

Team Dragun – Code Capsule Requirements

Theme:

The theme is Dev Time Capsule celebrates a developer's journey by creating a personalized digital snapshot that captures their skills, achievements, and aspirations. It challenges participants to build an interactive project where users can "seal" memories or goals for the future and "open" them later to reflect on their growth. This theme blends storytelling and functionality, encouraging participants to showcase their unique identity as developers while demonstrating creativity and technical expertise.

1. Home Page: Capsule Dashboard

Purpose:

To display an overview of all sealed and opened capsules.

Features:

- **Capsule List:**
 - A scrollable list of capsules with:
 - **Title:** Capsule name (e.g., *First Python Project*).
 - **Status:** Sealed (with opening date) or Opened (with opening date and reflection summary).
 - Capsules are sorted by their creation or opening date.
- **Actions:**
 - **Add Capsule Button:** Navigates to the Create Capsule page.
 - **Open Capsule Button (Enabled Only After Opening Date):** Opens the capsule and navigates to the Capsule Details page.

Interactions:

- **Tap a Capsule:** Navigate to the Capsule Details page to view its content.
- **Tap Add Capsule:** Navigate to the Create Capsule page.

2. Create Capsule Page

Purpose:

To allow users to seal a new capsule with their current achievements, code snippets, and goals.

Features:

- **Input Fields:**
 - Title (text input).
 - Type (dropdown: Code Snippet, Milestone, Idea, Other).
 - Description (multi-line text input).
 - Code Snippet (multi-line text input with monospaced font).
 - Tags (comma-separated text input, e.g., *Java, Backend, First Project*).
 - Opening Date.
- **Actions:**
 - **Save Button:**
 - Validates inputs.
 - Saves the capsule data to SQLite.
 - Returns to the Home Page.

Interactions:

- **Input Validation:** Ensures all required fields are filled.
- **Confirmation Toast:** Displays a success message after saving the capsule.

3. Capsule Details Page

Purpose:

To display the content of a specific capsule and allow reflection once it's opened.

Features:

- **Content Display:**
 - Title, creation date, and opening date.

- Capsule type, description, and code snippet (formatted as explained earlier).
- Tags for context (e.g., #Java, #Achievements).
- **Reflection (After Opening):**
 - A text area for users to write about their progress since sealing the capsule.
 - Save Reflection button to store the reflection in the database.

Interactions:

- **Before Opening Date:** Capsule details are view-only; reflection fields are locked.
- **After Opening Date:** Reflection field and Save Reflection button are unlocked.

4. Progress Page (Optional, If Time Permits)

Purpose:

To track opened capsules and display users' reflections in a timeline format.

Features:

- **Reflection Feed:**
 - Chronologically ordered list of opened capsules with:
 - Capsule title.
 - Opening date.
 - Key reflection summary.

Interactions:

- **Tap an Entry:** Navigate to Capsule Details page to view the full capsule and reflection.

Functionalities

1. Capsule Management

- Create Capsules:** Users can save capsules with title, description, tags, code, and an opening date.

- b. **Open Capsules:** Capsules remain locked until the opening date. Once opened, they display full content and allow reflections.
- 2. **Data Persistence**
 - a. **Shared Preferences**
 - i. Store capsule data locally, including:
 - 1. Title, type, description, code snippet, tags, creation/opening dates, and reflections.
- 3. **User Interaction Enhancements**
 - a. **Code Copy:** Allows easy reuse of code snippets.
 - b. **Notifications:** Reminds users when a capsule is ready to be opened using `AlarmManager` or `WorkManager`.
- 4. **UI/UX Design**
 - a. **Simple Layouts:** Minimalistic design using `ConstraintLayout` or `LinearLayout`.
 - b. **Monospaced Font for Code:** To enhance readability and mimic an editor-like feel.
 - c. **Color-Coded Status:**
 - i. Sealed capsules are gray.
 - ii. Opened capsules are green.
- 5. **Optional (Stretch Features)**
 - a. Tags for filtering and searching capsules.
 - b. Export capsules as `.txt` files for backup or sharing.

App Flow

- 1. **Launch App:**
 - a. Navigate to the Home Page (Capsule Dashboard).
- 2. **Create Capsule:**
 - a. Fill in details and save a new capsule.
 - b. Return to the Home Page with the updated list.
- 3. **View Capsule:**
 - a. Tap a capsule to see its details (view-only if sealed).
- 4. **Open Capsule (After Date):**
 - a. View capsule content and add reflections.
 - b. Save reflections and track progress.
- 5. **(Optional) View Progress Page:**

- a. See opened capsules with summarized reflections.