

FINAL PROJECT

Prototype Application to Improve Student Welfare and Security in the UMN Campus Environment

“CAMPUS CARE”

Innovative Solution for Your Campus Needs



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Course Content IS220 – Human Computer Interaction

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**INFORMATION SYSTEMS STUDY PROGRAM
FACULTY OF ENGINEERING AND INFORMATICS
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FOREWORD

We would like to express our gratitude for the opportunity given to us to develop the CampusCare application prototype. This introduction is conveyed as part of our project in the IS-220 Human Computer Interaction course guided by Mr. Johan Setiawan S.Kom., M.M., M.B.A, an experienced lecturer in this field.

In this course, we learned about human-computer interaction and the importance of understanding user needs. The teachings we received helped us understand the principles of good interface design and prototype testing to enhance the user experience.

In the development of the CampusCare application prototype, we aimed to integrate the knowledge we gained from this course with the hope of creating an application that meets good design standards and enhances the user experience in the campus environment.

We would like to express our gratitude to Mr. Johan Setiawan S.Kom., M.M., M.B.A for his guidance and support throughout the application development process. We also extend our thanks to all those who have assisted us in this project.

With this introduction, we hope that the CampusCare application prototype we have developed can provide benefits and meet user expectations. We hope that this report can provide valuable insights and contributions for the future development of the CampusCare application.

Thank you for your attention and support.
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Tangerang, June 2023

Group 6

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CHAPTER I

INTRODUCTION

1.1 Background

In the world of higher education, the well-being and safety of students on campus are important contributors to a positive and positive learning experience. As a progressive educational institution, Universitas Multimedia Nusantara (UMN) is committed to providing a safe, comfortable, and supportive environment for students, aligning with the goals of Sustainable Development Goal (SDG) number 4, Quality Education.

SDG 4 emphasizes the importance of providing inclusive and quality education for all, and this extends to creating a conducive campus environment that supports student well-being. By addressing the challenges faced by students, such as safety concerns, information accessibility, and effective communication, UMN aims to ensure a fulfilling educational experience and contribute to achieving SDG 4.

However, with the rapid development of technology, new solutions are being sought to meet the evolving needs of students. Students expect easy access to critical information, effective communication with fellow students and campus staff, and optimal safeguards for their well-being and safety on campus. It is crucial to leverage technology to address these needs and enhance the overall student experience.

In this context, we understand the importance of developing innovative and effective solutions to meet these needs. Thus, we have taken the initiative to develop a prototype application called "Campus Care," which aligns with SDG 4 by focusing on improving the welfare and safety of students on UMN campuses.

The "Campus Care" prototype app is designed to provide a wide range of features specifically tailored to meet the daily needs of students and address the challenges they face. It aims to improve campus management, enhance communication channels, and ensure the well-being and safety of students.

Through extensive analysis of the needs and problems faced by students on the UMN campus, we have gained valuable insights. We have engaged in discussions with students, lecturers, campus staff, and security personnel to understand their expectations and requirements for an application solution that can effectively address their concerns.

To ensure the quality, security, and affordability of the application, we have involved an experienced IT team in the development process. This team has worked diligently to create a robust and user-friendly prototype that fulfills the desired objectives.

With the "Campus Care" application prototype, our aim is to make a tangible contribution to improving the welfare and safety of students on the UMN campus. The application is designed to facilitate access to the latest information about campus activities, enable effective communication between students, staff, and lecturers, and provide optimal protection and security for students.

In this report, we will provide a detailed explanation of the concept, features, and design of the "Campus Care" application prototype. We will present the results of the testing and evaluation conducted to ensure the quality and effectiveness of the application. Additionally, we will offer recommendations for the development and implementation of the "Campus Care" application in the UMN campus environment, aiming to maximize its benefits for students.

We hope that this comprehensive report will contribute to a better understanding of the "Campus Care" application prototype's development and its potential to enhance the student experience and create an improved campus environment, in line with the objectives of SDG 4.

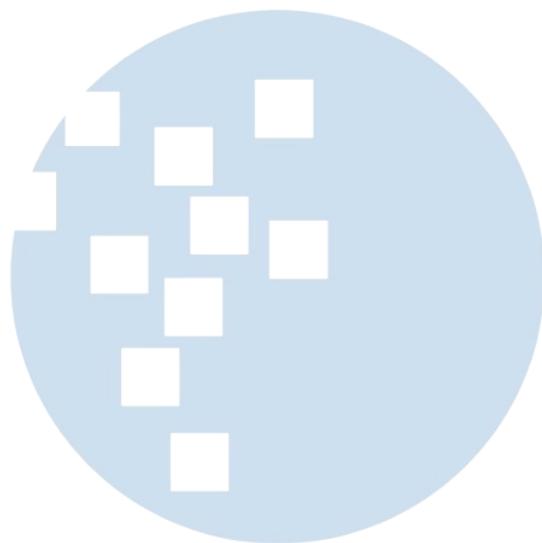
1.2 Objectives

1. The main objective of Campus Care is to enhance the well-being of students in the UMN campus environment.
2. Campus Care aims to improve the level of security in the campus environment through features such as emergency calls and emergency text messages.
3. Campus Care facilitates effective communication between students, authorities, and the Medical Center.
4. The objective of Campus Care is to bring innovation and the latest solutions in campus application development.

1.3 Benefits

1. The "Campus Care" application provides benefits in terms of easy access to emergency contact information.

2. "Campus Care" provides benefits in improving the security and protection of students in the campus environment.
3. With intuitive features and a good user experience, the "Campus Care" application provides benefits in enhancing the user experience for students.



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CHAPTER II

LITERATURE REVIEW

2.1 Concept 5/5/5

The 5/5/5 concept developed by Mr. Johan Setiawan S.Kom., M.M., M.B.A is an approach used in application development with the aim of facilitating and expediting the development process. This concept involves 5 Journal Articles, 5 Similar Applications, and 5 Interviews with relevant stakeholders. By considering relevant theoretical foundations, studying existing similar applications, and interacting with stakeholders, this concept can serve as a strong foundation for developing an application that meets user needs and aligns with current societal trends.

Here is an explanation of each component in the 5/5/5 concept:

1. 5 Journal Articles: Involves a study of five relevant journal articles in the field related to the application being developed. These journal articles can relate to human-computer interaction, interface design, user psychology, information security, or other related fields. Researching these journal articles helps in understanding the fundamental principles that need to be considered in the development of an effective application.
2. 5 Similar Applications: Involves studying five similar applications that already exist and have been used by the public. By studying these similar applications, the development team can identify the strengths and weaknesses of each application and evaluate the features that have proven successful in similar usage contexts. This can serve as a source of inspiration and guidance in designing the appropriate features for the application being developed.
3. 5 Interviews: Involves interacting with five relevant stakeholders who have knowledge and experience in the field. These interviews aim to obtain input, advice, and perspectives from those who directly interact with the community and users who will use the application. By listening to their viewpoints, the development team can understand user needs, challenges faced, and expectations to be achieved through the application being developed.

By using the 5/5/5 concept, the development team can gather broad and in-depth knowledge from journal articles related to the topic, existing similar applications, and

input from relevant stakeholders. This allows them to identify patterns, similarities, and emerging needs from the current community environment. With this strong foundation, application development can be done in a more targeted, efficient, and aligned manner with user needs and expectations.

Journal Article

1. Author : Aryani, D., & Kusumawardhani, A.
Title : The Role of Campus Environment and Students' Safety Perceptions on Students' Academic Engagement.

Year : 2020

Conclusion:

Based on the research, it can be concluded that the campus environment and students' safety perceptions have a significant influence on their academic engagement. A safe and conducive campus environment, along with positive safety perceptions, contribute to higher levels of academic engagement.

The research findings indicate that students are more likely to be academically engaged when they feel safe and comfortable in their campus environment. Positive safety perceptions allow students to focus on learning and academic activities without feeling disturbed or worried about security threats.

These findings highlight the importance of creating a safe and supportive campus environment for students. Efforts to enhance physical security, reduce crime risks, and improve campus infrastructure can have a positive impact on students' academic engagement.

Moreover, safety perceptions are also an important factor to consider. Efforts to increase students' awareness of security measures, provide clear information about existing safety procedures, and ensure the availability of adequate security resources can help improve students' safety perceptions.

Therefore, the conclusion of this journal is the significance of creating a safe and supportive campus environment and considering students' safety perceptions to

enhance their academic engagement. These efforts can have a positive impact on students' academic achievements and experiences in the campus environment.

2. Writer : Dewi, R. S., & Pratama, F.

Title : Mobile Application for Campus Security Based on Geofencing and Panic Button.

Year : 2020

Conclusion :

Based on the journal, it can be concluded that the use of geofencing-based mobile applications and panic buttons has great potential in increasing security in the campus environment. The use of geofencing technology allows the identification and mapping of critical areas on campus that require special attention in terms of security. Meanwhile, the panic button integrated into the application allows users to quickly and efficiently report emergency situations.

The results of the study show that the use of this mobile application can help reduce response time in dealing with emergency situations on campus. The application allows users to give a direct emergency signal to security personnel at the touch of a button, which can speed up the response and assistance needed.

In addition, this mobile application can also improve preventive security through the geofencing feature. By using this technology, users can receive notifications or warnings when entering an area identified as a risk zone or a security threat. This allows the user to increase alertness and take necessary precautions.

In conclusion, the development of mobile applications for campus security based on geofencing and panic buttons is an effective solution to improve response and security in the campus environment. The use of this technology allows users to quickly report emergency situations and provide the necessary assistance. In addition, the geofencing feature also helps improve preventive security by providing warnings and notifications to users when entering areas considered risky. The implementation of this mobile application can help create a safer and more comfortable campus environment for all members of the campus community.

3. Writer : Gunawan, I., & Suharyono.

Title : Designing a Campus Safety Information System using Geographical Information System (GIS) Technology.

Year : 2019

Conclusion :

Based on these journals, it can be concluded that the use of Geographic Information System Technology (GIS) in designing Campus Security Information Systems has significant benefits. This research shows that by using GIS, an information system can be built that provides campus security data with a clear and structured geographical view.

The results of the study show that with the existence of a Campus Security Information System that uses GIS, information about security can be well organized and easily accessible. This system allows users to view and map risk areas on campus, such as crime-prone points or emergency locations. This enables campuses and security personnel to take effective preventative measures and improve response in dealing with emergency situations.

In addition, the use of GIS also allows integration of security data and information with other geographic elements, such as campus infrastructure and maps of the surrounding area. This provides a more complete context and helps in making informed decisions regarding campus safety.

In conclusion, designing a Campus Security Information System using Geographic Information System Technology (GIS) can provide great benefits in improving campus security. GIS enables the organization of security data and information in a clear geographic view, enabling identification of risk areas and taking appropriate countermeasures. Security data integration with other geographic elements also helps in effective decision making. Implementation of a GIS-based Campus Security Information System can help create a campus environment that is safer and responsive to security.

4. Writer : Hidayatullah, R., Anjani, Y.A., & Fitriani, N.A.
- Title : The Role of Information Technology in Improving Campus Safety: A Case Study at Universitas Multimedia Nusantara (UMN).
- Year : 2021
- Conclusion :

Based on these journals, it can be concluded that the use of Information Technology has a significant role in improving campus security. This research shows that by implementing technological solutions, such as mobile applications, security systems, and technology-based surveillance, Multimedia Nusantara University (UMN) can increase the effectiveness of campus security.

The results of the study show that the use of mobile applications provides great benefits in improving campus security. The app allows students and staff to easily report emergency situations, get the latest safety information, and get help quickly through features such as the emergency button and security notifications.

In addition, the implementation of technology-based security systems, such as CCTV surveillance and the use of electronic access cards, also contributes to improving campus security. This system enables real-time monitoring, better access control, and data collection that can be used for security analysis.

In conclusion, the implementation of Information Technology has an important role in improving campus security. The use of mobile applications and other technology solutions allows campuses to improve response and assistance in emergency situations, increase security awareness, and strengthen the overall security system. This case study at Multimedia Nusantara University (UMN) shows that the use of Information Technology can have a positive impact in creating a safe and comfortable campus environment for all members of the campus community.

5. Writer : Kusuma, D. I., Cahyono, D., & Anggraeni, D.
- Title : Campus Security Information System with Android-Based Panic Button and Geofencing.

Year : 2019

Conclusion :

Based on these journals, it can be concluded that the use of Campus Security Information Systems with Android-based panic buttons and geofencing has an important role in increasing security in the campus environment. This research shows that by using this technology, an information system can be built that allows users to immediately report emergency situations and get help quickly.

The results of the study show that using an Android-based panic button allows users to easily and quickly report emergency situations to security. Through a mobile application that is integrated with a panic button, users can send emergency signals which are immediately received by security officers, thus speeding up the response and assistance needed.

In addition, the use of geofencing technology in campus security information systems also provides significant benefits. Geofencing enables the identification and mapping of critical areas on campus, as well as alerting users when they enter a risk zone or threaten security. This helps users to increase their awareness and take appropriate precautions.

In conclusion, the development of a Campus Security Information System with an Android-based panic button and geofencing is an effective step in improving campus security. Using the panic button allows users to quickly report an emergency situation, while geofencing helps identify risk areas and raises awareness. The implementation of this technology can help create a safer campus environment, provide better protection for all members of the campus community, and improve response in dealing with emergency situations.

5 Similar Apps

Features	Campus Safety	Guardian Mobile Safety	Safer Campus	SafeZone	LiveSafe
	100.000+ Download. Rating 4,2	500.000+ Download. Rating 4,4	200.000+ Download. Rating 4,1	1.000.000+ Download. Rating 4,3	1.500.000+ Download. Rating 4,5
Emergency	✓	✓	✗	✗	✗

Chat Report					
Emergency Call	✓	✓	✓	✓	✓
Campus Maps	✓	✓	✓	✗	✓
Latest News	✓	✗	✗	✓	✓
Reporting System	✓	✓	✓	✓	✓
Notification	✓	✓	✓	✓	✓

Interview 5 stakeholders

Jansen Wiratama , S.kom , M. Kom - (Lecturer of Information Systems)



According to Mr. Jansen Wiratama, S.Kom, M.Kom as a Lecturer/Lecturer at UMN (Multimedia Nusantara University) said that our prototype called CampusCare is good and really needs to be developed and if possible embed into the Union Application which has been provided by UMN so that the UMN academia community does not need to download additional applications to be able to take advantage of the features in CampusCare and also the features are in accordance with the name Prototype of our group application but Mr. Jansen himself commented on the logo which he felt was still not appropriate , and also some text boxes that still tend to be too stiff, and inconsistent in the placement of text and fonts.

Junaedi - (Campus Security Unit)



According to Mr. Junaedi as head of UMN security, the Campus Care application is something new and very unique, then Mr. Junaedi also hopes that the Campus Care application will also accommodate the hopes for all UMN families, with the design that we have made according to Mr. Junaedi it is good, but maybe later there will be developments as needed.

Vania Lay - (Head of Medical Center UMN)



According to Vania Lay, Chair of the Medical Center, the CampusCare application is very important for students because it provides an emergency call feature that allows them to immediately contact the medical team or security guard if an accident occurs on campus. This emergency call feature is a crucial aspect in maintaining the safety and welfare of students. In an emergency situation, students can easily trigger an emergency call through the application, connecting them directly with the UMN campus medical center or security guard. In fact, to increase the availability of assistance, there is a suggestion to add an alarm feature that can automatically notify security guards when there is an emergency call. With these features, response to emergencies can be significantly improved, ensuring immediate assistance is received and strengthening campus security systems.

Keysha Putri Angelica - (Student of Strategic Communication UMN)



According to Keysha, the name of our application already represents the function of the application. According to her, the most important main feature is the feature for reporting problems on campus and the feature for talking directly to campus staff. She thinks that our application is needed by campus students. And according to her, the prototype design is quite good.

Pak Danry Ray (IT Department of UMN)



According to Mr. Danry Ray as the UMN IT Department, the CampusCare application is very good and useful for UMN residents. However, there are a number of things that must be added, such as reporting cases of sexual harassment on behalf of CampusCare, with reporting of sexual harassment cases this application will be better and more complete for all incidents that occur on campus.

2.2 8 Golden Rules

The 8 Golden Rules, also known as the "Usability Heuristics" by Jakob Nielsen, are a set of principles or guidelines used in user interface design to ensure a high level of usability. These principles assist app developers in designing interfaces that are intuitive, efficient and satisfying to users.

The following is a brief explanation of the 8 Golden Rules:

1. Visibility of system status: Users should always be provided with clear information about the system status, such as indicating the progress of a process or displaying an error message. This helps the user to understand what is going on and avoid confusion.
2. Match between system and the real world: Interface design must reflect concepts and terms that are already familiar to users. By using familiar language and symbols, it will be easier for users to understand and use the application.

3. User control and freedom: The user must have full control over the interaction with the system. They should be able to easily reverse or undo their actions, thereby reducing the risk of unintentional errors.
4. Consistency and standards: Interface design should be consistent in appearance, behavior and terminology. This helps users to understand existing patterns and makes the user experience more intuitive.
5. Error prevention: The interface design should prevent errors as much as possible. By providing clear notifications, proper input limits, and secure settings, users can avoid errors and confusion.
6. Recognition rather than recall: Important information must be displayed clearly and does not require the user to remember previous information. Users should be able to access information easily, such as using visible menus or clear choices.
7. Flexibility and efficiency of use: Interfaces should be designed to accommodate users with varying experience levels. Trained users must be able to use the application quickly and efficiently, while less trained users must still be able to use it easily.
8. Aesthetic and minimalist design: The interface must have an attractive appearance and not be confusing. A simple and organized design helps users focus on the tasks they want to complete without distractions.

Following these principles in app development can help create a better user experience, increase user satisfaction, and reduce user error rates. These principles have become time-tested guidelines and are frequently used by interface designers to achieve optimal usability.

2.3 MBTI

MBTI (Myers-Briggs Type Indicator) is a personality measurement tool that is widely used in psychology and self-development. Developed by Isabel Myers and Katharine Briggs, the MBTI aims to describe individual preferences in four major personality dimensions, resulting in a total of 16 distinct personality types.

The following is a detailed description of each dimension in the MBTI:

1. Ekstrovert (E) vs. Introverts (I):

This dimension describes individual preferences in obtaining energy. Individuals who tend to be extroverted get energy from interactions with other people

and social situations. They tend to be open, passionate, and extroverted. Meanwhile, individuals who tend to be introverted get energy from alone time and personal reflection. They tend to be more calm, thinker, and introverted.

2. Intuition (N) vs. Senses (S):

This dimension describes individual preferences in receiving information. Individuals who are intuitive tend to be more interested in abstract concepts, general patterns, and seeing the big picture. They tend to be creative, innovative, and future-oriented. Meanwhile, individuals who tend to feel more focused on concrete details, facts, and direct experiences. They tend to be practical, realistic, and reality oriented.

3. Thought (T) vs. Feelings (F):

This dimension describes individual preferences in decision making. Individuals who tend to think more tend to use logic, objective analysis, and rational considerations in making decisions. They tend to be objective, critical, and focused on facts. Meanwhile, individuals who tend to feel more consider personal values, empathy, and social considerations in making decisions. They tend to be emotional, pay attention to other people's feelings, and are relationship oriented.

4. Rating (J) vs. Observation (F):

This dimension describes individual preferences in dealing with the outside world. Judgment-prone individuals tend to be structured, organized, and need certainty. They tend to make plans, stick to schedules, and have a tendency to complete tasks. Meanwhile, individuals who tend to observe tend to be more flexible, spontaneous, and open to change. They tend to be flexible, adaptive, and have a tendency to adjust to situations.

Through a combination of preferences in these four dimensions, the MBTI produces 16 different personality types, namely ENFJ, ENFP, ENTJ, ENTP, ESFJ, ESFP, ESTJ, ESTP, INFJ, INFP, INTJ, INTP, ISFJ, ISFP, ISTJ, and ISTP. Each personality type has unique strengths, preferences, and tendencies that influence how individuals interact, work, and make decisions.

However, it is important to remember that the MBTI is not an absolute personality determinant, but rather an indicator of personality preference. The MBTI can provide valuable insights about oneself and others, but it cannot be used as the sole determinant of one's personality.

2.4 Persona

Persona is a fictitious representation of a user that is used in the process of designing a product or service. Personas help development teams or designers understand user needs, preferences, and behavior in greater depth. Personas are created based on research and analysis of collected user data.

Here are some elements that are typically included in a persona description:

1. Name: Gives a unique identity to the persona.
2. Image: Provides a visual representation of the persona for easy identification.
3. Demographics: General information regarding age, gender, education, occupation, and other relevant backgrounds.
4. Personality characteristics: Describes the personality traits and preferences of users, such as introvert or extrovert, ambitious, analytical, creative, etc.
5. Goals and needs: Present what users hope to achieve and the problems they want to solve by using the designed product or service.
6. Situation and context of use: Describes the situation or context in which the user interacts with the product or service, such as the environment in which they live, the time of day, the device used, etc.
7. User behavior: Describes user behavior and habits when using a product or service, such as preferences in user interfaces, learning styles, etc.

Personas help a team of developers or designers to assume a particular user's point of view when designing a product or service. By understanding the characteristics and needs of personas, teams can make better decisions and design solutions that better suit the intended users. Personas can also help clarify design directions and serve as a reference during the development process.

2.5 Google Material You

Google Material You is a design approach introduced by Google to create a personalized user experience that focuses more on individuality. This concept is an evolution of the previous Material Design design approach, which aimed to create visual consistency and intuitive interaction across multiple platforms and devices.

Google Material You places an emphasis on personalizing and adapting designs based on user preferences and styles. Within Material You, users have the ability to customize the appearance of the app's interface and theme to suit their visual preferences. Users can choose colors, fonts, icons and other design elements to suit their personal style and preferences.

In Material You, interface design is based on the following principles:

1. Dynamic: Design adapts to changing user preferences and styles. Users can select color themes, fonts and icons to suit their personal tastes.
2. Expressive: Material You allows users to express themselves through design personalization. This creates a more personal and emotionally impactful experience.
3. Connected: Consistent design across Google devices and platforms, so users can have a seamless, connected experience across the Google ecosystem.
4. Environmentally friendly: Material You also takes battery efficiency and better resource use into account, by optimizing animations and the use of other design elements.

With Google Material You, Google wants to provide a more personalized and user-focused experience. Material You allows users to experience a personal touch in using Google products and create interfaces that match their visual preferences and individual style.

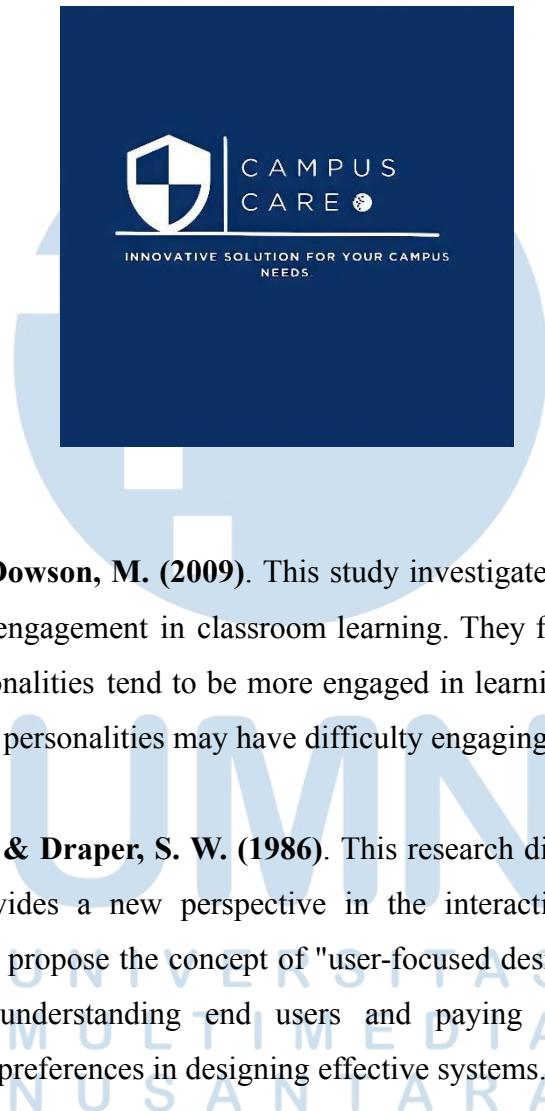
2.6 Color Selection, Logo and Philosophy

2.6.1 Color

Color is an important element in creating the visual identity of an application. In this case, using a blue color similar to the UMN logo can give the impression of consistency and identification with the campus. The color blue is generally associated with stability, trust, and security, which is in keeping with CampusCare's goal of improving campus management and user experience. In addition, based on the results of the questionnaire showing the respondents' interest in blue, the use of this color can affect the perception and attractiveness of the application for users.

2.6.2 Logo

The CampusCare logo is designed in the form of a shield, depicting protection, security, and the obligation to protect students and maintain security on campus. The shape of the shield also reflects responsibility and dedication to provide innovative solutions that suit campus needs. Including the tagline "Innovate Solution for Your Campus Needs" on the logo can emphasize the concept of innovative solutions offered by this application.

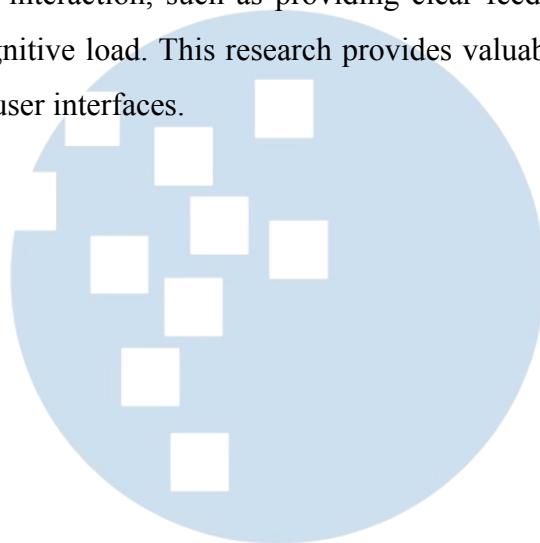


2.7 Previous Research

1. **Martin, A., & Dowson, M. (2009).** This study investigates the relationship between personality and engagement in classroom learning. They found that individuals with more open personalities tend to be more engaged in learning, while individuals with more introverted personalities may have difficulty engaging actively.
2. **Norman, D. A., & Draper, S. W. (1986).** This research discusses user-based system design and provides a new perspective in the interaction between humans and computers. They propose the concept of "user-focused design" which emphasizes the importance of understanding end users and paying attention to their needs, capabilities, and preferences in designing effective systems.
3. **Nielsen, J., & Molich, R. (1990).** This study discusses the heuristic evaluation of the user interface. This evaluation method involves using a predefined set of heuristic principles to identify design problems in the user interface. The results of this research provide a practical guide for designers to improve the quality of the user interface.
4. **Preece, J., Rogers, Y., & Sharp, H. (2019).** This research discusses interaction design that goes beyond the concept of human-computer interaction. They propose a

broader approach that includes the design of human interactions with various digital systems, including human interactions with physical, social, and software systems. This research highlights the importance of considering context and user experience in designing effective interactions.

5. **Shneiderman, B., & Plaisant, C. (2010).** This study discusses effective user interface design strategies. They identified eight design strategies that can improve human-computer interaction, such as providing clear feedback, giving users control, and reducing cognitive load. This research provides valuable insights for designers in designing better user interfaces.



CHAPTER III

RESEARCH METHODS

3.1 CampusCare Application Prototype Business Process

The business process in developing CampusCare application prototypes involves a series of steps designed to achieve development goals efficiently and effectively. This process involves collaboration between the development team, relevant stakeholders, and end users to ensure that the user's needs and expectations are met.

First, the development team will conduct a needs analysis and identify problems that exist in campus management and the current user experience. This involves interviews with stakeholders, data collection, and research to fully understand the challenges and opportunities that exist.

After that, the development team will design concepts and features that are expected to meet user needs. This design process includes creating wireframes, prototypes, and user interfaces that are intuitive and easy to use.

Next, the development team will start developing the application by implementing the features that have been designed. This process involves programming, testing, and iterating to ensure that the application runs properly and meets the expected quality standards.

Once development is complete, a testing phase will be conducted to identify bugs and ensure that the application functions properly in various usage scenarios. Using trials with real users and gathering feedback from them is also an important part of the testing process.

Finally, after the application is deemed ready, the development team will roll out the CampusCare application to the intended platform, such as iOS and Android. This rollout involves setting up infrastructure, distribution and promotion to ensure that the application is accessible to the target users.

During this entire business process, good communication between the development team, stakeholders and users is very important. Feedback from users and stakeholders will be used to make improvements and further development of the CampusCare application.

By following this business process, the CampusCare application prototype development can run in a structured and organized manner, produce solutions that meet user needs and expectations, and provide a satisfying user experience.

3.2 Data collection

In developing the CampusCare application prototype, our team used several data collection methods, including questionnaires and interviews.

The following is a summary of the questionnaires and interviews conducted:

1. Questionnaire 1: Requirements

This questionnaire aims to collect user needs and requirements regarding the expected features and functions of the CampusCare application. This questionnaire was distributed to students at Multimedia Nusantara University (UMN).

The questions in this questionnaire cover the following topics:

- Are they comfortable with the existing reporting system at UMN
- Have they ever reported incidents at UMN
- If they have reported how satisfied they are and for those who have never reported what are the main reasons they haven't/did not report

2. Questionnaire 2: Prototype

This questionnaire is used to collect feedback from users regarding the CampusCare application prototype. This questionnaire focuses on evaluating the user experience of the features, interface, and functionality of the prototype. Questions in this questionnaire include:

- User satisfaction with prototype interface and navigation.
- User perception of the features that have been implemented.
- Feedback and suggestions for improvement and improvement of the prototype.

3. Interview

In addition to the questionnaire, the team also conducted interviews with a number of students and lecturers at UMN. This interview aims to gain deeper insight into the needs and expectations of users for the CampusCare application. This interview covers topics such as:

- User experience when using similar apps.

- User preferences and expectations for certain features.
- Challenges and needs faced by users in the campus environment.

By using this data collection method, our team is able to gather valuable information to design and develop CampusCare application prototypes that suit users' needs and expectations.

3.3 Method *Design Sprint*

Design Sprints are a structured, focused method of product development designed to address challenges in a short period of time. The following is an example of implementing the Design Sprint Method in five working days, from Monday to Friday, to develop a Campus Care application prototype:

Monday: Understanding

On Monday, the Campus Care development team will kick off with an in-depth session on development challenges and goals. The team will conduct discussions and analyze user needs, as well as learn insights from relevant stakeholders. This will help the team understand the context, the problem to be solved and what the user wants.

Tuesday: Sketching

On Tuesday, the team will focus on generating ideas and potential solutions. Each team member will have an individual "sketching" session, where they visually design various concepts and features that might be included in Campus Care. After that, the team will share and discuss together to select the best ideas that will be passed on to the next stage.

Wednesday: Deciding

Wednesday will be the team's time to select the best ideas that were generated the previous day. After evaluation and discussion, the team will choose the most promising concept that fits the user's needs. The concept will be used as the basis for developing a prototype that will be built next.

Thursday: Prototyping

On Thursday, the team will start building a Campus Care prototype based on the selected concept. This prototype can be an interactive visual mock-up or a simplified version of the desired features. The focus today is on creating prototypes that can be used for further testing and evaluation.

Friday: Testing

The last day, Friday, will be used to test the Campus Care prototype that has been made. The team will invite target users or trial participants to use the prototype and provide feedback. This test will help the team understand the strengths and weaknesses of the application and gain valuable insights for further improvement and development.

By using the Design Sprint method, the Campus Care development team can efficiently and purposefully produce application prototypes that suit user needs. This five-day, structured process allows for faster development, as well as allowing teams to test ideas and get real-time user feedback.



CHAPTER IV

ANALYSIS AND RESULTS

4.1 Understanding

After designing the design, features, and appearance of the application, we conducted interviews with various respondents, including the Head of the Medical Center, students, lecturers, IT developers, and UMN security guards. The results of the interviews showed that the respondents agreed to enthusiastically welcome the presence of the CampusCare application, recognizing that this application would be a very valuable tool for the UMN community.

In particular, the Head of the Medical Center stressed the importance of implementing this application, because he realized that with CampusCare, UMN students, staff, and lecturers would easily get assistance from services provided by campus internal and external parties. The features available in the CampusCare application also allow users to easily report emergencies experienced by victims.

Keysha, a student majoring in Strategic Communication, thinks that this application is really needed and will really help UMN students. With the features provided by Campus Care, it can make it easier for students to access the latest information and news on campus, and easy access to report incidents or incidents on campus.

Thus, it can be concluded that the existence of the CampusCare application will provide better convenience and security for the entire UMN community, as well as assist in dealing with emergency situations quickly and efficiently.

4.2 Diverge

At this stage, each group member actively participates in an enthusiastic and creative brainstorming session. They enthusiastically poured out their brilliant ideas related to this research. The main objective of this session is to generate a variety of innovative and interesting ideas, which will later be applied in making stunning application prototypes.

After an intense brainstorming session, the next step is to apply the ideas to a professional design platform, such as Figma. Through Figma, group members are able to turn creative ideas into prototype designs which provide an initial picture of the

appearance and features of the application to be developed. This prototype design will later become the basis for further revision and development.

One of the results that stood out from this brainstorming session was finding a suitable name for the application to be made. After an exciting discussion, the group managed to choose a name that describes the essence of the application, namely "CampusCare". This name was chosen because it reflects the main purpose of the application, which is to provide care and security for the entire campus community.

In designing the features to be added to the CampusCare application, the group carefully considered the needs and wants of potential users. One feature that is the main focus is the emergency button which will be placed on the home page display. This feature will allow users to quickly and easily report emergency situations to the authorities.

In addition, other features that have been planned to be implemented in the CampusCare application include Emergency Reports, Campus Maps, Emergency Notification, Reminder, Information, More, Call, Community, Chat, and Profile. These features are designed to provide a comprehensive user experience and assist them in various aspects of campus life.

The initial design of the CampusCare application display is also the focus in this process. The group has created a unique and attractive logo and tagline that reinforces the message and values of CampusCare. This logo includes a shield that depicts protecting members of the campus community and providing assistance in an emergency.

In terms of color selection, the group has chosen a combination of light blue and white for the CampusCare application. The light blue color was chosen because it gives the user the impression of calm, security and comfort. While the white color gives the impression of simplicity and cleanliness. This color combination aims to create a pleasing and attractive appearance for the user.

CampusCare is designed to be used by Multimedia Nusantara University lecturers, staff and students. As such, the app is designed to meet the needs of all members of the campus community and be an effective means of ensuring their safety and well-being.

Overall, through an energetic brainstorming process and careful prototype design, the group succeeded in producing a promising initial concept for CampusCare applications. With a focus on user safety, maintenance and comfort, this application is expected to provide innovative solutions and assist in dealing with emergency situations and strengthen campus community ties.

4.3 Decide

At this stage, after all the ideas have been collected and designed in Figma, group members will continue with the stage of selecting the prototype design that will be applied. This process involves collective discussion and consideration to decide on the design that best fits the concept and purpose of the CampusCare application.

Group members will evaluate each prototype design that has been made, paying attention to aspects such as user interface appearance, functionality, ease of use, consistency with branding, and suitability with user needs. They will critically analyze and compare each design, identifying the advantages and disadvantages of each.

During the discussion, group members will express their opinions, provide input, and share views on the designs. It aims to achieve an in-depth understanding of the strengths and weaknesses of each design, as well as find the best solution that can meet the main objectives of the CampusCare application.

In this decision-making process, group members will focus on a design that combines attractive aesthetics with optimal functionality. They will also ensure that the prototype design reflects the values of CampusCare, such as safety, care, comfort, and community.

Structured and collaborative discussions will help group members to reach an agreement in choosing the most suitable prototype design. After considering all inputs and perspectives, the group will reach an agreement on the design to be applied.

The selection of this prototype design is an important step in the development of the CampusCare application, because the selected design will be the basis for further development and implementation of the features that have been planned previously.

Here are some CampusCare application prototype designs:

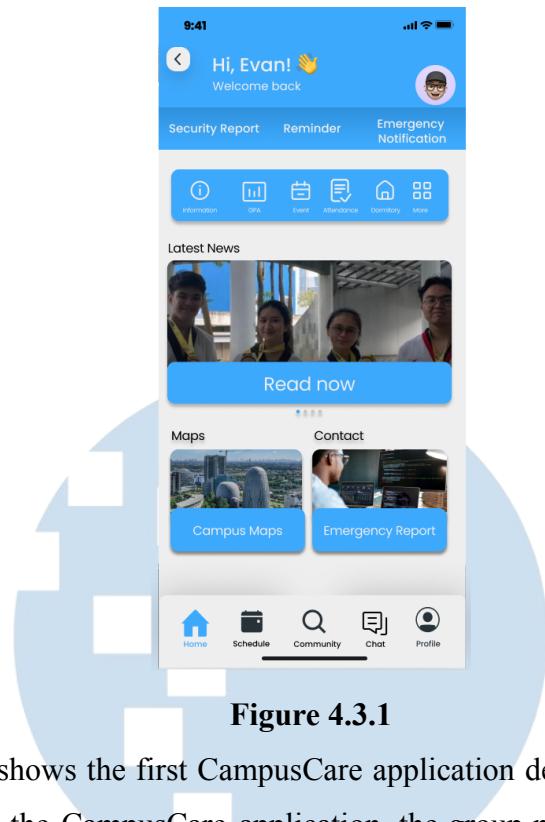


Figure 4.3.1

Figure 4.3.1 shows the first CampusCare application design. After identifying the first design flaws in the CampusCare application, the group members wisely decided to revise the existing features to ensure compatibility with the main purpose of the application. In the face of remaining disagreements, they understand the importance of collaboration and structured discussion to reach agreement.

In this revision process, the group carefully evaluates each existing feature, asking themselves and fellow group members whether the feature is truly relevant and provides added value to CampusCare users. In making decisions, they are driven by in-depth analysis and careful consideration to ensure the revised design best meets the main goals and needs of users.

In a collaborative spirit, group members share views and input, seeking agreement on which features need to be adjusted, removed, or added. Their primary focus is to deliver the most important and relevant features that will enhance the safety, well-being and user experience in the campus environment. With a targeted joint effort, they hope that the final CampusCare application design will be more effective and focused, providing significant added value to users.

Ultimately, this revision reflects the group's commitment to improving the CampusCare application concept, optimizing features that support the primary goal, and creating a superior user experience.

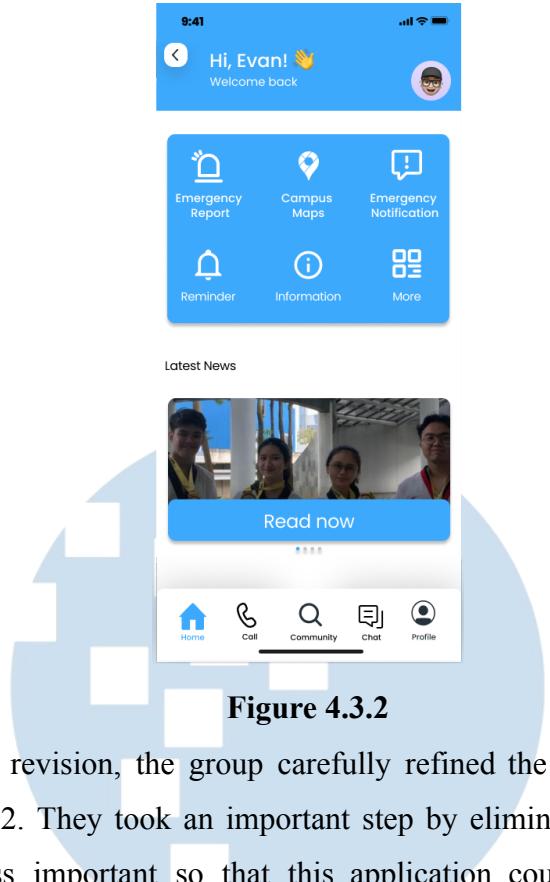


Figure 4.3.2

After careful revision, the group carefully refined the app's designCampusCare cation in Figure 4.3.2. They took an important step by eliminating several features that were considered less important so that this application could be more focused and effective in achieving its main goal.

In the feature removal process, group members carefully reconsider each feature that was present in the previous design. They carry out an in-depth evaluation to understand the usefulness and relevance of each feature to the main goals of CampusCare. It was decided to remove features that were considered not to make a significant contribution or to be relevant to the mission of this application.

This decision was taken to ensure that the CampusCare application remains focused on its main goal, which is to improve the safety and well-being of members of the campus community. By eliminating unnecessary features, groups can provide a more focused and efficient user experience in accessing key features that are truly relevant to user needs.

Through this step, the group shows wisdom in adapting the design to the main purpose of the CampusCare application. They are committed to providing a better user experience by reducing the confusion that may arise from irrelevant features.

With this second design, the CampusCare application has undergone significant improvements. The features that are maintained will provide direct benefits to users,

ensuring better accessibility to information, emergency notifications, and other important resources related to safety and well-being in the campus environment.

In an effort to continuously improve and optimize the design, the group upholds the principle of conformity with the main purpose and user needs. This revision is an important step in ensuring that the CampusCare application provides an effective and focused solution for members of the campus community in dealing with emergency situations and increases interaction and participation in the campus environment.

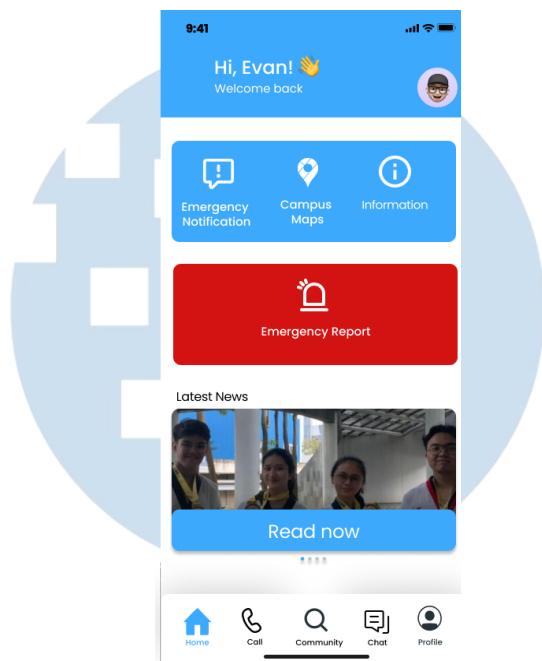


Figure 4.3.3

In figure 4.3.3, the group has produced a third design for the CampusCare application after making previous revisions. Even though some important features are still maintained, there are some features that are still confusing in how to apply them to the CampusCare application.

Group members realized the importance of overcoming this confusion so that users can easily understand and use the features. For that, they will involve further collaboration and deeper discussions to clarify and redesign the features that are still confusing.

In this discussion, group members will pay attention to the user experience and needs of the main users of the CampusCare application. They will seek more intuitive and simple ways to implement these features, so that users can easily access and take advantage of them.

The design revision in Figure 4.3.3 will focus on simplifying and improving the user experience. Confusing features will be revised to ensure that they are integrated seamlessly in the app's appearance and navigation flow. Users must be able to clearly see the functionality and benefits of each feature provided.

During this process, the group will consider input from potential users or other interested parties. They will also see design examples and user interfaces of similar applications that have proven successful, for inspiration and better ideas.

With a user-focused approach, the group will strive for a better design in Figure 4.3.3. The goal is to create a CampusCare application that is easy to use, intuitive, and provides clear added value for users.

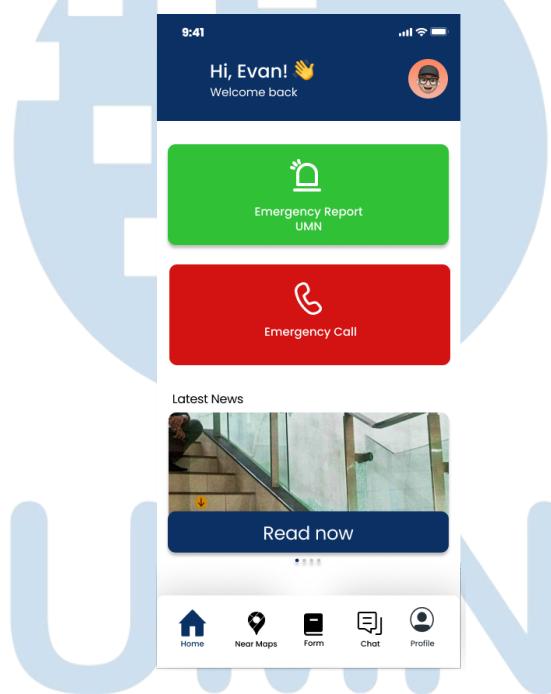


Figure 4.3.4

In figure 4.3.4, the group has reached the fourth or final design for the CampusCare application. This design reflects the results of the previous feature revision and trimming process, by ensuring that the available features are in accordance with the main purpose of making the CampusCare application.

In this design, the main focus is given to the "Emergency" feature which is the core of the CampusCare application. This feature has an important role in providing assistance and quick response in emergency situations in the campus environment. The presence of this feature will ensure the safety and well-being of members of the campus community.

In addition, this design also reflects the compatibility between the features and the design used. Group members wisely consider the right design elements to create a user-friendly, user-friendly interface. The designs have been carefully selected, combining attractive aesthetic elements with the clarity of necessary information.

The feature trimming process that occurs throughout the design journey is an important step. By maintaining a focus on the most important and relevant features, the group has created a CampusCare application that is more focused, efficient and effective in fulfilling its primary purpose.

This fourth design is the result of collaboration and deep thought of the group members. They are committed to providing the best solutions for users, prioritizing safety, comfort and well-being in the campus environment.

This design is the last step in developing the CampusCare application before entering the implementation phase. The group has succeeded in compiling features that match the purpose of making the CampusCare application, and the resulting design has described the quality and perfection needed to provide an optimal user experience.

4.4 Prototype

4.4.1. Prototype Application



Figure 4.4.1

Figure 4.4.1 is the initial appearance of the CampusCare application, users will be greeted with an attractive design, which includes the following elements: the application logo located in the middle left, the application name "CampusCare" displayed in an attractive typography style, the Multimedia Nusantara University (UMN) logo) next to the application name, as well as a tagline that emphasizes the importance of security and comfort in the campus environment.

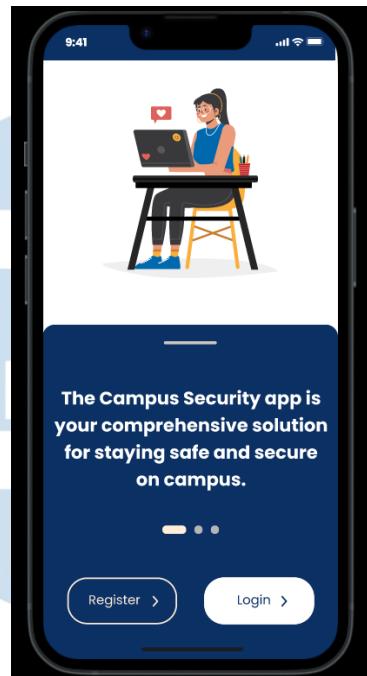


Figure 4.4.2 Display of User Data

Figure 4.4.2 displays the display for user data collection. If the user already has an account, they can immediately click the login button. However, for users who don't have an account, they need to go through the registration process first.

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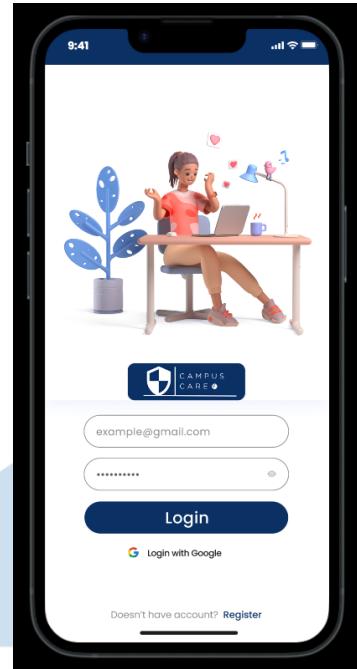


Figure 4.4.3 Login Page

Figure 4.4.3 is a login page intended for users who already have accounts. On this page, users are given the option to log in through the account they already have. In addition, there is also an option to log in via a Google account. However, if the user doesn't have an account at all, they can click on the register button located at the very bottom of the page to carry out the registration process.

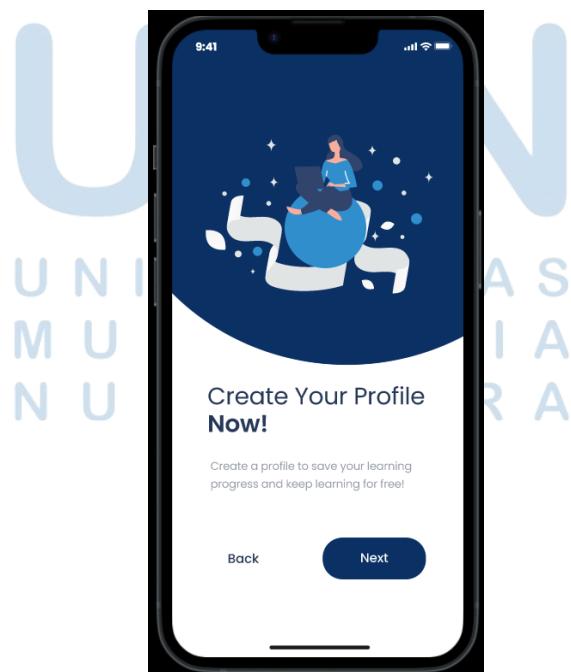


Figure 4.4.4 Display Create Account

Figure 4.4.4 displays a screen that allows users who wish to create a new account to continue the registration process by clicking the "Next" button. This makes it easy for users to continue through the steps required to create a new account. By clicking the "Next" button, users will be directed to the next page in the registration process to fill in the necessary information to create their new account.

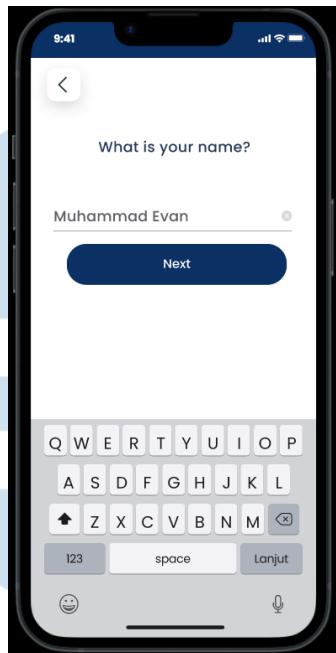


Figure 4.4.5 User Name Filling Display

Figure 4.4.5 shows the display provided for users to fill in their username. On this page, users are asked to enter or fill in the username they want. They can type their username in the field or column provided in the interface. Once users enter their desired username, they can proceed to the next step or page in the account creation process.

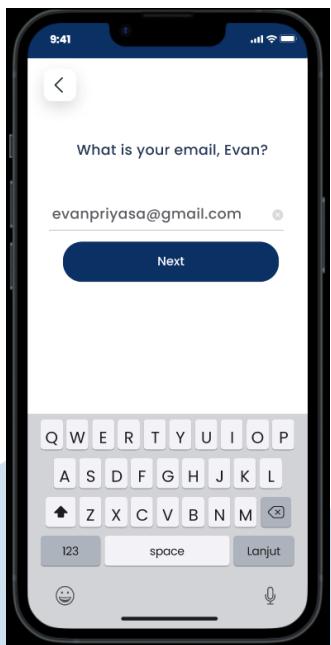


Figure 4.4.6 Display of User Email Filling

Figure 4.4.5 shows the display provided for users to fill in their email address. On this page, users are asked to enter or fill in a valid email address into the column or fields provided in the interface. Once users enter their email address, they can proceed to the next step or page in the account creation process.

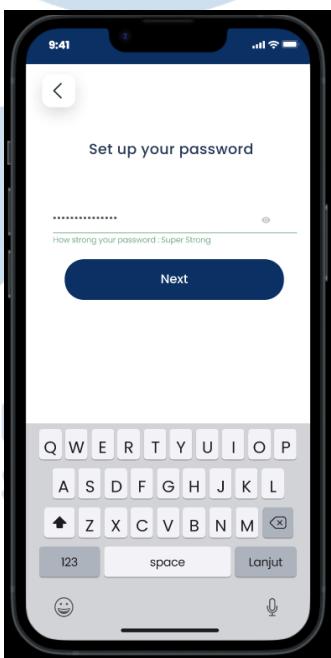


Figure 4.4.7 User Password Filling Display

Figure 4.4.7 shows the display provided for users to enter their password. On this page, users are asked to enter or fill in a strong and secure password to protect their account. This view usually contains a column or fields where the user

can type their password. It is important for users to choose a password that is unique and hard to guess to keep their account secure. Once users enter the appropriate password, they can proceed to the next step or page in the account creation process.

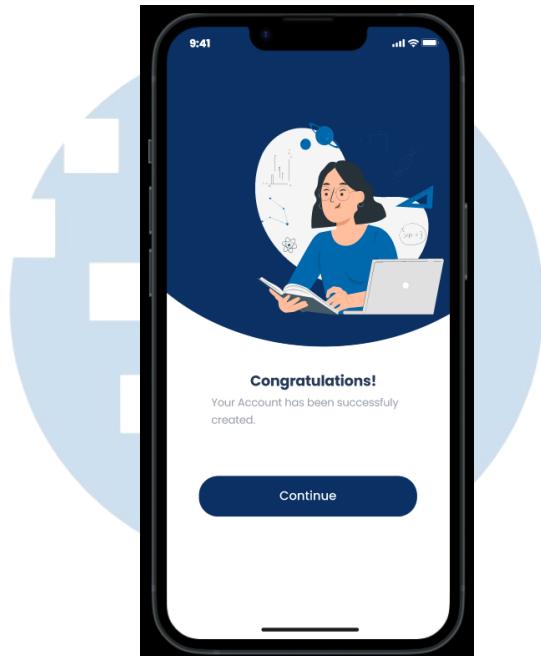


Figure 4.4.8 Display Complete Filling Create Account

Figure 4.4.9 shows the display that appears after the user has finished filling in the information and created a new account by clicking the "Create Account" button. This page is a confirmation that the account creation process has been completed successfully. In this view, users may see a message or notification stating that their account has been successfully created.

This view may also provide additional information, such as instructions on the next action the user can take, such as activating the account via a confirmation email or continuing to the home page or user profile. The purpose of this view is to provide users with assurance that their account has been successfully created and guide them to the next steps in using the relevant platform or service.

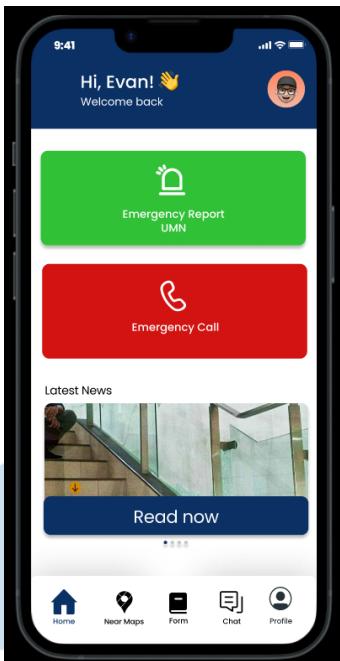


Figure 4.4.9 Display Home Page

Figure 4.4.9 shows the appearance of the homepage or main page after the user has successfully filled in their account data and successfully logged in. This view is the initial view shown to users after they have successfully logged in to their account.

On the appearance of this homepage, users will see an interface that contains content and features that are relevant to the platform or service being used. Typically, these views are designed to provide users with access to various menus, functions, or information they need to make better use of the platform or service.

The home page display may also include elements such as menu navigation, control panels, main feature lists, or content tailored to user preferences. The goal is to provide users with an intuitive user experience and make it easier for them to navigate or use the platforms they access after logging in.



Figure 4.4.10 Display of the UMN Emergency Report

Figure 4.4.10 shows the display that appears when the user clicks the "Emergency Report UMN" button on the home page display. This view is specifically designed to provide users with quick and direct access to security and medical services from UMN in emergency situations.

In this view, users will likely see a simple form or interface that will allow them to provide important information regarding the current emergency. They may be asked to fill in details such as the type of emergency, location, and a brief description of the problem or incident requiring emergency assistance.

After the user fills out the form or provides the required information, the system will immediately send a report to the security and medical team in charge at UMN. The purpose of this display is to provide a quick response and appropriate assistance in an emergency situation, ensuring the safety and well-being of the user.



Figure 4.4.11 Display Call

Figure 4.4.11 shows the display that appears when the user clicks the "Call Campus Security" and "Call Medical Center" buttons on the home page. This display is designed to provide users with convenience and quick access to directly contact campus security and the UMN medical center.

In this view, the user will see an interface that displays emergency phone numbers or call buttons for the UMN campus security department and medical center. Users can easily press the appropriate call button to immediately call the required service.

The purpose of this display is to provide a fast and efficient means of communication in emergency situations or situations that require security or medical assistance within the UMN campus environment. By clicking on the relevant buttons, users can quickly connect with the competent authorities for the necessary assistance and response.

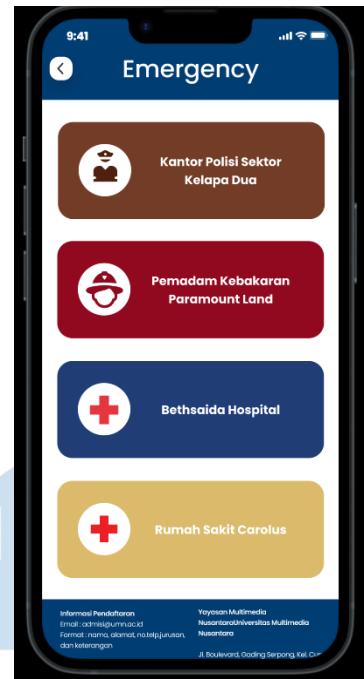


Figure 4.4.12 Display of Emergency Call

Figure 4.4.12 shows the display that appears when the user clicks the "Emergency Call" button on the home page. This view is designed to give users direct access to emergency services outside of the UMN, which includes general emergency telephone numbers such as the nearest fire department, police or hospital.

In this view, users will see important emergency numbers that they can call in emergency situations outside the UMN campus environment. They can press the appropriate call button to immediately connect with the emergency services needed in their area.

The purpose of this view is to provide users with quick and direct access to general emergency resources when they encounter a situation that requires an immediate response beyond the scope of the UMN. By clicking the "Emergency Call" button, users can immediately contact the competent emergency agencies and get the help they need.

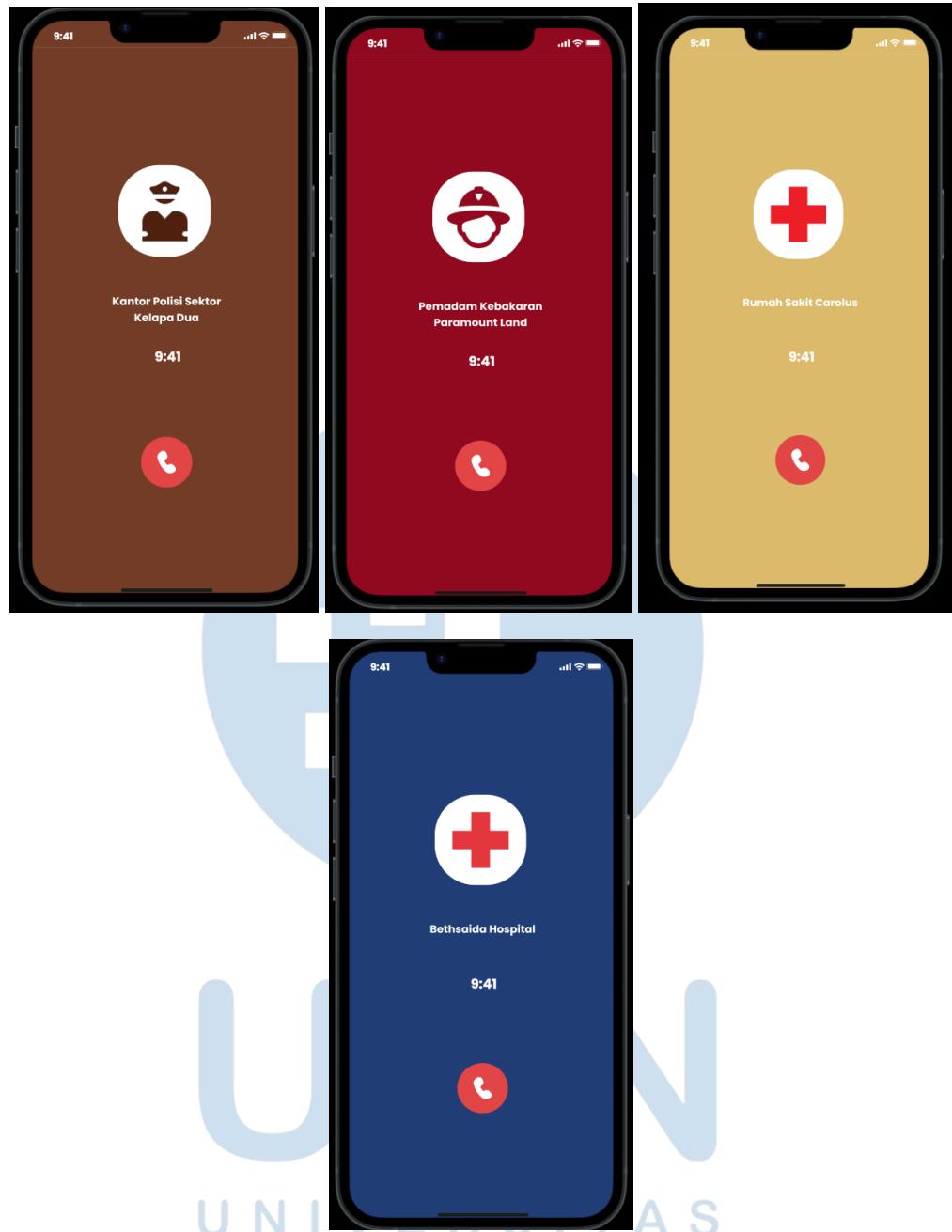


Figure 4.4.13 Display Call

Figure 4.4.13 shows the display that appears when the user clicks the button to contact Kelapa Dua sector police station, Paramount Land fire department, Carolus hospital, and Bethsaida hospital in emergency situations.

In this view, the user will see relevant contact information, such as a phone number or call button, for each emergency agency listed. By clicking a button or using the contact information provided, users can quickly contact the appropriate agency according to the emergency needs they face.

The purpose of this view is to provide users with direct and quick access to important contact information for specific emergency agencies, such as the nearest police station, fire department, and hospital. Thus, the user can immediately contact the appropriate authorities and get the help needed in an emergency situation.



Figure 4.4.14 Display News

Figure 4.4.14 shows the display that appears when the user clicks the button located in the "Latest News" section on the home page display. This display is designed to present the latest news related to Multimedia Nusantara University (UMN) and students.

In this view, users will see a list of the latest news that is relevant to UMN and student life. Each news story may be accompanied by a title, summary, and possibly an image that describes the news. Users can click on the news that interests them to read its full news content.

The purpose of this display is to give users access to the latest information related to UMN and students. Users can follow the latest developments, events, achievements, or other important news that occurs within the UMN environment. This helps users stay informed about what is relevant and interesting around them.

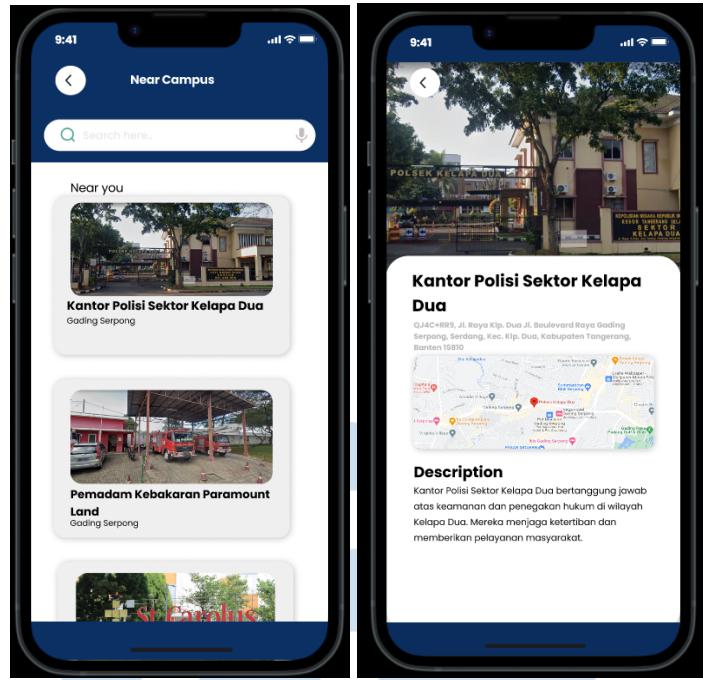


Figure 4.4.15 View Near Campus

Figure 4.4.15 shows the location of the closest service from the Multimedia Nusantara University (UMN) campus along with a description of each service, so the display is designed to provide information about the closest services that can be accessed by UMN students.

In this view, users may see a list or map showing the location of the nearest services such as shops, banks, restaurants, transportation stations, or other public facilities. A brief description of each service may also be included to provide information about the types of services available in the area around the campus.

The aim is to provide users with quick access to information about services around the UMN campus, so that students can easily find and take advantage of the services they need. Thus, this view helps users to explore the surroundings of the campus and fulfill their daily needs more efficiently.

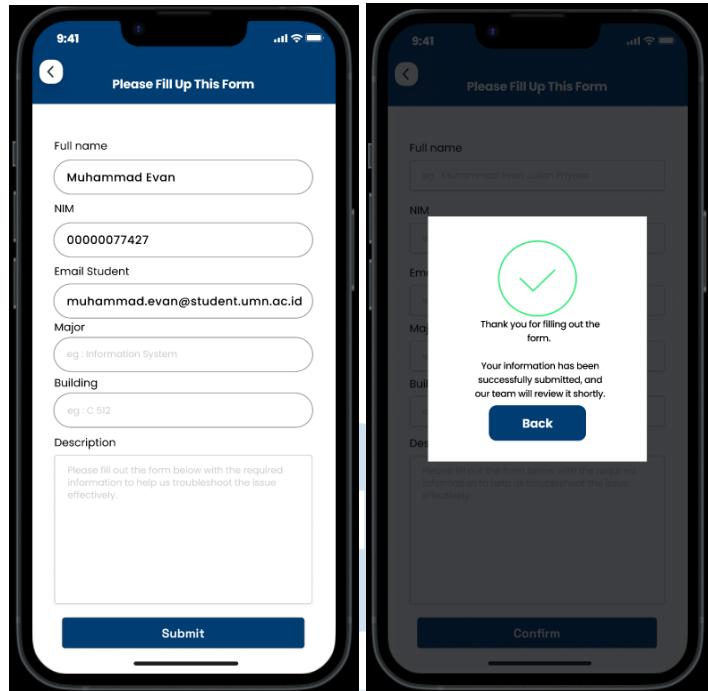


Figure 4.4.16 Display Form

Figure 4.4.16 shows a view of filling out a form that can be filled in by the victim or complainant. This form has an important role in reporting incidents and collecting data on victims. After the user fills in all the information requested in the form, they can directly press the "Submit" button to submit the form.

Once the "Submit" button is pressed, the user will receive a notification or alerts confirming that the form has been filled in successfully. Such notices provide assurance to users that the data they provide has been received and recorded correctly.

After receiving the notification, the user can press the "Back" button to exit the form filling display. This action takes the user back to the previous view or to the next step in the reporting or logging process, depending on the workflow or app design used.

The purpose of this display is to collect the necessary data for incident reporting and victim registration in a systematic and efficient manner. By ensuring all information is filled in correctly, users can continue the reporting and data collection process with confidence that the data they provide has been properly recorded.

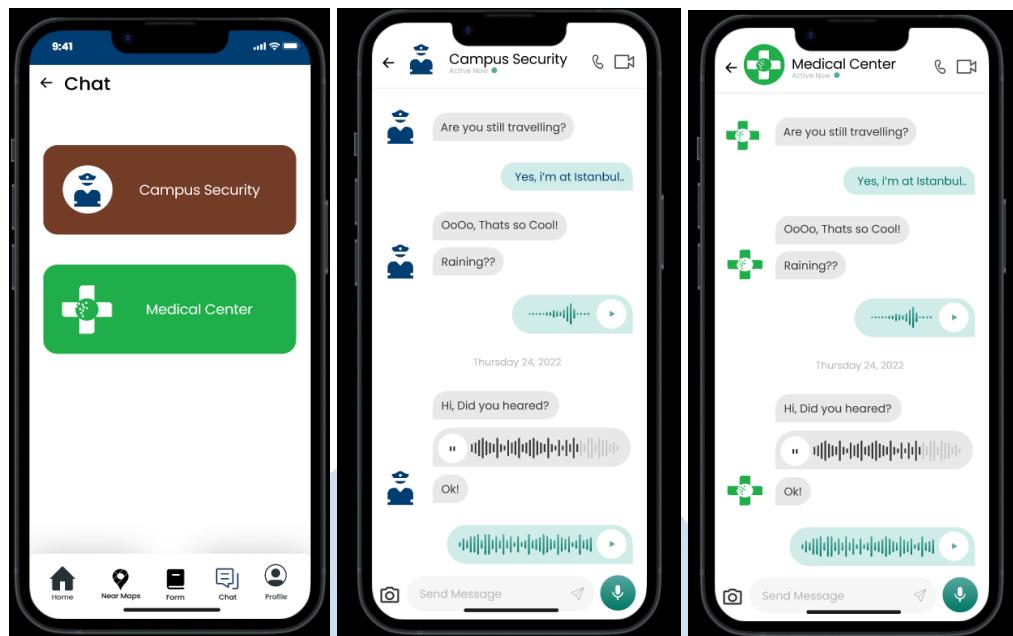


Figure 4.4.17 Display of the UMN Emergency Report Chat

Figure 4.4.17 displays a chat display that allows users to connect with security guards and the medical center at Multimedia Nusantara University (UMN). This display is designed to provide a means of direct communication between the user and the security guards and the UMN medical center.

In this chat interface, users will be directly connected to the UMN security team and medical staff via text message. Users can easily start a conversation by typing their message in the input field provided and sending it. Through this feature, users have the flexibility to ask questions, provide emergency reports, or request assistance according to their needs. To enrich communication, additional features such as a voice recorder, video call and camera are also available. Users can record their voice, make video calls, or even take photos or videos of emergency events as evidence which can provide security guards and medical staff with a more complete understanding. With this interactive chat interface, users will feel more comfortable and secure when communicating with the UMN team, while getting the help they need quickly and efficiently.

The purpose of this display is to provide a fast and efficient means of communication between the user and the security guards and the UMN medical center. Users can contact the relevant parties with security or health issues through this chat, thus enabling a fast and appropriate response to the situation faced by the user.

It should be emphasized that in a real emergency situation, it is important to immediately call a predetermined emergency number, such as an emergency telephone number or direct contact with the relevant security or medical authorities.

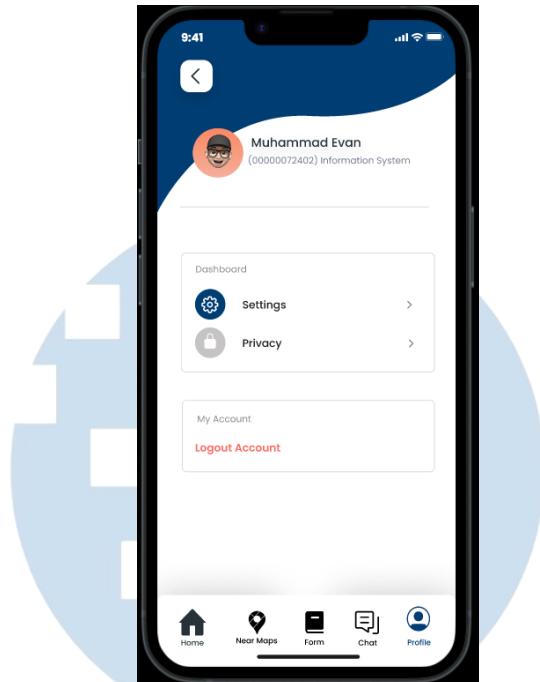


Figure 4.4.18 Profile Display

Figure 4.4.18 displays a view that allows the user to see the number of people who want to be friends and provides access to settings and privacy. In this view, users may see information about the number of friend requests received or the number of users who want to be their friend. This information may be displayed in the form of numbers or statistics showing the number of people the user wants to be in touch with.

In addition, this view also provides options to access settings and privacy. Users may click the "Settings" or "Privacy" buttons or menus to open related pages or submenus that allow them to set their privacy preferences and options.

Its purpose is to provide users with information about the friend requests they receive and provide control over their account settings and privacy. With easy access to settings and privacy, users can adjust their preferences, maintain security, and control who can contact them or view their information on the platforms they use.

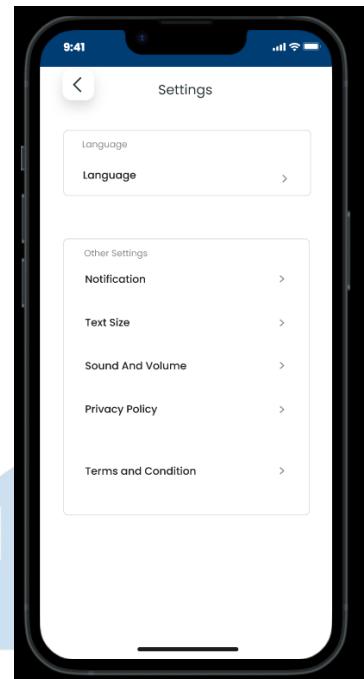


Figure 4.4.19 Display Settings

Figure 4.4.19 shows the settings display which provides several features that can be adjusted by the user. These features include:

1. Language: This feature allows the user to change the desired language in the application.
2. Notification: This feature sets the permission to show notifications from the app. Users can enable or disable notifications according to their wishes. By setting notification preferences, users can control the type and frequency of notifications received from apps.
3. Text Size: This feature allows the user to change the size of the text displayed in the application. Users can adjust the text size according to their visual preferences or readability needs.
4. Sound and Volume: This feature adjusts the sound and volume settings for app notifications. Users can control how loud or weak the notification sounds played by the app.
5. Privacy Policy: This feature provides access to the privacy policy that applies to the application. Users can read and understand how their data is handled by the application and their privacy rights and protections.
6. Terms and Conditions: This feature contains an agreement or application terms of use that governs the relationship between the user and the application

provider. Users are expected to read and agree to the terms and conditions that apply before using the application.

The purpose of this view is to give the user control and flexibility in setting language preferences, notifications, display text, sound, as well as providing access to the privacy policy and terms and conditions of use of the application. With these settings, users can customize the experience of using the application according to their personal needs and preferences.

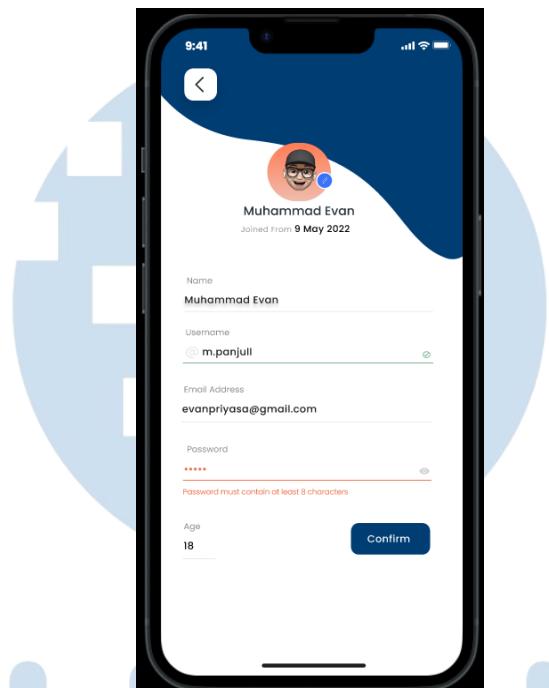


Figure 4.4.20 Privacy Display

Figure 4.4.20 displays the privacy view that allows users to change their personal information, such as name, username, email address, password, and age. This view is designed to give users control over their privacy-related information.

In this view, users will see input fields that allow them to edit and modify their personal data. They can enter any new information they wish to update, such as full name, desired username, valid email address, new secure password, and accurate age.

After editing the desired information, users can press the "Confirm" or "Save" button to save the changes they have made. By pressing the button, their personal information will be updated according to what they have entered.

Its purpose is to give users complete control over their personal information and to provide the ability to correct or change that data as they see fit. With this

privacy view, users can easily manage and organize their personal information according to their needs and preferences, and ensure that their personal data is kept accurate and up-to-date.

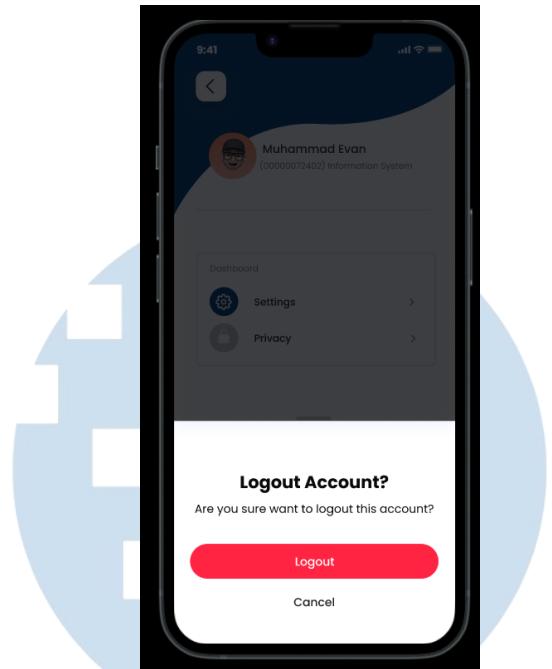


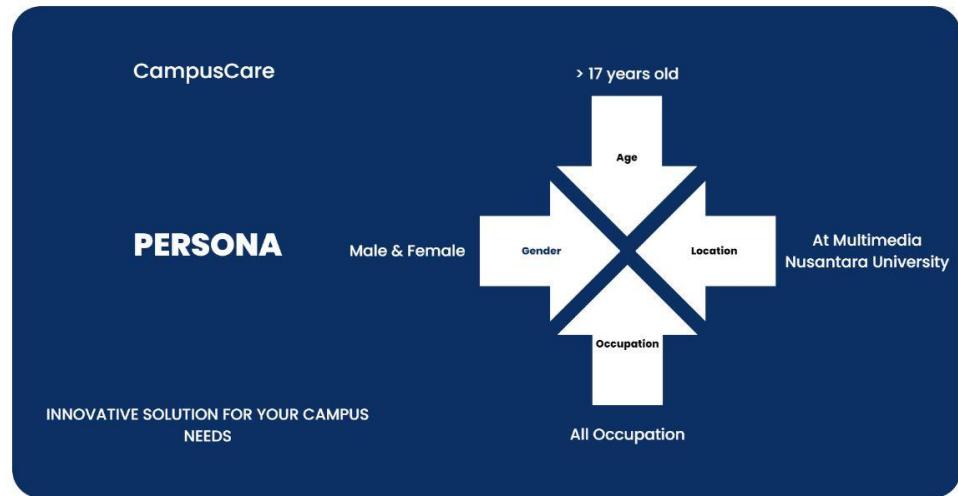
Figure 4.4.21 Display Logout Account

Figure 4.4.21 displays a view that allows users to logout from their account that has been connected to the application. In this view, the user may see a button or option labeled "Logout", "Sign Out", or similar. Users can press this button to end their login session and log out of the account currently being used in the application.

The purpose of this view is to give users the ability to control and manage their account access. By logging out of the account, users can ensure that their personal information cannot be accessed by other parties using the same device. Apart from that, this feature also allows users to switch between different accounts if they have more than one account in the application.

Logging out of an account is also an important step in maintaining user security and privacy. By ending login sessions, users can prevent unauthorized access to their accounts and protect their personal information from other users. In this view, users can safely and easily click the logout button to log out of their account and end the login session in the application.

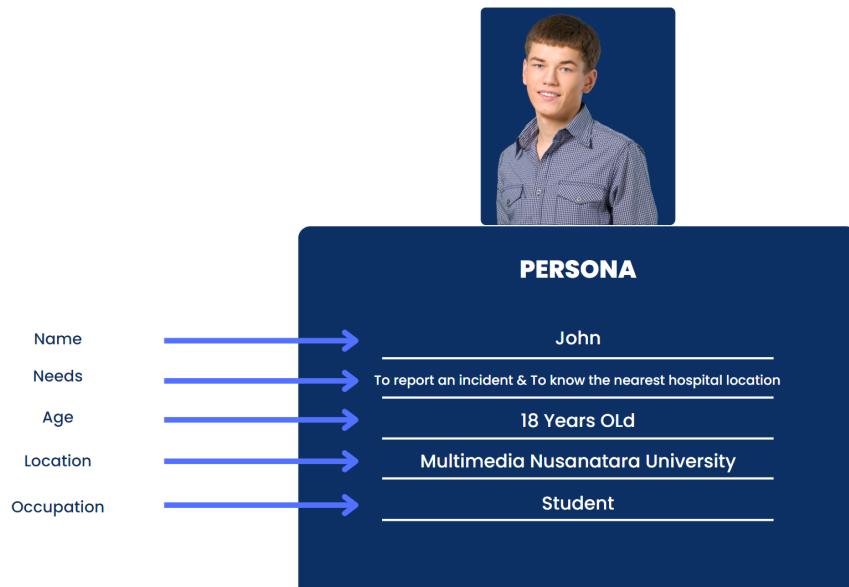
4.4.2. Prototype Persona



Based on the picture above, it can be explained that:

- The Campus Care app is designed for individuals aged 17 and over.
- The Campus Care app is designed for male and females.
- The Campus Care application targets users who are part of the larger Multimedia Nusantara University community.

Here is an example of the persona we created:



4.5 Validate

Mr. Jansen Wiratama , S.kom , M. Kom (Lecturer of Information Systems)

Based on the results of an interview with Mr. Jansen Wiratama, S.kom, M.Kom. He said that our prototype called Campus Care means a caring campus, although the logo

does not quite match the title Campus Care. He said that the meaning of Care itself should have a logo embracing hands but still appropriate in the category of security and caring has the same rough meaning as protecting which is symbolized in our Prototype shield which means protecting and for suggestions and criticism of our own prototype he said that it was good for prototypes but Mr. Jansen himself hopes that our own prototype will be embedded into one of the union features if possible so it doesn't require us to download additional applications so we can take advantage of the main uses of Campus Care but he also said that if that's not possible it's okay to stand as a separate application for the main view of Campus care it's good but for the coloring of the buttons to report to the medic and security guard, the color is too contrasting and there are some of the message boxes that are still too stiff. You can see from the ends of the box that they are still sharp, so Mr. Jansen suggested that we replace the edges of the box with softer, blunt shapes, not sharp. there are also some inconsistencies such as the placement of buttons for some features that are still inconsistent because some have changed positions so if you can adjust it so that there are no other changes it's good but when it's better to report there are additional features such as features to provide photos or to provided a video recording and he hoped that the Campus Care Prototype would be realized.

Pak Danry Ray (IT Department)

Based on the results of interviews conducted with Mr. Danry Ray as part of the IT department at UMN, he said that the Campus Care application prototype required several additional features, such as adding features to report incidents of sexual violence and requiring additional revisions such as the use of language. where in the Prototype application we can use the first and secondary language he said that we should specify a language that the user wants only one, the friends feature itself is questioned whether it is really necessary or not, in the switch account section it is questioned whether this feature is really necessary because the feature still feels irrelevant where Mr. Danry Ray said that it's best to log in using a student Email account so each device can only have 1 account, just like Mr. Jansen's opinion, if possible, the features in Camps Care are embedded in the application which is owned by UMN (Multimedia Nusantara University) so it doesn't require additional applications to be able to take advantage of the reporting features on CampusCare. He also hopes that UI development is pretty good overall

Vania Lay (Head of Medical Center)

Based on the results of Vania Lay's interview as chairman of the UMN Medical Center. She really appreciated and was impressed with the quality of the prototype that had been developed, because she was sure that this application would provide great benefits for students and the entire UMN community. This prototype was designed with the main objective of facilitating reporting of emergency events quickly and efficiently, thus enabling better emergency response actions in the campus environment.

However, in an in-depth review of the prototype, Vania also identified several aspects that could be improved. One of the issues that stuck out was the coloring of the contacts at Bethsaida Hospital, campus contacts, and the UMN emergency report. Vania considers that this coloring may not be sufficiently contrasting or eye-catching to affect readability and effective use.

Apart from that, Vania also feels that the position of these elements can be improved to achieve a more optimal layout. In application design, the strategic placement of each element is very important to ensure users can easily access and understand the functionality provided. Therefore, Vania proposes that improvements be made to the layout and placement of important elements in the application, in order to improve the overall user experience.

By making improvements to the coloring and placement of important elements, Vania believes that this prototype will be even better at meeting student needs and ensuring optimal use in emergency situations on the UMN campus.

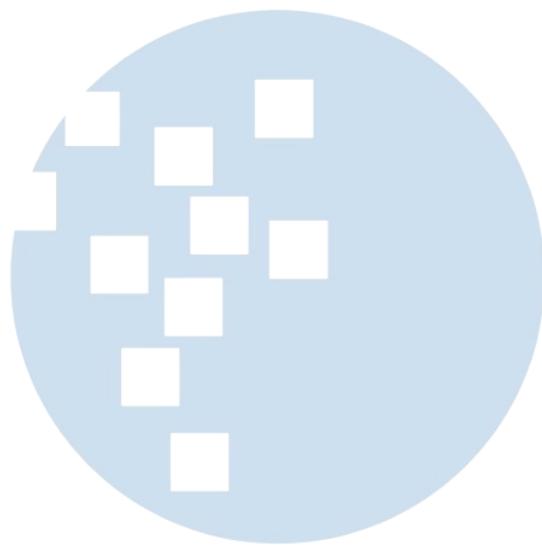
Keysha Putri Angelica (UMN Student)

Based on the results of the interview we conducted with Keysha as a student majoring in strategic communication, she believes that the prototype of our application (Campus Care) is good enough, and its features are very adequate for reporting an incident or incident on campus. As well as the colors and fonts used, according to her, are suitable for our application.

Keysha was also very impressed and appreciated our application, because she thought that our application would be very much needed by students, because she himself was also confused about the incident reporting system on campus which he considered quite troublesome and inefficient, while according to the features in our application it was very simple and efficient.

Junaedi (UMN Campus Security Guard)

According to Mr. Junaedi as head of UMN security, the Campus Care application is something new and very unique, then Mr. Junaedi also hopes that the Campus Care application will also accommodate the hopes for all UMN families, with the design that we have made according to Mr. Junaedi it is good, but maybe later there will be developments as needed.



CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

In this research, we succeeded in developing a prototype of the "Campus Care" application which aims to improve the welfare and safety of students in the UMN campus environment. Through an in-depth analysis of the needs and problems faced by students, we were able to identify the important features that this application must have.

Through the development of this prototype, we combined the principles of good interface design, easy access to information, effective communication, and optimal security protection. The "Campus Care" application is designed to provide comprehensive solutions and meet user expectations in living a campus life that is safe, comfortable and supportive.

During the development process, we also carried out tests and evaluations involving students, lecturers, campus staff and security personnel. The results of these tests provide valuable feedback to improve the quality and effectiveness of the application.

In this study, we observed that the development of the "Campus Care" application is very relevant to the goal of Sustainable Development Goal (SDG) number 4, namely Quality Education. This application can be a means to create a safe campus environment, support student welfare, and enhance the learning experience.

5.2 Suggestion

Based on the results of the research and development of the "Campus Care" application prototype, we would like to provide some suggestions for further development and implementation:

1. **Involve related parties:** It is important to involve relevant stakeholders, such as Internal Student Affairs, HSE/K3L, and Building Management, in discussion and collaboration regarding the development of this application. Good cooperation between related departments will ensure the suitability and sustainability of the "Campus Care" application in the UMN campus environment.
2. **Follow-up testing:** Next, we recommend conducting follow-up tests involving more users, both students and staff, to gather broader feedback. These tests will help identify potential improvements and further enhancements in the application.

3. Integration with existing IT infrastructure: In the implementation process, it is important to ensure good integration between the "Campus Care" application and the existing IT infrastructure at UMN. This will ensure the sustainability, security and overall performance of the application.
4. Improved data security: Since this app will collect and store sensitive user data, special attention needs to be paid to data security. We recommend engaging the IT security team to ensure adoption of best practices in protecting user data.
5. Regular updates and maintenance: The "Campus Care" application needs to be maintained and updated regularly to ensure the availability of the latest features, security enhancements, and handling of technical issues that may arise. The IT team needs to ensure regular maintenance and open communication with application users.

By implementing the suggestions above, we believe that the "Campus Care" application can be an effective and sustainable solution to improve the welfare and safety of students in the UMN campus environment.

In conclusion, we hope that this research can make a useful contribution to the development of "Campus Care" applications in the future, as well as improve the learning experience and create a better campus environment for students.



BIBLIOGRAPHY

- Aryani, D., & Kusumawardhani, A. (2020). The Role of Campus Environment and Students' Safety Perceptions on Students' Academic Engagement. International Journal of Learning, Teaching and Educational Research, 19(8), 18-34.
- Dewi, R. S., & Pratama, F. (2020). Mobile Application for Campus Security Based on Geofencing and Panic Button. Journal of Physics: Conference Series, 1561(1), 012049.
- Gunawan, I., & Suharyono. (2019). Designing a Campus Safety Information System using Geographical Information System (GIS) Technology. International Journal of Advanced Computer Science and Applications, 10(3), 220-227.
- Hidayatullah, R., Anjani, Y. A., & Fitriani, N. A. (2021). The Role of Information Technology in Improving Campus Safety: A Case Study at Universitas Multimedia Nusantara (UMN). In Proceedings of the International Conference on Science, Technology and Interdisciplinary Research (IC-STAR) (pp. 177-182).
- Kusuma, D. I., Cahyono, D., & Anggraeni, D. (2019). Campus Security Information System with Android-Based Panic Button and Geofencing. Journal of Physics: Conference Series, 1232(1), 012045.
- Lestari, E., & Yulianto, T. (2020). Designing a Campus Safety Application Using Geofencing and Panic Button Technology. Journal of Physics: Conference Series, 1567(3), 032042.
- Nasution, F. A., Pramudi, I., & Utomo, A. (2021). Improving Campus Safety through Geofencing and Emergency Call Features on Mobile Application. In Proceedings of the International Conference on Informatics, Technology, and Engineering (InCITE) (pp. 175-181).
- Pratama, F., & Dewi, R. S. (2022). Enhancing Campus Safety: Development of a Mobile Application with Panic Button and Real-Time Location Tracking. International Journal of Advanced Computer Science and Applications, 13(1), 254-263.
- Saputra, A., & Lestari, E. (2021). Designing a Student Welfare Application Based on Android. Journal of Physics: Conference Series, 1820(1), 012001.

- Setyawan, R. (2020). Integrating SDGs into Higher Education Curriculum: A Case Study of Universitas Multimedia Nusantara (UMN). *Journal of Social Studies Education Research*, 11(1), 203-220.
- Setiawan, J. (2020). Human-Computer Interaction: Concepts, Methodologies, Tools, and Applications. IGI Global.
- Suharyono, F., & Gunawan, I. (2019). Enhancing the Quality of Campus Safety and Security Using Mobile Application Technology. *Journal of Physics: Conference Series*, 1373(1), 012001.
- Susanto, A., & Hartono, R. (2021). Design and Implementation of Campus Safety Mobile Application with Panic Button Feature. *International Journal of Electrical and Computer Engineering (IJECE)*, 11(2), 1281-1289.
- Widiatnala, R. (2021). User-Centered Design: A Practical Guide for UX Designers. Packt Publishing.
- Yulianto, T., & Lestari, E. (2022). Enhancing Campus Security with Geofencing and Emergency Notification System: A Case Study at Universitas Multimedia Nusantara (UMN). In Proceedings of the International Conference on Advances in Informatics and Computational Sciences (ICACS) (pp. 127-132).



APPENDIX

Distribution of roles in groups

- Muhammad Evan Julian Priyasa - 00000072402 - Report, Prototype dan PPT
- Maureen Audilia - 00000073951 - Prototype, Report, Interview, Questionnaire and PPT
- Kelvin Harianto - 00000072811 - Report, Questionnaires, Interviews and PPT
- Tresya Meisel Adieputri - 00000073937 - Report, Questionnaires, Interviews and PPT
- Adelio Nohan Abbrarsyah - 00000073372 - PPT, Interview and Questionnaire
- Safires Atalla Zaraski - 00000073610 - PPT and Interview

Link Prototype Aplikasi CampusCare = [► Apps - Project-HCI-Prototype \(figma.com\)](#)

Link Questionnaire 1 =<https://forms.gle/oiVRjNsV7YftS17D9>

Link Questionnaire 2 =<https://forms.gle/VeMiVKmGTPrBQiLj6>

Link PPT =

https://www.canva.com/design/DAFkNCqDZ28/LGtFpawlw23Va0DyR15peA/edit?utm_content=DAFkNCqDZ28&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton

Link Drive Video Presentation and =

<https://drive.google.com/drive/folders/1LezskgMC7FVwCAe0hseouM0CPed5Fu0W?usp=sharing>

