



**CSM3114 FRAMEWORK-BASED MOBILE APPLICATION
DEVELOPMENT**

SEMESTER I, SESSION 2023/2024

INDIVIDUAL ASSIGNMENT – PROJECT 1

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**COURSE: BACHELOR OF COMPUTER SCIENCE (MOBILE
COMPUTING) WITH HONORS**

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GITHUB LINK

<https://github.com/AfiqahHazirah206/CSM3114Project1.git>

EXECUTIVE SUMMARY OF THE PROTOTYPE

UniAlerts is a specialized mobile application created to consolidate crucial university notifications and alerts concerning emergencies. The goal is to give those at universities a dependable and effective way to receive current information about significant adjustments.

There are 4 key features of this UniAlert app:

1. Announcement Feed
 - A centralized feed with notifications and news from the university.
 - Arranged chronologically to provide quick accessibility to most recently released information.
 - Easy for users to browse the feed and keep up with notices from the university.
2. Emergency Alerts
 - Immediate alerts in case of emergencies or crucial announcements.
 - The application guarantees that users obtain important information in a timely manner, enabling immediate action in unexpected circumstances.
 - A vital feature that improves the university community's readiness and security is alerts for emergencies.
3. Categorisation and Filters
 - Alert classifications, such as Academic and Events Updates.
 - Users can personalize the kinds of announcements they receive by using the selection choices.
 - Users can now personalize their alerts to suit their own interests as well as concerns thanks to this flexibility feature.
4. Interactive Announcements
 - By adding or deleting announcements from within the app, users can take an active role in the information-sharing process.
 - By enabling the university community to participate in the information circulation, this feature improves involvement and cooperation.

Although I had originally intended to retrieve announcements and alerts straight from university email systems, the requirement for a particular API presented unanticipated difficulties. Understanding the value of privacy and appropriate use of information, I am working on resolving these issues and improving the functionality of the app. I had investigated possibilities like launching the Google Cloud Platform project and using APIs for automated access to Gmail information, including the Gmail API. This puts privacy and confidentiality of information first and guarantees

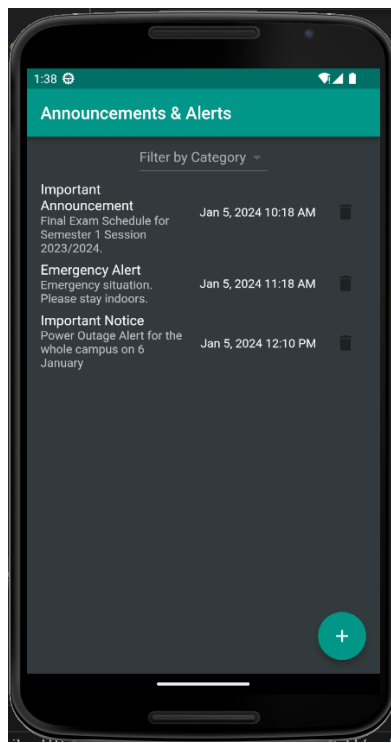
that UniAlerts will always be a useful and broad channel of communication for the university community.

THE PROTOTYPE DESIGN

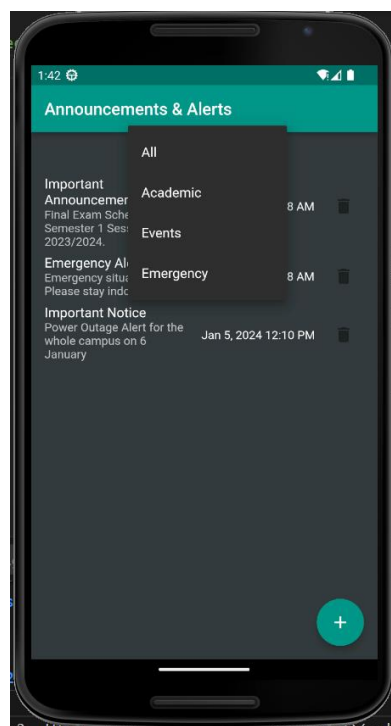
The UniAlerts app prototype has an easy-to-use and simple layout. Transparency and convenience are given top priority in the user interface. Below is a summary of the main screens:

1. Announcement Feed:
 - A centralized feed that presents announcements in an easily understandable and structured way.
 - Timestamps for each announcement to indicate recency.
 - User-friendly navigation for seamless browsing.
2. Emergency Alerts:
 - Immediate pop-up alerts for emergency situations.
 - Unique auditory and visual cues to pay closer attention.
 - Easy utilization of crucial information to facilitate rapid decision-making
3. Categorisation and Filters:
 - For clear sorting, apply categories consisting of Academic, Events, and Emergency.
 - Users can personalize the kinds of alerts they receive by using the filter options.
4. Interactive Announcements:
 - Easy-to-use interface that lets users add and remove announcements.
 - Controls that are easy to use encourage engaged involvement.

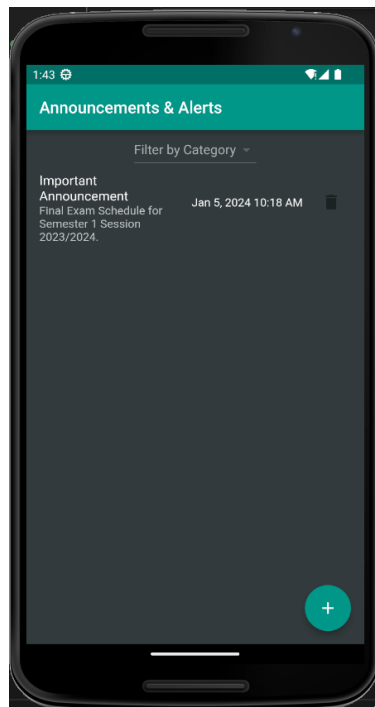
THE UI FOR THE APPLICATION



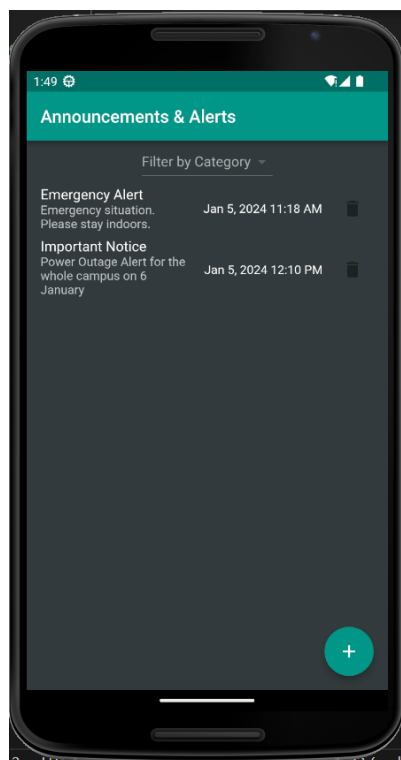
Announcement Feed – Basically the home page for my UniAlerts app that displays all the alerts and announcements regardless of the categories.



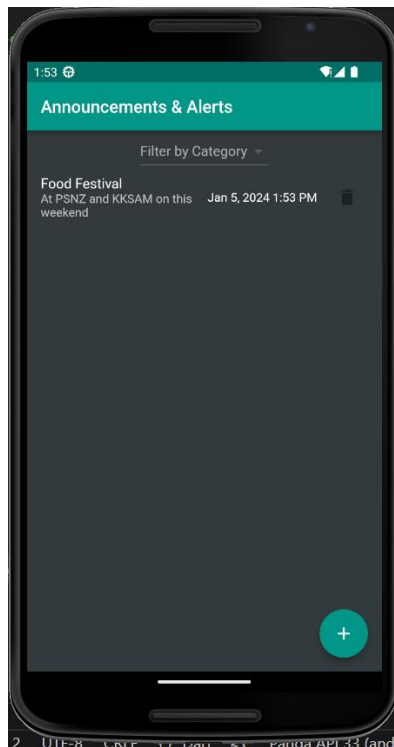
Categorisation & Filter – The button for users to filter the announcements to only display the categories that they have selected which are Academic, Events or Emergency.



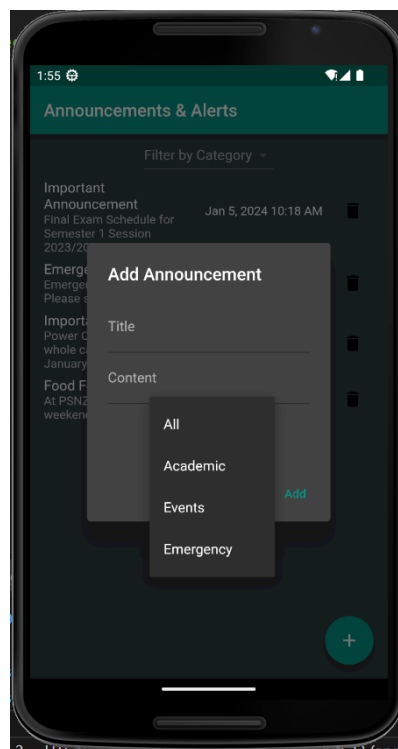
Academic Category – displays only announcements that involves academic matters such as Final Exam Schedule.



Emergency Alerts – displays emergency alerts that requires everyone to take note immediately such as Flood in Campus and Power Outage.



Events Category – displays announcements on ongoing and upcoming events that took place in the campus such as the Food Festival that is usually held on weekend.



Interactive Announcements – user just simply can add a new announcement by tapping the “+” symbol at the bottom left of the app and this screen will pop up. User are required to fill in the title, brief description at the content part and also select the category of the announcement on the dropdown menu provided.

POTENTIAL COMMERCIAL VALUE & THE PRICING OF THE PROTOTYPE

The freemium business model used by UniAlerts is purposefully created to meet all of the requirements of the university community and offers extra advantages for premium users. Our freemium strategy's main components are as follows:

1. Freemium Model
 - A basic feature set is offered by UniAlerts, which is free for all users. This guarantees broad acceptance among the academic community, promoting diversity and easy access to vital communication resources.
2. Basic Features
 - All users have free access to UniAlerts' core features, which include the Announcement Feed, Emergency Alerts, and Categorization Filters. This guarantees that there are no financial obstacles in the way of meeting basic communication requirements.
3. Premium Features
 - First Access to Specific Alert: Prior to being released to the general public, premium users acquire timely alerts, guaranteeing an enhanced notification experience.
4. Collaboration for Mutual Gain
 - To benefit both parties, UniAlerts looks for joint venture opportunities with surrounding businesses or emergency services. These partnerships may include sponsorships and improved services.
5. User Engagement and Satisfaction
 - The goal of the freemium business model is to create a middle ground between giving all users access to basic functions and rewarding subscribers with more features. This strategy encourages user enjoyment and participation in addition to sustainability.
6. Future Monetisation Strategies
 - In terms of its future monetization strategy, UniAlerts is still flexible. The app continues to investigate novel streams of income as its user base grows and fresh functions are added, guaranteeing its long-term viability.
7. Conclusion
 - UniAlerts puts being a useful and easily attainable way to connect for the university community by embracing the freemium business model. The model fosters possible collaborations for mutual benefit while enabling an adaptable and long-term strategy that addresses the changing needs of users.

LESSON LEARNED

The process of creating UniAlerts has been rewarding and enlightening, offering insightful knowledge on a range of topics related to app development, user interaction, and the convergence between technological and practical issues. It is essential to comprehend the variety of demands faced by the university community. In order to guarantee the app's significance and usability, user-centric design must be prioritized. It's additionally critical to strike a balance between offering a feature-rich application and keeping things simple.

Unexpected difficulties arose when the original plan was to retrieve notifications and announcements straight from university email systems. After realizing that a certain API was required and that adhering to security procedures was crucial, I modified my strategy and looked into other options. The attempt to obtain email data through web scraping highlighted the importance of responsible data access procedures. In order to make sure the app complies with the latest industry standards and places a high priority on user confidentiality, I investigated safe alternatives like Google Cloud Platform and APIs like Gmail API.

CONCLUSION

In a nutshell, UniAlerts is an essential tool for security and exchange of information at universities. By consolidating important notifications and warnings regarding emergencies, the app not merely provides real-time information that benefits the university community but additionally gives users the ability to customize the way they use it. The app is an essential tool that promotes a more secure and linked university environment because of its dedication to real-time data, user customization, campus safety, and enhanced communication. The goal of having a smoothly updated and equipped university community that can confidently handle any emergency is embodied by UniAlerts.

After understanding the lessons, I understand that UniAlerts is a lifelong learning process rather than merely an application. Every obstacle faced has given rise to chances for development, modification, and enhancement, which has ultimately helped create a robust and user-centred solution for the campus community. These experiences will be applied going forward, guaranteeing a comprehensive and knowledgeable method for developing applications.

REFERENCE

1. *Must-have apps for students in Korea*. Available at:
<https://koreajoongangdaily.joins.com/2022/03/26/national/kcampus/lifehacks-campus-kcampus/20220326070023485.html> (Accessed: 22 December 2023).
2. 에브리타임 - 함께하는 대학생 활 - apps on Google Play (no date) Google.
Available at:
<https://play.google.com/store/apps/details?id=com.everytime.v2&pli=1>
(Accessed: 22 December 2023).
3. Google cloud platform. Available at:
<https://console.cloud.google.com/welcome?project=uni-alerts-app> (Accessed: 06 January 2024).
4. *Welcome to the Flutter API Reference Documentation!* (no date) *Flutter*.
Available at: <https://api.flutter.dev/> (Accessed: 06 January 2024).