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Designing a Web-based Application Mockup for the Registration of Undergraduate Students at Mercu Buana University

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Abstract - New student registration is one of the critical administrative processes in higher education institutions. In the current digital era, web-based systems offer greater practicality compared to the traditional methods, which are often slow and prone to errors. However, many existing systems focus solely on collecting registration data, neglecting the ongoing informational needs of students' post-registration. This study proposes the design of a web-based registration system that not only facilitates the registration process but also integrates essential features for broadcasting orientation schedules, campus announcements, and other critical information within a single platform. The design incorporates real-time notifications, user-friendly dashboards, and strong data protection measures to enhance user experience and security. Using the waterfall methodology, the study progresses through problem identification, requirements analysis, system design, and prototype evaluation. The resulting prototype, developed using Figma, is tailored to meet the needs of new students and improve campus administrative efficiency. Evaluation results demonstrate that the proposed system effectively bridges gaps in both registration processes and student information management.

Keywords :
Student Registration;
Web-based Application;
User Interface;
Figma;

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1. INTRODUCTION

The new student registration process is one of the most essential activities that educational institutions must manage efficiently. In today's era of advanced technology, many institutions have adopted web-based registration systems as they offer significant advantages over traditional manual methods. Manual processes are often cumbersome, time-consuming, and prone to errors, making them less reliable in handling large-scale data. However, despite the growing use of online systems, most registration platforms are primarily focused on collecting information about prospective students. They often overlook the critical need to provide ongoing support and information to students once they are officially enrolled.

Newly admitted students frequently encounter challenges when trying to access crucial information, such as orientation schedules, announcements, or administrative guidelines. Such information is often shared across multiple, uncoordinated channels, such as email, social media groups, or bulletin boards. This scattered approach not only creates confusion but also increases the likelihood of students missing important updates. This highlights the need for an integrated registration system that not only streamlines the enrollment process but also supports students by delivering essential information during their transition into campus life.

To address this gap, a web-based registration system with integrated student information services has been designed. This platform simplifies the process by centralizing all critical information into a single, easy-to-access system. Through this solution, students can stay updated without the need to sift through multiple, fragmented communication channels. The system also allows institutions to disseminate information more effectively, ensuring timely and accurate delivery while minimizing the risk of miscommunication.

Additionally, a user-friendly interface plays a pivotal role in enhancing the system's functionality. The design focuses on intuitive navigation, real-time notifications, and personalized dashboards that present relevant information clearly and efficiently. These features not only improve the user experience but also empower new students to confidently utilize the system, reducing the learning curve and making their transition to campus life smoother.

By combining a streamlined registration process with integrated informational services, this innovative system offers a modern solution to meet the evolving needs of educational institutions and their students. It simplifies administrative processes while ensuring students have access to the tools and information they need to succeed in their academic journey. This approach represents a significant step forward in creating a more efficient, connected, and student-centered educational experience.

2. LITERATURE REVIEW

To further inform ourselves on this study, we conducted a comprehensive review on previous existing studies related to the topic of student online admissions. The following are what we found to be most relevant to our study:

1. Yuris Alkhafi, Rino Ramadhan, Rahdian Kusuma Atmaja, Ispandi. (2024). “Mobile-based Application Development on Admissions of New Students with Design Science Research Methodology”.
2. Rizwan Ullah, Muhajid Shah. (2022). “Online Intermediate Admission Management System”.
3. Kamma Arpitha. (2020). “A Study on Online College Admission Management System”.
4. Mutiara Universitas Andi Djemma Palopo. (2024). “Aplikasi Pengarsipan Data Administrasi Mahasiswa Pada Program Studi Teknik Informatika Berbasis Website”.
5. Fatema-Tuz-sabiha. (2019). “Online Postgraduate Admission System: A Case Study”.

3. METHODOLOGY

The development of the web-based application mockup for new student registration was carried out in several stages, including needs analysis, design, prototyping, and evaluation. The design process utilized Figma as the primary tool, leveraging its collaborative and prototyping capabilities to ensure a user-centered and iterative approach. Key design elements, such as intuitive navigation, responsive layouts, and centralized information dashboards, were conceptualized and refined based on user feedback. The mockup serves as a visual representation of the system, ensuring modularity and clarity for future development and implementation.

4. RESULTS AND DISCUSSION

The user interface (UI) design for the new student registration system aims to simplify and enhance the user experience in accessing information and completing the registration process.

The design emphasizes clear and intuitive navigation, ensuring that users, particularly new students, can easily locate the features they need without confusion. Elements such as navigation buttons, forms, and key information are arranged in a logical and consistent layout across all pages.

The interface is crafted to be user-friendly, addressing the needs of users who may not yet be familiar with campus digital systems. The use of colors, icons, and text is carefully planned to create a visually comfortable experience, with a clear hierarchy of information. Critical elements, such as registration forms, orientation schedules, and announcements, are strategically positioned for easy access.

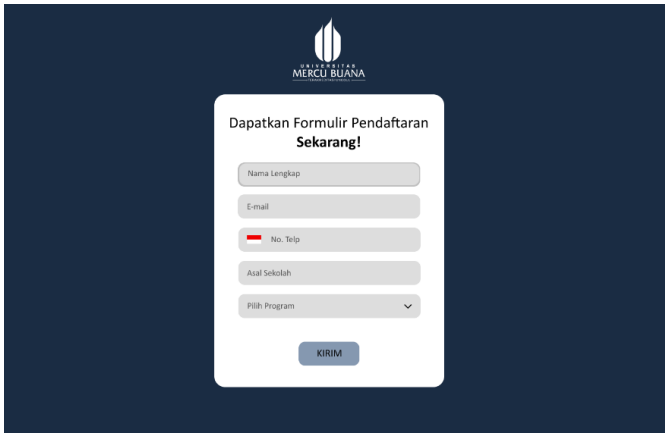

Figure 1 Sign up page

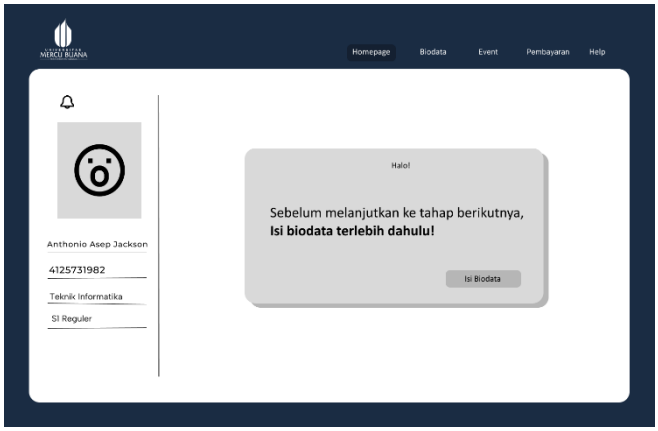

Figure 2 Homepage

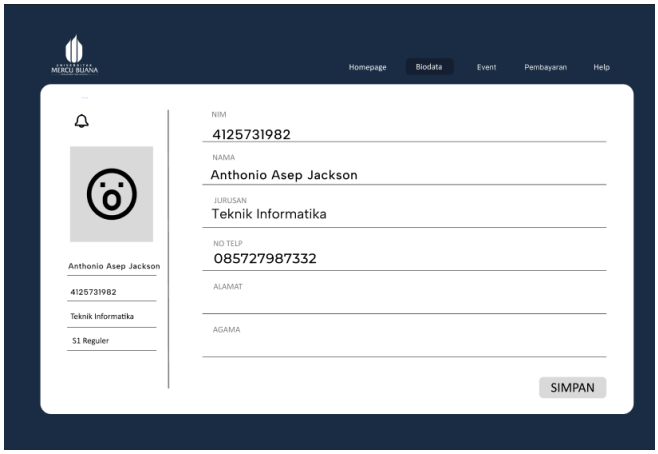

Figure 3 Biodata page

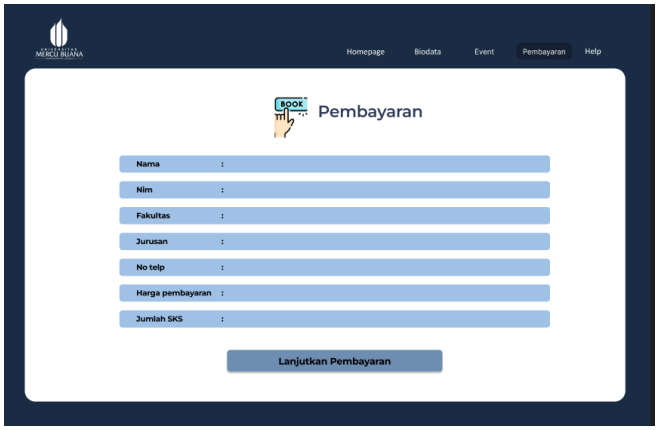

Figure 4 Payment page

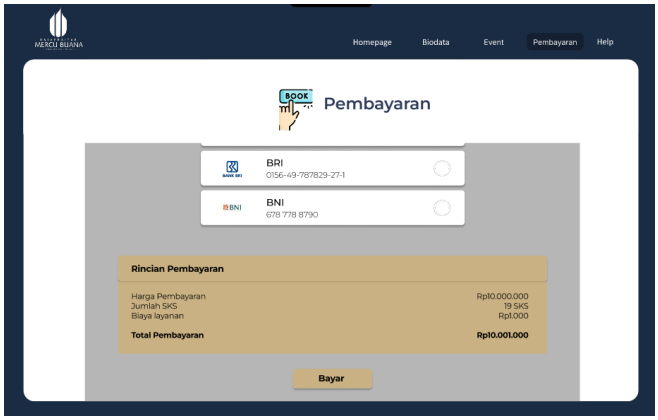

Figure 5 Payment confirmation page

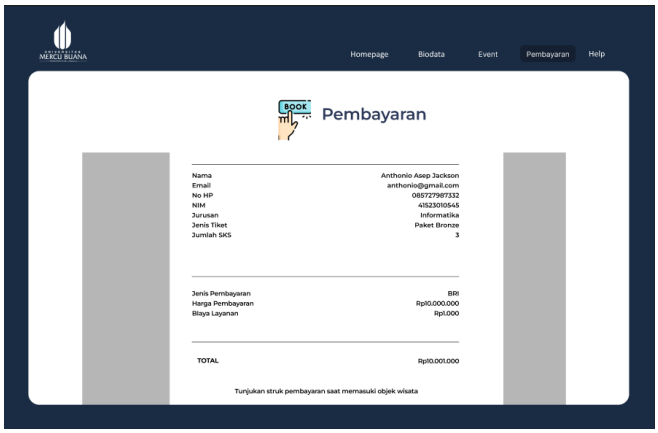

Figure 6 Payment receipt

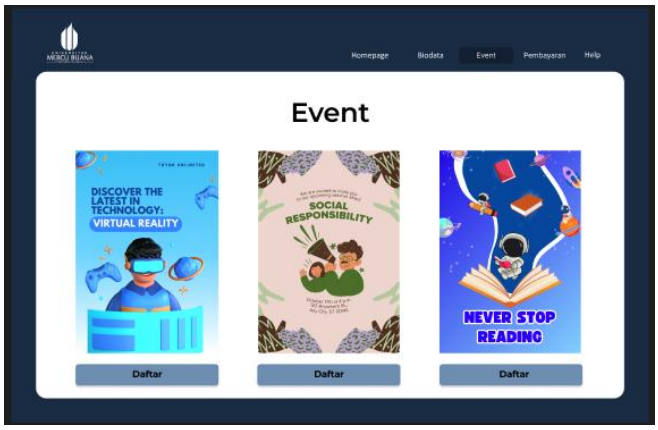

Figure 7 Event page

Evaluation of the design confirms that the prototype aligns with user needs, focusing on efficiency and ease of navigation. It provides a solid initial concept of how the system will function to support campus administrative needs while prioritizing user comfort during the registration process.

5. CONCLUSION

The design and development of the web-based application mockup for new student registration addresses the challenges often faced by educational institutions and newly admitted students. By centralizing essential registration and post-registration information into a single platform, the system provides a seamless and efficient user experience. The mockup ensures that critical features, such as intuitive navigation, responsive layouts, and personalized dashboards, are prioritized to support both students and administrative staff.

The use of Figma as the primary design tool allowed for an iterative and user-centered approach, ensuring that the final prototype meets the needs of its target audience. Evaluation results demonstrate that the design simplifies the registration process, reduces confusion, and makes accessing important information more convenient.

This mockup serves as a foundation for future implementation, offering a modern, scalable solution that can enhance administrative efficiency while supporting students during their transition into campus life. By focusing on user-friendly design principles and integrated functionality, the system represents a significant advancement in creating a connected, efficient, and student-centered educational experience. Future steps may include system development, testing, and deployment to realize the full potential of the proposed design.

REFERENCE

[1] Yuris Alkhafi, Rino Ramadhan, Rahdian Kusuma Atmaja, Ispandi. (2024). “Mobile-based Application Development on Admissions of New Students with Design Science Research Methodology”.

[2] Rizwan Ullah, Muhajid Shah. (2022). “Online Intermediate Admission Management System”.

[3] Kamma Arpitha. (2020). “A Study on Online College Admission Management System”.

[4] Mutiara Universitas Andi Djemma Palopo. (2024). “Aplikasi Pengarsipan Data Administrasi Mahasiswa Pada Program Studi Teknik Informatika Berbasis Website”.

[5] Fatema-Tuz-sabiha. (2019). “Online Postgraduate Admission System: A Case Study”.