

Project Description:

MapuaMate is a mobile application designed to cater to the needs of MMCM students, offering a range of practical features to make university life easier. The application includes features such as a message board, university announcements, course announcements, class schedules, meeting room availability, room reservations, professor ratings, an event calendar, a grade tracker, a campus map, canteen menus, and lastly, a page to report and claim lost and found items. With its user-friendly interface and helpful features, MapuaMate simplifies various aspects of campus life.

Requirements Summary:

Minimum Requirements	Processor Cores	Dual-Core
	OS	Android 6.0 iOS11
	RAM	2GB
Recommended Requirements	Processor Cores	Quad-Core
	OS	Android 8.0 iOS12
	RAM	4GB
Other Requirements	Connectivity	Wi-Fi Cellular data
	Permissions	Notifications Access to Photos

Table 1. System Requirements

The application is not necessarily demanding, however the recommended requirements seen in table 1 are suggested to ensure that users will experience the application's full capabilities, without experiencing any lag.

Creating a user-friendly and efficient app for students involves several key elements. First, the user interface and experience (UI/UX) must prioritize easy navigation, ensuring a clear and logical flow between features. The design should be optimized for mobile devices, with readable and interactable elements on small screens. UI components should be large enough for comfortable touch interaction. Accessibility is also crucial, incorporating features like text-to-speech and colorblind-friendly designs to cater to all students, including those with visual impairments. Clear labels, larger buttons, and a minimalistic design will help accommodate less tech-savvy users.

The app aims to provide a comprehensive suite of tools to enhance student life. This includes a message board for discussions, sections for university and course announcements, a daily class schedule, and features for meeting room availability and reservations. Additionally, the app will offer a professor rating system, interactive event and course calendars, a visual grade tracker, an interactive campus map, a daily canteen menu display, and a virtual lost and found board. These features are designed to streamline access to essential information and services, making university life more manageable and efficient for students.

To ensure accessibility for all students, the app is designed to be compatible with a wide range of devices by lowering the system specifications required. This approach ensures that almost every smartphone can run the application smoothly, demanding less from the device's system and broadening access to the app's valuable features.

Design Space:

WHAT REQUIREMENTS MAY BE DIFFICULT TO REALIZE?

1. Navigation

- i. **Complexity of Features** - Ensuring a clear and logical flow between the many features, including message boards, schedules, room reservations, professor ratings, and more can be difficult. It is essential to provide an easy-to-use navigation system that lets users switch between various elements without being overwhelmed.
- ii. **Feature Prioritization** - To prevent clutter, careful consideration must go into determining which features should be prioritized in the main navigation versus those that can be nested or accessed through secondary menus.

2. Mobile Optimization

- i. **Spacing** - Displaying detailed information such as class schedules, event calendars, and campus maps on small screens without sacrificing readability and usability can be difficult. Ensuring that all UI elements are enough for comfortable touch interaction while fitting all necessary information requires precise designing of the UI.

Doing so would also require adapting layouts to different screen sizes and orientations which makes it complex while maintaining usability and visual appeal.

WHAT ARE SOME TRADEOFFS THAT YOU SHOULD OR DID EXPLORE?

1. Multifunctionality vs. Simplicity

- Balance between a comprehensive feature set and a user-friendly interface is crucial; prioritize core features for the initial release and plan phased additions based on user feedback.

2. Accessibility Features vs. Design Aesthetic

- Ensuring accessibility for all users, including those with disabilities, is vital and should be balanced with maintaining a modern design; integrate adaptive design techniques and conduct accessibility testing.

WHICH TASKS WILL BE EASIEST TO SUPPORT? WHICH ARE THE HARDEST?

Among the tasks listed, supporting the message board and class schedule features could be considered straightforward. Due to the widespread use of forums and discussion boards in educational settings. Given the existence of numerous messaging apps, implementing a forum-like interface where students can post and respond to questions and ideas would likely benefit from existing solutions. The class schedule feature contains static data, only changing it every semester, making it relatively easier to do and maintain.

On the other hand, developing a campus map, room reservation and meeting room availability might pose significant challenges. Creating a detailed, accurate, and user-friendly map that includes building locations, key facilities, and real-time updates on room availability requires extensive data collection, integration, and visualization capabilities. This task involves updating mechanisms, which could be demanding

Logos



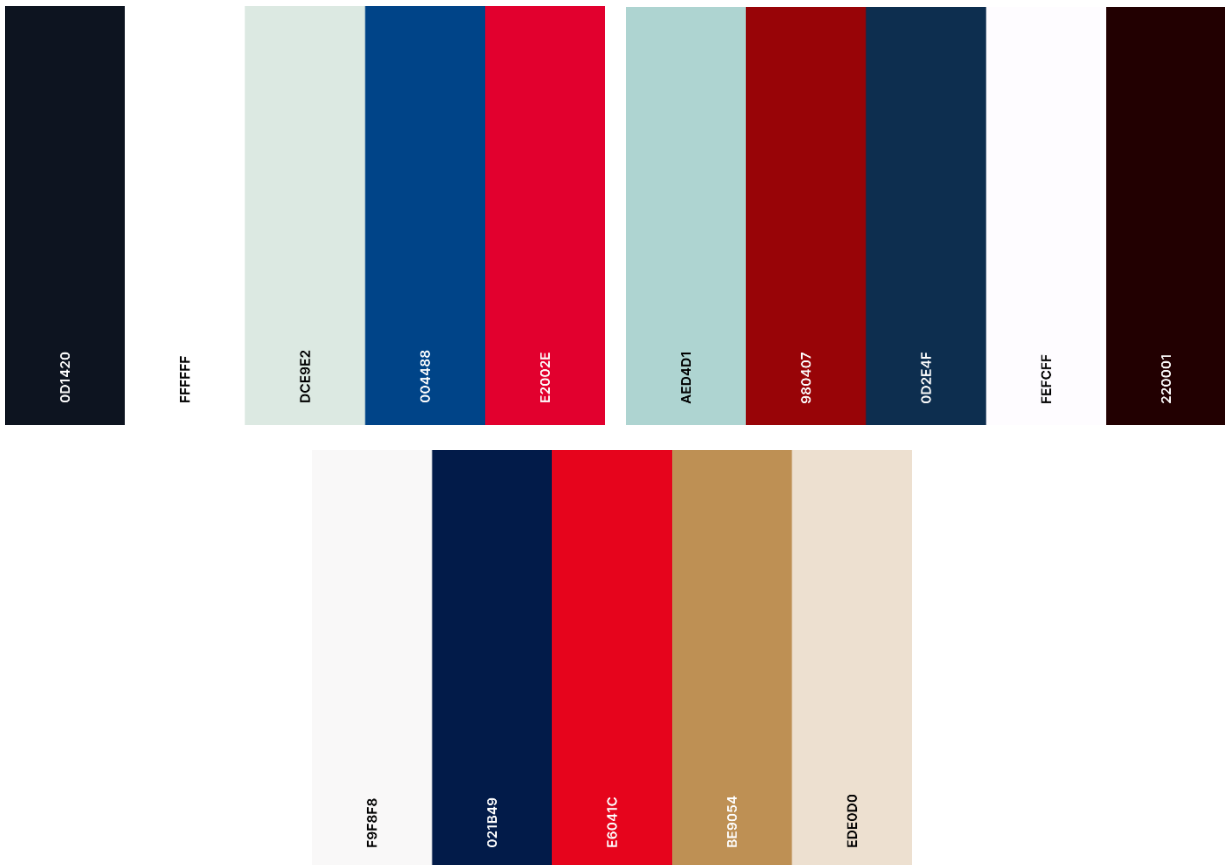
The team ultimately ends up choosing the logo on the far right among the displayed logos.

Application Icon Size Comparison



This is how the icon would look in different mobile devices with different screen sizes.

Color Palettes



The above color palettes are the team's potential choices for the overall color of the app. The team deliberately chose colors that is close to the MMCM Logo since the app is made for assisting MMCM students.

The Font

ABCDEFGHIJKLMNOPQRSTUVWXYZÀÁÂÃÄÅÊËÌÍÎÏÐ
abcdefghijklmnopqrstuvwxyz
tuvwxyzàá&12345678
901234567890(\$£€.,!?)

Open Sans

The team chose Open Sans as their font as it is highly suitable for mobile applications due to its clean, open letterforms that enhance readability on small screens and its versatility with multiple weights for typographic hierarchy. Its modern, neutral design fits well with various styles, ensuring a professional look, and its optimization for mobile use ensures fast load times and minimal performance impact.

Design Summary:

Design 1:

Design 1 provides a simple yet comprehensive sketch, detailing each section in the main menu and explaining their functionality. Design 1 features a resizable sidebar menu to minimize space usage, a message board, and recent announcements on the main page. This ensures that users have immediate access to important information and can easily navigate through various sections of the application.

Design 2:

Design 2 offers a more detailed message board feature compared to Design 1. Similar to Design 1, the message board is located on the main page. However, unlike Design 1, the recent announcements are displayed in a pop-up window that appears upon launching the main page after signing in. The design of the message board is inspired by Facebook and Instagram. Overall, Design 2 is very similar to Design 1, with only a few differences.

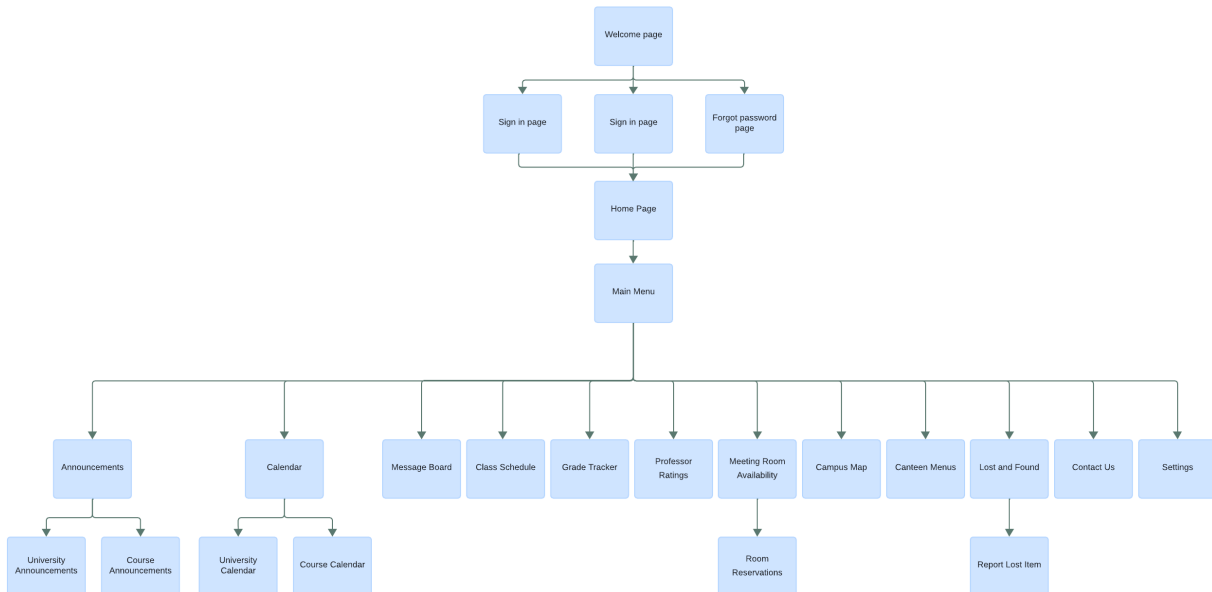
Design 3:

Design 3 differs from the previous two designs. Instead of a sidebar for the main menu, the main menu itself is displayed on the main page. Upon signing in, users can immediately access the main menu directly from the main page, which contains nothing but the menu. The design is clean and modern, featuring a consistent layout with a picture of the MMCM building on every page.

The Designs:

[60 pts] The designs: Present each design that you created. **Remember that you should present at least three designs.** Cover each design in its own section by presenting the following information.

[10%] A brief overview of the design.



The provided flowchart outlines the design of MapuaMate. Initially, users encounter the Welcome page and proceed to the Sign-in/Sign-up page. If users forget their password, they can click the Forgot Password button to retrieve their account. Upon successful sign-in, users access the Home Page, where the Main Menu can be found. The Main Menu branches out into several key features: Announcements, Calendar, Message Board, Class Schedule, Grade Tracker, Professor Ratings, Meeting Room Availability, Campus Map, Canteen Menus, Lost and Found, Contact Us, and Settings. The Announcements page includes sub-options for University and Course Announcements. The Calendar section is divided into University and Course Calendars. Additionally, there is a Room Reservations page for reserving rooms under Meeting Room Availability.

Design 1

- Welcome page and sign in

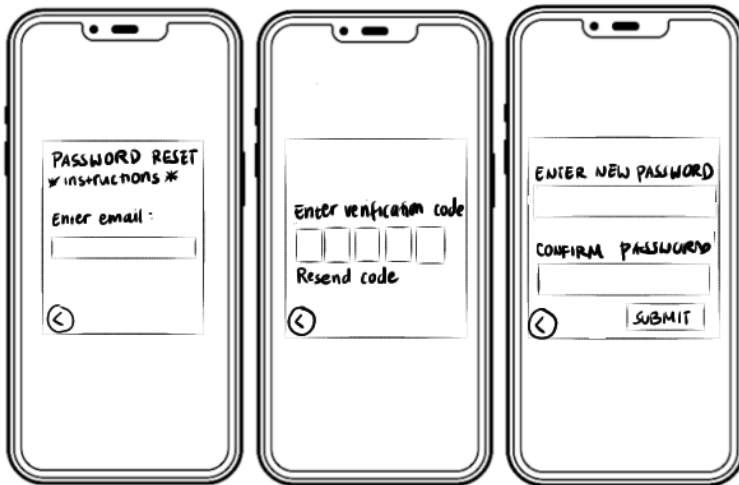
WELCOME
PAGE



SIGN IN
PAGE

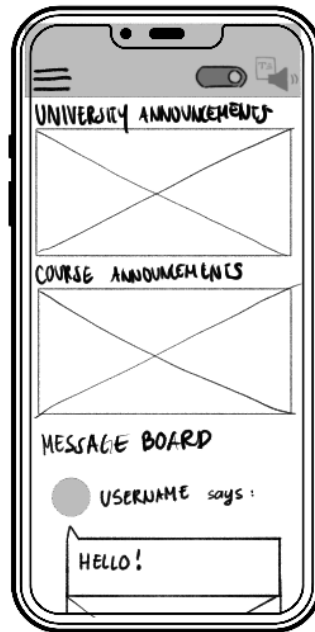


FORGOT PASSWORD

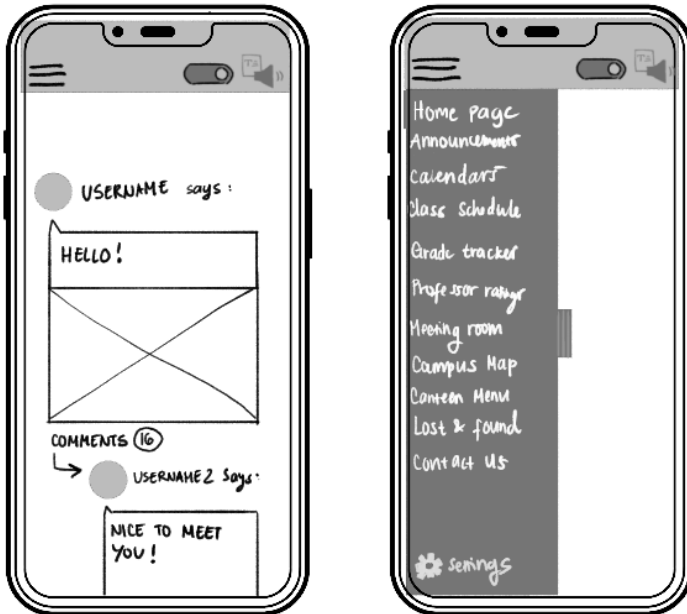


- Home page (Message board and recent announcements)

HOME PAGE

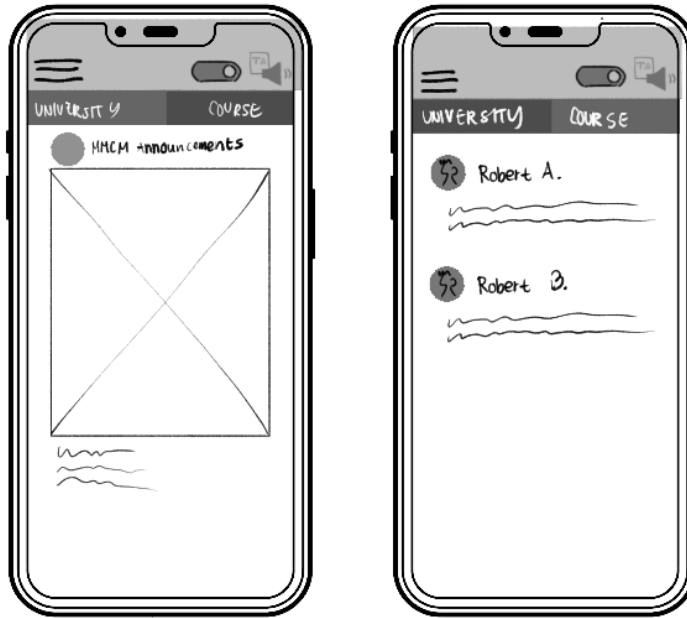


HOME PAGE (MESSAGE BOARD & MAIN MENU)



- Other features:

ANNOUNCEMENTS



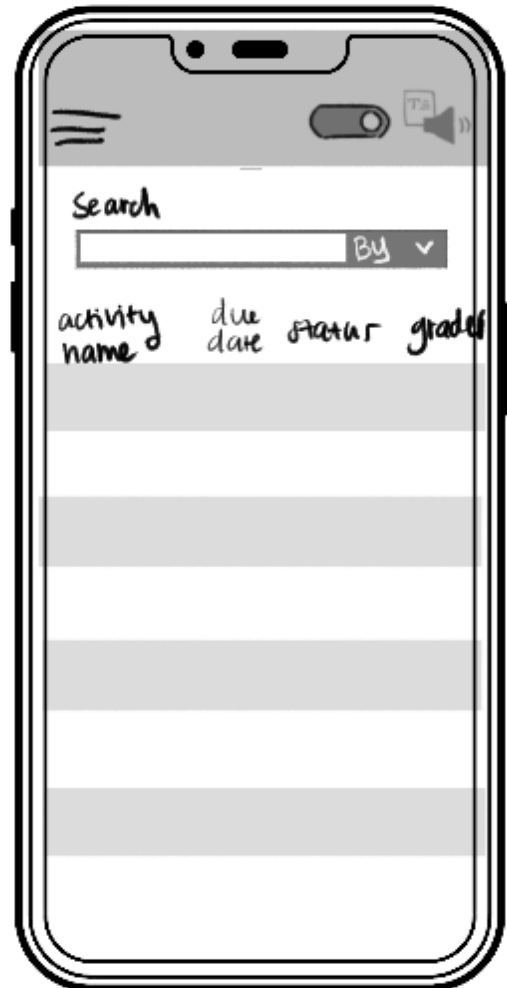
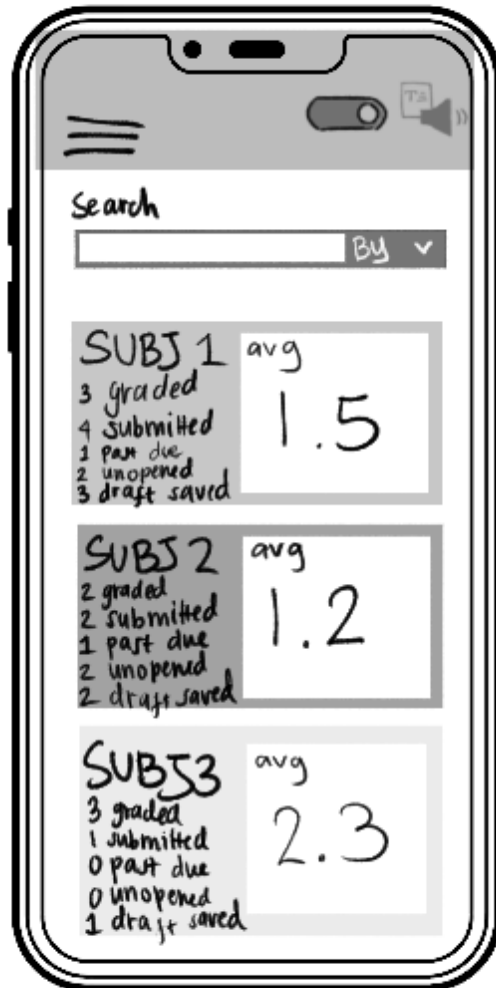
CALENDARS



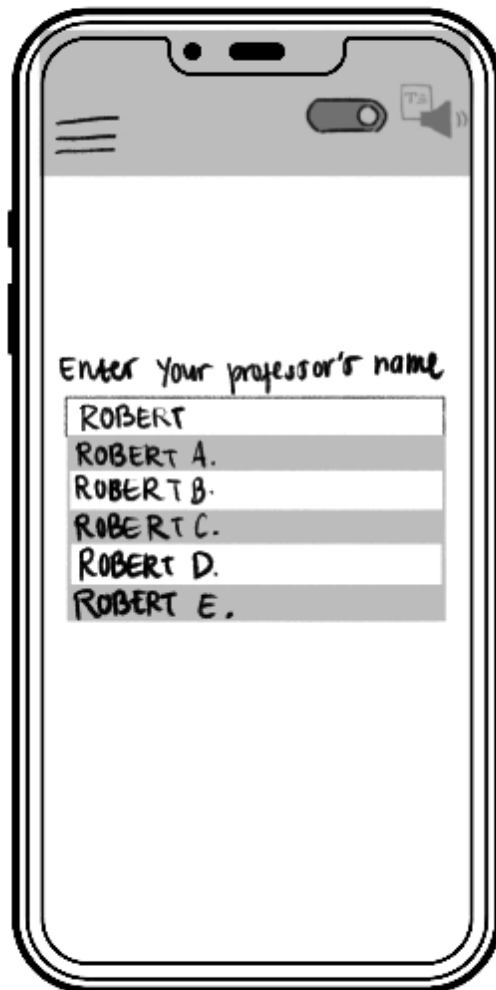
CLASS SCHEDULE



GRADE TRACKER



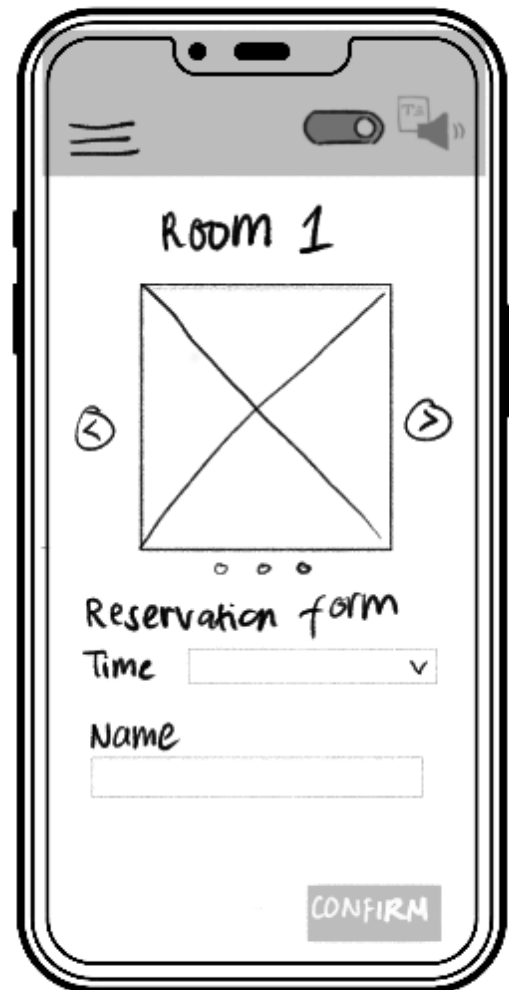
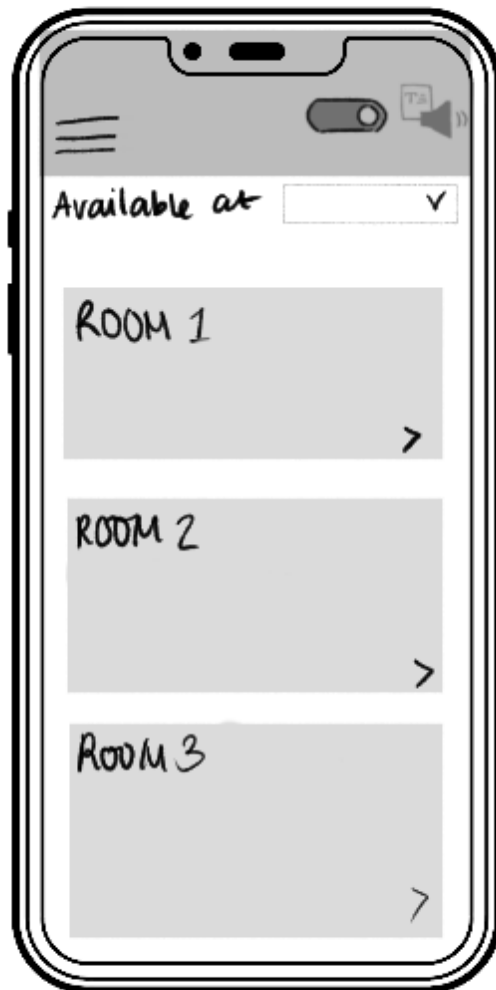
PROFESSOR RATINGS



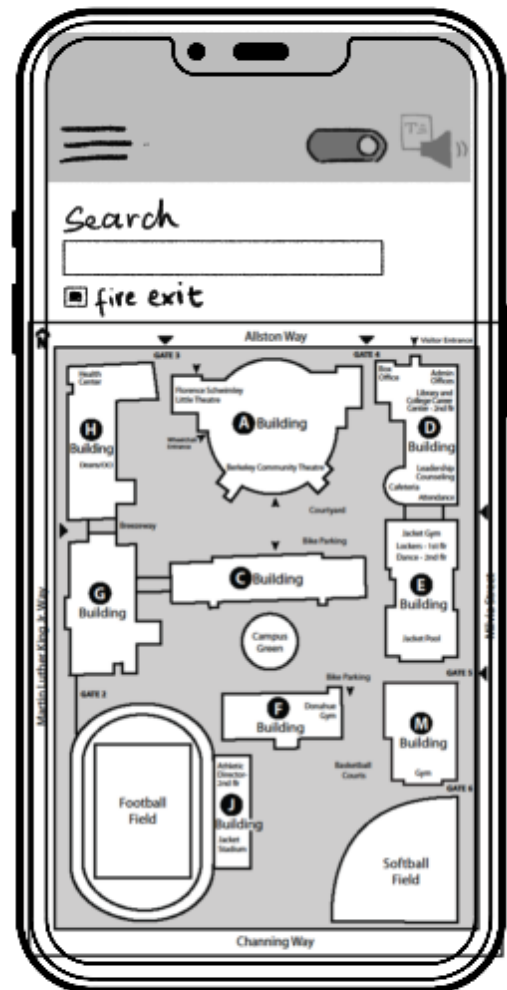
PROFESSOR RATING (LEAVING REVIEW)



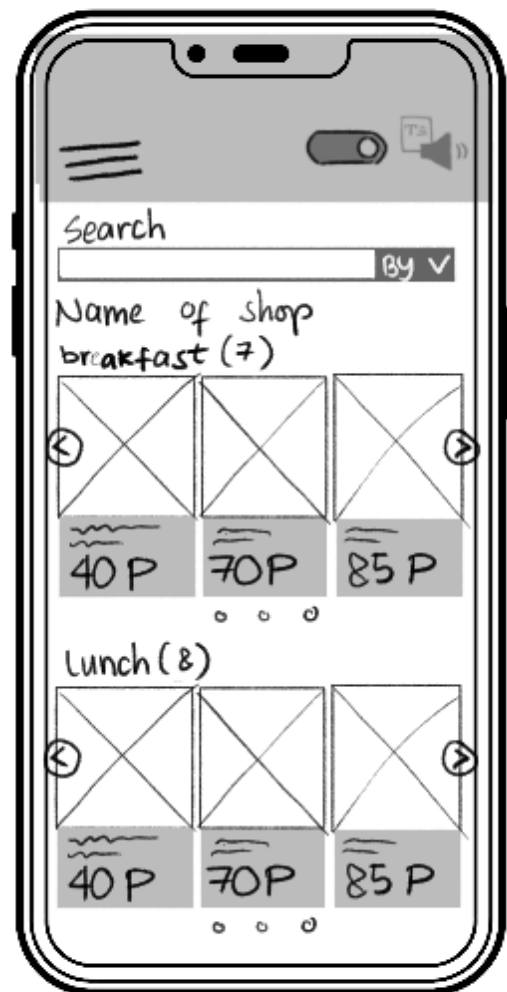
MEETING ROOM



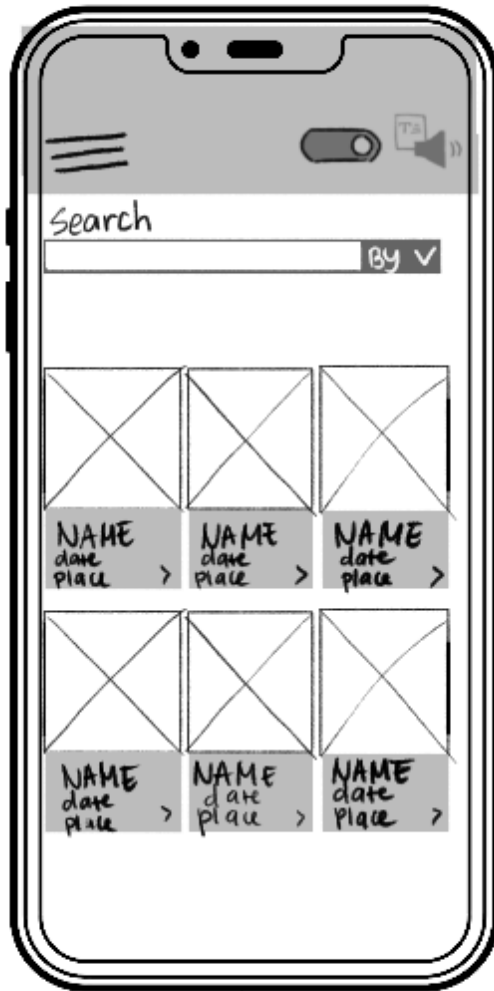
CAMPUS MAP



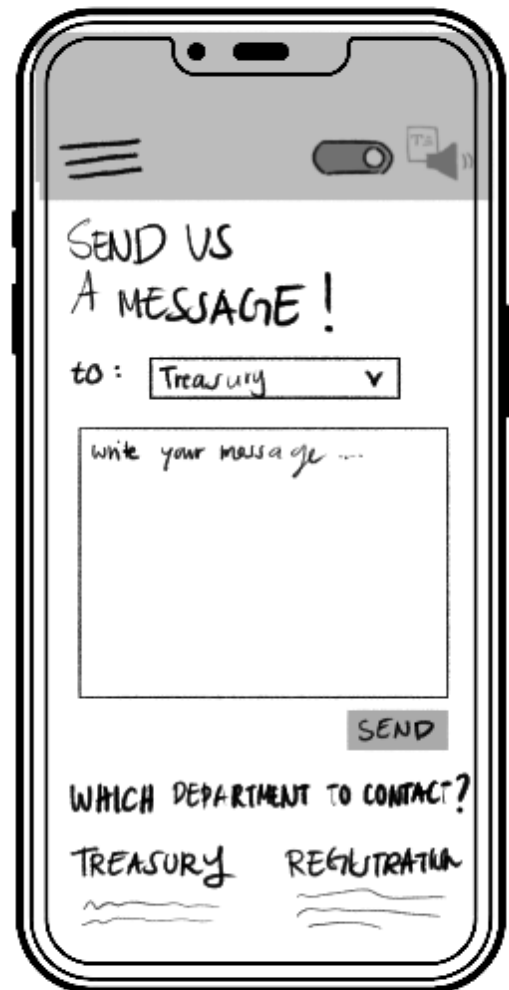
CANTEEN MENU



LOST AND FOUND



CONTACT US



Design 2

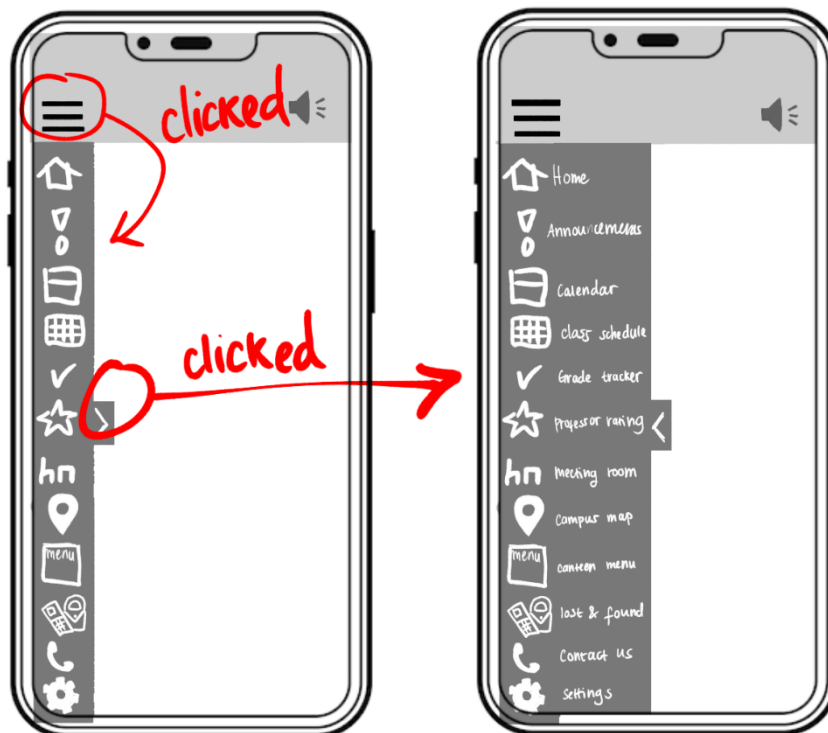
- Welcome and sign in page

WELCOME AND SIGN IN PAGE



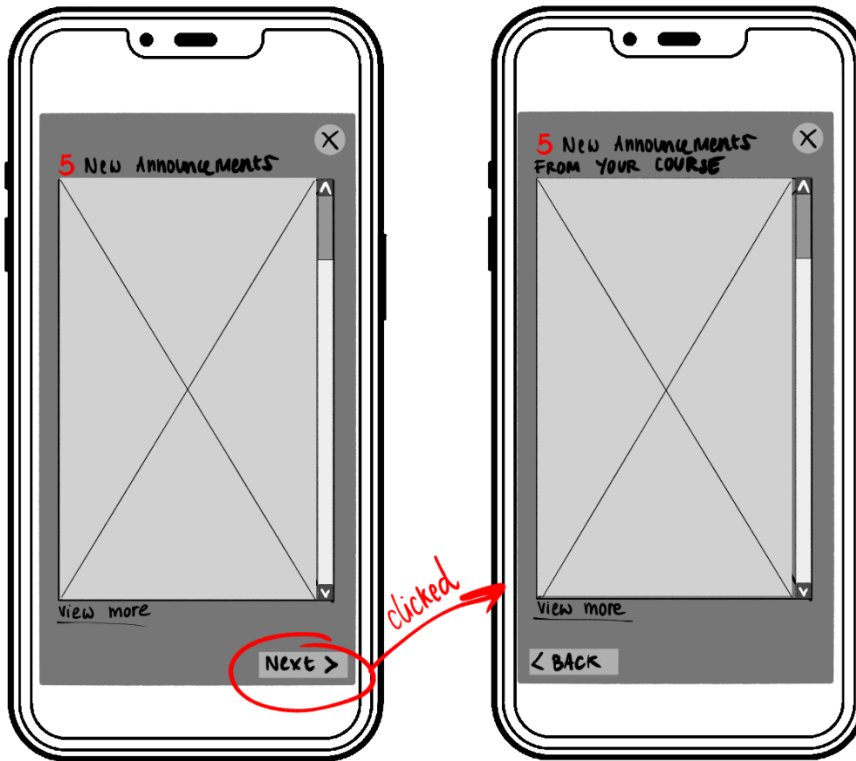
- Main menu (Navigation bar)

MAIN MENU



- Home page (Message board)

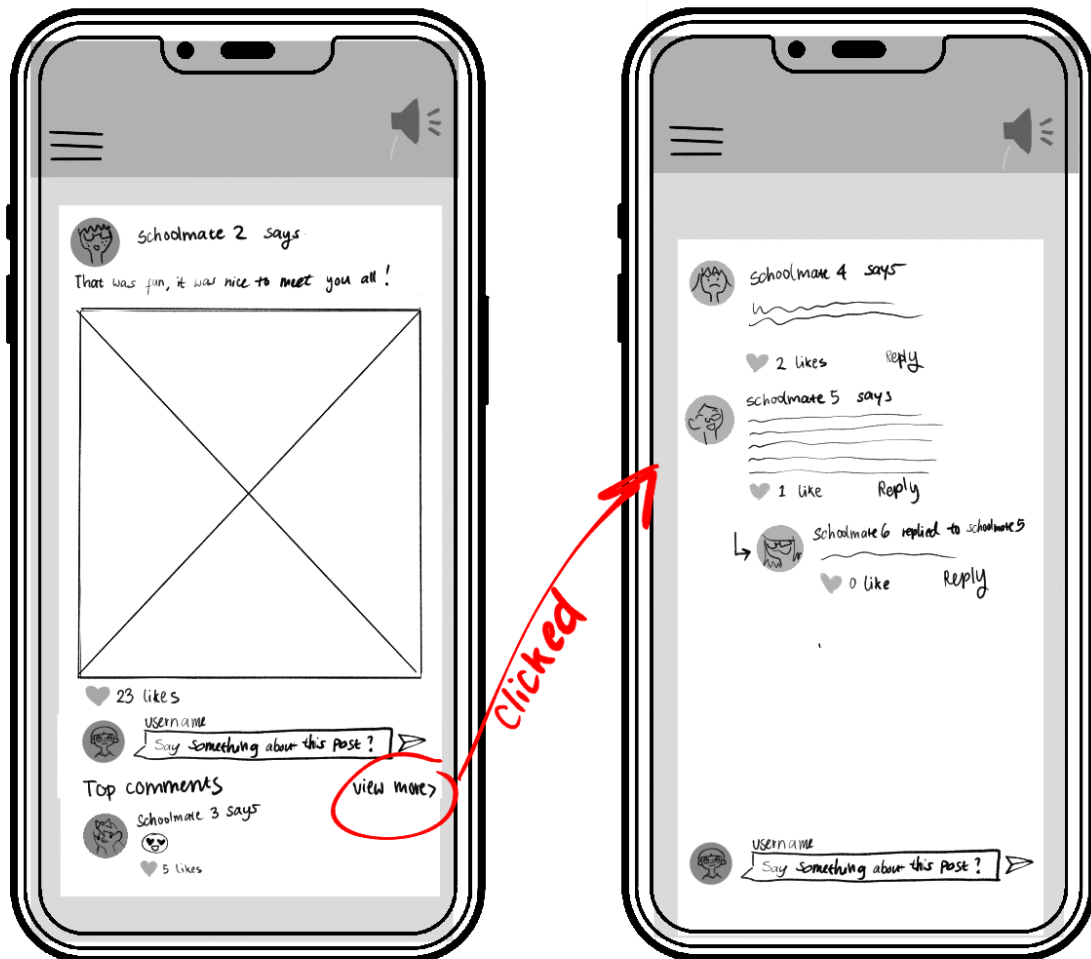
HOME PAGE 1 (ANNOUNCEMENTS NOTIFICATION)



HOME PAGE 2 (POSTING ON MESSAGE BOARD)

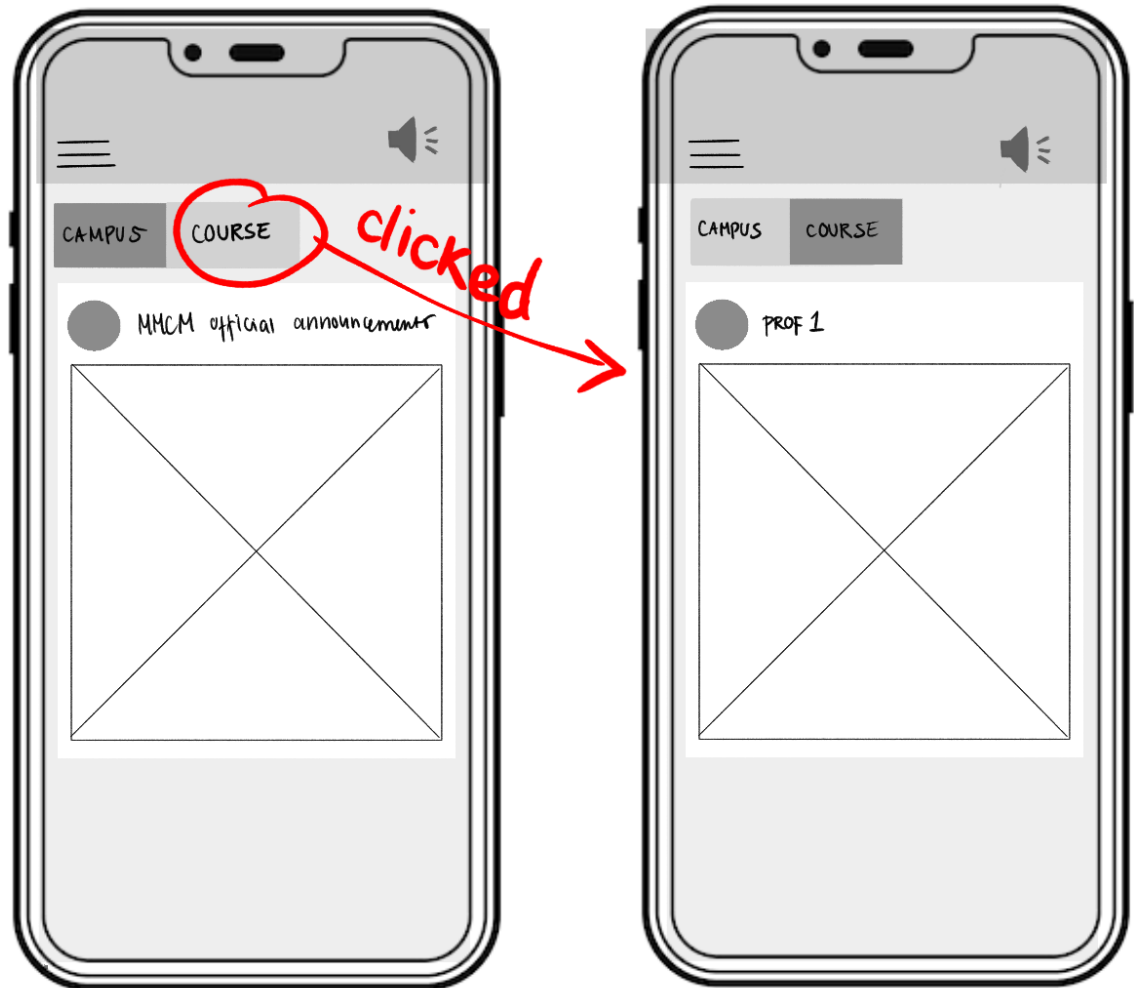


HOME PAGE 3 (MESSAGE BOARD & COMMENTS)



- Example section page (Announcements page):
on

ANNOUNCEMENTS



Design 3

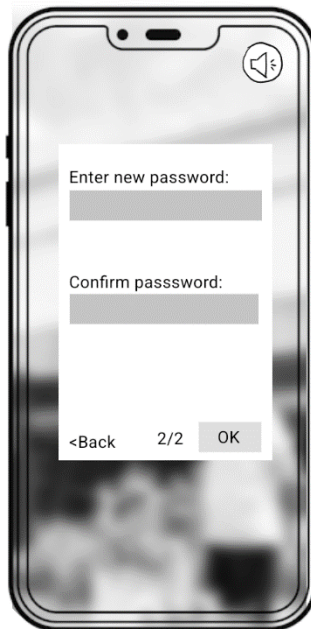
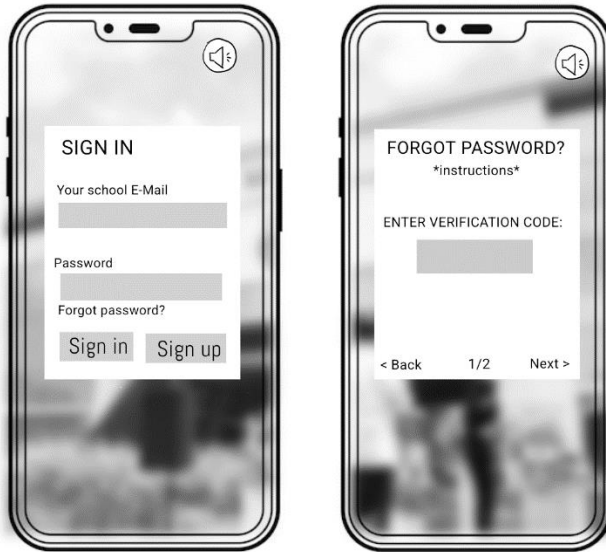
- Welcome page

WELCOME PAGE



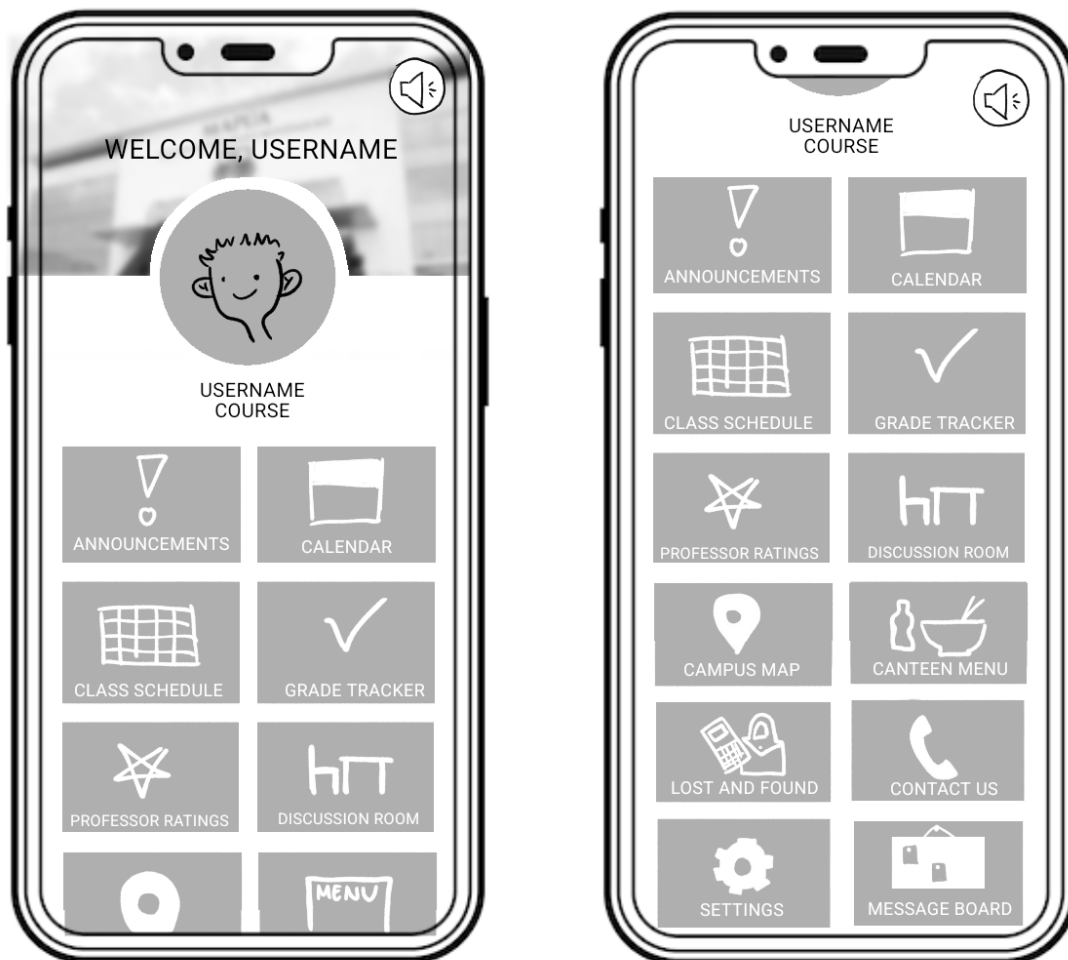
- Sign in

SIGN IN



- Home page and main menu

HOME PAGE AND MAIN MENU



- Example section page (Announcements page):

ANNOUNCEMENTS



[20%] At least one scene is written from a user's perspective.

Scenario 1: As a new MMCM student, Sammy is not yet familiar with the campus. He had a meeting with his professor at the CCIS faculty office, but he couldn't find it and got lost.



Narrator: Sammy is a new student at MMCM. He has a meeting with his professor at the CCIS faculty, and he is running late!!

Sammy: Oh no, it's already 10:05 AM, I was supposed to be there at 9:30 AM!!



Sammy: No way, I don't even know where the office is!



Narrator: ...and Sammy is forever lost. The end.

Scenario 2: Lily rarely uses Facebook and is unaware of the events going on in the campus. As a result, she missed an event that she wanted to go to.



Lisa: Hey, the event yesterday was really fun, wasn't it?

Lily: Huh, what event?



Lisa: Did you not see the announcement on facebook? There was a battle of the bands, and then there was this and that and blablabla... Man, that was really awesome!



Lily: Heeeehh really?? I barely open Facebook. I really wanted to go to that event!!

Scenario 3: Jared and Rick are working on a project in the canteen. They can't focus on their work, because of how noisy it is. They wanted to reserve a discussion room, but do not know how.



Jared: Hey, don't you think it's too noisy here? I can't focus on our work right now.



Jared: I wish we can do this in the discussion room instead.. I heard you can reserve one online.



Rick: But where though? I can't find it.

With MapuaMate, all the issues faced by students can be solved with one application. Whenever students feel lost or need help, they can turn to MapuaMate for guidance!

[35%] An assessment of this design (advantages, disadvantages, and the degree to which your requirements can be met by the design). Include feedback from potential users in the assessment. Make sure to express how you gathered this feedback.

Design 1

Advantages:

- **Navigation:** The application is simple and easy to navigate. Recent announcements and message boards are displayed immediately after the user signs in, ensuring that important information is seen right away. The main menu is a sidebar that can be shown or hidden and is accessible from every page.
- **Mobile Optimization:** Most texts and buttons are large enough for small screens on mobile devices. Using large images instead of text helps make the application more readable and less wordy.
- **Accessibility:** Design 1 features a text-to-speech toggle for visually impaired users located at the top, which can be easily accessed on all pages within the application.

Disadvantages:

- **Navigation:** Placing the recent announcements page before the message board makes the message board harder to find, as users must scroll far down to reach it.
- **Mobile Optimization:** On mobile devices, the sidebar menu can occupy too much space. This issue is addressed by making the sidebar resizable. However, with many menu items, the text must be small to fit, making it difficult for users to tap items accurately without accidentally selecting others. Additionally, resizing the bar can cut off the text.
- **Accessibility:** The small texts in the main menu might make it more difficult for older demographics and people with visual impairments.

Design 2:

Advantages:

- **Navigation:** The application is simple, user-friendly, and similar to Design 1. Placing recent announcements in pop-up windows helps make the message board easier to find, as users don't have to scroll down to reach it. The main menu is a sidebar that can be shown or hidden and is accessible from every page.
- **Mobile Optimization:** Most texts and buttons are large enough for small screens on mobile devices. Using symbols, especially in the main menu, makes the application less wordy and more user-friendly.

- **Accessibility:** The message board is very similar to Facebook and Instagram. Since these platforms are widely used by both younger and older people, this should make it easier for everyone to use. Additionally, design 2 features a text-to-speech button for visually impaired users located at the top, which can be easily accessed on all pages within the application.

Disadvantages:

- **Mobile Optimization:** Design 2 also uses a side bar menu, and it can occupy a lot of space. This issue was solved by making the sidebar resizable. However, since the sidebar contains many menu items, the text has to be small to fit. This can make it difficult for users to tap the items accurately without accidentally selecting other menu items.

Design 3

Advantages:

- **Mobile Optimization:** In Design 3, the main menu occupies the entire main page. With large buttons and the use of symbols, this enhances readability and usability on the small screens of mobile devices.
- **Accessibility:** Design 3 features a text-to-speech button for visually impaired users located at the top, which can be easily accessed on all pages within the application.

Disadvantages:

- **Navigation:** The main menu cannot be accessed from every page; users must return to the home page. There is no recent announcement page, therefore the user will not get notified of new announcements right away.

Each design offers its own set of advantages and flaws. To finalize the design, we will carefully consider the strengths and weaknesses of each design. By taking the best aspects from all three designs and addressing their flaws, we will be creating an improved and optimized solution that meets the needs of the users effectively.

Requirements changes:

[10 pts] Requirements changes: You more than likely modified, added to, or removed elements of your requirements and usability criteria as a result of conducting the design process. Discuss these in this section... what were they and how did they arise?

System requirements remain the same, however, the usability criteria were changed. Initially, the criteria comprised of usability, accessibility, and user satisfaction. To enhance the scope of the evaluation, the team has expanded the criteria to include mobile optimization, visual appeal, and assessment of all the features. To assess usability, the 10 Usability Heuristics will be utilized. In addition, custom-designed questions developed by the team will be used to assess the other criteria.