UNIVERSITI MALAYSIA TERENGGANU

FACULTY OF OCEAN ENGINEERING TECHNOLOGY & INFORMATICS

CSM3114 : FRAMEWORK BASED MOBILE APPLICATION DEVELOPMENT

Assignment 2 : Tourist Helper App

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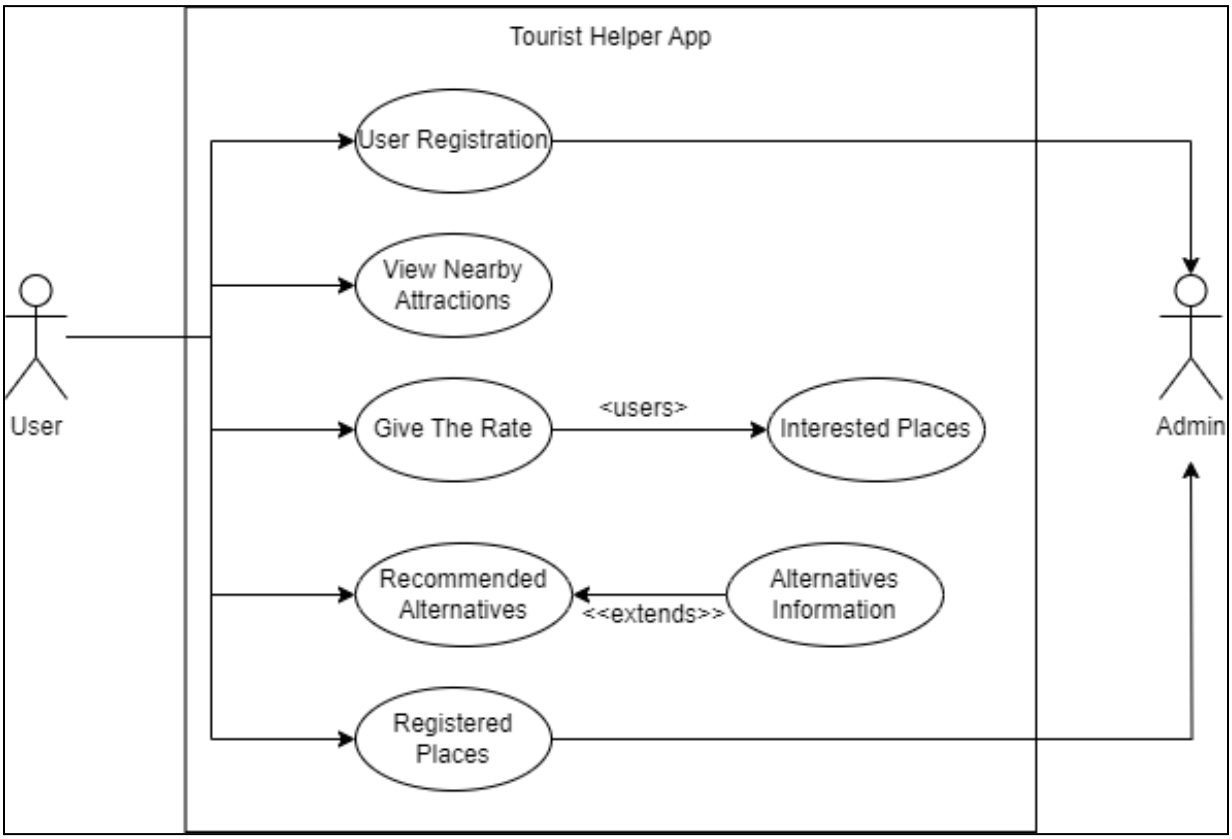
1.0 Executive Summary

The Tourist Helper App is an innovative mobile application designed to enhance the travel experience for tourists worldwide. With a user-friendly interface and cutting-edge features, this mobile app aims to provide seamless navigation, personalized recommendations, and valuable information to make every journey memorable.This mobile app project has created a theory where to produce the main features of the app and demonstrate the transaction of record. The key features are comprehensive detailed information about tourist spots, historical sites and cultural events.

Additionally, collaboration with tourism boards for exclusive content as well as expanded language support and cultural insights.In addition, practical tips about local customs, transport and safety.The global tourism industry is rapidly growing, and travellers seek digital solutions to enhance their experiences. The Tourist Helper App addresses this market demand by providing a comprehensive, all-in-one solution for tourists, positioning itself as a leader in the travel tech sector.

2.0 Use Case

A use case diagram for the Tourist Helper Mobile App development provides a high-level visualization of how users interact with the system and the various functionalities the app offers.



3.0 The Common Structure Of Tree Widgets

In a tourist helper mobile app, a Tree Widget is a user interface element that displays hierarchical data in a tree-like structure. This structure allows users to navigate through different levels of information, making it especially useful for presenting categories, subcategories, and nested details in an organized manner.

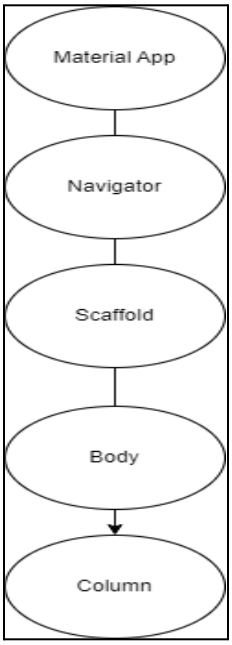


Figure 3.1

MaterialApp: The root widget for the Flutter application, providing the basic structure and configuration.

Navigator:Manages the navigation stack and handles transitions between screens.

Scaffold: Defines the basic structure of the visual interface, including the app bar, body, and optional navigation elements.Inside the scaffold there is a navigation bar at the bottom for quick access to different sections of the app.

AppBar: Contains the app's title, an icon button to open the drawer, and potentially other actions.This AppBar makes it easy for users which page they use it.

Body: The main content area of the app.

SingleChildScrollView: Enables scrolling when content exceeds the screen size.

Column: Organizes widgets vertically within the body.

DetailedInformationContent: Content displayed in the modal bottom sheet, providing detailed information about a specific attraction or event.

Floating Action Button (Optional): A button that floats above the content, triggering a primary action like adding a new item or navigating to a key feature.

This structure is a general guideline, and able to customize it based on the specific features and design considerations based on the tourist helper app. Additionally, this project needs to break down some sections into reusable widgets for better maintainability and scalability.

4.0 Flutter Widget And Features Adopted In The Application

Material Design Widgets:

Flutter provides a rich set of Material Design widgets that help in creating a cohesive and visually appealing user interface. These include AppBar, BottomNavigationBar, FloatingActionButton, Card, ListTile, and more.

Custom Widgets:

Developers often create custom widgets to tailor the UI to specific design requirements. These widgets can be reusable components that enhance the overall user experience.

Hero Animations:

Hero animations are often used to create smooth transitions between screens. In a tourist helper app, this could be applied when transitioning from a list of locations to a detailed view of a specific location, providing a visually appealing effect.

Navigation:

Flutter's navigation system helps in managing the flow of the application. Features like Navigator and MaterialPageRoute are commonly used to navigate between different screens or pages.A curved navigation bar, also known as a bottom navigation bar with a curved design, can be implemented using Flutter.

Rating Bar Flutter : The rating_bar package is a simple Flutter package that allows you to implement a customizable star rating widget in your application.
It provides a widget called RatingBar that can be easily integrated into your UI.

Flutter Packages for HTTP Requests (e.g., http):

Fetches data from a backend server or API to populate the app with dynamic content.

5.0 Sample Of Interface (Explanation)

5.1 Sign Up and Login Screen

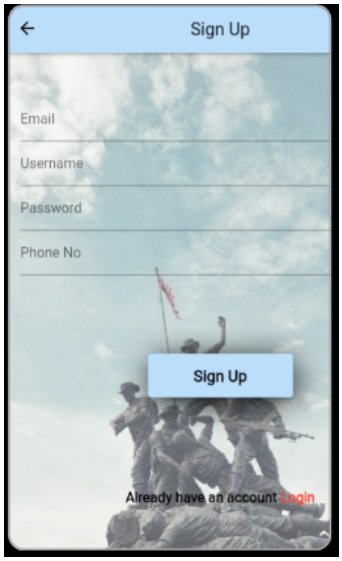


Figure 5.1

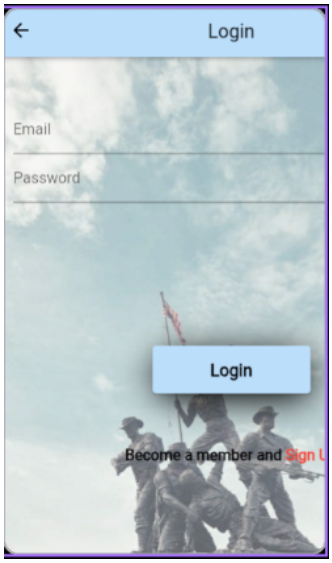


Figure 5.2

This app displays sign up and login so the user must sign in to go to the next page. The User must enter id and password to confirm authentication.The system validates the entered credentials against stored information in a secure database. If the provided information matches the stored records, the user is considered authenticated.

5.2 HomePage Screen

Figure 5.3

Figure 5.4

Based on the figures, it shows that the home page is the tourist helper for the interface session. The user can click at that container or place images and show a description about that place.By using hero animations, this could be applied when transitioning from a list of locations to a detailed view of a specific location, providing a visually appealing effect. The description about that place also includes a register place and feedback for that place. This may be applied by users to plan their decision and look forward to the survey. This screen also have logged out to go back into the welcome screen.

5.3 Q&A and Registered Places Screen

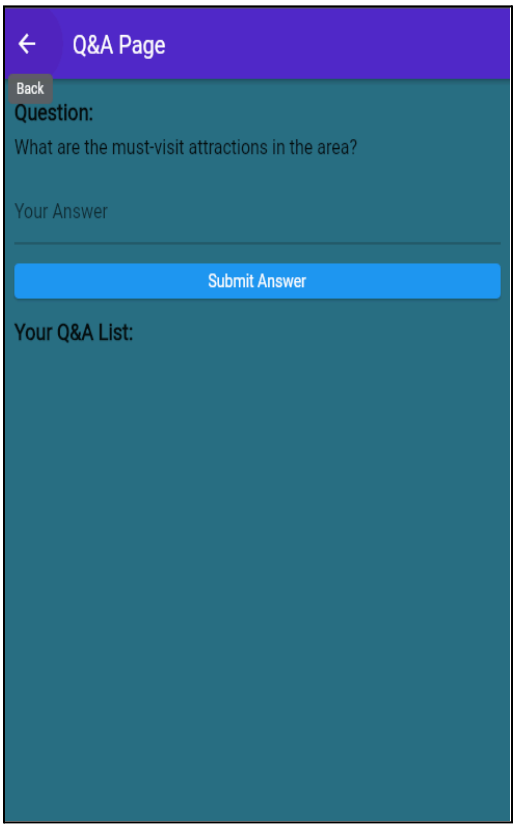


Figure 5.5

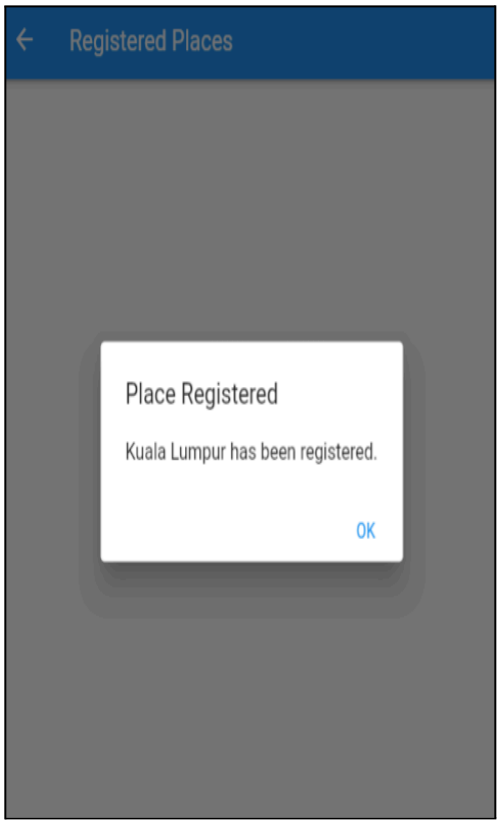


Figure 5.6

Based on figure 5.5 and figure 5.6, this screen shows the function of this application for the users. For the Q&A page, the user may click at the navigation bar from bottom and give some feedback for that place they already plan it before they survey that destination. The question was provided by the admin and the user may answer the question. The list of questions and answers will display below after clicking submit answers. After the users make a decision about where they want to go, just click the button register now at the container and it will display the list of registration places.

6.0 Conclusion

In conclusion, The Tourist Helper Mobile App is poised to revolutionise how travellers explore new destinations. With its user-centric design, advanced features, and strategic monetization, we are confident that our app will become an essential companion for tourists globally, making their journeys more enjoyable and stress-free.In addition, the Future Direction plan for mobile app development projects will improve and continuous development is important to the vision. Future updates will include integration with emerging technologies (AR, VR) for an enhanced experience.Whether exploring iconic landmarks, immersing in local culture, or navigating through unfamiliar streets, the Tourist Helper App is designed to elevate every travel experience. The main objective will look forward to empowering more journeys, creating lasting memories, and being the trusted companion for travelers across the globe.

7.0 References

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