Chapter I. Introduction

Background of the study

Transitioning to college life is a significant milestone that presents a unique set of challenges for students worldwide. Forming friendships and social connections in a new environment is a common struggle, especially for international students who face language barriers, cultural differences, and feelings of isolation. These challenges can affect their academic performance, mental health, and overall well-being. In the Philippines, this struggle is prevalent among freshmen and students transitioning to a new academic environment. The recent shift to virtual learning due to the COVID-19 pandemic has worsened these issues, increasing stress, anxiety, and social isolation among Filipino college students. At Mapúa Malayan Colleges Mindanao (MMCM), many students, particularly irregular students, those who have shifted courses, and newcomers from other schools, struggle to find their social circle.

Statement of the problem

1. Isolation of Irregular, Shifted, and Transfer Students
    - Irregular students, those who have shifted courses, and transfer students often feel isolated and excluded in the current social environment. They lack a platform tailored to their specific needs for forming connections.
2. Inefficiency of Existing Methods
    - Existing methods, such as social media and school-organized events, do not address these students' needs. Social media can be overwhelming and impersonal, while school events may not cater to all interests or schedules.
3. Lack of Integration with Existing Platforms
    - There is no existing digital platform specifically designed for student connections at MMCM. Current popular platforms like MMCM Confessions are not adequately integrated into a system that facilitates real-time student interactions.

Assumption of the study

The Mumble app is proposed to address these issues by providing a platform for students to identify and join interest-based groups, engage in conversations, and attend social events. It aims to enhance student engagement by creating a dedicated and user-friendly environment for social interactions.

Significance of the study

This study aims to enhance the social experience and well-being of students at MMCM by addressing the lack of effective platforms for forming friendships and social connections. The primary beneficiaries of this study are:

1. **Students:** Helps students form meaningful social connections, improving their overall college experience.

2. **Student Organizations:** Offers a new way to reach and engage with students, fostering a more inclusive campus community.
3. **Faculty and Administrators:** Provides a tool to support student well-being and integration, potentially enhancing academic performance and retention rates.

Chapter II. Research Design

The design process model adopted for the Mumble application is user-centered, emphasizing the end-users' needs and experiences throughout the development stages. This approach consists of several key phases, including task analysis, requirements gathering, and iterative design and testing. Each stage is critical for ensuring that the final product effectively meets the specific social integration challenges faced by students at Mapúa Malayan Colleges Mindanao (MMCM). By closely involving users and incorporating their feedback, the design process aims to create a functional and engaging application that fosters meaningful social connections. The following sections detail each stage, integrating both theoretical descriptions and practical experiences from the development process.

Task analysis for Mumble involves breaking down the activities that users need to perform to achieve their goals within the app. This hierarchical task analysis includes identifying and joining interest-based groups, engaging in conversations, and attending events. For instance, to join a group, a user must first browse the available groups, select one that aligns with their interests, and submit a request to join. This analysis is visually represented through diagrams that map out each step and its sub-tasks. Our experience showed that providing clear, step-by-step pathways helped users navigate the app more intuitively, reducing confusion and improving overall user satisfaction.

To gather the necessary data for the Mumble application, the team employed various methods including interviews, surveys, and observations. Each method was chosen for its ability to provide different types of insights. Interviews allowed us to understand the personal experiences and challenges of irregular and transfer students. Surveys provided quantitative data on user preferences and behaviors, while direct observations offered real-time insights into how students interact with existing social platforms. These combined methods ensured a comprehensive understanding of user needs, which was critical for developing a well-rounded set of requirements for the app.

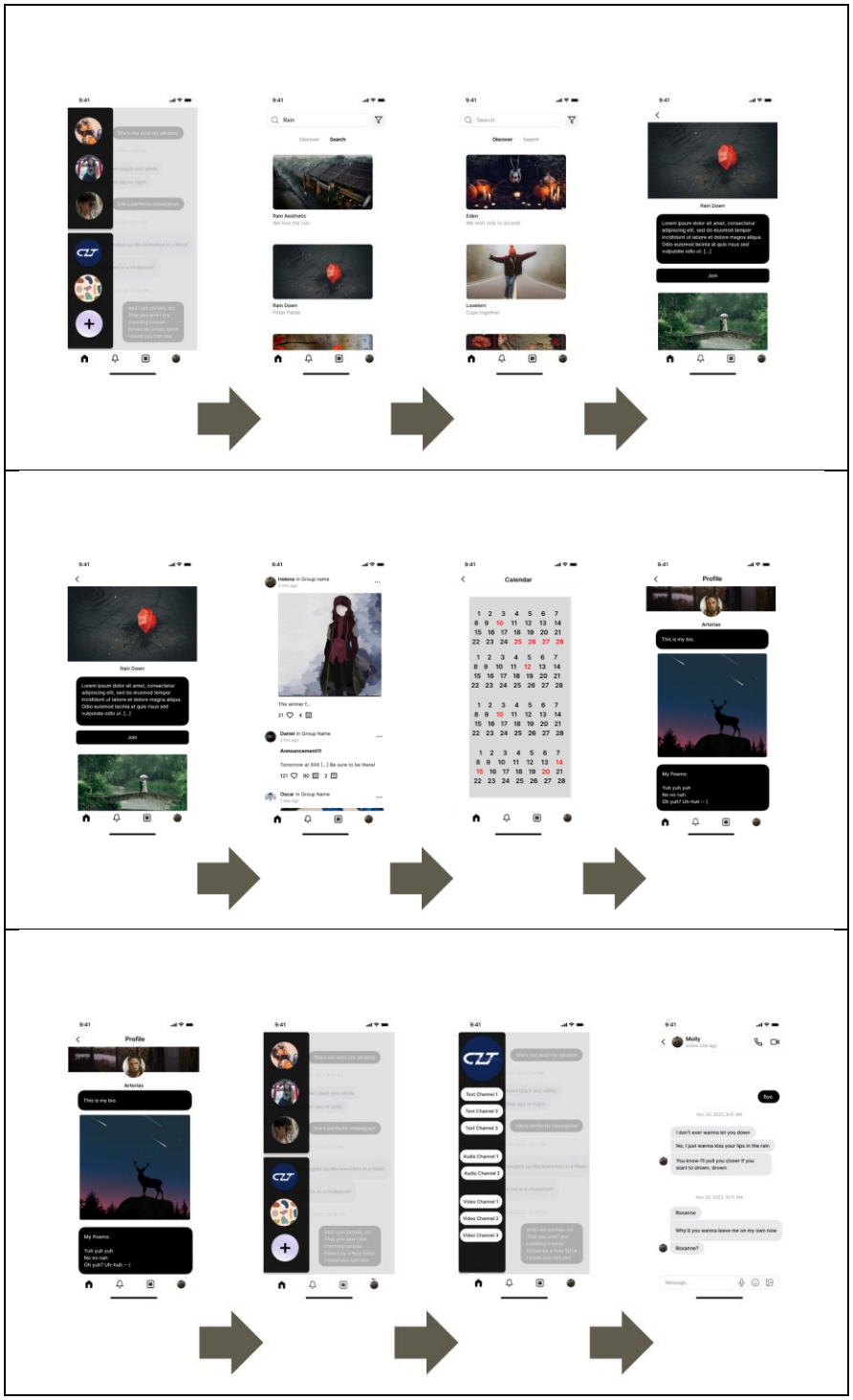
Interviews with potential users highlighted the social isolation challenges faced by irregular and transfer students. These conversations revealed that many students struggled to integrate into existing social circles and often felt excluded from campus activities. Our interview process included both structured and open-ended questions, allowing participants to share their experiences freely. This qualitative data was invaluable for identifying key features that could address these social barriers, such as personalized group recommendations and easy-to-join social events.

Surveys distributed among MMCM students gathered extensive quantitative data on user preferences and behaviors. Questions focused on students' social habits, the types of groups they were interested in, and their preferred methods of communication. The survey results indicated a high demand for a centralized platform where students could easily discover and join interest-based groups. This feedback directly informed the development of Mumble's group discovery and communication features, ensuring the app was tailored to meet the actual needs of its users.

Observational studies were conducted to understand how students currently engage with social activities on campus and online. By observing interactions in common areas and existing digital platforms like MMCM Confessions, the team gained insights into the barriers students face in forming connections. These observations highlighted the importance of integrating Mumble with existing platforms and creating user-friendly navigation paths. The findings from these studies were crucial in designing an intuitive interface that facilitates seamless social interaction.

In developing Mumble, we identified and documented requirements from multiple perspectives to ensure a comprehensive approach. From the users' perspective, the app needed to facilitate easy group discovery, joining, and communication. Functional requirements included robust CRUD (Create, Read, Update, Delete) operations for managing groups and events. Data requirements emphasized the need for secure storage and handling of user information, while environmental requirements focused on accessibility and compatibility with various devices. Usability requirements stressed the importance of an intuitive and engaging interface. Finally, designers' requirements underscored the necessity of a scalable and integrative system that could evolve based on user feedback and technological advancements.

A. **Storyboarding and Prototyping**



B. **Evaluation of prototype**

Evaluation Criteria (Based on the 10 heuristics of design evaluation)

Area of Evaluation	5	4	3	2	1
A. Visibility of System Status - The system design provides appropriate feedback like message prompts in response to user actions.		✓			
- The message prompts are clear, visible and understandable.	✓				
B. Match between the system and the real world - Used words, phrases and concepts according to users' language rather than system oriented words and computer jargons.	✓				
C. User control and freedom - The system design provides ways of allowing users to easily "get in" and "get out" if they find themselves in unfamiliar parts of the system.	✓				
D. Consistency and Standards - The colors, text, labels, buttons and other elements in the design are uniform from start to finish**.**		✓			
- Text and icons are not too small or too big.	✓				
- Menus and other features of the system are arranged and positioned in a consistent way. (For ex. If your website has navigation buttons on the top under the page title on one page, the users will automatically look there for the same features on other pages.		✓			
C. **Error Prevention** - The system design provides an automatic detection of errors and preventing them to occur in the first place.	✓				
- Idiot proofing mechanisms are applied		✓			
F. Help users recognize, diagnose and recover from errors **-** Error messages and the terms used are recognizable, familiar and understandable for the users.		✓			
G. Recognition rather than recall **-** Objects, icons, actions and options are visible for the user. - Objects are labeled well with text and icons that can immediately be spotted by the user and matched with what they want to do.	✓				
H. Flexibility and efficiency of use - The system design provides easy to navigate menus. - the system does not make wasteful time of system resources.		✓			
I. Aesthetic and minimalist design **-**Graphics and animations used are not difficult to look at and does not clutter (mess) up the screen. - Information provided is relevant and needed for the system design.	✓				
J. Help and Documentation		✓			

-the system design provides information that can be easily searched and provides help in a set of concrete steps that can easily be followed.					

Chapter III. Conclusion and Recommendation

The Mumble app is designed to address the social challenges faced by students at MMCM, particularly irregular, shifted, and transfer students. By facilitating the formation of friendships and social connections, the app aims to enhance students' college experience and well-being. The design and implementation of the app will follow the User-Centered System Design process to ensure it meets user needs and expectations.

The researchers' insights and learnings from this project highlight the importance of user-centered design in creating effective and engaging interactive systems. Throughout the development of the Mumble app, the researchers applied the principles of Human-Computer Interaction (HCI), gaining a deeper understanding of how to create user-friendly interfaces that address real-world problems. This experience underscored the critical role of involving users in the design process to ensure that the final product truly meets their needs and expectations.