UNIVERSITI MALAYSIA TERENGGANU

ASSIGNMENT 2

(PROJECT MONITORING AND TRACKING APP)

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MOBILE FRAMEWORK (CSM3114)

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Executive Summary

In the dynamic realm of competitive IT, ABC Technologies is poised to reshape business operations with a strategic focus on innovative mobile applications. Recognizing the growing importance of mobile solutions, these applications aim to optimize remote access, facilitating seamless integration into corporate structures. The goal is to enhance accessibility, user-friendliness, and personalization, fundamentally changing the way business services are delivered and experienced.

At the forefront of this initiative is ABC Technologies' Project Monitoring and Tracking App. This robust and user-centric platform is designed to revolutionize project management within the IT landscape. With a keen emphasis on secure login, streamlined project registration, real-time activity updates, and progress tracking, the app ensures a seamless and efficient project management experience. Its user-centric design promotes accessibility for both novice and experienced users, while collaborative features enhance team coordination. The app's adaptability and integration capabilities make it suitable for projects of varying sizes and complexities, promoting scalability and aligning with the ever-evolving needs of businesses.

Embracing this innovative solution heralds, a new era of efficient and transparent project management. The Project Monitoring and Tracking App simplifies project workflows, providing intuitive dashboards for a comprehensive view of project status. ABC Technologies envisions a future where success is just a click away, where businesses confidently navigate the digital landscape, leveraging transformative tools that not only optimize project management but also contribute to the broader goal of making business services more accessible, easy to use, and personalized. With ABC Technologies, the convergence of efficiency, transparency, and success is at the forefront of the mobile revolution.

Use Case

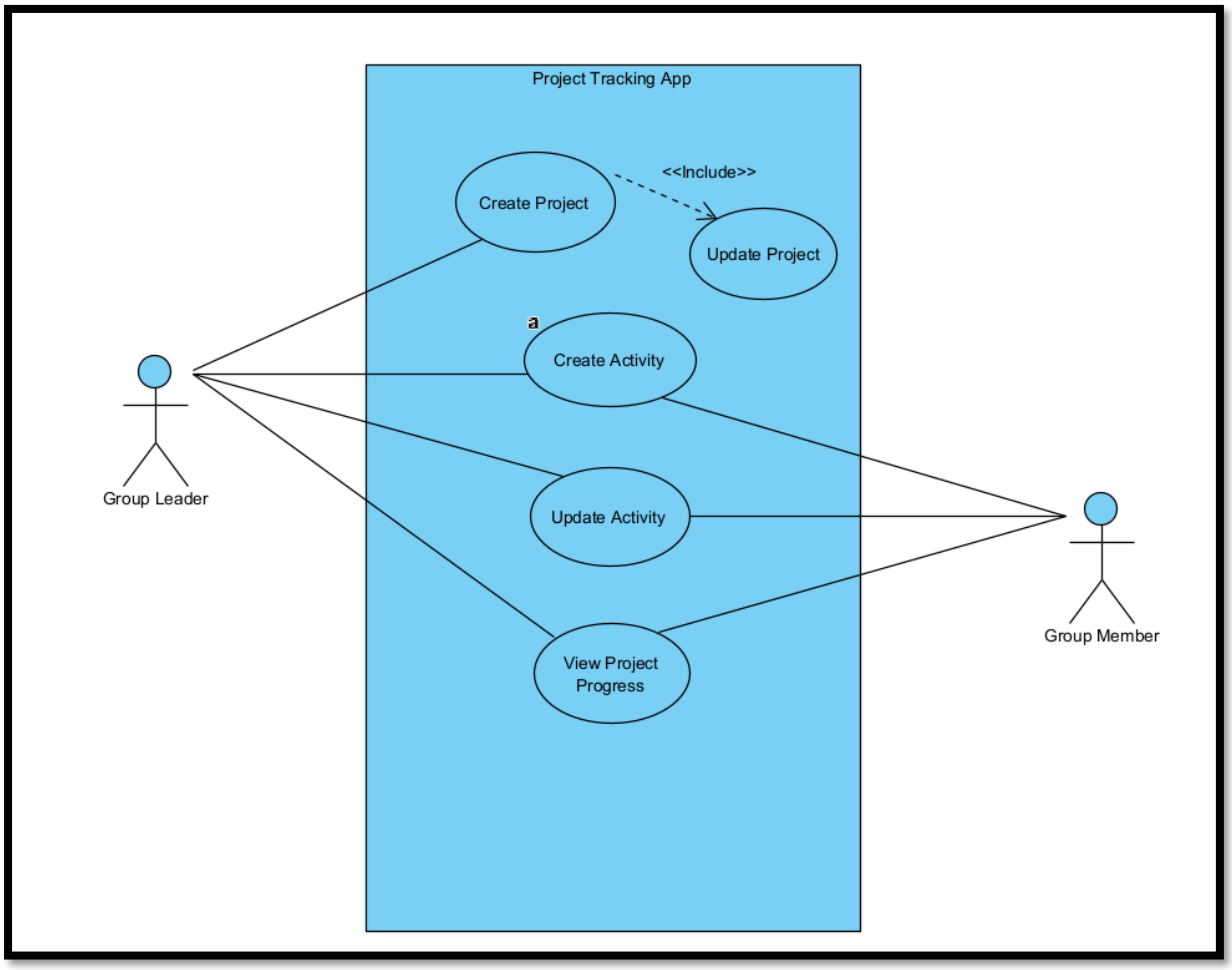
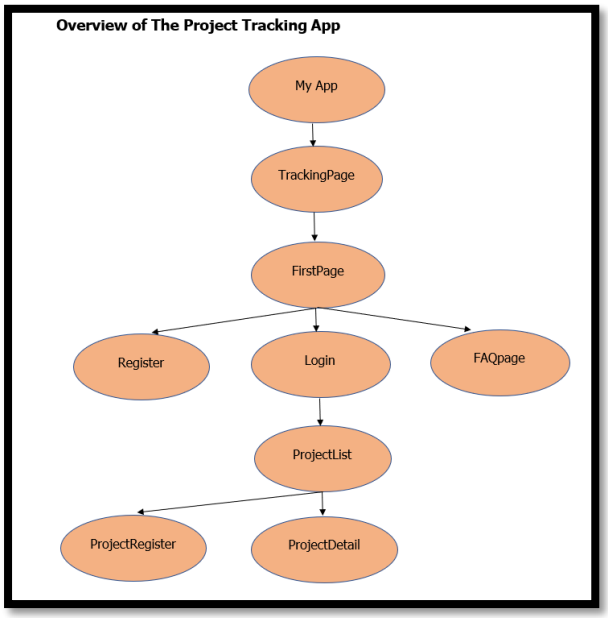
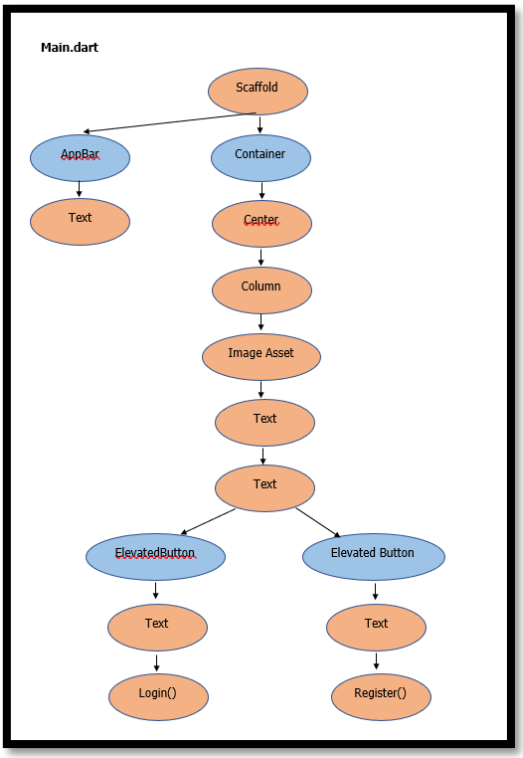


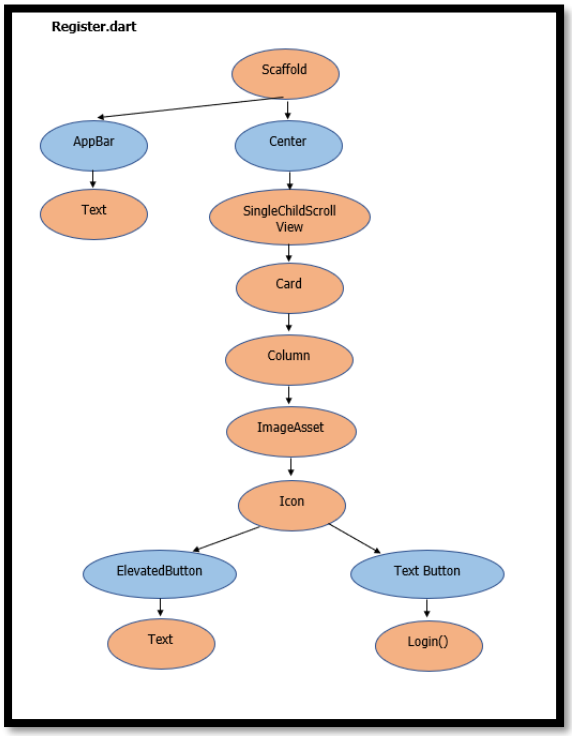
Figure 1

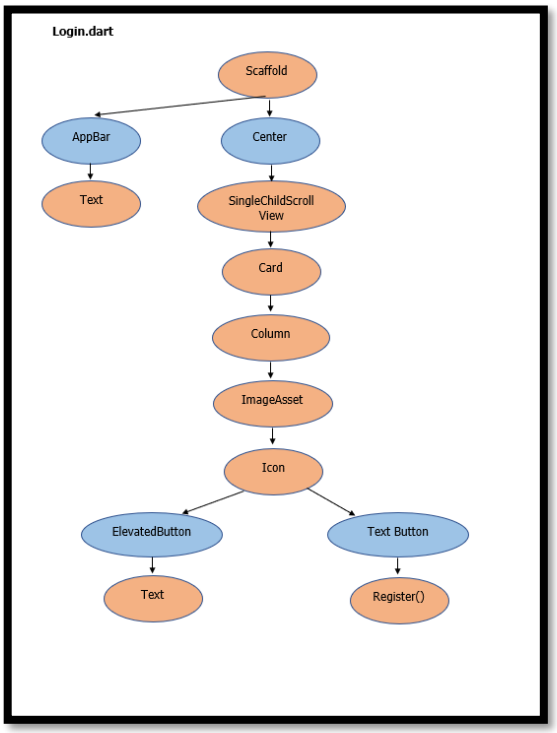
The figure 1 shows the Project Tracking App by ABC Technologies delineates clear use cases for group leaders and members. Group leaders wield the authority to initiate projects, create activities, update project, view task progress, and monitor overall project advancement. Simultaneously, group members are equipped to contribute actively by creating activities, updating progress, and accessing real-time project insights. This dual-role functionality ensures a cohesive and streamlined project management experience, fostering collaboration and efficiency within the app's framework. ABC Technologies' app thus caters to the diverse needs of both leadership and team members, facilitating a seamless and structured approach to project tracking.

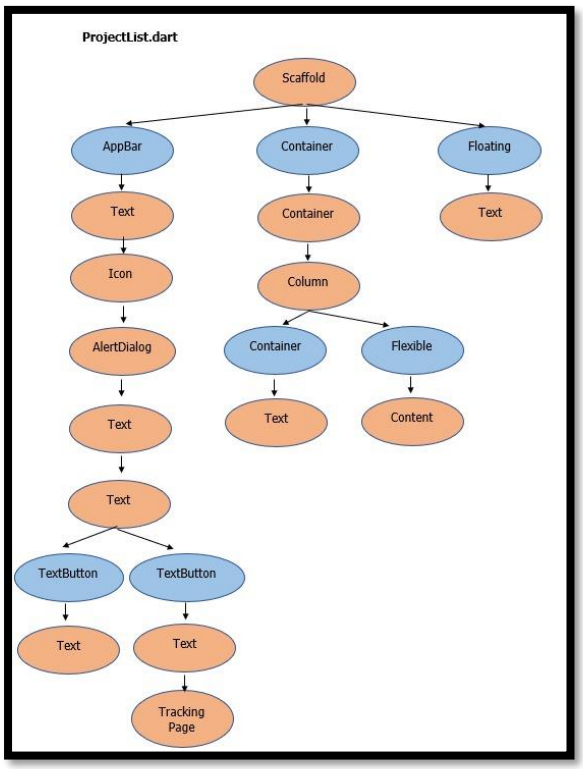
Structure of Tree Widgets

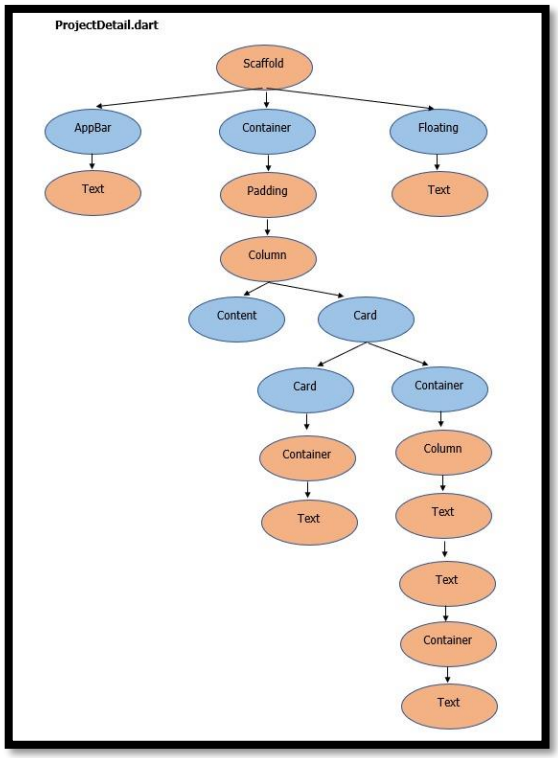









ProjectList.dart
Scaffold
AppBar
Container
Floating
Text
Container
Text
Icon
Column
AlertDialog
Container
Flexible
Text
Text
Content
Text
TextButton
TextButton
Text
Text
Tracking Page


ProjectDetail.dart
Scaffold
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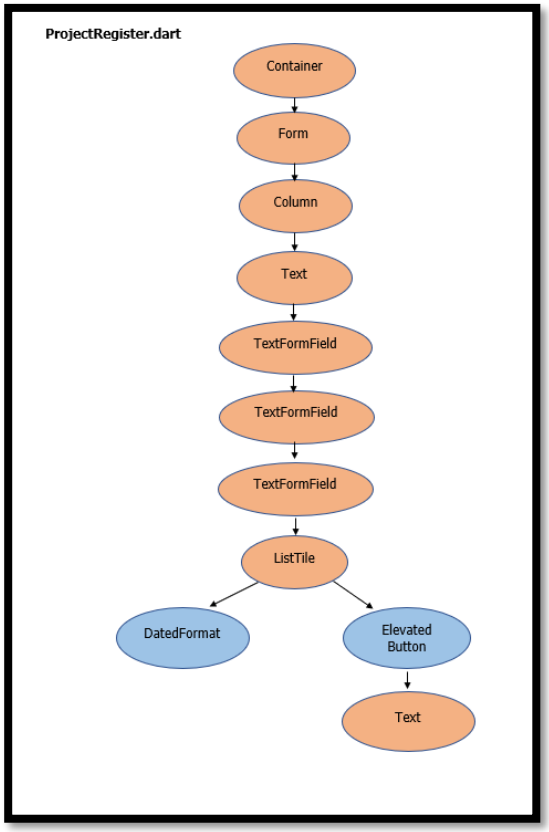
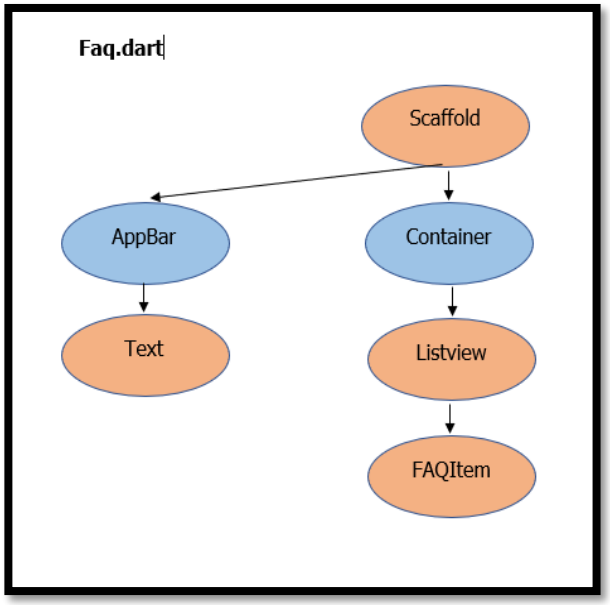
Floating
Text
Padding
Text
Column
Content
Card
Card
Container
Container
Column
Text
Text
Text
Container
Text


ProjectRegister.dart
Container
Form
Column
Text
TextFormField
TextFormField
TextFormField
ListTile
DatedFormat
Elevated Button
Text


Faq.dart
Scaffold
AppBar
Container
Text
Listview
FAQItem

Flutter Widget and Features Adopted in Application

List of Flutter Widget that have been used in this application

1. ListView: A scrollable list of widgets.
2. ExpansionTile: A Material Design expansion tile.
3. SingleChildScrollView: A box that can contain a single scrollable widget.
4. TextFormField: An input field for text.
5. ListTile: A single fixed-height row that typically contains some text as well as a leading or trailing icon.
6. DateFormat: A utility for formatting and parsing dates.
7. showDatePicker: A method to display a date picker.
8. CircularProgressIndicator: A widget that shows progress along a circle.
9. ListView.builder: A scrollable list of widgets that are created on demand.
10. InkWell: An ink splash on a Material widget that responds to touch.
11. Flexible: A widget that controls how a child of a [Row], [Column], or [Flex] flexes.
12. GestureDetector: A widget that detects gestures.
13. GlobalKey<FormState>: Used in _formKey and _updateFormKey to manage the form state for adding and updating activities.
14. DropdownButtonFormField: Used to display a dropdown for selecting activity progress status.
15. Expanded: Used to make the ListView expand to fill the available space.
16. SnackBar: Displayed to indicate successful registration of an activity and a project.

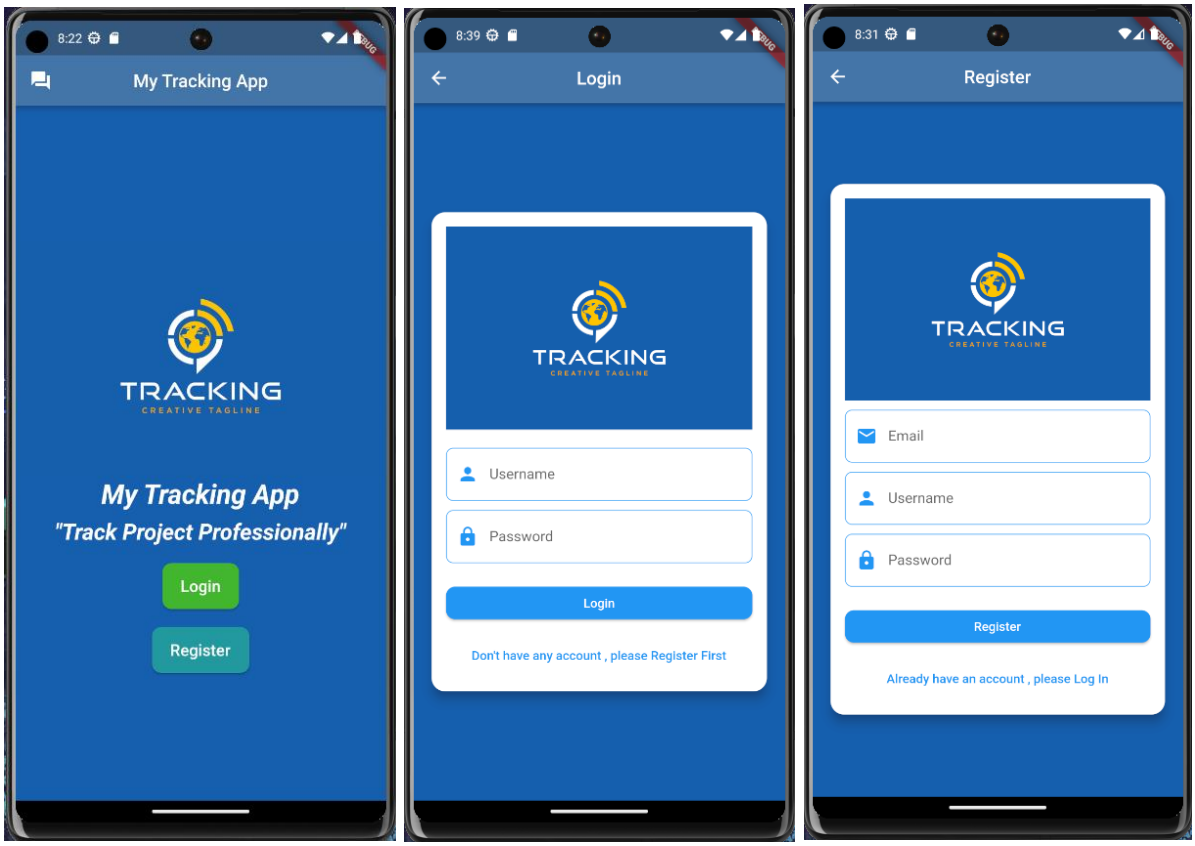
The Features are adopted in application

1. CRUD Functions for Project:
    - Create: Enables users to add new projects to the system.
    - Read: Retrieves and displays information about existing projects.
    - Update: Allows users to modify project details.
    - Delete: Permits users to remove projects from the system.
2. CRUD Functions for Project Activity:
    - Create: Facilitates the addition of new activities within a project.

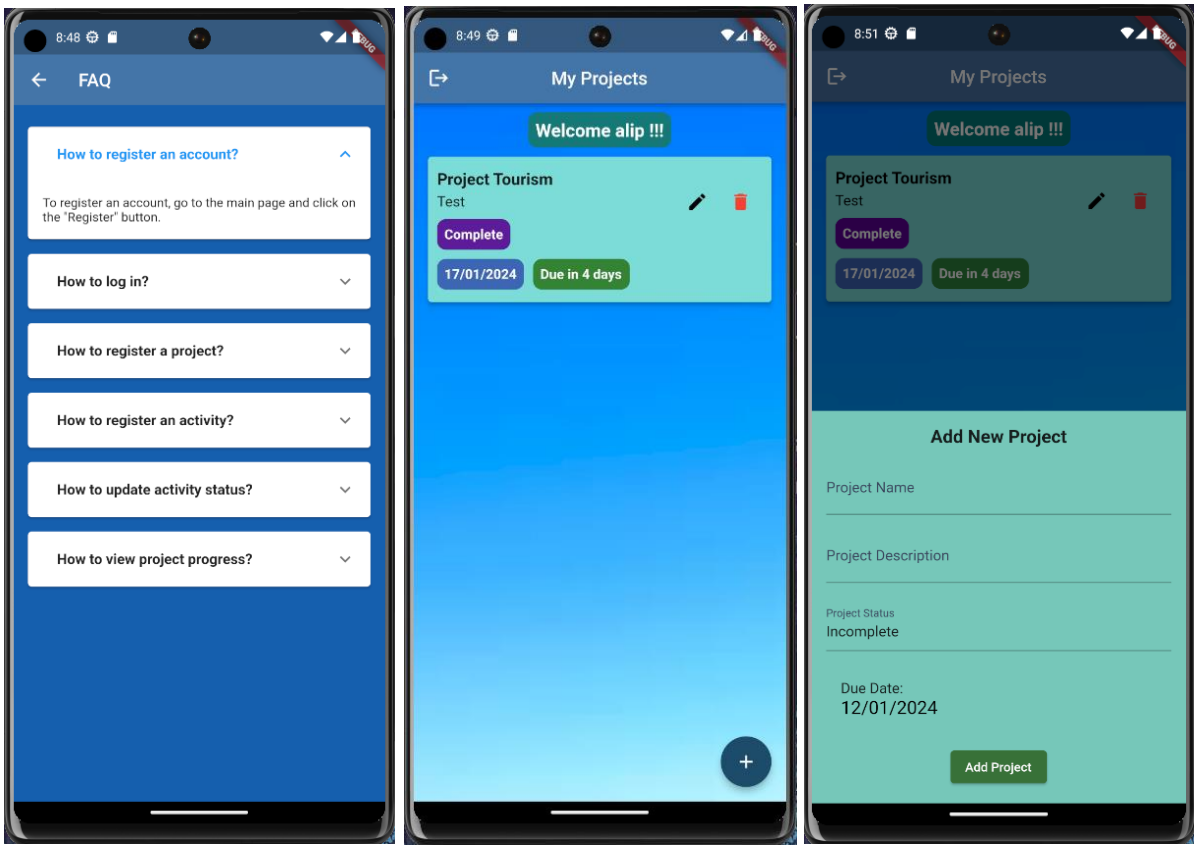
- Read: Retrieves and displays information about existing project activities.
- Update: Allows users to modify activity details.
- Delete: Permits users to remove activities from a project.

3. Update Activity Status:
    - Allows users to update the status of an activity using a dropdown list, providing a clear and efficient way to track progress.
4. Update Project Status:
    - Enables users to efficiently track the progress of a project by updating its status through a dropdown list, offering a clear and effective method.
5. Project Progress Display:
    - Automatically calculates and displays the project progress in percentage once all activities within the project are marked as "Complete."
6. Project Deadline Display:
    - Shows the deadline of a project, which is captured during the project registration process.
7. Individual Project Due Dates:
    - Displays the due date for each project, providing users with a clear timeline for project completion.
8. Frequently Asked Questions (FAQ) Page:
    - Includes a dedicated FAQ page to address common questions and concerns users may have about the project tracking application, enhancing user understanding and support.
9. Login Page:
    - Provides a secure login mechanism, allowing users to access the project list page during each session.
10. User Registration Page:
    - Includes a registration page for group leaders or any user interested in utilizing the project tracking application. This page captures essential user information for account creation and system access.

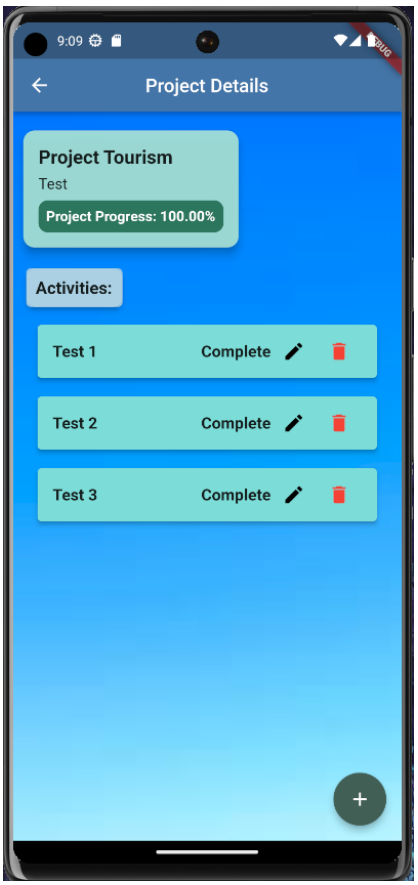
Sample of interface with Explanation

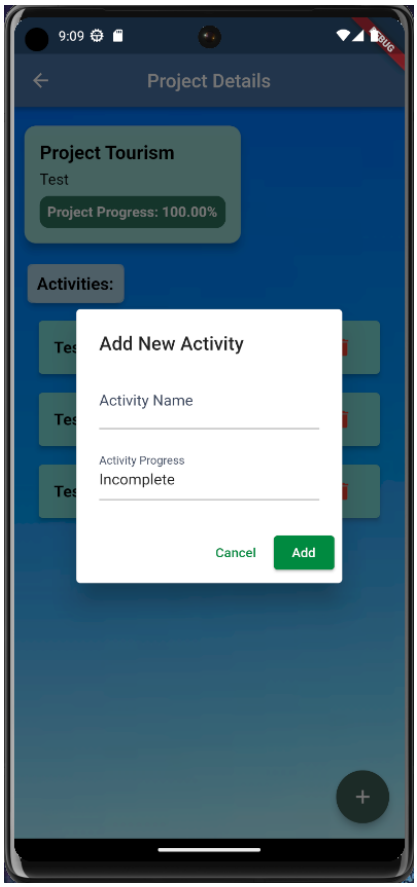


The main page features the trademark of the application, alongside prominent access points such as a login button and a register button. Positioned on the left app bar is an icon leading to the FAQ page. Upon entering the login page, users encounter fields prompting entry of their username and password. Upon successful validation against the database, users are directed to the project list page. Adjacent to the login button, a text button facilitates navigation to the register page, catering to users without an existing account. Transitioning to the register page, users are prompted to input their email, username, and password. Upon completion of the form, clicking the register button stores the provided information in the database. A text button, located beneath the register button, facilitates navigation to the login page, catering to users with existing accounts.



The FAQ page is designed to address common inquiries, providing answers to questions such as how to register, log in, and register a project, among others. It serves as a comprehensive resource for users seeking guidance on various aspects of the application.Moving to the Project List page, the left app bar prominently features a log-out button to conclude the user session. Positioned below the app bar is the user session's name. Further down, a list of projects is displayed, encompassing essential project details such as project name, description, project status, deadline, and days remaining until the due date. Each project entry is equipped with icons allowing users to edit or delete the respective project. Adding to the user interface is a floating action button at the bottom. When activated, this button reveals a form for adding a new project. The form incorporates attributes such as project name, description, project status specifies an initial status of "Incomplete" and an option for selecting the project's due date using a date picker. Upon completion of the form, clicking the submit button saves the input in the database.





The Project Details page provides an in-depth overview of a project's key attributes, including project name, description, and a dynamic Project Progress metric calculated as a percentage based solely on activities marked as "Completed." Positioned beneath the Project Progress section is a comprehensive list of activities associated with the project. Each activity entry displays its name and current status. Users are empowered to update both the activity name and status. Additionally, activities can be deleted, affording users a streamlined approach to managing project tasks.Further enhancing functionality is the "Add New Activity" section. This feature prompts users to input the name of the activity and specifies an initial status of "Incomplete." Upon clicking the add button, the input is securely stored in the database, contributing to the ongoing development and tracking of project-related activities.

Conclusion

In conclusion, ABC Technologies' Project Monitoring and Tracking App encapsulates the company's forward-thinking approach to mobile applications, particularly in the realm of project management. This user-centric platform not only streamlines project workflows with secure login, real-time updates, and intuitive dashboards but also aligns seamlessly with the broader corporate vision of enhancing accessibility and personalization in business services. As businesses adapt to the demands of the competitive IT landscape, ABC Technologies provides a beacon of efficiency, collaboration, and scalability, setting the stage for a future where success is intricately connected to the innovative use of technology.

Embracing this transformative solution from ABC Technologies marks a decisive step toward a more efficient and transparent era of project management. With adaptability and integration capabilities catering to projects of diverse sizes and complexities, the app serves as a catalyst for businesses seeking not only streamlined operations but also a strategic edge in a digital-centric business environment. ABC Technologies envisions a landscape where their mobile applications redefine the business paradigm, offering a user-friendly and collaborative approach that propels enterprises toward sustained success in the ever-evolving world of IT solutions.

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