



UNIVERSITY MALAYSIA TERENGGANU
FACULTY OF OCEAN ENGINEERING TECHNOLOGY & INFORMATICS

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CSM 3114
FRAMEWORK-BASED MOBILE APPLICATION DEVELOPMENT

PROJECT REPORT 2
SMART TRAVEL PLANNER APP

PREPARED BY:
NUR AININ SOFIA BINTI ASABUL KAPI (S62956)

PREPARED FOR:
DR. MOHAMAD NOOR HASSAN

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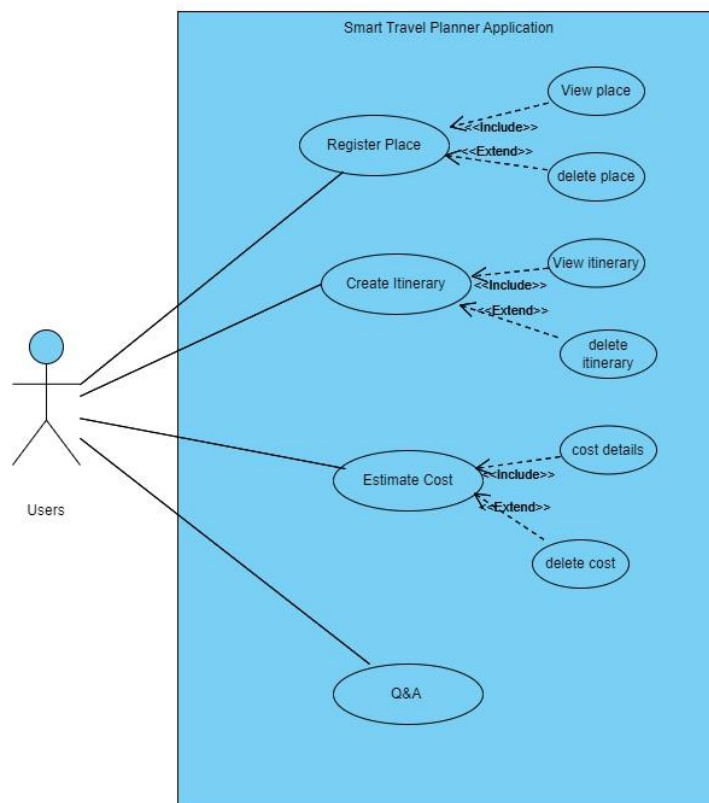
Executive Summary

A versatile smartphone software called the Smart trips Planner was created to improve the process of organizing trips. The app's user-friendly UI makes it easy for users to plan and arrange their travels by facilitating effective itinerary management. With the help of a Cost Estimation function, it streamlines the budgeting process and empowers users to make well-informed financial decisions depending on their activities, duration, and destination. Through a carousel slider on the home screen, the app presents visually appealing photographs and educational information, further enticing users to explore interesting travel destinations.

The navigation system has a drawer menu and a bottom navigation bar, both of which are deliberately designed for simplicity of use. These components guarantee easy and rapid access to essential features like creating itineraries, estimating costs, looking up destinations, and participating in a group Q&A session. The latter promotes a sense of community among travelers by enabling users to ask and get answers to queries about travel.

Beyond its usefulness, the app is beautifully designed, with eye-catching backdrops and vivid photos that perfectly convey the spirit of travel. In conclusion, the Smart trip Planner has the potential to completely transform the trip planning process by providing a thorough, aesthetically pleasing, and user-focused solution that meets the various demands of travelers everywhere.

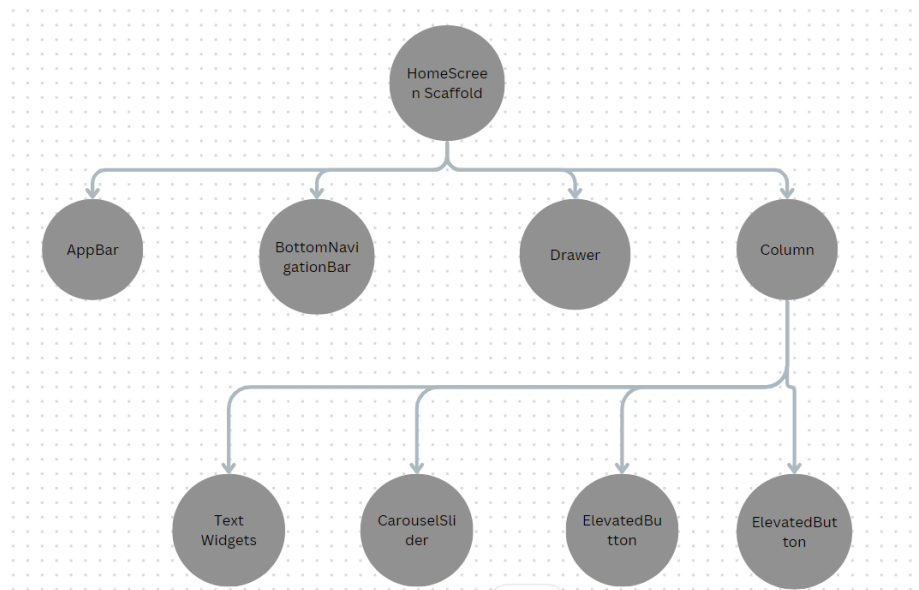
Use Case



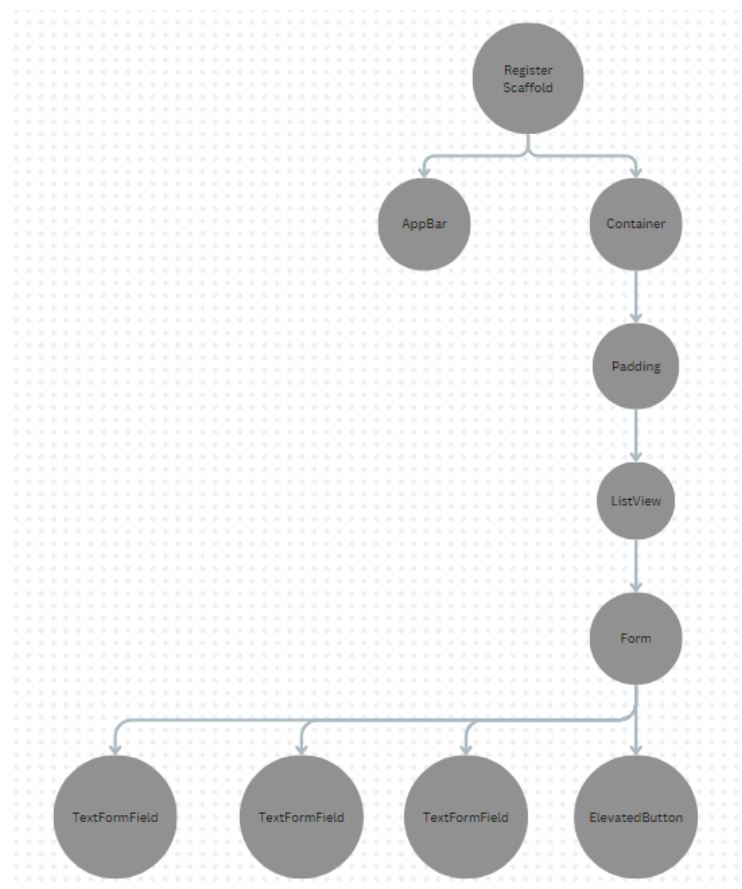
The Smart Travel Planner Application features one actor which is "User". The "User" actor can login, register place, create itinerary, view estimate cost and Q&A. During the login phase, the system can verify provided email and password. This for old user, if new user they have to sign up first to create account before login to the application. The "User" also handles the backend process, particularly can delete the list of places, cost details and list of itinerary's.

Tree Widgets Sample

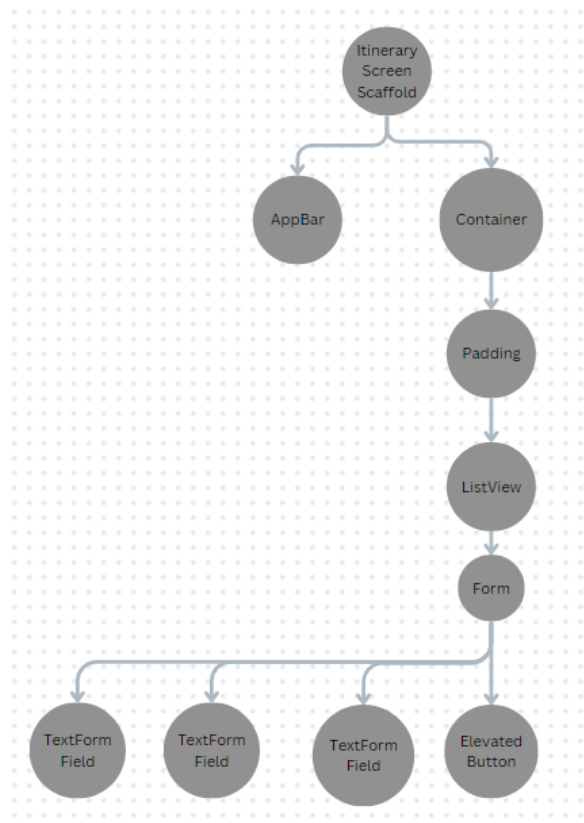
1. Home Screen



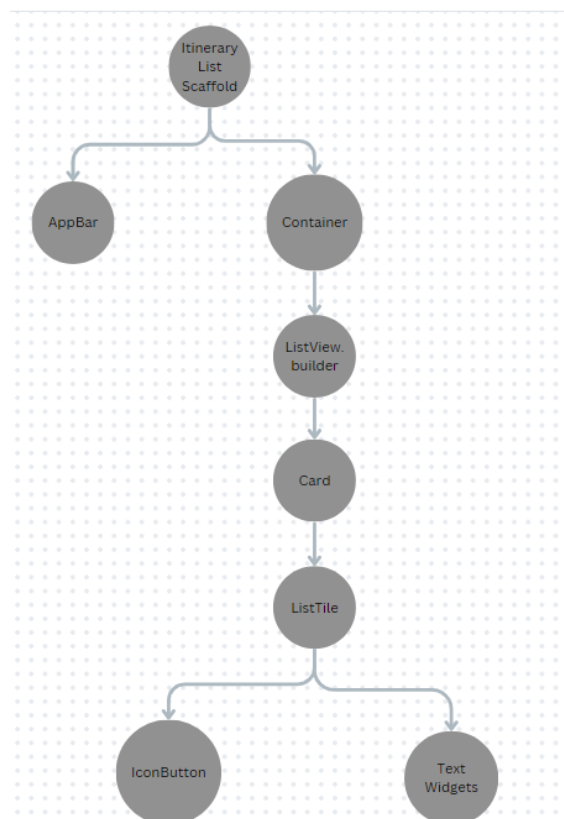
2. Register Place



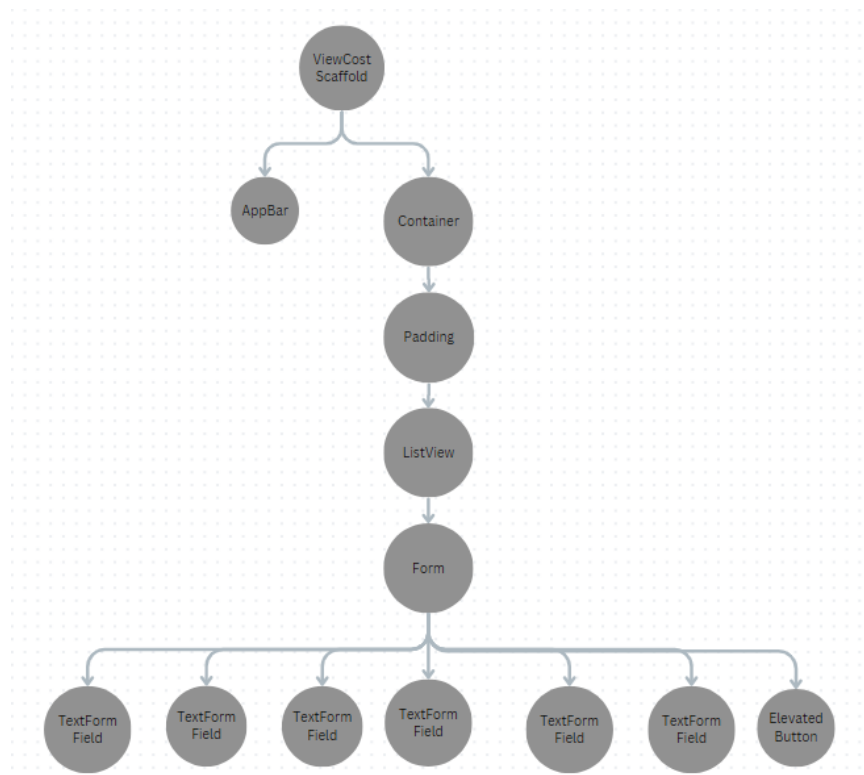
3. Itinerary Screen



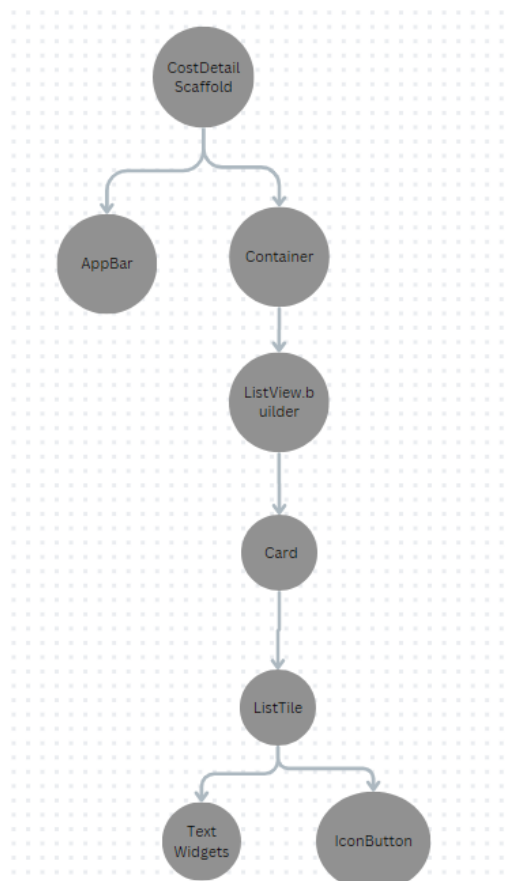
4. Itinerary List



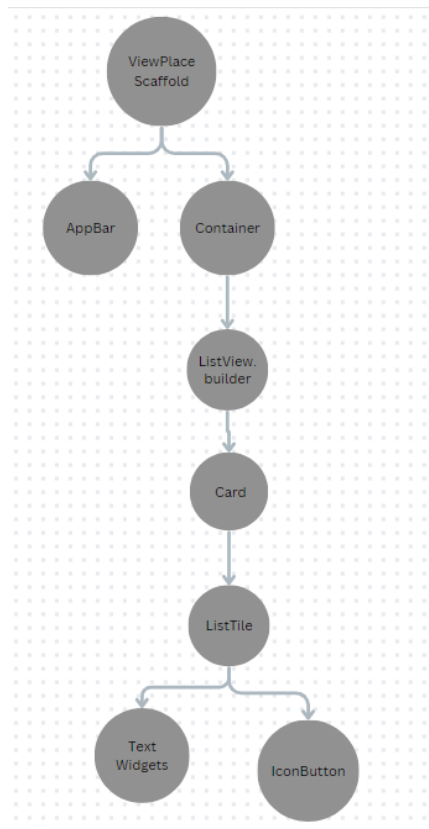
5. View Cost



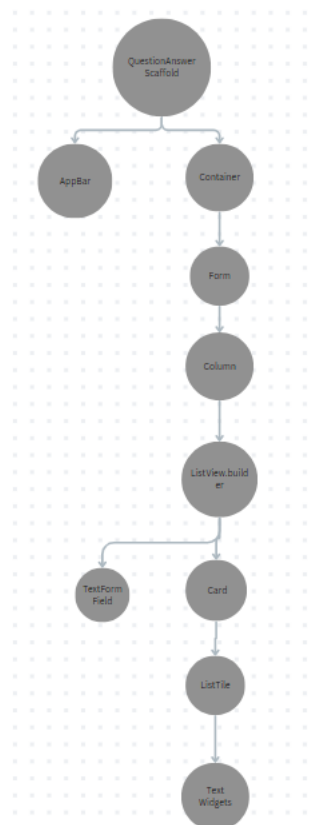
6. Cost Detail



7. View Place



8. Question Answer



Widget and Features Adopted in the application

With a range of Flutter widgets and features, the Smart Travel Planner Application has been carefully thought out to give users a smooth and eye-catching experience. The application's overall functionality and aesthetics are enhanced by the well built features and intuitive widgets.

1. Widgets

1.1 Drawer

- The Drawer widget is utilized to create a slide-in navigation menu, offering quick access to various sections of the app. It allows users to switch the different pages of the application that include view place, view itinerary and estimate cost.

1.2 BottomAppBar

- The BottomAppBar contains a row of icons at the bottom for easy navigation, allowing users to switch between different screens or functionalities. That includes dashboard, Q&A, cost details and logout.

1.3 ListView.builder

- ListView.builder is employed to efficiently create a scrollable list of widgets, dynamically loading only the items that are currently in view. This is particularly useful for displaying lists of travel places, itineraries, and cost details.

1.4 Card and ListTile

- The Card and ListTile widgets are utilized to structure and present individual items within lists, providing a consistent and visually appealing format.

1.5 StatefulWidget and State Management

- StatefulWidget is used to manage the state of dynamic elements, such as updating the list of travel places, itineraries, and cost details in real-time.

1.6 TextFormField

- TextFormField widgets are used for capturing user input, such as traveler names, addresses, destinations, dates, and various details required for trip planning.

1.7 ElevatedButton

- ElevatedButton widgets serve as interactive components, allowing users to trigger actions like planning a trip, creating itineraries, or submitting forms.

1.8 Image and Decoration

- The Decoration property, along with Image widgets, is applied to enhance the visual appeal of your app, incorporating background images to create an immersive travel-themed experience.

1.9 SnackBar

- The Flutter widget works as a lightweight and unobtrusive way to send short messages or notifications to users at the bottom of the screen. It is usually used to display information about the results of an operation or to prompt users to take certain actions.

2. Features

2.1 HTTP Package for Networking

- The http package is utilized for making HTTP requests to a Firebase Realtime Database, enabling functionalities like registering places, fetching itineraries, viewing cost details, and handling Q&A interactions.

2.2 CarouselSlider

- The CarouselSlider widget is employed to create an engaging carousel of travel images, providing an attractive visual display of various destinations.

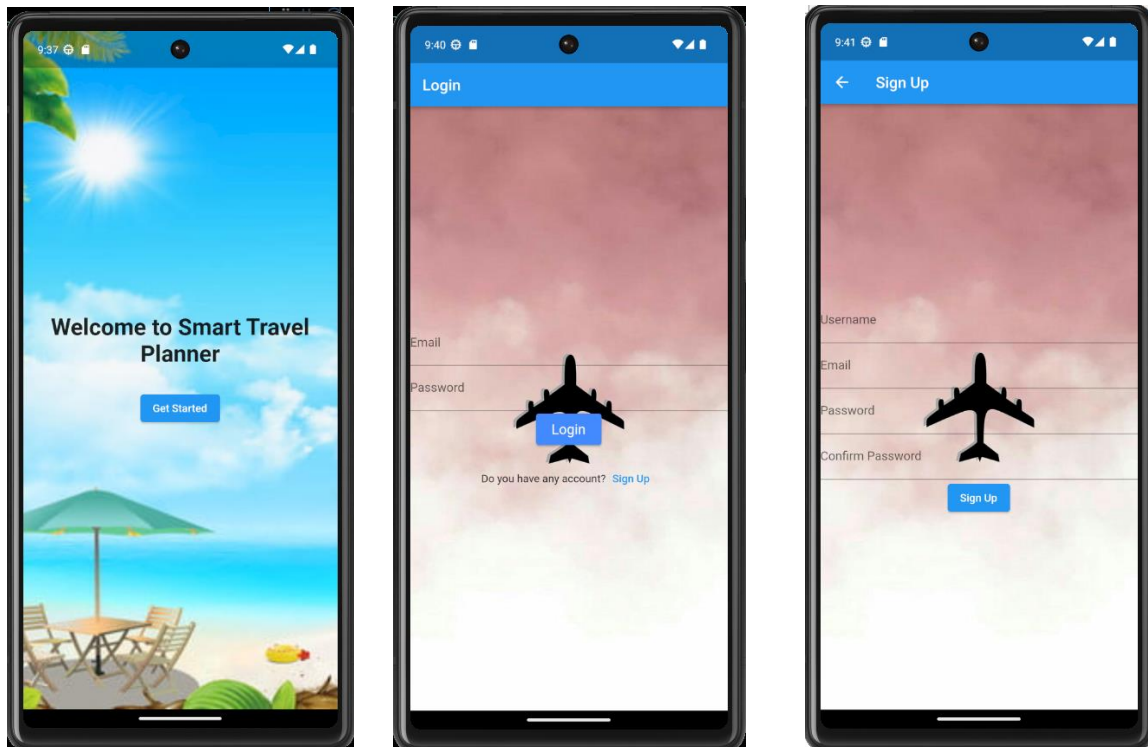
2.3 Form and Validation

- The use of Form with TextFormField widgets supports form-based interactions, allowing users to register places, create itineraries, and input cost details with built-in validation.

In conclusion, these widgets and features collectively contribute to an intuitive and user-friendly Smart Travel Planner app, offering a seamless experience for planning and organizing trips.

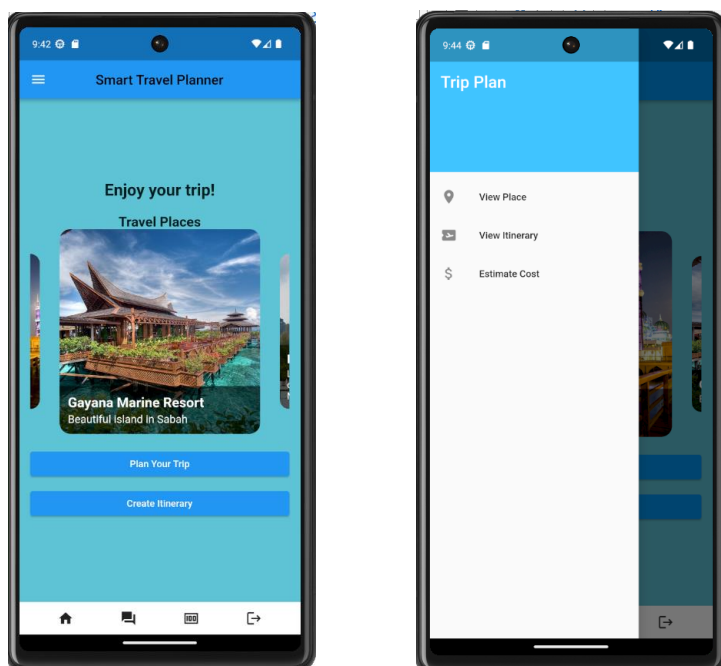
Interface Sample

1. Welcome, Login and Sign up screen



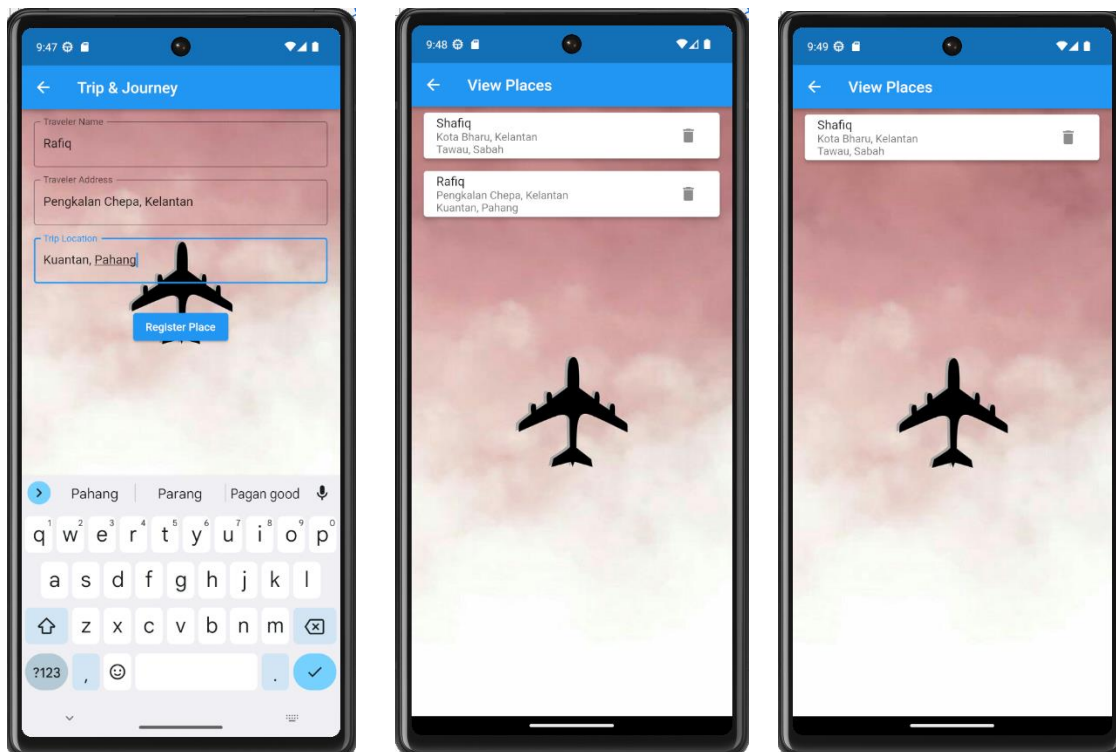
In this page, after the user click on get started button on Welcome screen, it direct go to Login screen. If user does not have any account to login, user can click sign up and fill the information about themselves. After that, users can login like usual.

2. Home Screen



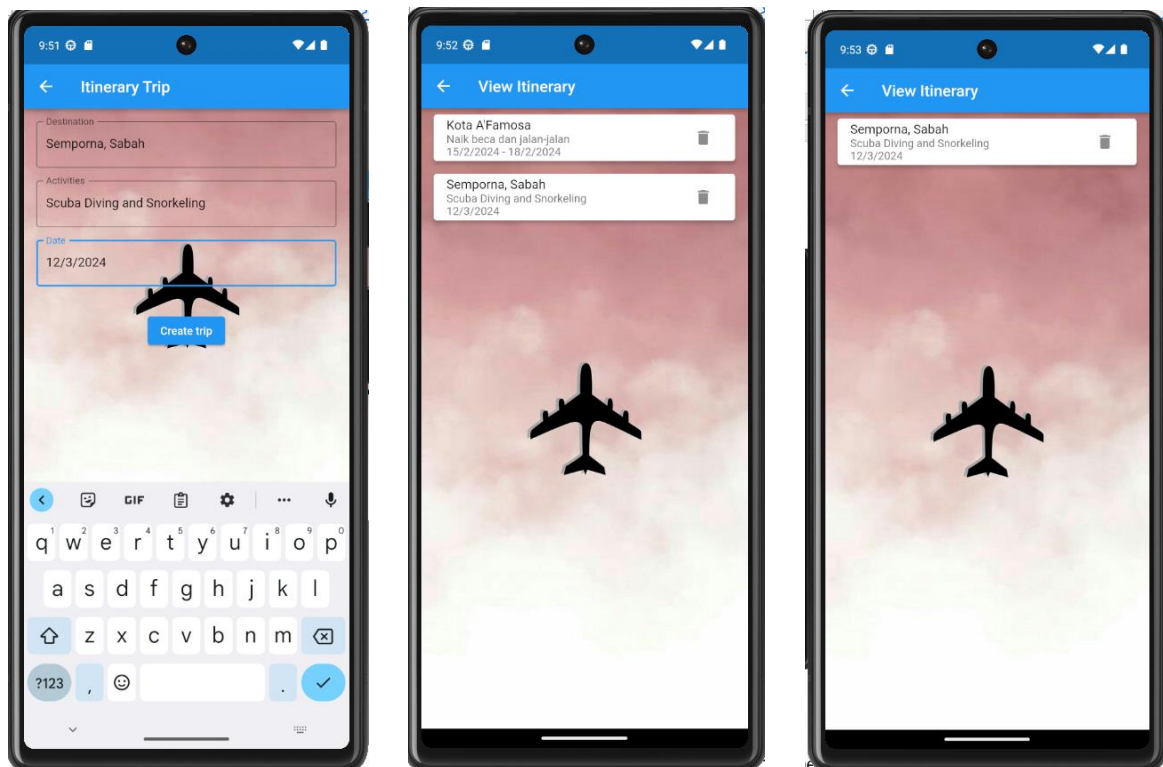
In our main pages, it show the slideshow place that can give idea to user to plan vacation. Plan Your Trip and Create Itinerary button will show the form to users to fill the information about the trip. The users also can see the list that the make at view place and view itinerary.

3. Register Place and View Place Screen



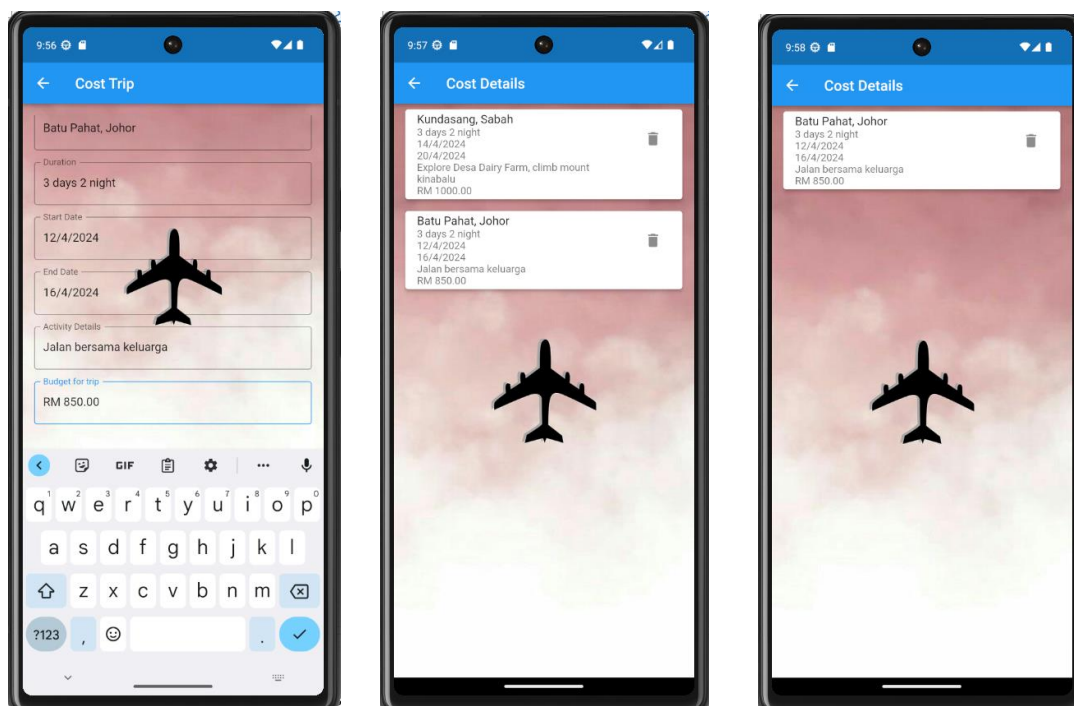
This is Register Place page. In this page, it show what the users can fill for their vacation as a planning. Next, View Place page show the list of records that have been done create by users. At that page also users can delete the list of records if they finish visit or does not want to go to that place.

4. Create Itinerary and View Itinerary



This is Create Itinerary page. In this page, users can make some planning for their vacation alone or with family. Next, View Itinerary page show the list of records that have been done create by users. At that page also users can delete the list of view itinerary records.

5. Estimate Cost and Cost Details



This is Estimate Cost page. In this page, it shows that users can assumed the cost that they can prepared for one trip. After that, they can delete the cost details if they does not want it.

6. Q&A



The function this page is users can ask as many as they want to ask about travel or how to manage the trip with cheap cost or anything.

Conclusion

A significant element in the capture and optimisation of travel planner operations is the Smart Travel Planner application. The application was designed to provide a comprehensive solution for the registration of places, creating trip plans and viewing estimated costs associated with one journey. The seamless creation of an itinerary, which allows users to select their destination, activity and date, is a key feature.

The integration of a create itinerary page and a view itinerary feature further adds to the application's effectiveness. In addition, easy access to the various pages of this application is ensured by including a drawer and well designed navigation. The adaptability of the system to realtime data storage, which promotes consistency and accessibility by connecting it to Firebase.

By promoting contactless interaction, providing real time updates and ensuring a smooth user experience, the Smart Travel Planner application is in line with the needs of the digital industry. Looking ahead, the application has the foundation for future enhancements, including more advanced features and scalability. Finally, the Smart Travel Planning application is an excellent tool for users to look for innovative and efficient management solutions which meet today's needs in the hospitality industry but also anticipate future developments.

Reference

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3. Bhaumik, P. (2021, November 2). *Flutter: Push, pop, push*. Medium. <https://medium.com/flutter-community/flutter-push-pop-push-1bb718b13c31>
4. ChatGp, 2024 <https://chat.openai.com/share/3167584a-5fab-497a-b109-691c26fd09c5>

Link GitHub

https://github.com/Ainin24/smart_travel_app