

FINAL PROJECT SEMESTER MAY 2024

"My School" Implementation of data management for new student admissions through PHP and Database integration

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This report is prepared to fulfill the requirement of CPP401 Final Project

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Lastly, I appreciate our family and friends for their continuous support throughout the development process. Their encouragement and understanding is important to maintain focus and motivation during challenges.

All contributions are essential in the success of website development. I believe this will benefit many people through convenient and easily accessible health services.

ABSTRACT

Admission of new students is a crucial process that requires efficient and accurate data management. This paper discusses the "My School" implementation of data management for new student admissions using PHP and database integration. The system built aims to increase efficiency and accuracy in collecting, storing and processing prospective student data. The methodology used includes requirements analysis, system design, implementation and testing. The results show that this system is able to minimize data input errors, speed up the selection process, and make information access easier for administrators. Apart from that, this system also supports better reporting and faster decision making. In conclusion, the implementation of PHP and database-based data management has proven to be effective in improving the quality and efficiency of the new student admissions process.

CHAPTER 1

INTRODUCTION

The admission of new students is a critical operation for educational institutions, necessitating the efficient and precise management of data to guarantee a fair and efficient selection process. Extensive documentation, manual data entry, and substantial administrative effort are frequently associated with conventional admissions procedures, which can result in inefficiencies, delays, and errors. The incorporation of web-based systems and databases has become an increasingly popular solution to streamline and enhance the admissions process as technology continues to advance.

The implementation of a data management system for new student admissions using PHP and database integration is the subject of this paper. PHP, a server-side scripting language that is frequently employed, is renowned for its adaptability and compatibility with a variety of database systems, rendering it an optimal choice for the development of web-based applications. Educational institutions can enhance overall efficiency, reduce the probability of errors, and automate and facilitate the admissions process by utilizing a robust database management system and PHP.

The system that has been suggested is designed to ensure that both administrators and applicants have a seamless experience. The system provides an online platform for applicants to submit personal information and academic records, monitor the status of their applications, and receive expeditious notifications. It offers administrators the ability to manage applicant data, evaluate submissions, and make informed decisions based on comprehensive and accurate information.

This paper delineates the methodology employed to develop and execute the system, which encompasses requirements analysis, system design, implementation, and testing. It also discusses potential future enhancements and presents the results of the system's deployment, emphasizing its impact on the admissions process. The proposed solution exhibits substantial enhancements in the efficiency, accuracy, and accessibility of administering new student admissions through the integration of a database management system and PHP.

The subsequent sections will explore the intricate details of the system development, illustrating the practical advantages and obstacles that were encountered during the implementation process. Our objective is to offer educational institutions that are interested in modernizing their admissions processes through the use of web-based technologies valuable insights and guidance through this investigation.

1.1. Problem Statement

The use of new data is a crucial aspect in the operational efficiency and accountability of a educational institution. Traditional methods, such as physical collection and manual storage, have several drawbacks that can hinder the effectiveness and accuracy of the collection process.

- 1. Human error: Manual storage involves physical form submission by students or parents, which is costly for learning, data collection, or data shortage.
- 2. Inefficiency of Work and Data Collection: Time-consuming collection, verification, and data collection processes require long periods, leading to inefficiency in data collection and poor results.
- 3. Improving Data Management: Physical storage requires large storage space and a good data management system, which can be time-consuming and costly for emergencies or needs.
- 4. Lack of Transparency and Accessibility: Students and parents may not be provided with information about their file status, which can lead to confusion and conflict.
- 5. Lack of Scalability: Traditional methods may not efficiently manage large volumes of physical data, causing delays in the collection process.
- 6. Risk of Lack or Data Damage: Physical storage costs are high due to lack of knowledge, errors in planning, or unintentional actions, posing risks to the integrity and safety of student data.
- 7. Information Security: Ensuring the security of personal data is more important than using digital systems that can be easily manipulated.

1.2. Objective

The purpose of this paper is to conduct a thorough examination of the implementation and efficacy of a data management system that utilizes PHP and database integration to facilitate the management of new student admissions. The objective of the investigation is to:

- 1. Methodology Outline: Provide a comprehensive description of the procedures that are employed in the design, development, and implementation of a PHP-based system that is integrated with a database management system that is specifically designed for admissions processes.
- 2. System Performance Evaluation: Evaluate the system's performance in comparison to conventional admissions management methods in terms of efficiency, accuracy, and reliability.
- 3. Benefits: Demonstrate the benefits of integrating PHP and databases, including enhanced user experience for administrative staff and applicants, streamlined application processing, and improved data integrity.
- 4. Challenges and Solutions: Identify the obstacles that were encountered during the implementation process and suggest effective solutions to address them.
- 5. Offer Practical Insights: Offer practical insights and recommendations for educational institutions that are seeking to modernize their admissions processes through digital solutions.
- 6. Emphasize Future Opportunities: Evaluate the potential for scalability, adaptability to future technological advancements, and the broader implications of digital transformation in educational administration.

By accomplishing these objectives, this paper endeavors to provide valuable insights into the utilization of PHP and database integration to improve the efficacy and effectiveness of student admissions processes in educational institutions.

1.3. System Scope

The new student admissions website will include core functions for new student registration and login and admin, new student profile, new student registration, new student selection, and new student admission announcements. Additional functionality will include processing new student assessments via report cards, which can be displayed and can be accessed by admins. The Website will not provide a billing or payment system. And also virtual chat, but this system will be replaced by providing a special contact for questions. This overview defines the initial system scope, with specific requirements to be determined later.

1.4. Target User

The following are the target research consumers for the implementation of a data management system for new student admissions through the integration of a database and PHP:

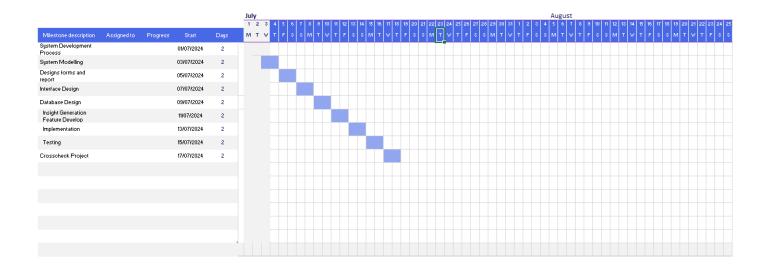
- 1. Educational Administrators: Administrative personnel, principals, and admissions officers who are accountable for the supervision and management of the student admissions process. They will benefit from comprehending the potential of digital systems to enhance data management efficiency, reduce manual errors, and facilitate their workflow.
- 2. Academic Staff and Teachers: Educators who may be involved in the admissions process or in evaluating the academic records of new applicants. Comprehending the system can enable them to recognize enhancements in data accuracy and accessibility.
- 3. Students and Parents: The admission system is intended for prospective students and their parents. Despite the fact that they are not the primary audience for this paper, their requirements and experiences are significant in the design and implementation of the system, rendering them an indirect but significant target group.
- 4. Educational Consultants and Advisors: Professionals who offer consulting services to educational institutions in order to enhance administrative processes and implement new technologies. This paper will furnish them with case studies and implementation strategies to assist their clients.

The objective of this website is to offer a comprehensive understanding of the advantages and

implementation strategies of utilizing PHP and database integration to administer new student admissions by attending to the needs and interests of these target users.

1.5. Project Timeline

The following figure shows the estimated development timeline of this project.



CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

A critical function of educational institutions is the efficient and accurate administration of new student admissions. Traditional methods, which frequently depend on manual data entry and paper-based processes, are susceptible to inefficiencies, delays, and errors. The necessity of a robust digital solution that can simplify the admissions process and guarantee a seamless experience for both administrative staff and applicants is underscored by these challenges.

The implementation of a data management system for new student admissions using PHP and database integration is the subject of this paper. PHP, a server-side scripting language that is widely used, is an excellent choice for the development of web-based applications due to its compatibility with a variety of database systems and its flexibility.

Users (students and parents) and administrators are accommodated by the proposed system:

1. For Users:

- Online Registration: Applicants are able to submit their personal and academic information by completing a comprehensive online form.
- Upload Academic Records: The system enables applicants to submit scanned copies of their academic records, including report cards.
- Application Status Check: Applicants may access the system to determine whether their application has been accepted or not.

2. Administrators:

- Data Management: Administrators have access to a centralized dashboard that enables them to manage and evaluate all incoming student applications.

- Evaluation System: The system provides administrators with the ability to evaluate and score applications based on predefined criteria, thereby assisting them in determining which students satisfy the admission standards.

Traditional methods are significantly outperformed by the incorporation of a database management system and PHP. It enhances data accuracy by minimizing manual entry errors, automates commonplace tasks to increase efficiency, and offers real-time access to application data. Additionally, this digital transformation guarantees a more transparent and user-friendly admissions process for applicants, in addition to optimizing administrative workflows.

The methodology section of this paper delineates the process of designing and implementing the system, including the analysis of requirements and the deployment of the system. The evaluation section evaluates the system's efficacy and its influence on the admissions process by drawing comparisons with conventional methods. Lastly, the discourse addresses potential obstacles that may arise during the implementation process and recommends future improvements to the system.

Educational institutions can enhance operational efficiency, reduce administrative burdens, and provide a superior experience for applicants and their families by integrating a web-based data management system for new student admissions. The objective of this paper is to offer a comprehensive roadmap and practical insights into the integration of PHP and database technologies in order to achieve these objectives.

2.2. Review on the Existing System

2.2.1. Exist 1: Jakarta PPDB

Jakarta PPDB (New Student Admission) is a new student admission system implemented by the DKI Jakarta Provincial Education Office. This system is designed to organize the registration and selection process for new students in a transparent, effective and efficient manner. PPDB Jakarta uses an online platform to facilitate student registration from elementary, middle school, to high school and vocational school levels.

Features of the Jakarta PPDB Web

1. General Information

- Announcements and News: Latest updates regarding schedules, requirements and conditions for accepting new students.
- Guide and FAQ: Registration guide information and answers to frequently asked questions by prospective students and parents.

2. Online Registration

- Registration Form: A digital form that prospective students must fill out with personal data, parent information and school preferences.
- Upload Documents: Feature to upload required documents such as birth certificates, family cards and report cards.

3. Verification and Validation

- Check Registration Status: Prospective students can monitor their registration status in realtime to find out whether their files are working.
- Document Validation: A system that allows administrative officers to verify the authenticity of documents uploaded by students.

4. School Selection

- Zoning: Information about school zoning, helping prospective students choose schools based on where they live.
- School Profile: Information regarding the profile of each school, including facilities, achievements and student admission capacity.

5. Announcement of Selection Results

- Selection Results: Announcement of selection results which can be accessed by prospective students to find out whether they are accepted or not.
- Download Results: Feature to download the selection results certificate.

6. Reporting and Statistics

- Registration Statistics: Statistical data regarding the number of registrations, number accepted, and other demographic information.
- Daily Report: Daily registration report which helps the Education Department in controlling the PPDB process.

7. Help and Contact

- Online Helpdesk: A help service that can be accessed online to answer questions and help overcome technical problems faced by prospective students or parents.
- Committee Contact: Contact information that can be contacted to obtain further assistance.

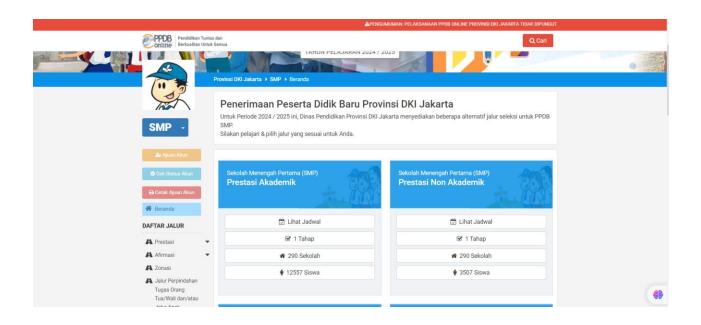
8. Accessibility and Navigation

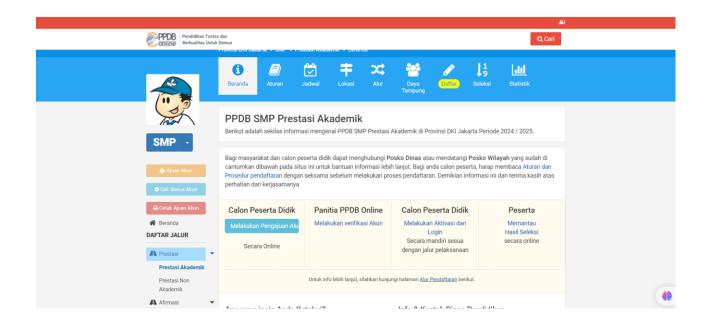
- Multi-Language: Support for various languages to make it easier for users who don't speak Indonesian.
- Responsive Design: Appearance that can be adapted to various devices, such as computers, tablets and smartphones.

Benefits of PPDB Jakarta Web Features

- Transparency and Accountability: With features that allow prospective students and parents to combine registration status and selection results in real-time, the admissions process becomes more transparent and accountable.
- Efficiency: Automate the registration process and reduce manual workload and increase operational efficiency.
- Accessibility: The online system makes access easy for all prospective students, including those in remote locations.
- Centralized Data: Data management that makes it easier to monitor and analyze data by the Education Department for better decision making.

With these features, the PPDB Jakarta website not only facilitates a more effective and efficient new student admissions process, but also provides a better experience for prospective students and parents, as well as supporting better school administration and education policies.





2.2.2. Exist 2: Binus School admission

Binus School PPDB (New Student Admission) is a new student admission system managed by Binus School, a leading private educational institution in Indonesia that offers education from elementary to upper secondary level. This system is designed to facilitate the online registration and selection process for new students, providing easier and more efficient access for prospective students and parents.

Features of the PPDB Binus School Web

1. General Information

- Announcements and News: The latest information regarding registration schedules, requirements, procedures and conditions for accepting new students.
- Registration Guide: Complete instructions on how to register, including video tutorials and FAQ (Frequently Asked Questions).

2. Online Registration

- Registration Form: Digital form to fill in prospective students' personal data, parent data and academic information.
- Upload Documents: Feature for uploading supporting documents such as birth certificates, family cards, report cards and letters of recommendation.

3. Verification and Validation

- Check Registration Status: Prospective students can monitor their registration status in realtime to find out whether their files have been verified.
- Document Validation: A system that allows administrative officers to verify the authenticity of documents uploaded by prospective students.

4. Tests and Interviews

- Entrance Test Schedule: Information and scheduling of entrance tests or assessments required for the selection of prospective students.
- Interview Schedule: Scheduling interviews for prospective students and parents as part of the selection process.

5. Announcement of Selection Results

- Selection Results: Announcement of selection results which can be accessed by prospective students to find out whether they are accepted or not.
- Download Results: Feature to download the selection results certificate.

6. Reporting and Statistics

- Registration Statistics: Statistical data regarding the number of registrants, number accepted, and other demographic information.
- Daily Report: Daily registration report that helps the school monitor the progress of the PPDB process.

7. Help and Contact

- Online Helpdesk: A help service that can be accessed online to answer questions and help overcome technical problems faced by prospective students or parents.
- Committee Contact: Contact information that can be contacted to obtain further assistance.

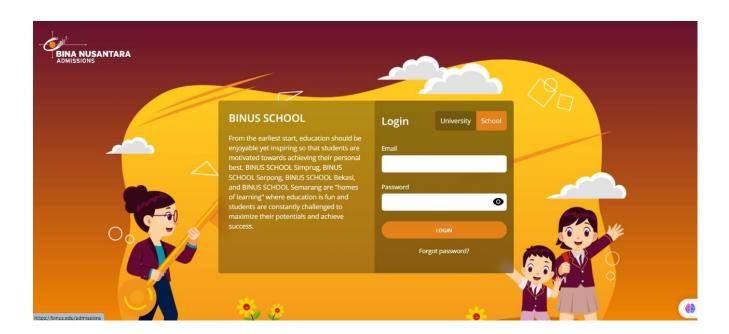
8. Accessibility and Navigation

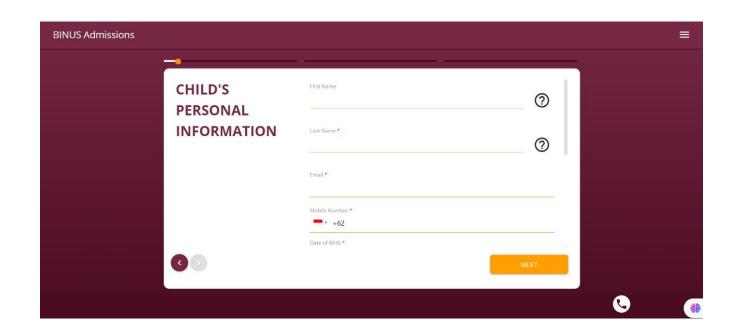
- Multi-Language: Support for various languages to make it easier for users who don't speak Indonesian.
- Responsive Design: A display that can adapt to various devices, such as computers, tablets and smartphones.

Benefits of PPDB Binus School Web Features

- Transparency and Accountability: With features that allow prospective students and parents to monitor registration status and selection results in real-time, the admissions process becomes more transparent and accountable.
- Efficiency: Automation of registration and selection processes reduces manual workload and increases operational efficiency.
- Accessibility: The online system makes access easy for all prospective students, including those
 in remote locations.
- Centralized Data: Centralized data management makes it easier for schools to monitor and analyze data for better decision making.

With these features, the PPDB Binus School website not only facilitates a more effective and efficient new student admissions process, but also provides a better experience for prospective students and parents, as well as supporting better school administration and education policies.





2.2.3 Comparison with My School

The following is a comparison of the features between the new student admissions web between My School and the PPDB Jakarta web and the PPDB Binus School web:

Feature	My School	PPDB Jakarta Web	PPDB Binus
			School Web
User (Students and			
Parents)			
Student Registration	Yes	Yes	Yes
(Fill Out Personal Data			
Form)			
Upload Report	Yes	Yes	Yes
Card Grades			
Check	Yes	Yes	Yes
Registration Status			
Guide and FAQ	Yes	Yes	Yes
Multi-Language	No	No	No
Support			
Responsive Design	No	Yes	Yes

Admin			
Student	Yes	Yes	Yes
Data Management			
Document Verification	No	Yes	Yes
Evaluation System	Yes	Yes	Yes
Announcement	Yes	Yes	Yes
of Selection Results			
Daily Reports and	No	Yes	Yes
Statistics			
Online Helpdesk	No	Yes	Yes
Contact Information	No	Yes	Yes
Data Reporting and	No	Yes	Yes
Statistics			

Comparative Analysis

Advantages of My School:

- Feature Specifications: Focus on essential basic features such as registration, uploading grades, and checking status for users, as well as data management and scoring systems for admins.

Advantages of PPDB Jakarta Website:

- Comprehensive: In addition to basic features, document validation, daily reports and statistics.
- Transparency: Features for checking status and announcing selection results which enable a more transparent process.
- Accessibility: Responsive design that ensures accessibility from various devices.

Advantages of the PPDB Binus School Website:

- Comprehensive and Advanced: Provides all the features offered by PPDB Jakarta with the addition of multi-language support, which is very useful for prospective international students.
- Responsive Design: Provides a display that can adapt to various devices, providing a better user

experience.

Conclusion:

PPDB Jakarta and Binus School web have more comprehensive features compared to your web plan. They provide a variety of additional services such as document validation, daily reports, and statistics that increase transparency, efficiency, and accessibility. However, the advantage of the My School website lies in its simplicity and focus on essential core features.

To increase your competitiveness, you can consider adding features like document validation, daily reports, statistics. This will make your platform more complete and user-friendly, thereby providing a better experience for users.

CHAPTER 3

SYSTEM ANALYSIS

3.1. System Development Process

3.1.1. Project Planning Oversight

To develop the new student registration process, the Scrum development process will be implemented. Scrum is a project management and agile development method focused on collaboration, change, and incremental improvement. It is widely used in software development and can be applied in various fields including educational technology. Scrum emphasizes iterative development, where work is divided into small, manageable parts called "sprints." These sprints are short, time-limited events in which specific tasks are performed. Daily review and process processes help ensure that any media period will be completed in time and full time.

Scrum is good for this job because of his power to make work lead to the first time, change changes in his appearance. With a deadline of about 3 months, the Scrum method of breaking the project into manageable sprints is well suited to the need for continuous improvement and regular reviews. This revision process allows for changes based on knowledge generation and feedback, which is essential for adapting the system to better meet the needs of the user.

Gantt outlines the expected development timeline. The project will begin with a periodic review during the first week to understand the system design and correct any errors or inefficiencies. The second week will be used to analyze the needs of the administrator and the user, to create an interface, and to analyze the current processes. After this research process, the next 2 weeks will be dedicated to the design of the user interface, with Figma chosen as the design material for its simplicity, functionality and integration capabilities.

PHP will be used for website development because of its simplicity in creating interactive spaces. Its simple syntax supports the development of user-friendly systems and

its compatibility with MySQL makes the system robust and flexible. The design database will start automatically when the design interface is created. Because of compatibility, database design, data identification feature development, and data analysis feature development will overlap. The first sprint will focus on data management and feature analysis, lasting about 4 weeks. Visual Studio Code will be used for feature development, which will be used in subsequent sprints. Visual Studio Code is a complete code editor that supports PHP and is effective for creating and visualizing data on websites. MySQL will be used for database design and management.

This development plan provides a structured and flexible process that fits the project timeline. The Scrum method focuses on iterative development, regular reviews, and changes that keep the project moving through manageable sprints, allowing for continuous improvement and resource utilization. work well. A Gantt chart provides a clear path, detailing the implementation of important plans. Using tools such as Figma, Visual Studio Code and MySQL, the development process is improved and the integration of important elements, from data management to user and administrator tasks, is done systematically. May this project continues, this process is used to make a movement of a movement, which will lead to a difficult student and a job that makes the process the student's registration.

3.1.2. System Requirement Analysis

Review the process requirements necessary for creating a new student enrollment process. It describes the non-functional work required to ensure that the solution is complete and effective.

Functional Requirements:

- 1. Registration / Login: The system must allow students and administrators to create an account and log in privately. This feature includes the registration and review process.
- 2. Profile Management: Users must be able to manage their profiles. This includes updating personal information, checking status, and changing information for students and administrators.
- 3. Application Submission: Applicants must be able to submit their application online, including downloading the required documents and completing the required forms.
- 4. Application Tracking: The system will provide a tracking service that allows applicants to

monitor the status of their application during the evaluation process.

- 5. Communication tools: A secure information system should be available for communication between prospective students and administrative staff. This includes notifications, updates and questions.
- 6. Data Management: Administrators will be able to manage student data, including their personal information, application details, and registration status. This includes adding, modifying and retrieving data.
- 7. Scheduling: The process should make it easier to schedule for new students.

Non-Functional Requirements:

- 1. Performance: the platform will work well with high traffic, enabling fast response times and good performance during peak registration periods.
- 2. Security: The system will also protect sensitive user data by encrypting it and following data protection laws. Secure research methods and data management practices are important.
- 3. Ease of use: the interface should be intuitive and friendly for all users, including prospective students, administrators, and current students. Accessibility plans should be included to assist employees with disabilities.
- 4. Reliability: The system should ensure high reliability and minimum downtime. Reliability and recovery plans should be in place to protect against data loss and ensure business continuity.
- 5. Scalability: The platform should be designed to accommodate the growing number of users and applications. This includes planning for future growth and the ability to handle increasing amounts of data.
- 6. Support: The code base should be well documented and structured to support continuous maintenance and updates. This includes clear privacy principles and manageable architecture.

Accomplishing these operational and non-operational requirements is necessary to achieve the goal of creating a robust and easy-to-use new student registration system. The system aims to simplify the registration process, improve the user experience and provide reliable support to educational institutions and their prospective students.

3.2. System Modeling

3.2.1. Process Modeling

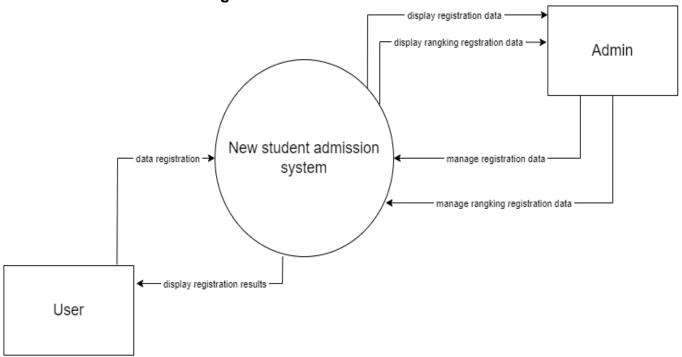
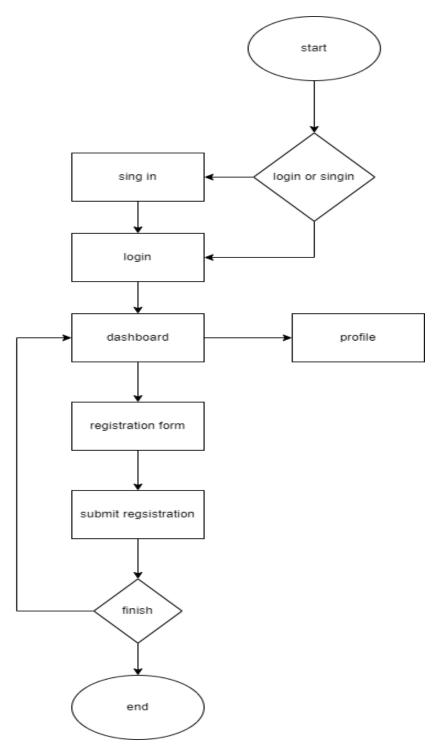


Figure 3.1 Modeling Diagram

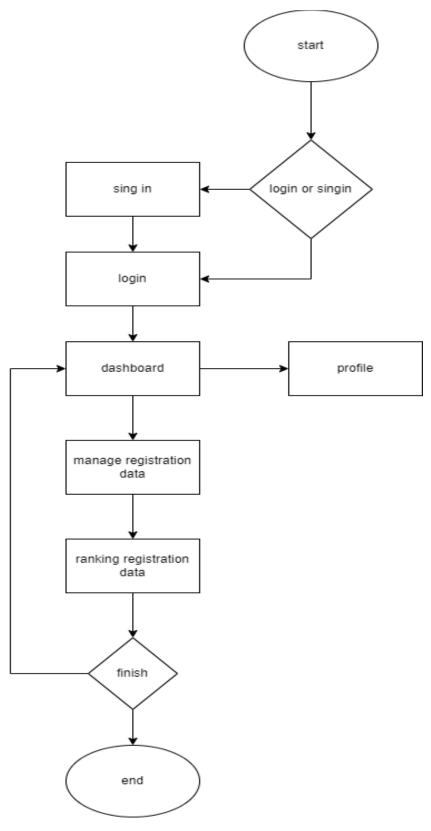
Figure 3.1 shows the interaction between the system and the users, And the admin

3.2.2. Logical Modeling

The following is the User flowchart:

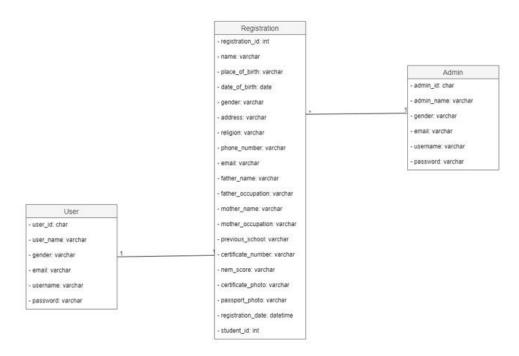


The Following flowchart is Admin Flowchart:



3.2.3. Data Modeling

The following is the Entity Relationship Diagram of new student admissions:



There are 3 entities in this system, namely Admin, Registration, and User. This system is designed for the admission process of new students. Below is the description of each entity and their respective attributes:

1. Admin

- admin_id:char

- admin_name: varchar

- gender: varchar

- email: varchar

- username: varchar

- password: varchar

Admin is the data of the account administrator who manages the student registration and admission system.

2. Registration

- id_daftar: int

- name: varchar

- palace_of_birth: varchar

- date_of_birth: date

- address: varchar

- gender: varchar

- religion: varchar

- phone_number: varchar

- email: varchar

- father_name: varchar

- father_occupation: varchar

- mother_name: varchar

- mother_occupation: varchar

- previous_school: varchar

- certificate_number: varchar

- nem_score: varchar

- ceritificate_photo: varchar

passport_photo: varchar

- registration_date: datetime

student_id: int

Registration represents the data collected during the registration process for a new student. This includes personal information, contact details, family background, previous school information, and required documents.

3. User

- student id: int

- name: varchar

- gender: varchar

- email: varchar

- username: varchar

- password: varchar

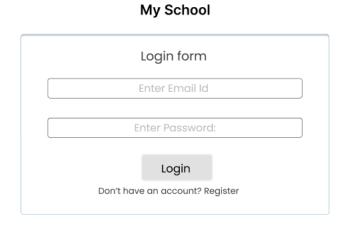
User represents the data of the account for a student who has completed the registration process and has been admitted to the institution.

The Online Admission System uses different entities to manage and organize the data effectively. Admin and user access are secured and differentiated via unique usernames and passwords.

CHAPTER 4

SYSTEM DESIGN

4.1. Website Design



The image above shows the My School login form. Users need to fill in the email and password fields and then click login to continue. For email and password, users can use the email and password that were created when registering an account.

Password
Confirm password
ster

The image above is a register page that can be used by users to create an account to enter the website. Users must fill out all forms for account registration so that the account can be registered.

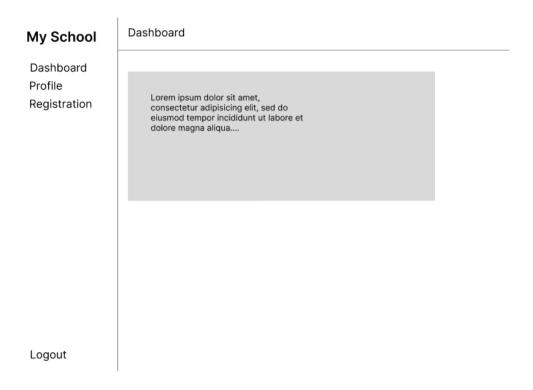


Figure 4.3 After Login Page

The image above is a dashboard that can usually be used as a tutorial for users using the website for the first time.

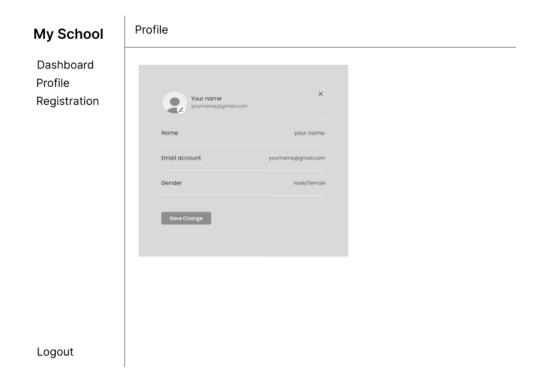
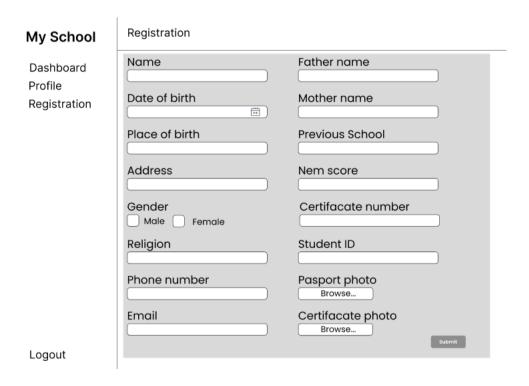


Figure 4.4 Consultation Form

The image above is a profile section that can be used by users to view data from accounts that have been created and can be used to update data from accounts that have been created.



The image above is a registration form that users use to fill in data for new student registration, and the data is sent to the school for accepting new students.

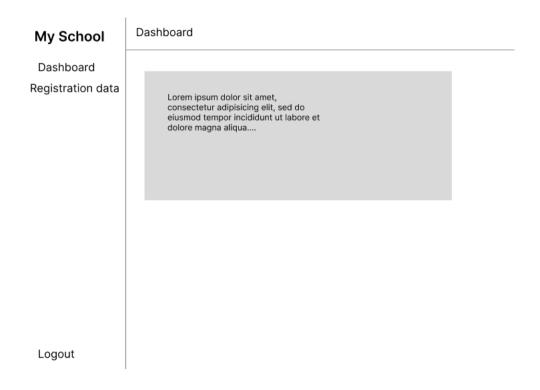


Figure 4.6 Doctor Page

The image above is a dashboard for admins which can usually be used as a notification for the responsible admin.

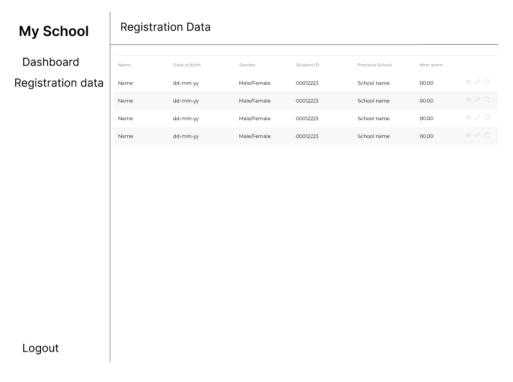


Figure 4.7 Patient Que and Confirmation Page

The image above is the registration data for the admin. This data is the registration data that has been received by the admin from the user for registering new students.

The design above is a web development design for the My School website, new student admission. with the use of Low fidelity design that focuses on the basic structure and function of using Low fidelity makes the web design more flexible and also easy to create.