

I. 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.

II. 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.

III. Prototype Description

Overview

The prototype was created using Figma as it supports real-time collaboration, making it easier for the team to work on the project together. There are also built-in plugins that offer functionalities such as icon libraries and automatic background removal for images, making the completion of the prototype faster. By sending the target clients a link to the project, they can easily access and interact with the application.

The prototype consists of various features. These are the university and course announcements, class schedule, social board, room reservation, professor ratings, event and course calendar, grade tracker, campus map, canteen menus and a virtual lost and found board. These features will be thoroughly discussed below, including its design for better visualization.

MapuaMate Figma Link:

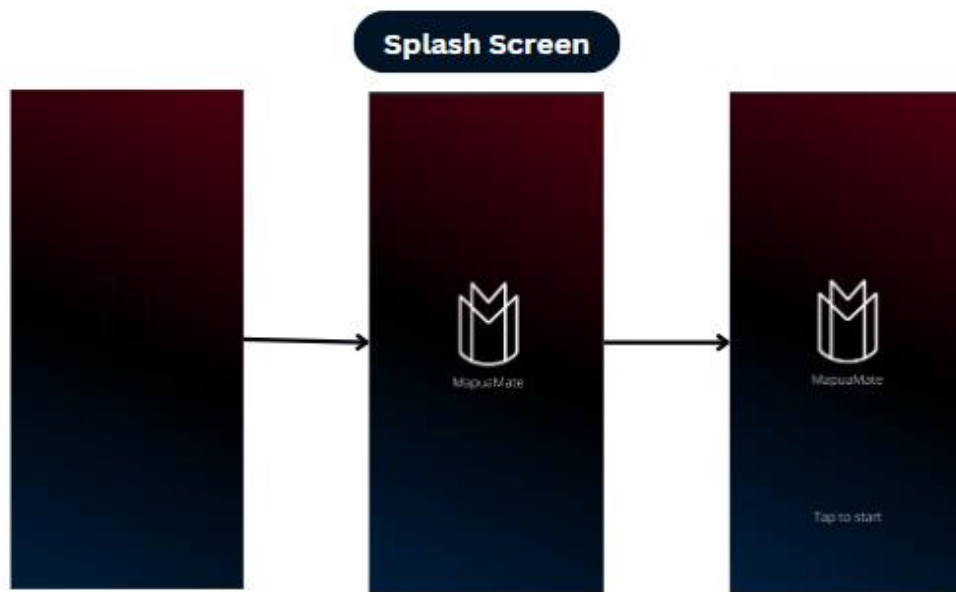
<https://www.figma.com/design/VfJkzqjFMbDfQgWISdJHXP/MapuaMate?t=VnaJBniuLqmvwaDf-0>

User Scenario

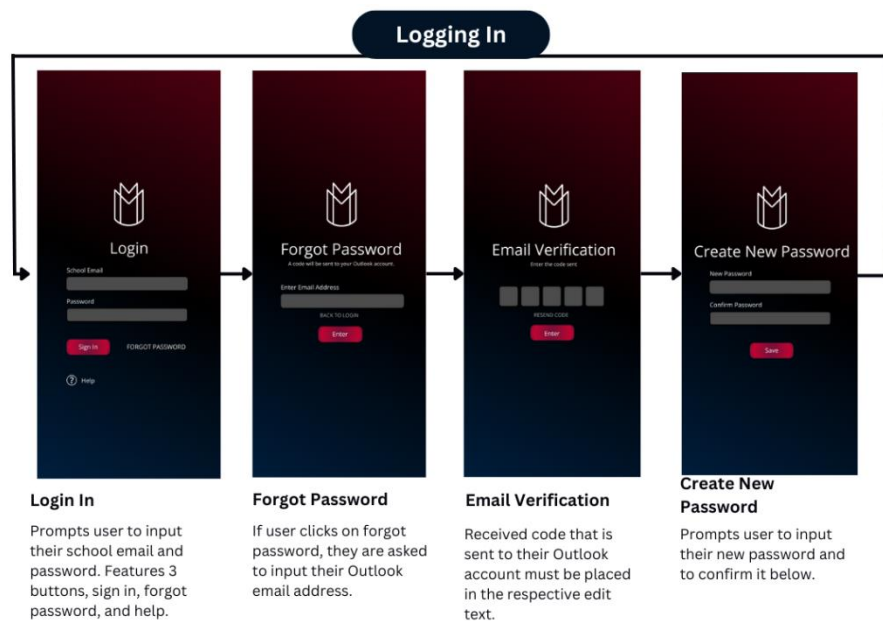
Maria, a first-year MMCM student, often felt overwhelmed navigating her busy university life. She struggled to keep up with class schedules, missing classes due to last-minute room changes. Finding study rooms was a hassle, and she missed important announcements and events because she couldn't track the various platforms they were posted on. Her grades suffered as she had no centralized way to monitor her progress or seek help easily.

She heard that a group of developers are releasing an application that specifically aims to assist MMCM students in their campus experience called MapuaMate. After downloading MapuaMate, Maria's university experience transformed. The app provided her with class schedules, course announcements, and university updates all in one place, ensuring she never missed important information. She could check and reserve study rooms in advance, saving time and reducing stress. The event calendar kept her informed about campus activities, and the message board allowed her to quickly get help from peers. The grade tracker gave her a clear view of her academic performance, making her daily life more organized, efficient, and connected.

Prototype Screenshots



A short animation will appear, highlighting MapuaMate's logo. After, it will prompt the user to touch the screen which will bring them to the log in page.



Home Page



Pop up screen (Announcements)

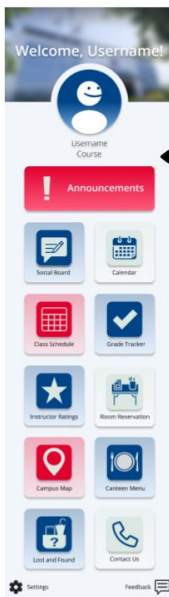
Pop up screen will tell how many announcements have been made since the last time the app was opened.



Home Page

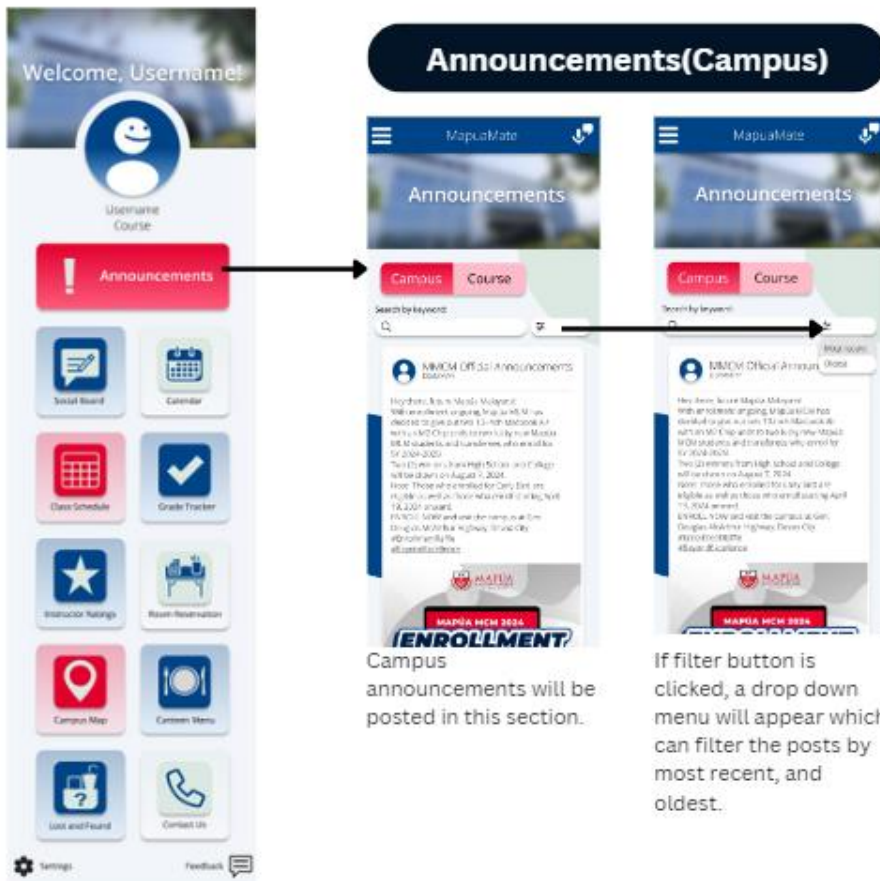
Home page shows buttons that will take you to different features it offers.

Navigation Bar

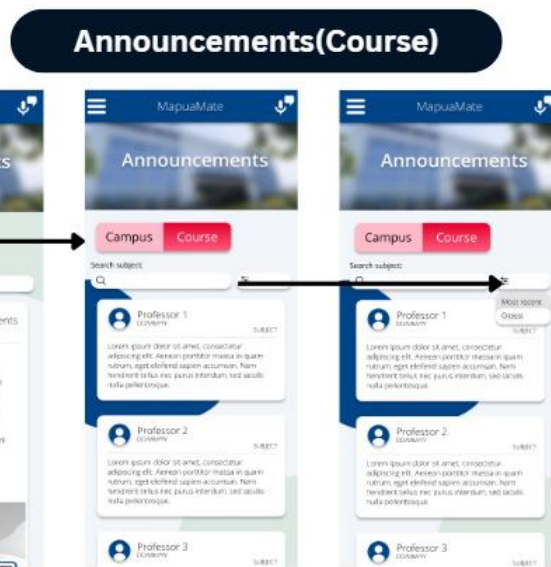


Clicking on the triple bar will bring the user back to the home page.

Clicking on the button will read the text on the screen to the user (This function is for users who struggle with reading)



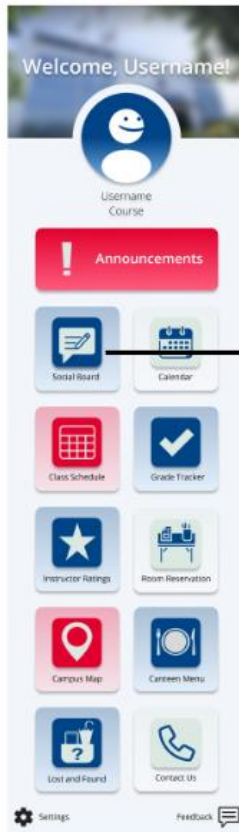
*Note: Campus announcements section is shown in default.



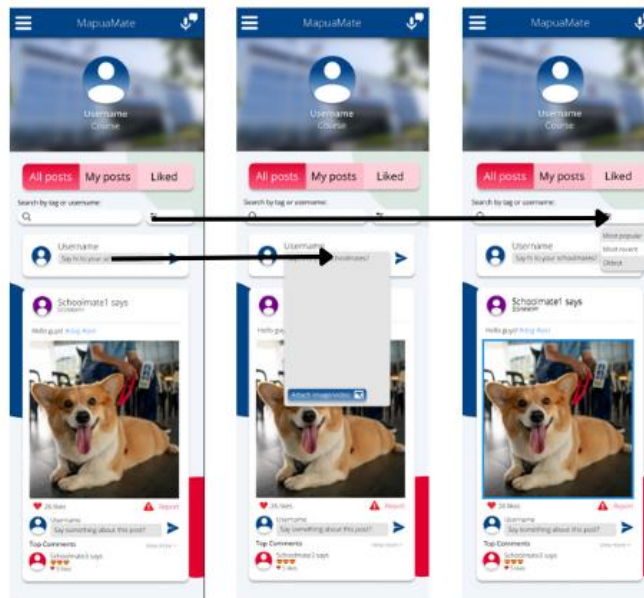
Course button can be seen beside the campus button if user wants to view announcements made by their professors.

Course announcements will be posted in this page.

If filter button is clicked, a drop down menu will appear which can filter the posts by most recent, and oldest.



Social Board (All posts)



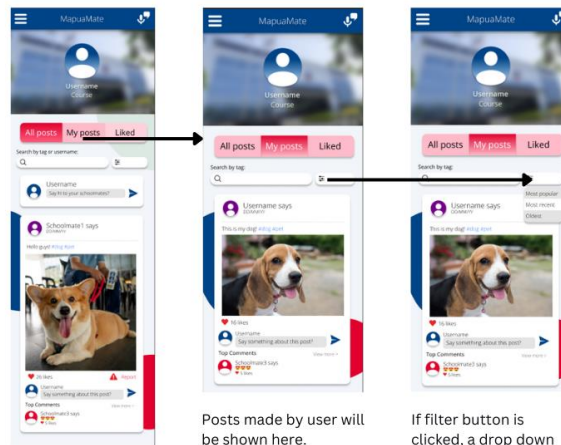
All posts made by schoolmates will be shown in the social board.

If user want to make a post, they can attach images or videos.

If filter button is clicked, a drop down menu will appear which can filter the posts by most popular, most recent, and oldest.

*Note: All posts section is shown in default.

Social Board (My posts)

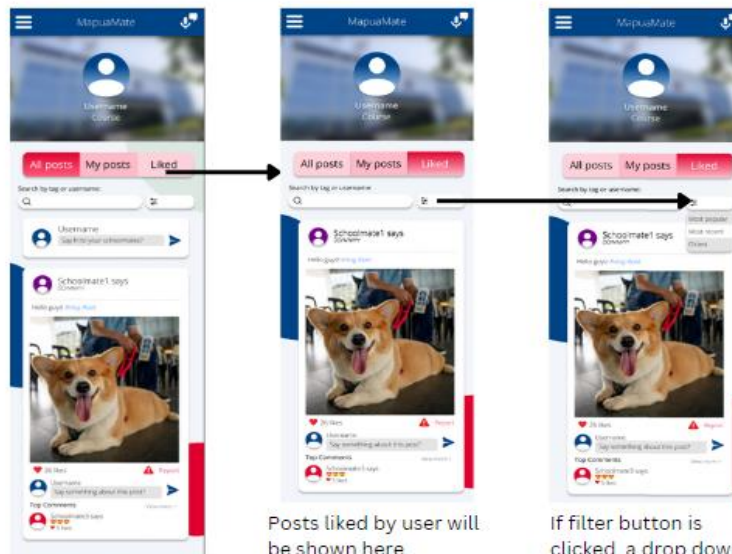


My posts button can be seen beside the All posts button if user wants to view posts they have made.

Posts made by user will be shown here.

If filter button is clicked, a drop down menu will appear which can filter the posts by most popular, most recent, and oldest.

Social Board (Liked)

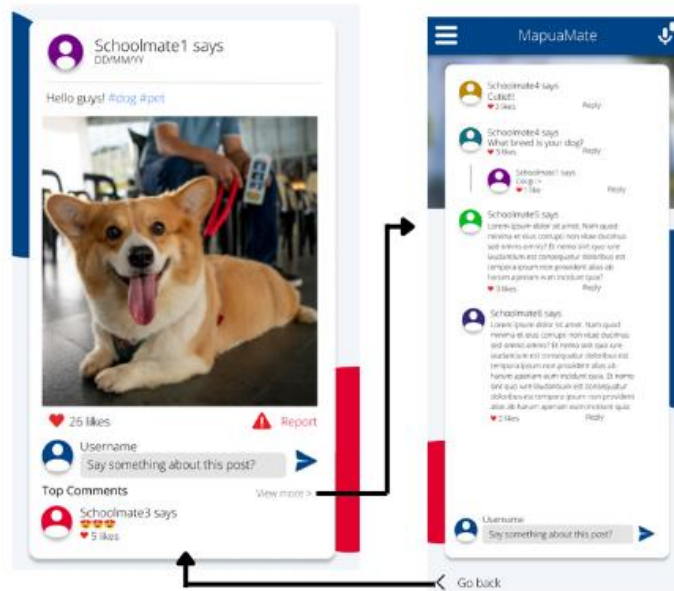


Liked button can be seen beside the My posts button if user wants to view posts they have liked.

Posts liked by user will be shown here.

If filter button is clicked, a drop down menu will appear which can filter the posts by most popular, most recent, and oldest.

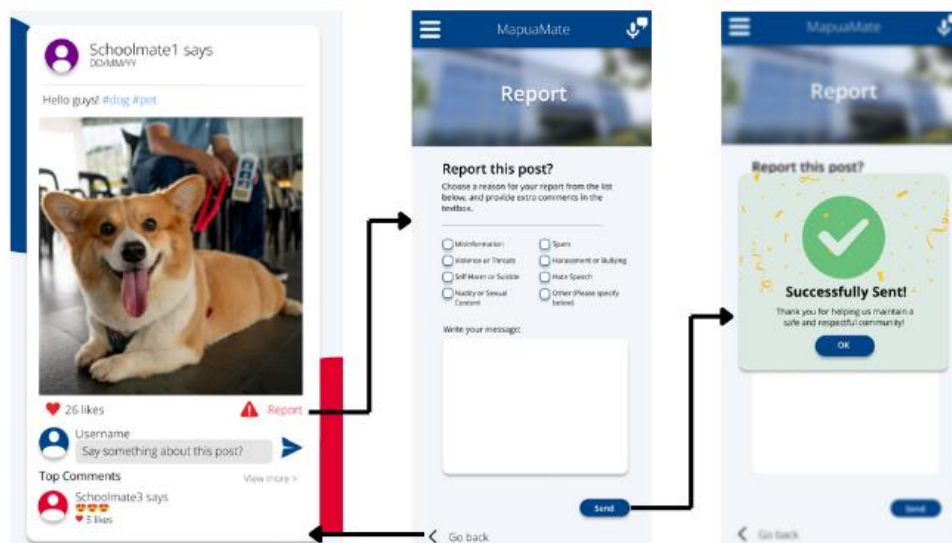
Social Board (Comments)



Click view more to see other comments made by schoolmates

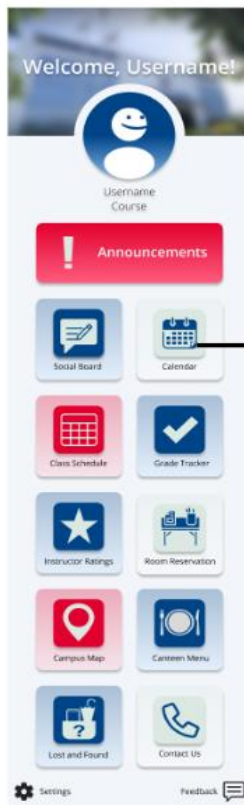
User may like and reply to other comments made by other schoolmates.

Social Board (Report a Post)

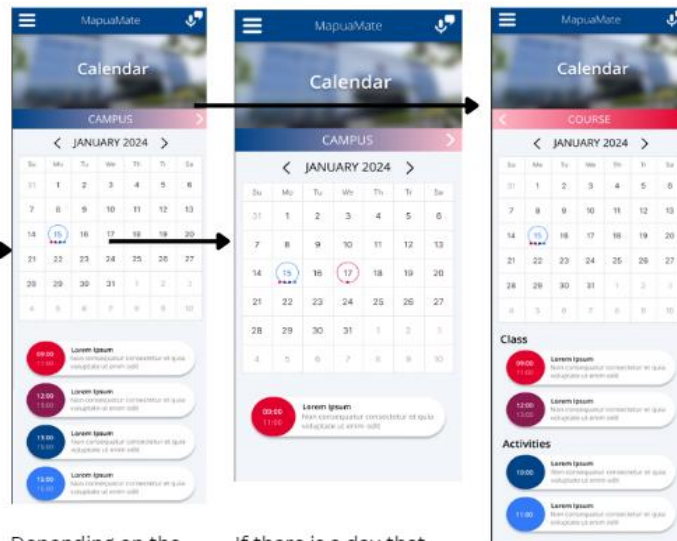


Click report to report a post.

User must provide a reason why they are reporting a post.



Calendar

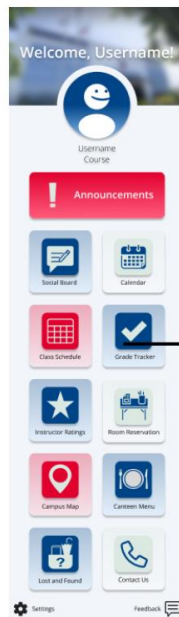


*Note: Campus announcements page is shown in default.

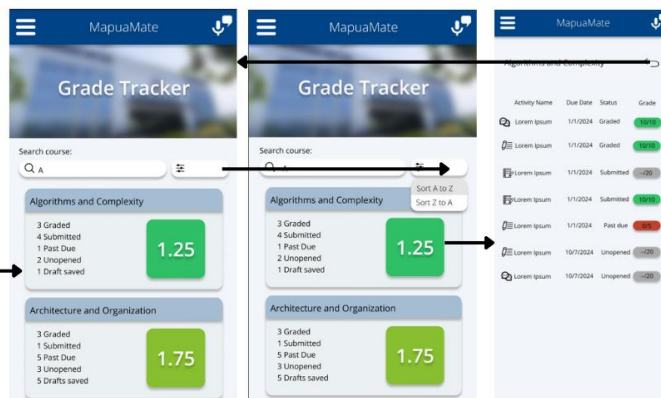
Depending on the day that was clicked, campus events for that day will be displayed on Campus Calendar.

If there is a day that has an event, a small circle will appear on the date of the calendar.

Classes/ Activities will be displayed on Course Calendar.



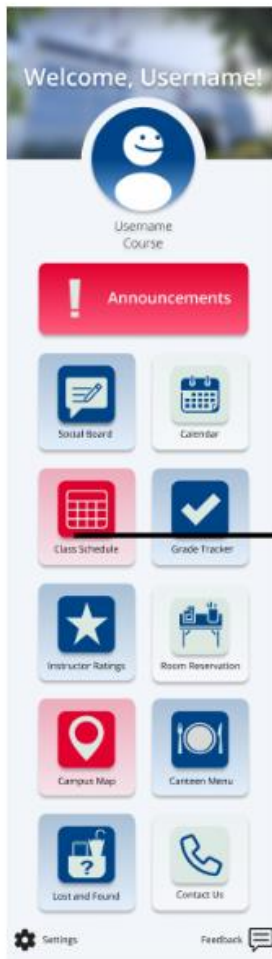
Grade Tracker



All courses and their corresponding grades will be displayed.

If filter button is clicked, a drop down menu will appear which will can filter courses alphabetically

Activities and breakdown of scores are displayed.



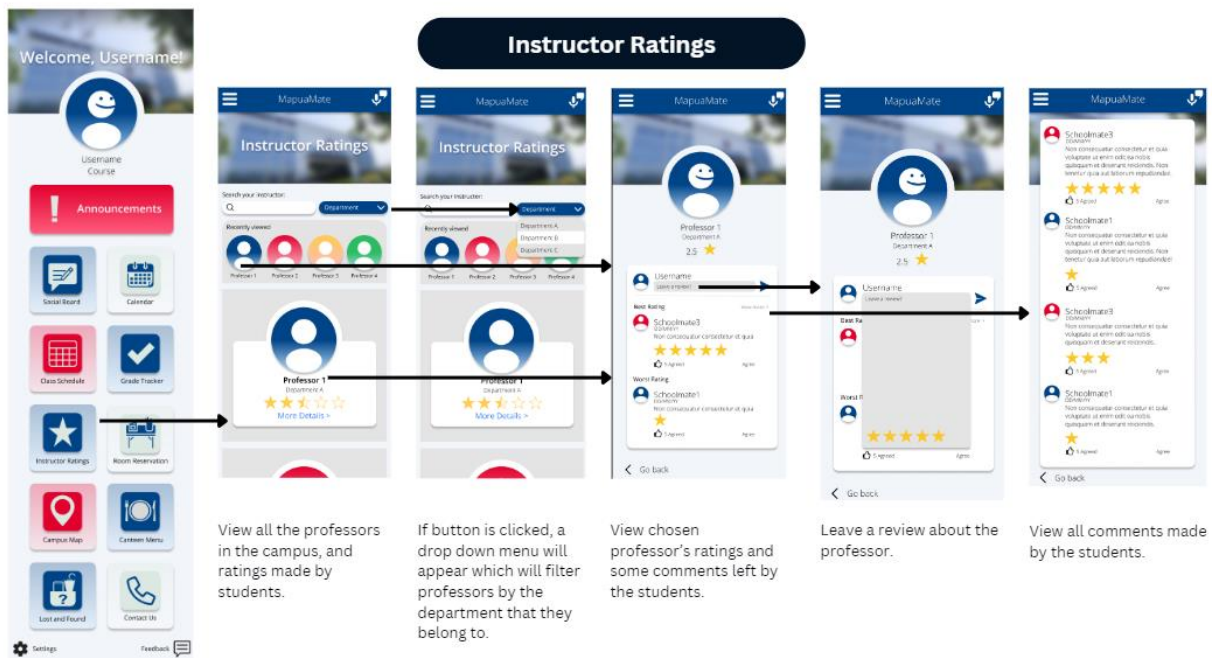
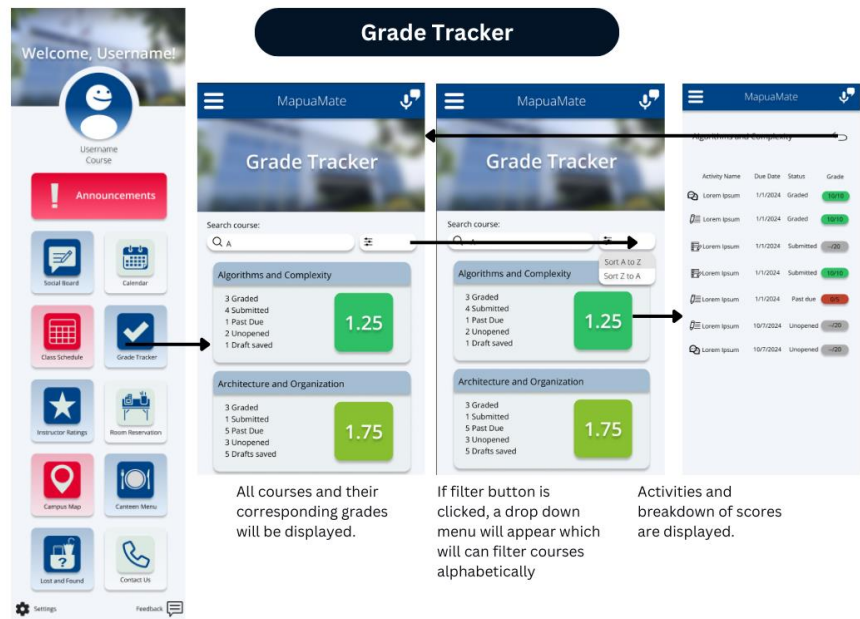
Class Schedule



Class schedule for current semester is displayed, including the room assignment.



If button is clicked, a drop down menu will appear which will display all the terms you have enrolled at MMCM to see past schedule.





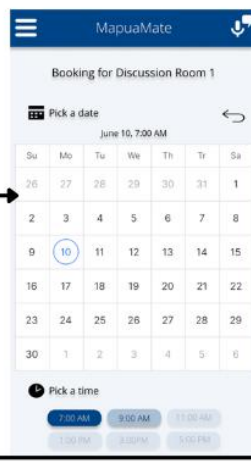
Room Reservation



View rooms that can be used by students.



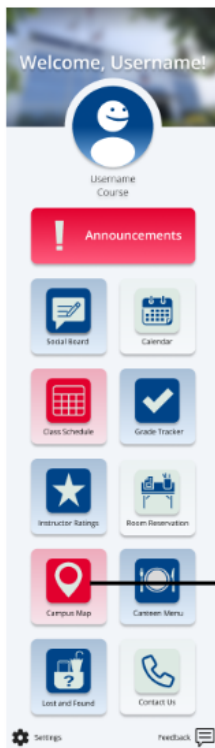
Application prompts user to fill up necessary information to book the room,



If date and time of day is clicked, it will be displayed above the calendar.



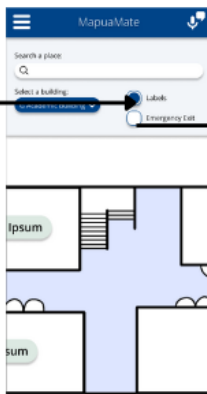
After filling up all information, a pop-up screen will show displaying that user has successfully booked the room.



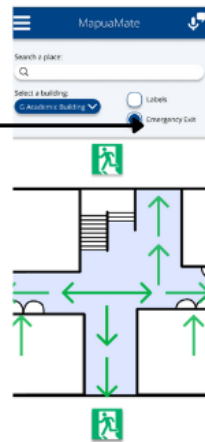
Campus Map



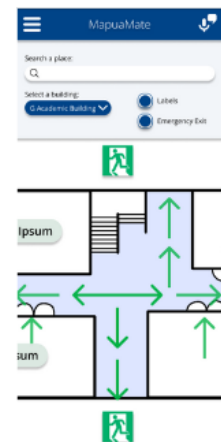
The map of the campus can be viewed in the Campus Map.



Button can be clicked to check the room labels.



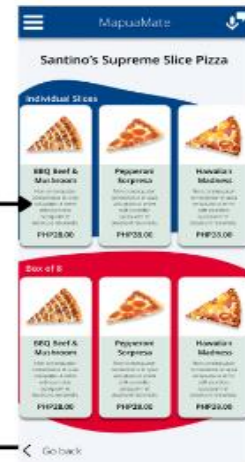
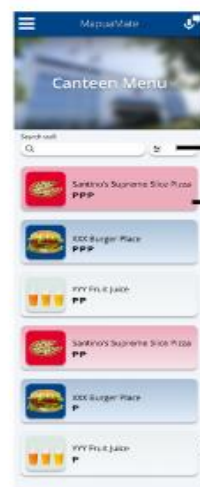
Button can be clicked to see the emergency exit.



Both buttons can be clicked to see both.



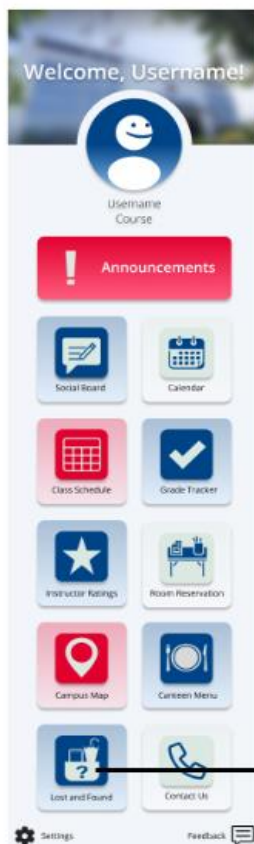
Canteen Menu



The stalls in the canteen can be viewed in Canteen Menu.

If filter button is clicked, a drop down menu will appear which will filter stalls by ascending, descending, highest and lowest price.

When a stall is clicked, their menu can be viewed which includes a short description and price.



Lost and Found



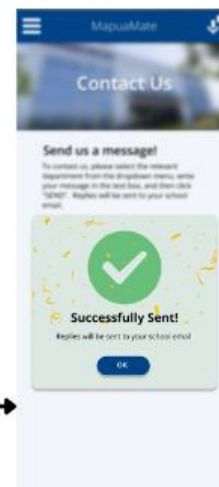
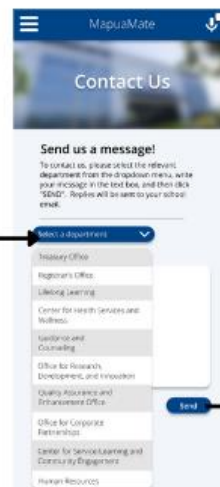
All lost and found items will be posted in the Lost and Found page.

If filter button is clicked, a drop down menu will appear which will filter items by most recent and oldest post.

Details about the chosen item can be viewed.



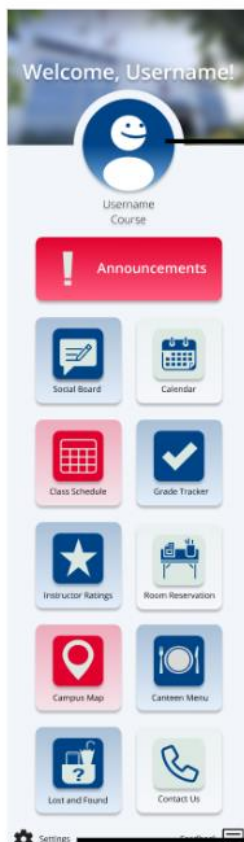
Contact Us



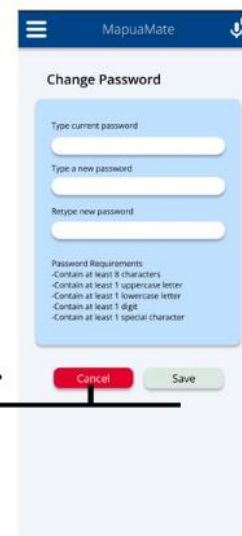
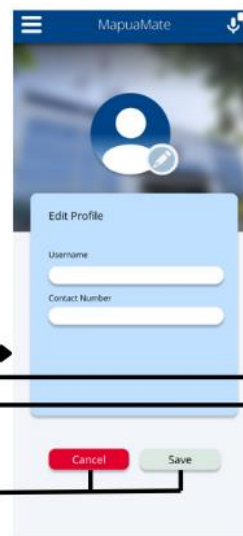
The Contact Us page enables user to contact any department they wish to message to, especially if they have concerns.

If button is clicked, a drop down menu will appear which contains the offices the user may contact.

Once send button is clicked, the message will be sent to the chosen department.



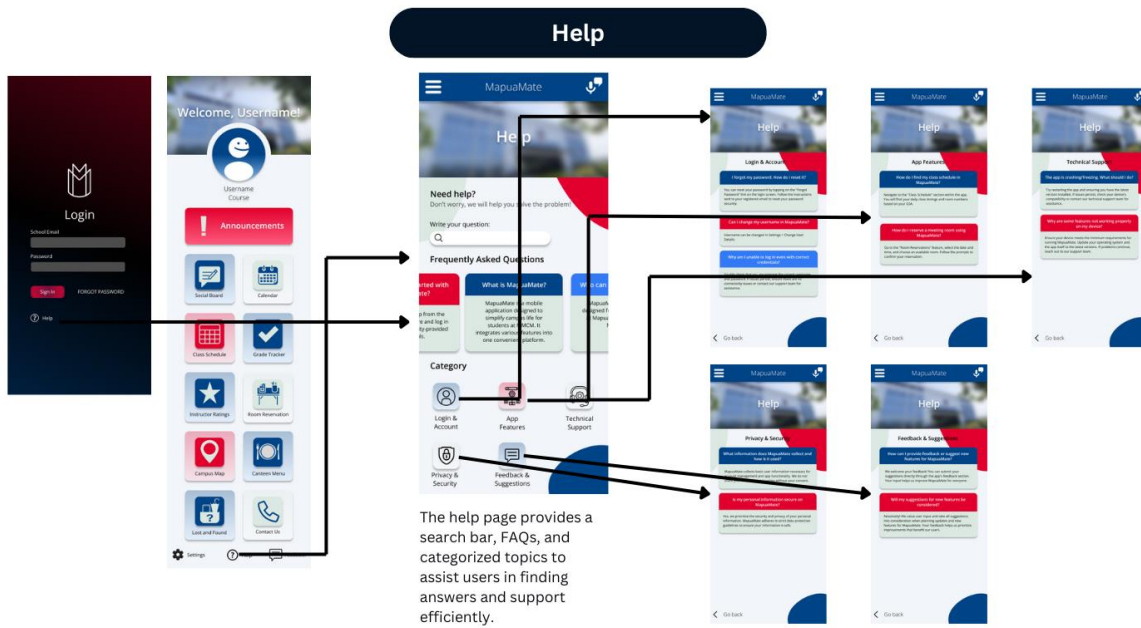
Settings

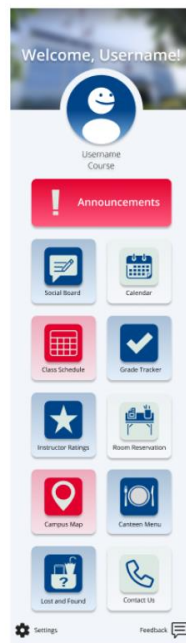


The Settings page shows user details. They may choose to change their details and their password.

The Edit Profile page asks the user for their new username and/or new contact number.

The Change Password page asks user for their old and new password and to retype their new password.





Feedback

The Feedback page asks user to provide feedback about the application to help the developers improve the system.

Sample input for feedback.

Feedback will be sent to the developers once send button is clicked.

Rationale

With careful evaluation, the current prototype combines ideas from the past design submitted. This was made possible by the team's careful planning, discussing the pros and cons of the previous design. The decision to merge these aspects was driven by the goal of addressing the weak points seen in prior designs. Also, as the members were working on the prototype, they wanted to add new elements which were not in the original plan. However, it was deemed necessary to add them to make the prototype appealing and more user-friendly. This has ultimately shaped the final prototype.

Figma was utilized to create the prototype for easy collaboration among the team. There is also a feature that allows the proponents to send the final link to the clients for feedback. While using the free version of Figma, we encountered problems such as limited button interactions which hindered full implementation of our vision. Nonetheless, the team has incorporated the functionalities necessary, ensuring that the prototype's effectiveness remains intact.

Changes to Requirements

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.

IV. Initial Evaluation Plan

An invitation to test MapuaMate's prototype will be sent to students of Mapua Malayan Colleges Mindanao where 10-20 respondents will be taken. If the student agrees to test the prototype, a survey questionnaire using Google Forms will be sent to them after. The questionnaire would include the usability criteria based on the 10 Usability Heuristics. It will also include the questions created by the team to assess other essential criteria. To assess feedback, a Likert scale will be used throughout the survey and responses will be evaluated depending on the interpretation and value of the response provided by the student.

[1 pt] Project Description: Write an updated **one paragraph** description of your project. Simply re-introduce the general area of application, intended tasks it will support and the intended user population.

[4 pts] Requirements Summary: Briefly state key requirements from your system. Again, the goal here is to re-introduce the requirements developed in Parts 1 and 2, though it is OK if you introduce new or altered requirements here. Do not exceed one page in this summary.

[75 pts] Prototype Description:

[5 pts] An overview of the prototype that you developed.

[20 pts] Each piece of the prototype in more detail, using screen shots or photographs to help illustrate the design.

[10 pts] At least one scenario from a user's perspective.

[20 pts] Rationale: why did you choose this prototype? What are its advantages and disadvantages with respect to your requirements and to your ability to evaluate it.

[20 pts] Changes to your requirements: did you alter your requirements or usability criteria while developing your prototype? If so, what are they and how did they come about?

[20 pts] Initial Evaluation Plan: Discuss usability criteria and requirements that your prototype can address and how you plan to address them. In what ways do you plan to measure the effectiveness of your interface? Make sure to cover the three techniques that you plan to use.