): History Reminder

Goal: Help students preparing for history/geography exams memorize important dates and events using random popup notifications on their device screen (even when the app is closed).

🎯 Objectives

- Make memorization of events/dates passive and continuous
- Offer structured predefined lists of events
- Allow users to customize their own lists
- Deliver random popups on screen to remind them of events

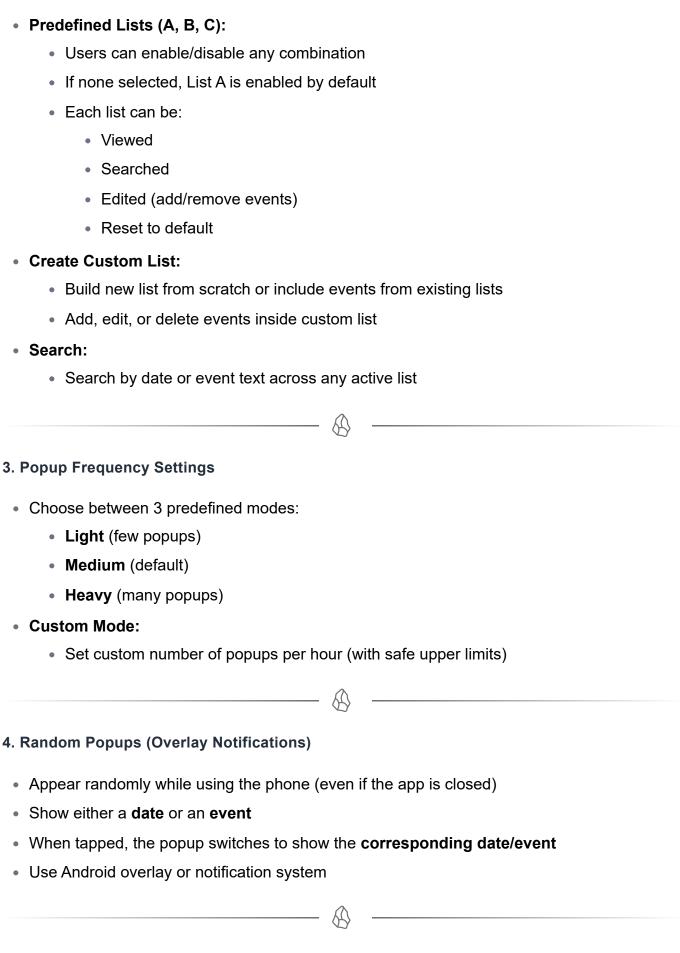## 👤 Target Users

- High school students (especially BAC candidates)
- Anyone who wants to memorize historical dates easily

🎛️ Core Features (MVP)

1. Home Screen

- Two main buttons:
  - **Event & Date Management**
  - **Popup Frequency Settings**

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2. Event & Date Management

- **Predefined Lists (A, B, C):**
    - Users can enable/disable any combination
    - If none selected, List A is enabled by default
    - Each list can be:
        - Viewed
        - Searched
        - Edited (add/remove events)
        - Reset to default
- **Create Custom List:**
    - Build new list from scratch or include events from existing lists
    - Add, edit, or delete events inside custom list
- **Search:**
    - Search by date or event text across any active list

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3. Popup Frequency Settings

- Choose between 3 predefined modes:
    - **Light** (few popups)
    - **Medium** (default)
    - **Heavy** (many popups)
- **Custom Mode:**
    - Set custom number of popups per hour (with safe upper limits)

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4. Random Popups (Overlay Notifications)

- Appear randomly while using the phone (even if the app is closed)
- Show either a **date** or an **event**
- When tapped, the popup switches to show the **corresponding date/event**
- Use Android overlay or notification system

💾 Data Management

- Store events and settings locally on device
- Predefined lists stored in local database (readable + resettable)
- Use `Hive` or `sqflite` for data storage
- Use `flutter_local_notifications` or `overlay_window` for popups

⚙️ Architecture Overview

- **UI Layer:** HomeScreen → EventManagement → ListView/Add/Edit → PopupSettings
- **Logic Layer:**
    - `EventListManager` (enable/reset lists)
    - `RandomEventService` (pick random events)
    - `OverlayService` (display popup)
    - `BackgroundService` (periodic triggers)
    - `SettingsService` (save user preferences)
- **Data Models:**
    - `Event` (title, date)
    - `EventList` (name, enabled, events)
    - `Settings` (frequencyLevel, customPerHour)

🧪 Testing Plan

- Unit test for:
    - Adding/editing/deleting events
    - Random selection logic
    - Frequency limits
- Integration test for:
    - Background service triggering popups
    - Popup tap showing the paired item
- Manual testing on Android device

🏞️ Future Features (Optional)

- Home screen widget (shows random event on home screen)
- Cloud sync of custom lists
- User accounts / backups
- Add "word–translation" mode for language learning