**App Title (Tentative): TastyVault**

**🌟 Main Idea:**

**TastyVault** is a personalized food recipe app that allows users to discover, save, and manage recipes from around the world. The app supports both **online browsing** via a recipe API and **offline access** through local storage. Users can sign in securely, search for recipes based on ingredients or dietary preferences, and save their favorites for offline use.

**🎯 Purpose & Use Case:**

* Help users **discover new recipes** tailored to their tastes.
* Enable users to **save and access recipes offline** for convenience (e.g., during cooking).
* Allow for **meal planning** and recipe organization.

**👥 Intended Audience:**

* Home cooks, food enthusiasts, and anyone looking for new meal ideas.
* Users who want a **personal recipe vault** with offline functionality.

**🔧 Core Functionalities:**

| **Feature** | **Purpose & Enhancement** |
| --- | --- |
| **Firebase Authentication** | Secure login for personalized experience and access to saved recipes and preferences. |
| **Recipe Search (API)** | Search recipes via Spoonacular API using keywords or ingredients. Enhances recipe discovery. |
| **Offline Recipe Storage** | Save recipes in SQLite for offline access, ideal for use in kitchens with no internet. |
| **Favorites Management** | Let users save favorite recipes for quick access and organization. |
| **Meal Planner (Optional)** | Plan meals for the week, stored locally for easy reference. |
| **Recipe Detail View** | Show ingredients, instructions, and nutrition info in a clean, easy-to-read format. |

**🖥️ Screen Outline:**

| **Screen** | **Purpose** | **Key UI Components** |
| --- | --- | --- |
| **Login/Signup Screen** | User authentication via Firebase to access personal recipes. | EditText (email/password), Button (Login/Signup), TextView (labels) |
| **Home Screen** | Search bar and recipe categories; displays recipe results from API. | EditText (search), Button (search), RecyclerView (recipe cards), ImageView |
| **Recipe Detail Screen** | Detailed view of a selected recipe with save option. | TextView (title, ingredients, steps), Button (Save), ImageView (photo) |
| **Favorites Screen** | Lists saved recipes stored in SQLite for offline access. | RecyclerView (recipes), Button (delete/save), TextView (titles) |
| **Meal Planner Screen** | (Optional) Weekly meal planning and saved plans. | CalendarView, RecyclerView, Button |

**💾 Data Management:**

| **Data Type** | **Storage Method** | **Persistence Strategy** |
| --- | --- | --- |
| User Info (email, login) | **Firebase Authentication** | Stored securely via Firebase |
| Recipes from API (view only) | Not stored | Temporary data fetched via API |
| Favorite Recipes (saved) | **SQLite Database** | Stored locally for offline use (title, ingredients, instructions, image) |
| User Preferences (e.g., dietary) | **SharedPreferences** | Persist user settings locally |
| Meal Plans (optional) | **SQLite** | Stored with dates and recipe references |

**🌐 Web Service Integration:**

| **API** | **Usage** |
| --- | --- |
| **Spoonacular API** | Search and fetch recipes based on keywords, ingredients, or dietary restrictions. |