Travel Planner App

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**Introduction:**

The “Travel Planner” app is a mobile application designed to simplify and enhance the process of planning and managing trips for individual users. The app will provide a user-friendly interface and various functionalities to create and organize multiple trips, add activities, stateless and stateful widgets, routing and navigation, gesture handling, and application testing, the application will offer a personalized experience for its users.

Purpose:

The purpose of the “Travel Planner” app is to offer users a comprehensive tool to effectively plan and manage their trips. With user authentication and remote storage using Firebase Firestore, the app ensures secure access to trip data from multiple devices. Additionally, local storage using SQLite allows users to manage their trips offline, making it ideal for travelers who may not have consistent access to the internet during their journeys.

**Functionality:**

1. **User Authentication:**

Allows users to sign in and create accounts using Firebase Authentication.

1. **Trip Creation and Management:**

Users will be able to create and manage multiple trips. Each trip will have a title, destination, start date, and a list of planned activities.

1. **State Management:**

The application will utilize stateful widgets and a state management solution to ensure smooth and responsive user interactions.

1. **Routing and Navigation:**

The application will use different routes for screens, such as login, home screen (displaying trips), trip details, and trip creation.

1. **Gesture Handling:**

The application will use gestures for common interactions, such as swiping to delete trips or activities and tapping to view more details. This will enhance user experience with intuitive interactions.

1. **Remote Storage:**

The app will store the user’s trip data in Firebase Firestore to provide real-time synchronization. Organize trips in collections and documents within Firestore.

1. **Local Storage:**  
   It will use local storage using SQLite to allow users to access their trip data offline when an internet connection is unavailable.
2. **Consuming a web service (Weather API):**

The application will be integrated with a RESTful API to fetch additional travel-related data, such as the weather forecast of the user's destination for the current day.

1. **Application Testing**

The application will have tests to validate functions and methods related to trip creation, editing, and deleting. Also, perform widget tests to ensure smooth Ui interactions and screen transitions. Use flutter testing framework and packages like ‘flutter\_test” and ‘mockito’ for comprehensive testing.

**Milestones of developing “Travel Planner”**

24th July to 30th July

* Submit my project proposal
* Set up Project Environment
* Trip Creation and Management

31 July to 6th Aug

* Work on state management
* Complete Routing and Navigation
* Gesture handling

24th July to 30th July

* Remote Storage
* Local Storage
* Consuming a Weather API
* Application Testing
* Bug Fixing and Refinement

**Conclusion:**

The “Travel Planner” app will empower users to efficiently plan and manage their trips, ensuring a delightful travel experience. The app’s user-friendly interface, seamless navigation, and real-time synchronization will make it a valuable tool for all types of travelers.