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FACULTY OF OCEAN ENGINEERING TECHNOLOGY &
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CSM3114
FRAMEWORK-BASED MOBILE APPLICATION DEVELOPMENT

Project Report 1

Grade Tracker & Calculator Mobile App: Ezy-Score

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1.0 Executive Summary of Prototype

The prototype of this Grade Tracker and Calculator Mobile App: Ezy-Score is a revolutionary tool designed to enhance the academic experience for university students. This all-in-one mobile application streamlines the process of grade tracking and CGPA calculation.

The development of the Grade Tracker and Calculator Mobile App, Ezy-Score, was prompted by several challenges faced by university students in managing their academic responsibilities. Existing methods of using spreadsheets or traditional planners may be time consuming and prone to errors, leading to a need for a more streamlined and automated solution.

Ezy-Score simplifies the grade tracking process by allowing students to input and update their grades for various courses in one centralized platform. The academic overview feature enables students to create a personalized list of enrolled courses, facilitating at-a-glance monitoring of their courses in multiple semesters. By automating the CGPA calculation process, Ezy-Score aims to eliminate manual errors. The automation of CGPA calculation within the Ezy-Score app involves a sophisticated algorithm that processes the grades a student receives across different semesters.

Another feature of the app is its integrated event calendar, which serves as a platform for managing important academic dates such as assessments and examinations. Users can input exam details, including course names, dates, times, and venues. The notes ensure students stay organized, reducing the risk of missing important deadlines and enhancing overall time management.

Grade Tracker and Calculator Mobile App: Ezy-Score prototype is positioned to completely transform the way universities students go about their study journey. By combining grade tracking, CGPA calculation and event scheduling in one user-friendly platform, the app aims to simplify students' lives and contribute to their academic success. Its ability to serve multiple purposes and dedication to continuous improvement make it a potential in the field of academic support tools.

2.0 Prototype Design

The Ezy-Score prototype design showcases four main screens which are Home, MyCGPA, Courses, and MyCalendar. Each screen is designed for simplicity and user-friendly interactions, providing a visual preview of how users will navigate through the essential features of the app.

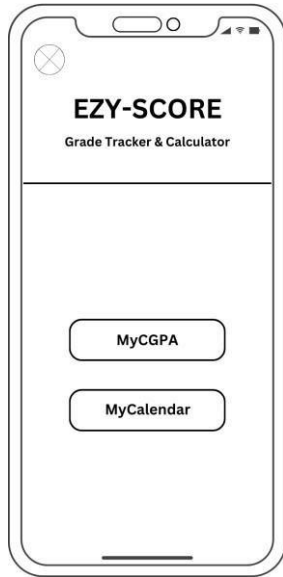


Figure 2.1: Home Screen Design

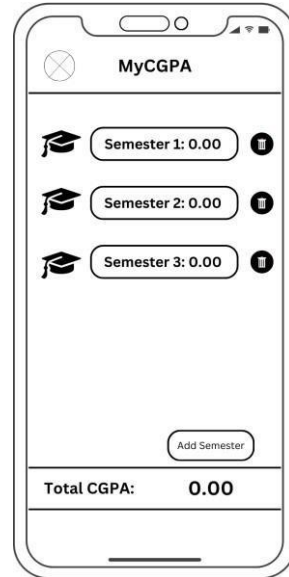


Figure 2.2: MyCGPA Screen Design

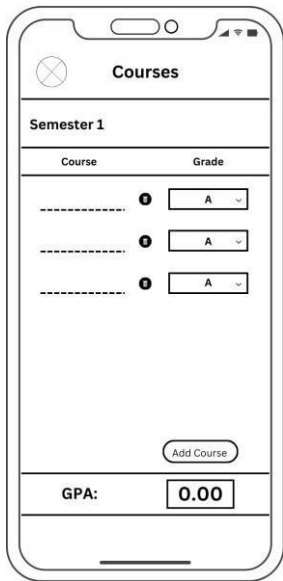


Figure 2.3: Courses Screen Design

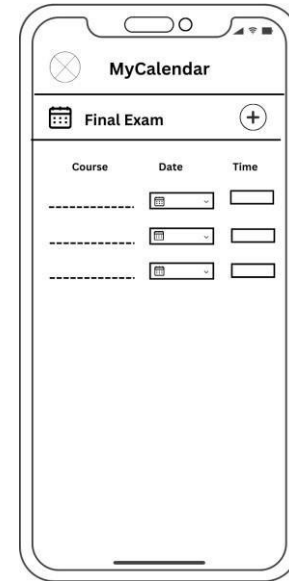


Figure 2.4: MyCalendar Screen Design

3.0 User Interface (UI) of Application

The user interface (UI) of the Ezy-Score Grade Tracker and Calculator Mobile App is thoughtfully designed. Every screen in the application has been created to improve the user experience and ensure a smooth and simple interaction. These are four main screen that have been developed:



Figure 3.1: Home Screen Prototype

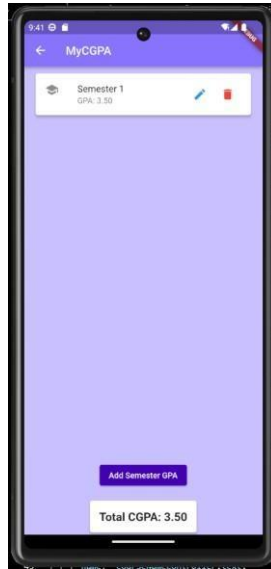
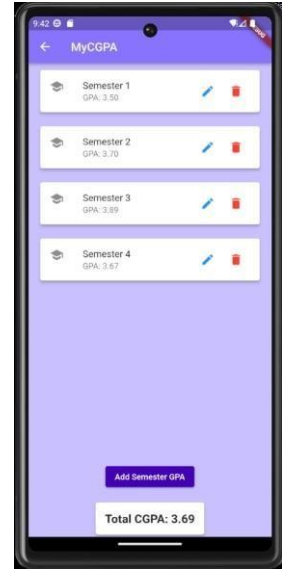


Figure 3.2: MyCGPA Screen Prototype



As illustrated in *Figure 3.1*, the Home screen acts as the central hub with two buttons leading to essential features. The "MyCGPA" button directs users to view and manage their CGPA, while the "MyCalendar" button provides access to a comprehensive calendar for organizing academic events.

A calculated CGPA for each semester is displayed to users on the MyCGPA screen as shown in *Figure 3.2*. The Courses screen, where users enter and modify their grades, can be accessed by tapping on any semester. It is flexible to be able to change or delete the GPA entries for every semester. The cumulative CGPA is prominently displayed at the bottom, offering users a quick overview of their academic progress.

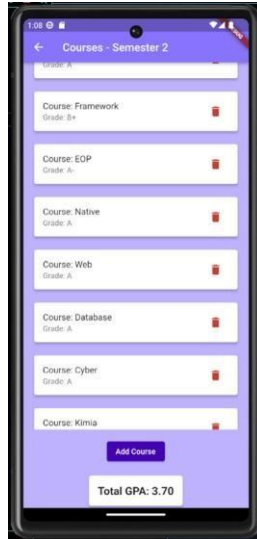


Figure 3.3: Course Screen CGPA Prototype

Users can add enrolled courses and their corresponding grades on the Courses screen as shown in *Figure 3.3*, to create a comprehensive record of their prior academic accomplishments. The lists that displayed makes grades and results easier to observe, which helps users identify where they can improve. To improve clarity and help users evaluate their academic performance, the GPA for the semester is shown at the bottom.

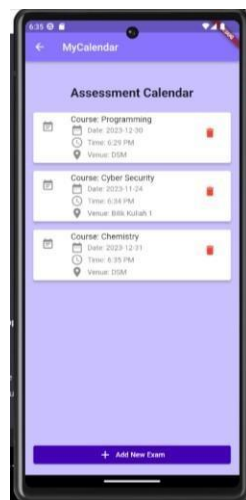


Figure 3.4: MyCalendar Screen Prototype

In the MyCalendar screen, users can set reminders using notes for crucial dates like exams and assessments, as illustrated in *Figure 3.4*. Each note displays the course or subject, date, time, and venue for better organization. Users have the flexibility to delete notes once an event is completed or if they no longer require the reminder, ensuring a personalized approach to managing academic schedules.

4.0 Potential Commercial Value and Pricing of Prototype

The Ezy-Score Grade Tracker and Calculator Mobile App presents a compelling opportunity for commercialization within the university landscape. By offering the app at a suitable price point, universities can unlock new opportunities to enhance productivity and empower their community, fostering seamless collaboration and increased efficiency.

In the realm of education apps, Grade Tracker and Calculator Mobile App are proving to be invaluable tools for college and university students. These applications serve as essential aids for students, enabling them to monitor their academic performance effectively. Beyond simple grade calculations, this mobile app offers a comprehensive set of features. This functionality renders these apps highly valuable for students aspiring to excel in their studies.

Ezy-Score's potential for commercialization within the university domain lies in its adaptability to institutional needs. Universities have the opportunity to benefit from this by creating customized institutional packages that offer huge quantities subscriptions or licenses at a savings. This not only increases students' financial accessibility to the app but also promotes academic excellence across the university.

The Ezy-Score Grade Tracker and Calculator Mobile App opens up a society of new possibilities for increasing efficiency in educational institutions. Seamless integration with existing Learning Management Systems (LMS) can significantly enhance the productivity of both students and educators. By syncing data between Ezy-Score and the university's LMS, the app becomes a centralized hub for academic information, simplifying the user experience and reducing administrative overhead. The data gathered by Ezy-Score can be utilized to identify individual student learning patterns and preferences. This information can then be leveraged to suggest personalized learning paths, helping students optimize their study approaches for better outcomes.

Next, to create a successful app involves a combination of simplicity, affordability, and visibility. By keeping the app user-friendly and cost-effective, developers can attract and retain a substantial user base. Strategic marketing efforts amplify the app's presence, ensuring it reaches its target audience effectively.

To cater to the budget constraints of students, a recommended pricing point is RM 3 per user. This budget-friendly approach aims to enhance accessibility, allowing a larger student population to benefit from the app without a significant financial burden. This approach not only promotes equal opportunity but also reflects our dedication to supporting students in their educational journey by providing a quality yet affordable solution for managing their academic performance.

The education app market holds significant potential for developers and investors focusing on this Grade Tracker and Calculator mobile app. By offering a feature-rich, yet affordable solution, and implementing smart marketing strategies, stakeholders can tap into the vast opportunities within the education technology landscape.

5.0 Lesson Learned

One of the primary lessons learned was when using ‘removeLast’, it is important to ensure that the collection is not empty. Calling ‘removeLast’ on an empty list will result in an unsupported error. To handle this, ‘isEmpty’ property can be used to check if the collection is not empty.

The other lesson I learned is the use of ‘reduce’ provides a concise and expressive way to perform cumulative operation on a collection. ‘reduce’ function is a higher-order function which is a function that can take other functions as arguments or return functions as a result, commonly used with collections, such as lists. This function is used to iteratively combine elements of a collection into a single value (reduce method - ListQueue class - dart:collection library, n.d.).

6.0 Conclusion

As a summary, the Ezy-Score Grade Tracker and Calculator Mobile App stand as a revolutionary tool poised to transform the academic experience for university students. Addressing the challenges of manual grade tracking and CGPA calculation, Ezy-Score streamlines these processes, offering a centralized platform for efficient academic management. From a user perspective, the importance of simplicity, intuitive design, and adaptation emerged as crucial factors. Through user feedback, we learned that continuous improvement is not just a development phase but an ongoing commitment to refining the user experience based on real-world usage. The decision to price the app at RM 3 per user proved effective in ensuring accessibility without compromising on quality. This approach aligns with our commitment to supporting students on their academic journeys. The strategic marketing efforts have not only increased app visibility but also fostered meaningful partnerships, emphasizing the importance of a well-rounded approach to market engagement. Moving forward, the commitment to continuous improvement and addressing the evolving needs of the user base will remain central, ensuring that Ezy-Score continues to contribute meaningfully to the academic success of university students.

7.0 Reference

Biessek, A. (2019). *Flutter for Beginners*. Birmingham: Packt Publishing Ltd.

CodeWithibad. (2022, October 8). *Drop Down Form Field in flutter || DropDown flutter* [Video]. YouTube. <https://www.youtube.com/watch?v=fG7VQ9n6Y90>

DirtyNative. (2020, May). *Formatting a Duration like HH:mm:ss*. From Stack overflow: <https://stackoverflow.com/questions/54775097/formatting-a-duration-like-hhmmss>

Flutter DropdownButton widget. (2023, January 15). From GeeksforGeeks: <https://www.geeksforgeeks.org/flutter-dropdownbutton-widget/>

Flutter Guys. (2023, May 7). *Flutter Tutorial - Time Picker in Flutter* [Video]. YouTube. <https://www.youtube.com/watch?v=HlmX7QjU5mk>

(2023/2024). *Lab Manual & Lab Report*. CSM3114 Framework-Based Mobile Application Development.

Palma, G. (2021, December 14). UnderstandingBuildContext - flutter Community - medium. *Medium*. <https://medium.com/flutter-community/understanding-buildcontext-6df0d540bad3>

reduce method - ListQueue class - dart:collection library. (n.d.). From Flutter.Dev: <https://api.flutter.dev/flutter/dart-collection/ListQueue/reduce.html>

Ripples Code. (2022, September 14). *Add Dynamic Items to ListView in Flutter using GetX || Flutter || GetX* [Video]. YouTube. <https://www.youtube.com/watch?v=3G-dPzwO9s4>

Umar, M. A. (2018). Mobile CGPA Monitoring System. *In Advances in educational technologies and instructional design book series (pp. 10–21)*.

What are controllers in Flutter? (2018, December). From Stack overflow: <https://stackoverflow.com/questions/53667793/what-are-controllers-in-flutter>