



UNIVERSITI MALAYSIA TERENGGANU

FACULTY OF COMPUTER SCIENCE AND MATHEMATICS

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FRAMEWORK-BASED MOBILE APPLICATION DEVELOPMENT

CSM 3114

PROJECT 2 ASSIGNMENT

(TOURIST HELPER APPLICATION)

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1.0 EXECUTIVE SUMMARY

Tourist Helper Application is designed to give benefits to the user when visiting any place registered in the application and to optimize the tour experience. The application provides essential functionalities such as user authentication, which is login and register, getting new information update from the developer in at the other side the user is allowed to view locations of many states in Malaysia and when user click any of states, user can view and choose location to register and luxuriate the 'Perks' of the place they registered. User can directly give feedback for categories for each place viewed based on the attraction and the 'Perks' offered by the places.

The application aims to simplify travel, making it more accessible, user-friendly, and personalized. At the same time, Tourist Helper Application is predominant developed for business purpose. The application is not just created to relish user to enjoy the 'Perks' of some places but also to increase the usability in tourist to install this application to savor the 'Perks' of the places and getting feedback that host places can append more 'Perks' of each place in deduction the places can attract many tourists.

2.0 USE CASE

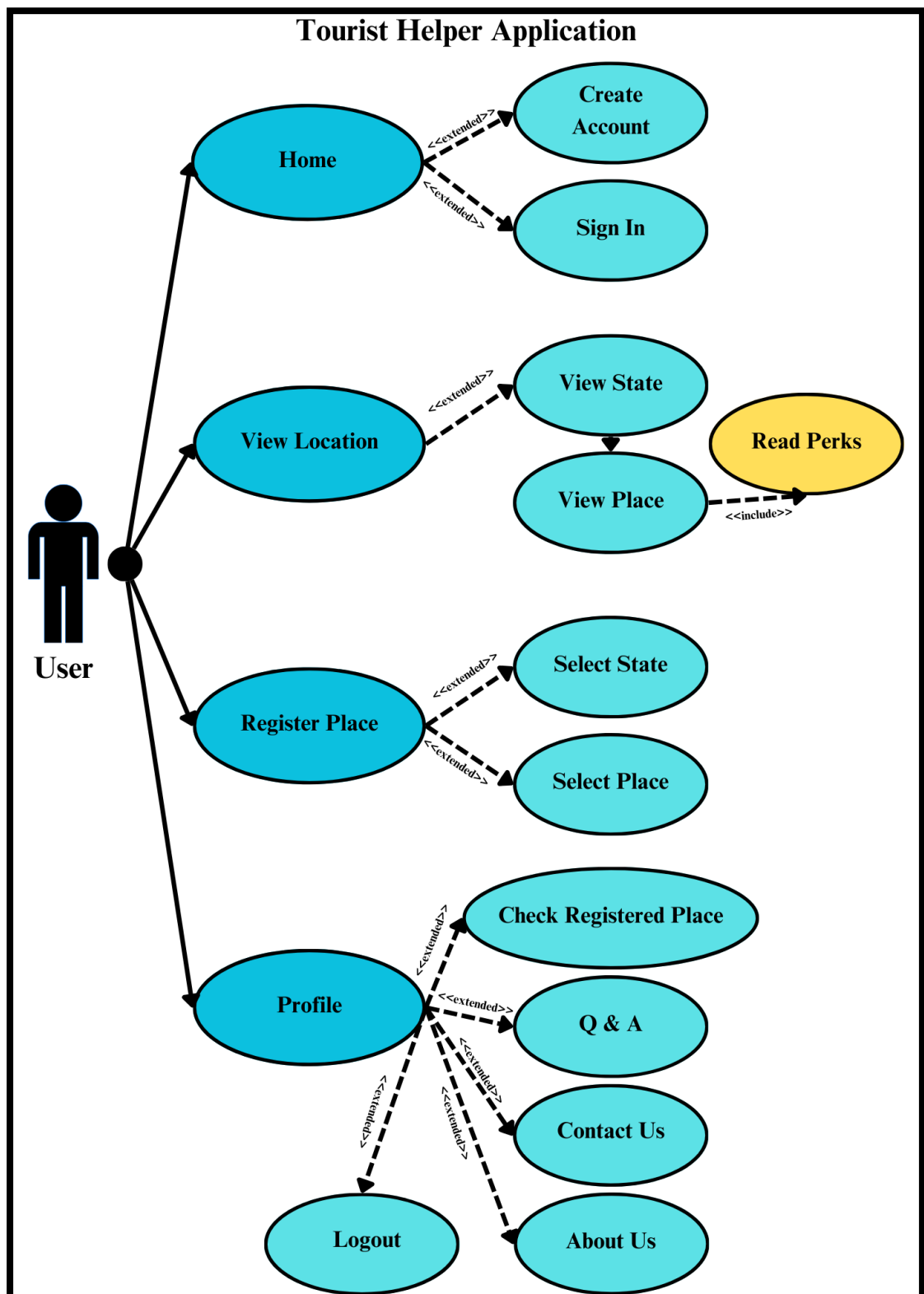


Figure 1: Use Case Diagram of Tourist Helper Application

3.0 THE COMMON STRUCTURE OF TREE WIDGETS WHEN DESIGNING AND DEVELOPING

3.0.1 WIDGET TREE

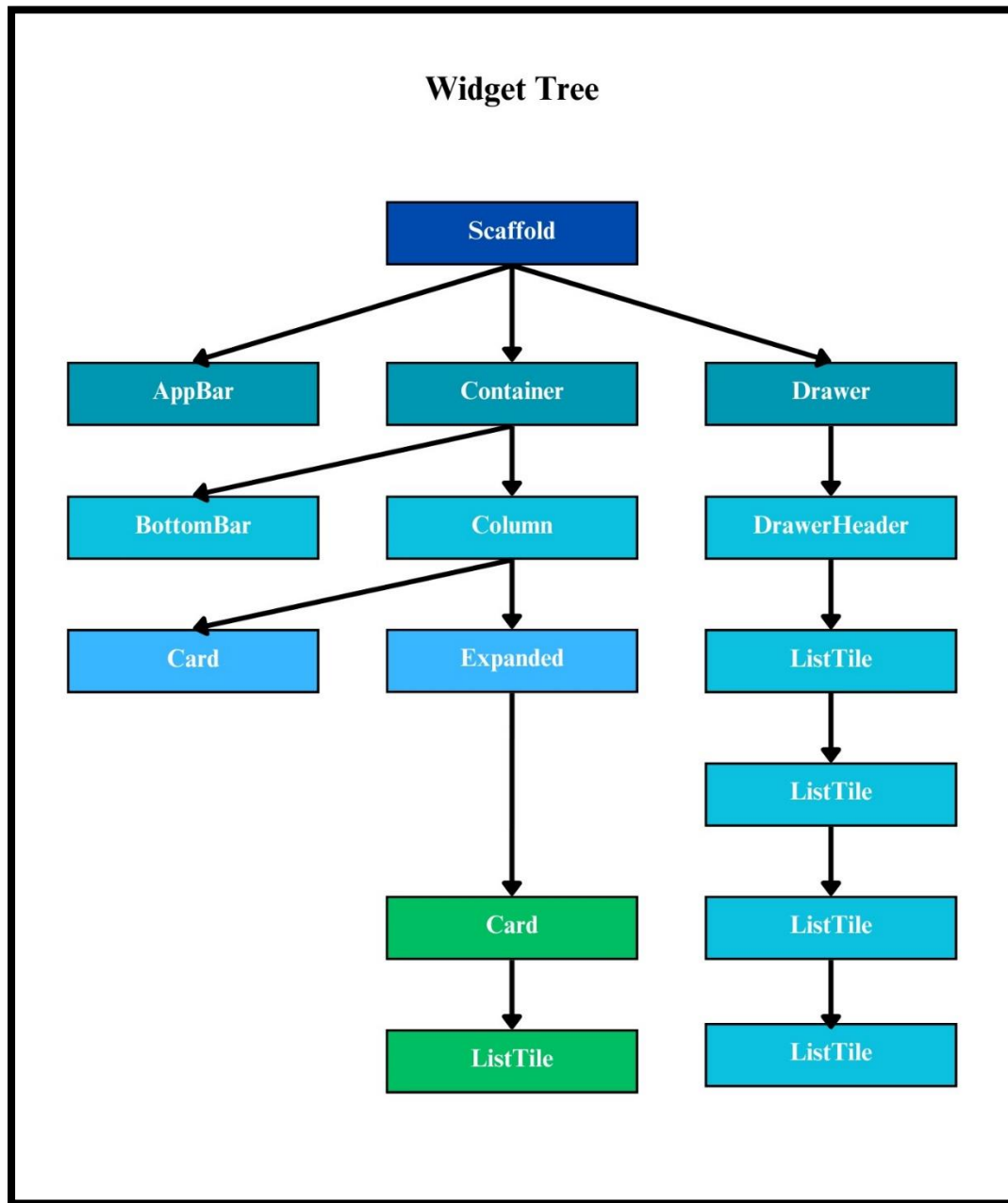


Figure 2: Widget Tree of Tourist Helper Application

3.0.2 WIDGET TREE EXPLANATION

1. Scaffold: The top-level widget providing basic structure for your screen.
2. AppBar (MyAppBar): The app bar at the top of the screen displaying title "Registered Place."
3. Container: A container holding the main content of the screen.
4. Column: A column widget arranging its children vertically.
5. Card (Title: "Registered Place"): A card displaying the title "Registered Place."
6. Expanded (ListView.builder): An expanded widget takes the remaining space, containing a ListView.builder to display a dynamic list of registered places.
7. Card (List item for each registered place): A card for each registered place in the list.
8. ListTile: A list tile within the card, displaying information about a registered place, including an image, state, place, and a delete icon.
9. BottomBarWidget: A widget at the bottom of the screen, serving as a navigation or action bar.
10. Drawer (MyDrawer): A side drawer that can be opened to reveal additional navigation options.
11. DrawerHeader: The header section of the drawer, potentially displaying user-related information.
12. ListTile (Menu item for "Registered Place"): A menu item in the drawer for navigating to the Registered Place screen.
13. ListTile (Menu item for "Q & A"): A menu item in the drawer for navigating to the Q & A screen.
14. ListTile (Menu item for "Contact Us"): A menu item in the drawer for navigating to the Contact Us screen.
15. ListTile (Menu item for "About Us"): A menu item in the drawer for navigating to the About Us screen.
16. ListTile (Menu item for "Logout"): A menu item in the drawer for logging out.

4.0 FLUTTER WIDGET AND FEATURES ADOPTED IN THE APPLICATION

4.0.1 FLUTTER WIDGET

1. Scaffold – Provides the basic structure of visual interface.
2. AppBar – Top of the bar.
3. Container – A box that have other widgets with decorations.
4. Column – A widget that arranges its children in vertical.
5. Row – A widget that arranges its children in horizontal.
6. Card - Material design card.
7. Padding – Provide space around another widget.
8. Text – Display text.
9. TextField – For text input.
10. ElevatedButton – A material design raised button.
11. DropdownButton – Button for selecting by dropdown menu.
12. CircleAvatar – A circular avatar for image or object.
13. Icon – A graphic symbol representing object or action.
14. GestureDetector – Detect gestures.
15. AlertDialog – A dialog box.
16. Image – A widget for displaying image.
17. ListView – A scrollable list.

Rare:

18. CupertinoSlidingSegmentedControl – Sliding animation.
19. SingleChildScrollView – Enable scrolling for child widgets.
20. BackdropFilter – Applies a filter to the existing painted content behind it.
21. RatingBar – Allows users to provide ratings.

4.0.2 FEATURES ADOPTED

1. Image Upload – Apply ‘Image Picker’ to allow picking image from external.
2. Navigation – Navigate between different pages.
3. State Management – To manage state of widget.
4. Firebase Integration – Storing and retrieving data.
5. Dialogs – Showing dialog box for editing.
6. Drawer – Navigation menu to other section or page.
7. Gradient Background – To enhance visual appeal.
8. List Views – Displaying list of registered places.
9. Column and Row Layouts – Organize widget in columns and rows.
10. Gesture Detection – Detect gestures for interactive elements.
11. Text Editing -Allow user to edit text.
12. SnackBar – For notification after deleting place.
13. Provider Package – For state management.
14. Image Corousel – To create a swipeable image carousel.
15. Toggle Switch – To switch between places.
16. Popup – Shows a modal bottom sheet with blurred background.

5.0 SAMPLE OF INTERFACE WITH EXPLANATION



Figure 3: Interface Design

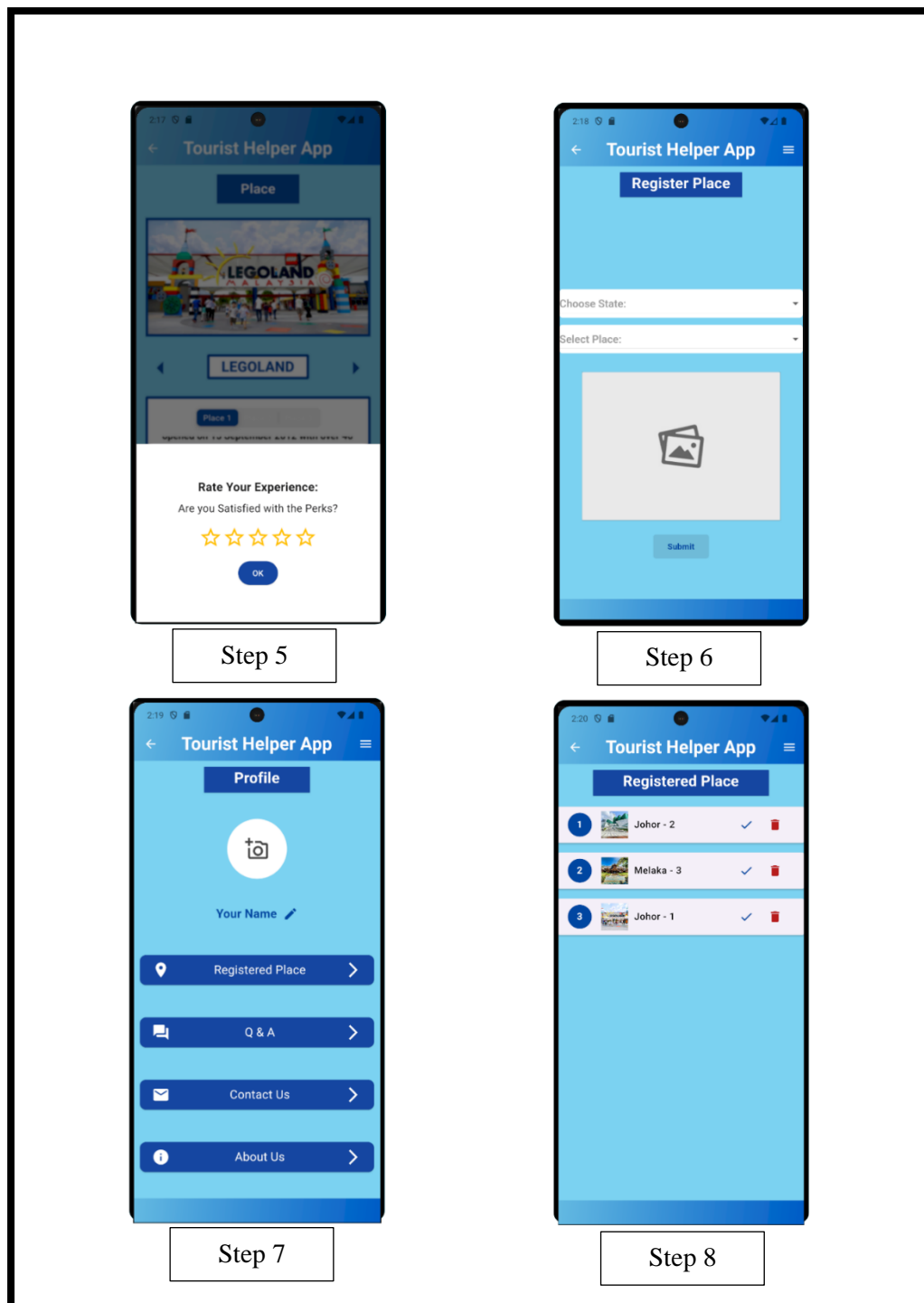


Figure 4: Interface Design

INTERFACE EXPLANATION

1. **Step 1 (Home Page)** – This is the first interface or Home Page for Tourist Mobile Application.
2. **Step 2 (Sign In)** – From the home page, if user already have existing account, user can directly click the sign in button, if user does not have account, user must create an account first and then sign in.
3. **Step 3 (View Location)** – This is the page for user to view the State of the Malaysia (not all state is included) unless there is an update in the application.
4. **Step 4 (View Location)** – User need to click the image of any state to view the places in the state. Currently have 3 places for each state with introduction and ‘Perks’ which is main reason the use of application.
5. **Step 5 (View Location)** – In the same page of view places, whenever user click the arrow left or right button, the sheet that display ‘Feedback for Categories’ will pop up from the bottom. This is not compulsory to be rated by the user.
6. **Step 6 (Register Place)** – After user finish review of places, user need to register place to get and to acquire the ‘Perks’ for place.
7. **Step 7 (Profile)** – The registered place is in the profile after user finish register the place. The list of registered places is under ‘Registered Place’.
8. **Step 8 (Registered Place)** – Here, user can click to check their registered place and can show to the crew or worker or staff of the place whenever user tour the place.

6.0 CONCLUSION

To conclude, the Tourist Helper Application aims to enhance the tourist experience by offering the ‘Perks’ and information about the place they want to tour in Malaysia. It incorporates features for user registration, feedback, and accessing exclusive benefit (Perks) in creating a comprehensive platform for tourist to plan and enrich their travel experiences. In addition, having this type of application can avoid from tourist to get scammed by locals in every way such as transportations, foods, accommodations and in an easy word is scammed in ‘tourism’.

To protect against scams, this Tourist Helper Application is developed and really in needed in this global generation. It’s also advisable to stay informed about the local customs and practices to better navigate potential scams. Moreover, the emphasis on user feedback and the ability to register places contribute to a dynamic community-driven platform, where the collective experiences of tourists can guide others in making well-informed choices. The ‘Perks’ system is the main layer of incentive for users to actively engage with the application creating a mutually beneficial relationship between tourists and the places the explore.

7.0 REFERENCE

HOME BACKGROUND APPLICATION

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