



**UNIVERSITI MALAYSIA TERENGGANU
FACULTY OF OCEAN ENGINEERING TECHNOLOGY &
INFORMATICS**

**CSM3114
FRAMEWORK-BASED MOBILE APPLICATION DEVELOPMENT**

Project 1 – University Personal Mobile Apps Prototype

StudyUnity: Study Group Finder Application

Github: [Source Code](#)

Prepared by:
S62596
NUHA BINTI MOHD NORDIN

Prepared for:
DR. MOHAMAD NOR BIN HASSAN

BACHELOR'S DEGREE COMPUTER SCIENCE
(MOBILE COMPUTING) WITH HONOURS
SEMESTER I 2023/2024

Table of Contents

1.0 Executive Summary of the Prototype	3
2.0 Prototype Design.....	4
3.0 User Interface for the Application	5
4. 0 Potential Commercial Value and Pricing.....	7
5.0 Lesson Learned	8
6.0 Conclusion	8
7.0 References.....	9

1.0 Executive Summary of the Prototype

The main goal of the StudyUnity mobile application prototype is to improve students in campus collaborative learning experience by making it easier for study groups to be formed. By creating a supportive environment for knowledge sharing and academic success, the application aims to close the gap between students who similar academic interests.

One issue that has been discovered is the laborious and frequently difficult task of manually creating study groups. Finding appropriate groupmates can be difficult for students, which leads to less-than-ideal study sessions and lost educational chances.

The StudyUnity prototype uses Flutter's cross-platform functionality to create a simplified and user-friendly platform, providing a complete solution. StudyUnity ensuring that students can learn and of improving their participation in the learning process. Additionally, this application will encourage students to learn in many areas that will meet their various demands (Ward, 1987). To facilitate and improve the process of forming study groups, the application includes a list of groups that users can join, and the ability to establish new groups.

In summary, the prototype offers a scalable and approachable solution to the highlighted issue. Through effective study group building, the StudyUnity application could greatly enhance students' collaborative learning experience and promote academic success.

2.0 Prototype Design

The StudyUnity prototype has been meticulously designed with a primary emphasis on delivering an intuitive and user-friendly experience. The application's design is comprehensively outlined through the utilization of wireframes.

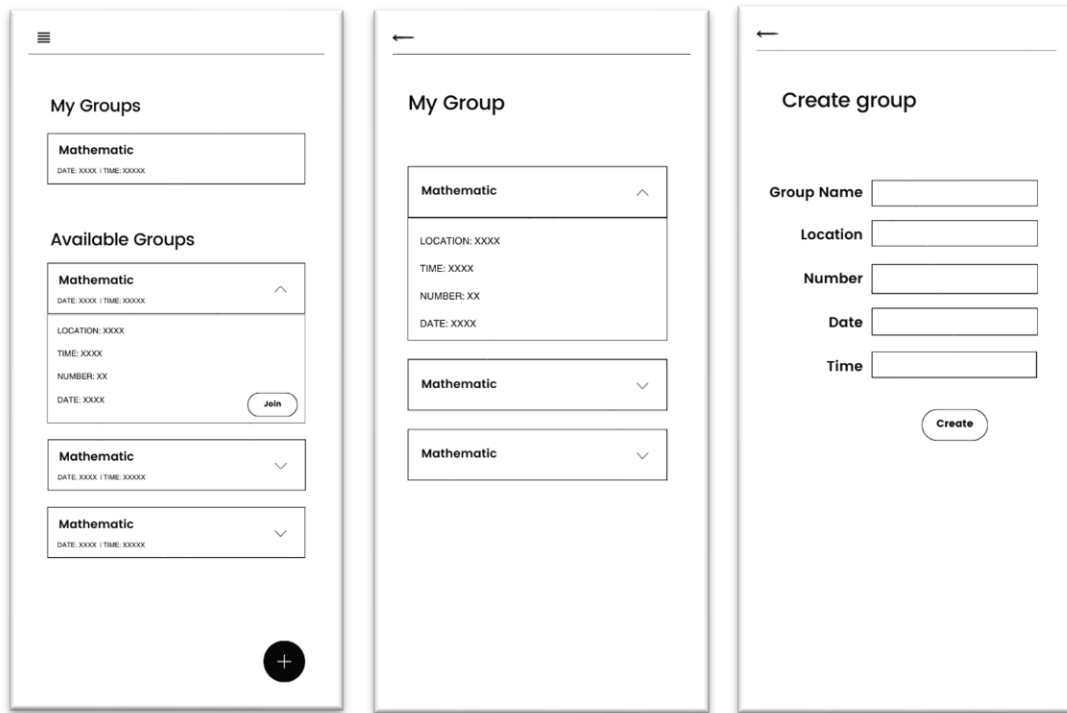


Figure 1

Figure 2

Figure 3

The 'Home' screen shown in *Figure 1* serves as a central hub, prominently featuring a display of joined groups, alongside a list of available study groups ready to be joined. Additionally, there is a floating action button that give quick navigation to create new group. *Figure 2* shows the 'My Group' screen present a consolidated list of the study groups that used has joined, providing detailed information about each group. Lastly, *Figure 3* shows the 'Create Group' screen offering a user-friendly form to facilitate creation of new study groups.

This design approach prioritizes a streamlined and engaging user experience, enhancing the overall efficacy of the platform.

3.0 User Interface for the Application

The user interface (UI) for the StudyUnity application is designed to offer a captivating and intuitive experience for users. It includes a range of interactive and visual components that enhance the overall usability and design of the application.

The visual design of the StudyUnity application incorporates the following elements:

- Colour Palette

The chosen monochromatic colour palette is a key element of StudyUnity UI, contributing to a clean and minimalist appearance. The predominantly black and grey tones not only create a visually appealing interface but also align with the professional and serious tone often desired in educational applications.

- Typography

A high contrast between black, grey, and white hues has been employed to optimize text readability across the StudyUnity application. The careful selection of clear and readable fonts for all text elements further enhances the user's ability to absorb information effortlessly. This commitment to legibility is fundamental in ensuring that educational content is easily accessible and comprehensible for users.

- Iconography

The integration of intuitive icons plays a pivotal role in representing various actions and features within the StudyUnity application. These icons are designed to convey functionality succinctly, contributing to a seamless user experience. Consistency in iconography has been prioritized to ensure that users can quickly grasp the meaning behind each icon, thereby facilitating efficient navigation and interaction.

This visual design can be seen being applied to the application from the output below. *Figure 4* shows the screenshot of 'Home' screen output, where I leveraged the Stateful Widget and setState() (StatefulWidget class - widgets library - Dart API, n.d.) to dynamically updates the user interface based in user interactions, which is joining a group where it will move the records. The user interface here contains two different sections which are 'My Group' section,

displays a section for the user's joined groups, and 'Available Group' section, displays available group. Each group is represented as a Card in a list. Users can expand a group to view additional details.



Figure 4

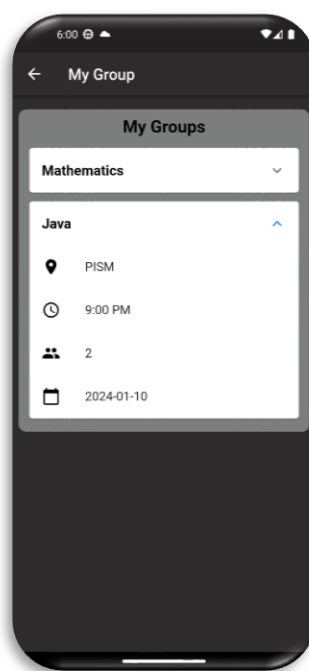


Figure 5

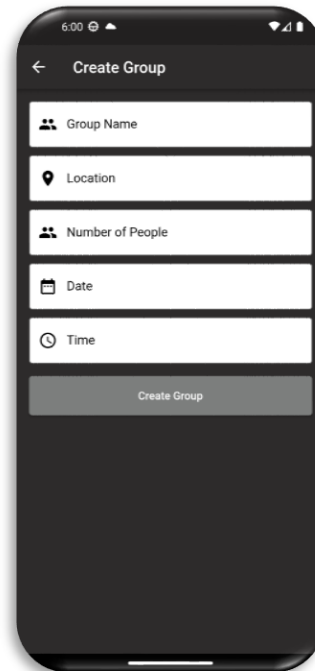


Figure 6

'My Group' screen shows in *Figure 5* used Expansion Tile widget (Srivastava, 2022) which create expandable tiles that reveals additional details when tapped. If there are joined groups, each of it created Card that contains Expansion Tile.

Lastly, 'Create Group' screen in *Figure 6* implemented Form for input fields for group creating purposes. The date and time selection used 'showDatePicker' and 'showTimePicker' to enhance user interaction.

4.0 Potential Commercial Value and Pricing

The StudyUnity application holds significant potential commercial value, presenting an opportunity for expansion and growth in the educational technology market. With its captivating and user-friendly interface, StudyUnity addresses critical need for effective and streamlined study group management. The potential for widespread adoption among students, educators, and institutions is substantial, as the application streamlines collaborative learning experiences and enhances educational outcomes.

The commercial value of StudyUnity is underscored by its ability to address the evolving needs of students, educators, and institutions alike. The application's features, such as the 'Home' screen's easy group navigation, the 'My Group' screen's comprehensive study group management, and the seamless 'Create Group' screen, position StudyUnity as a valuable tool for enhancing collaboration and academic engagement.

In terms of pricing, a competitive and scalable model is envisioned to accommodate a diverse user base. Pricing for the StudyUnity application is strategically set at an accessible rate of RM5.00 per user, ensuring affordability while reflecting the application's premium features and potential impact on collaborative learning.

As the education technology market continues to expand, StudyUnity's potential for growth is considerable. The strategic incorporation of additional features, ongoing updates, and responsive customer support further enhances its long-term commercial viability. By leveraging its intuitive design and robust functionality, StudyUnity stands poised to not only meet but exceed the expectations of users, establishing itself as a cornerstone in the educational technology landscape.

5.0 Lesson Learned

The development journey of the StudyUnity mobile application prototype has been a valuable learning experience, providing insights into various aspects of application design, user interaction, and project management.

- **User-Centric Design**

Creating user-friendly interface requires a deep understanding of the end-users' needs and preferences. The lesson learned here is the significance of user feedback and the iterative design process in refining the application's usability.

- **Coding Skills**

The hands-on coding experience provided by developing StudyUnity enhanced my proficiency in Flutter, Dart, and overall mobile application development.

- **Pricing Model**

Determining the pricing for the application required a thoughtful balance between affordability and the perceived value of the features offered. The lesson learned here is the necessity of conducting market research to understand user expectations and competitor pricing, ensuring StudyUnity's competitiveness in the educational technology market.

6.0 Conclusion

In conclusion, the StudyUnity mobile application prototype emerges as a promising solution for improving collaborative learning experiences on campus by making it easier to form study groups. The intuitive design prioritises user-friendly navigation and engagement, as demonstrated in the prototype design and user interface sections. StudyUnity's prospective commercial value and pricing strategy demonstrate the company's feasibility in the educational technology market by providing an affordable yet premium service to a diverse user base. As a result, StudyUnity not only tackles the recognised difficulty of time-consuming study group formation, but it also has the potential to have a substantial impact on students' academic progress.

7.0 References

- Srivastava, N. (2022). *Expansion Tile in Flutter - FlutterDevs*. Retrieved from Medium:
<https://medium.flutterdevs.com/expansion-tile-in-flutter-d2b7ba4a1f4b>
- StatefulWidget class - widgets library - Dart API*. (n.d.). Retrieved from Flutter:
<https://api.flutter.dev/flutter/widgets/StatefulWidget-class.html>
- Ward, B. A. (1987). *Instructional Grouping in the Classroom Research, School Improvement Research Series*.