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Design of a Web-Based Information System for New Student Registration in Vocational High Schools

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ABSTRACT

In an era of increasingly rapid digitalization, it is important for schools to have a registration system that is easily accessible to prospective students and related parties. So, the aim of this research is to design a web-based registration information system for new students at the Fardillah Moncongloe Vocational High School using a needs analysis, system design, software development, and testing approach. This information system includes several features such as filling out online registration forms, uploading required documents and tracking registration status. It is hoped that the results of this research can make a positive contribution to Fardillah Moncongloe Vocational High School (SMK) in improving the process of accepting new students. Besides that, this research can also be a reference and basis for developing similar registration information systems in other educational institutions. Based on the research results, information was obtained that this system can run well and in accordance with the wishes of the user. This is known based on the results of black box testing in the registration process, the system display is easy to understand, student data security is maintained, error management can be identified, and is responsive. This is supported by the responses of 400 respondents with a data distribution of 37.5% who said they were very satisfied and 62.5% who said they were satisfied with the system used. This is known based on the results of black box testing in the registration process, the system display is easy to understand, student data security is maintained, error management can be identified, and is responsive. This is supported by the responses of 400 respondents with a data distribution of 37.5% who said they were very satisfied and 62.5% who said they were satisfied with the system used. This is known based on the results of black box testing in the registration process, the system display is easy to understand, student data security is maintained, error management can be identified and is responsive. This is supported by the responses of 400 respondents with a data distribution of 37.5% who said they were very satisfied and 62.5% who said they were satisfied with the system used.

1. INTRODUCTION

Currently, the progress of technological innovation is very fast so that various satisfactory resources are needed, both as human resources and infrastructure [1]. The progress of computers cannot be separated from the increase in technological innovation, so the Internet is also needed. Internet technology is something that is commonly heard of, almost every human being uses this technology every day. Increasing technological innovation is developing very quickly in various fields of human life [2, 3]. Apart from that, improvements in information technology have also significantly influenced the field of education and have been widely used in agencies or organizations.

Information technology is needed as a supporting device that can help facilitate human activities. In this case study, Fardillah Moncongloe Vocational High School (SMK) still uses a manual system in admitting students, such as data processing still using paper forms taken directly at the school so this process is very ineffective and inefficient. This process is very risky of data loss if not stored carefully.

Apart from that, the problem experienced by the PPDB (New Student Registration) committee or new students is the lack of an ideal computer as a device for handling student data. Furthermore, the committee had difficulty finding data on students who had registered so it was very troublesome.

Manual registration processes tend to take up valuable time and human resources, which can disrupt school efficiency and result in data inaccuracies [4, 5] Parents and students often have to fill out many forms manually or physically come to school to register, causing disruption in their daily routine. Data errors, such as writing names or addresses incorrectly, can have a negative impact on school administration. Based on these problems, an information system for New Student Registration at Fardillah Moncongloe Vocational School is needed.

This research aims to create a new information system for student registration at Fardillah Moncongloe Vocational High

School, with goals of speeding up the registration process, improving data accuracy, and enhancing overall school efficiency. Furthermore, this study intends to convert the current manual system into a digital platform that makes accessing student data easier, reduces the risk of data loss, and simplifies the registration process for both the school committee and new students. Ultimately, this is expected to boost the efficiency and effectiveness of New Student Registrations at the school.

2. LITERATURE REVIEW

2.1 Planning

Designing a New Student Registration information system is a crucial step in efforts to increase the efficiency and accuracy of the student admission process at school [6]. This system is designed to replace manual processes that tend to take time and have the potential to cause data errors [7]. In designing this system, several main aspects must be considered. First, student enrollment data collection should be simplified through easily accessible online forms.

Second, the system must be able to manage student data safely and maintain the security and confidentiality of personal information. Third, this system must have a data validation algorithm that allows identifying errors or inconsistencies in filling out forms. Fourth, integration with existing school databases is important to avoid duplication of data and ensure consistency of information. Lastly, this system must be able to provide reports and analysis of data that is useful to schools, such as student enrollment trends from year to year. Based on the previous description, by carefully designing a New Student Registration information system, schools can increase data accuracy and save valuable time and resources.

2.2 Information systems

It is important to understand that information systems are not just about technology, but also about how that technology is used to produce information that is valuable for decision making [8, 9]. The entire information system must be designed, managed and maintained well so that it can contribute positively to the efficiency and effectiveness of the organization.

An information system consists of several main elements, including hardware (hardware) such as computers and servers, software (software) such as applications and computer programs, data generated or stored by the system, procedures or steps that regulate the use of the system, and people. -the person who operates and manages the system [10, 11].

A system has an important role in identifying relevant information input and producing appropriate output as a result [12]. Therefore, appropriate goals and objectives are needed for the system. Meanwhile, information refers to various types of data that are processed into a form that is more valuable and meaningful for the party who receives it.

Information systems are various computer devices and software as well as human devices that will monitor information using devices and programming [13]. Therefore, to help the smooth running of an information system, several parts are needed so that information handling can run as expected. The component parts of an information system consist of input, process, output, technological innovation, data collection, and control [14, 15].

The New Student Registration Information System is a software or digital platform designed to facilitate an effective and efficient student registration process in an educational institution, such as a school [7, 16]. This system allows prospective students to submit registration applications online, fill out the registration form, and upload the required documents. Apart from that, this system also allows school administrative staff to manage registration data, check the validity of documents, and compile student admission lists.

2.3 New Student Registration (PPDB)

New Student Registration (PPDB) or New Student Registration has an important role in maintaining the integrity of the new student admissions process, avoiding nepotism or discrimination practices, and ensuring that all candidates have the same opportunity to access education [17]. Therefore, good and fair PPDB management is one of the key aspects in providing quality education [18].

Based on the opinion of Damayanti et al. [19] that PPDB is an academic selection process for prospective new students to continue to a higher level of education from their previous school with the main aim of organizing and managing the admission of new students in a structured and fair manner. This process involves a number of stages, including the announcement of registration, collection of application forms, data verification, selection processing, and announcement of admissions results by establishing educational quality guarantees to help efforts towards ideal goals [20].

2.4 Website

A website is a digital page that can be accessed via the internet with various types of content, such as text, images, audio or video, which can be viewed via a computer, tablet or smartphone device [21-23]. Websites usually have a unique address called a URL (Uniform Resource Locator), which users use to access the page.

Moreover, websites are not just about technology but are also a powerful medium for communicating, sharing information, and interacting with users from various backgrounds. Websites have become an integral part of the digital world and play an important role in providing access to information and services in this modern era, so their use depends on the needs and preferences of the owner.

2.5 PHP

The PHP (Personal Home Page) programming language is very useful in developing this application because it allows website managers to carry out various tasks such as processing registration data, saving data into a database, validating data, and presenting information dynamically to users [24, 25]. Through PHP, developers can create interactive registration forms that allow prospective students or their parents to fill in personal data and upload documents easily. Apart from that, PHP also enables real-time data validation, which helps identify errors in filling out forms and ensures that the data submitted by the applicant meets the specified requirements.

PHP is open source software that is distributed free of charge [26] with a license and can be downloaded on the official website, namely http://www.php.net freely. PHP also supports integration with other technologies, such as HTML,

JavaScript, and CSS which makes it possible to create an attractive and well-functioning website appearance [27]. Especially in new student admission applications, because it can help automate and increase the efficiency of the admission process, make the applicant experience more comfortable, and provide a strong system for educational institutions in managing registration data and making decisions on student selection results.

2.6 MySQL

MySQL is a database management system (DBMS) that can be used in new student admission applications to store and manage data related to New Student Registration [28, 29]. In the context of this application, MySQL acts as a "warehouse" where student registration data, such as personal information, educational history, and application documents, can be stored and accessed in a structured manner.

Through MySQL, new student admissions applications can process data efficiently, reducing the potential for human error, and providing a better registration experience for prospective students and administrative staff. Additionally, MySQL also enables secure and reliable data storage, which is critical in managing sensitive information such as prospective students' personal data [30]. The advantages of MySQL are:

1. It doesn't require a lot of RAM, the advantage of MySQL is that it can be installed on servers with small RAM specifications.
2. Structured data storage, meaning that MySQL allows student registration data to be stored in structured tables, which makes it easy to organize and access.
3. Supports multi-user, meaning MySQL can be used by many users at the same time.
4. Guaranteed security, meaning MySQL provides a variety of security features, including access rights management, data encryption, and user authentication, which are important for protecting requesters' personal data.

2.7 Flow chart

Flowcharts in designing new student admission applications are very useful in several ways because they help researchers visualize the stages required in developing new student admission applications [31, 32]. Firstly, it helps in planning and organizing the design process clearly. Second, it allows application developers and designers to understand the workflow and development stages required. Third, this flowchart can be used as a reference guide during application development, helping to avoid confusion or errors in the design process.

In addition, flowcharts can also be an effective communication tool within a development team, ensuring that all team members have a uniform understanding of the steps to be taken in designing a new student admissions application. Thus, flowcharts become an important instrument in planning and developing efficient and effective new student admission applications.

3. METHODOLOGY

The research methodology for the New Student Registration information system at Fardillah Moncongloe Vocational High School adopts a research and development approach, which involves several key phases [33]. Initially, a comprehensive literature review will be conducted to explore existing literature on student registration systems. Following this, data collection or needs analysis will be performed to gather insights from stakeholders regarding their requirements and expectations for the system. Subsequently, the system will be designed based on the findings from the needs analysis stage.

The testing phase will employ black box testing methodology to evaluate the system's functionality independently of its internal workings [34]. Additionally, descriptive statistical analysis techniques will be utilized to analyze the collected data. This research method aims to ensure that the New Student Registration system is tailored to meet the specific needs of Fardillah Moncongloe Vocational High School, enhancing its efficiency and effectiveness.

3.1 Framework of thought (Framework)

In preparing this research, a framework structure is needed to help easily prepare it with clear stages [35]. The structure of this framework is the stages that will be taken in overcoming the problem to be resolved. The framework used is as shown in Figure 1.

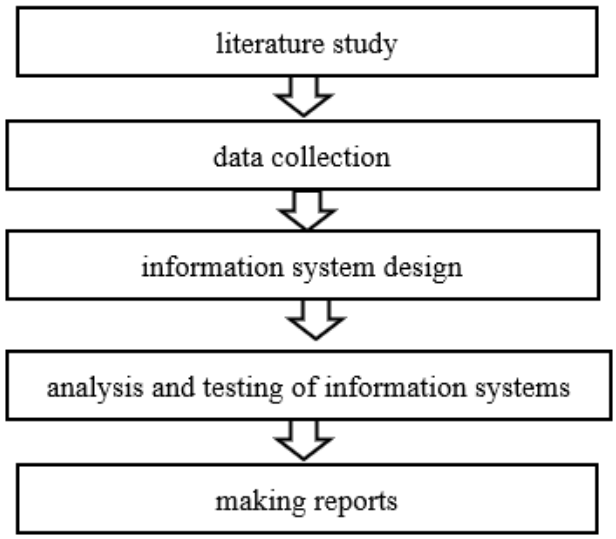

Figure 1. Framework of thought

(1) Study of literature

This stage carries out a review of writing or literature from various journals, digital books, reference books and various related sources that can help in this research.

(2) Data collection

This stage carried out data collection using a direct interview method with the relevant school committee in the process of inputting PPDB biodata and an observation method through direct observation at Fardillah Moncongloe Vocational School.

(3) Information systems design

The design stage is when the author begins to design a Web-based New Student Registration (PPDB) information system using PHP and MySQL.

(4) Information systems analysis and testing

This activity carries out system testing and analysis starting from inputting new students to the reporting stage so that the author can find out which parts are still problems or errors so they can be corrected.

(5) Making information system reports

This final stage is the creation of an information system report which is compiled from the results of the data collection stage to the design stage and testing stage of the New Student Registration information system, so a complete picture of the application being created is obtained.

3.2 System requirements analysis

Analysis of the needs of a new student admission system is the process of identifying the needs necessary to develop or update an effective system for accepting new students to an educational institution [36, 37]. The main goal is to ensure that the student admission process runs efficiently, transparently, and in accordance with educational institution policies. The functional requirements needed for this system are:

(1) New students

- Register or register
- Login
- Fill in your biodata and upload the specified files
- View registration information
- See the results of the announcement

(2) Committee or Admin

- Login
- Validate registration
- Print registration and acceptance reports
- Manage the test scores of new students

3.3 School overview

(1) History of Fardillah Moncongloe Vocational School

Fardillah Moncongloe Vocational High School was founded by the chairman of the Fardillah Foundation led by Haeruddin, S.Ag. The foundation's address is Manjalling Hamlet, Bonto Bunga, Moncongloe District, Maros Regency, South Sulawesi Province, Indonesia. Led by the school principal named Mr. Haeruddin, S. Ag. And there is one deputy principal who is assisted by several teachers and school staff.

Fardillah Moncongloe Vocational School initially had 5 majors, but as time went by the majors that were most in demand by new students were only 2 majors, namely Computer and Network Engineering and Automotive Light Vehicle Engineering. The TKJ or Computer and Network Engineering department is the department with the newest students who are female, while the TKR or Light Vehicle Engineering department is the department with the most new students who are male.

Fardillah Moncongloe Vocational School has facilities provided for students, namely first, a bus which is specifically for new students whose homes are far from the school and do not have their own vehicle so that new students can ride the bus and are picked up every morning and taken back in the afternoon. to each other's homes for free without any charges. Second, there is internet access or WiFi that can be used by new students at certain times.

(2) School address

The author conducted this research at a school located at:

School name: Fardillah Moncongloe Vocational School

Address: Manjalling Hamlet, Bonto Bunga, District. Moncongloe, Maros Regency, South Sulawesi Province, Indonesia.

Website: http://www.smkfardillahmoncongloe.sch.id

E-mail: dfardillahsmk@yahoo.co.id

4. RESULTS AND DISCUSSION

4.1 System design

4.1.1 Flow chart

- Main page

The main page flowchart in Figure 2 depicts parts of the main page of the website. There is a display presented regarding the registration of new students at Fardillah Moncongloe Vocational School.

The flowchart in Figure 3, 4 depicts the outline of the administrator web page. The first stage, to enter this page, the administrator must log in first. If the username and password entered are correct, you will enter the administrator page and vice versa, if both are incorrect a notification will appear again to log in.

- Register flowchart

This flowchart describes the registration process that can be carried out by new students. New students must first register an email account and password to be able to log in, as shown in Figure 5.

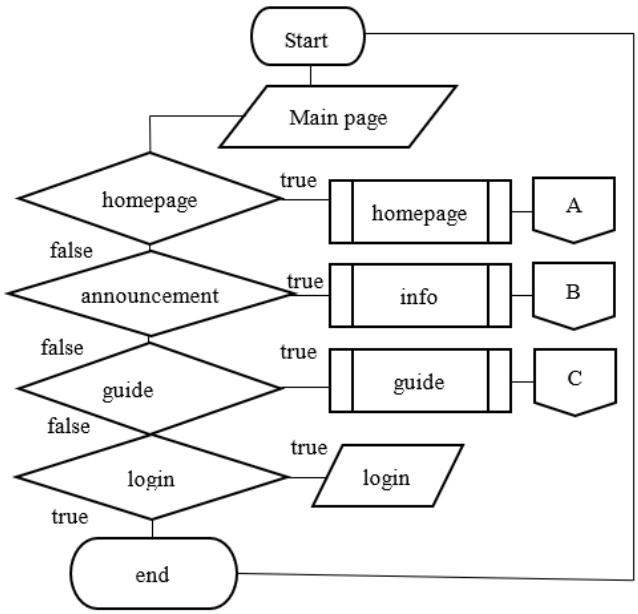

Figure 2. Main page flowchart

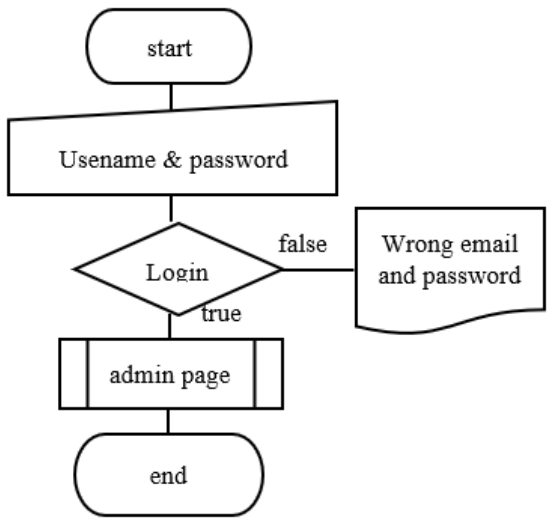

Figure 3. Admin login flowchart

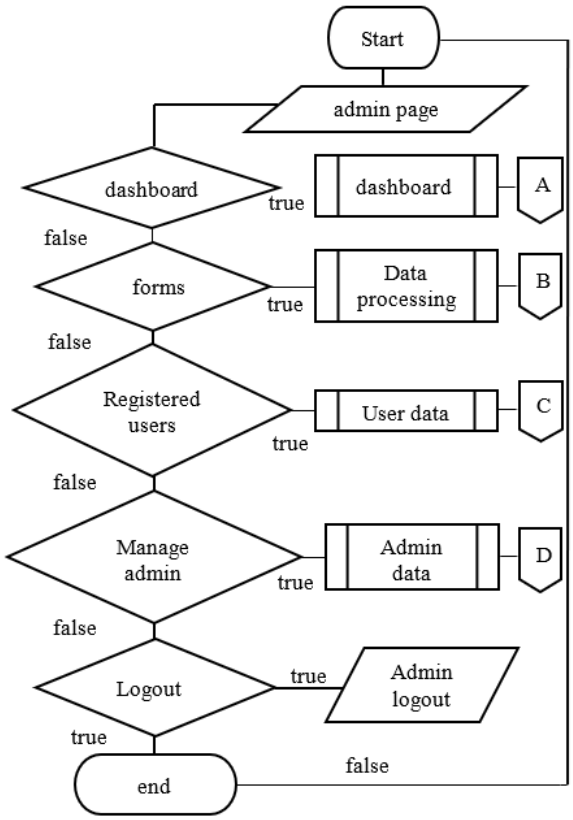

Figure 4. Admin page flowchart

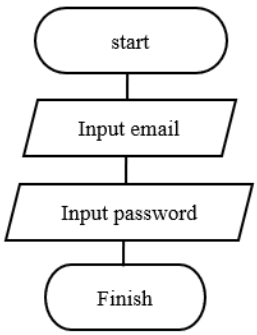

Figure 5. Register flowchart

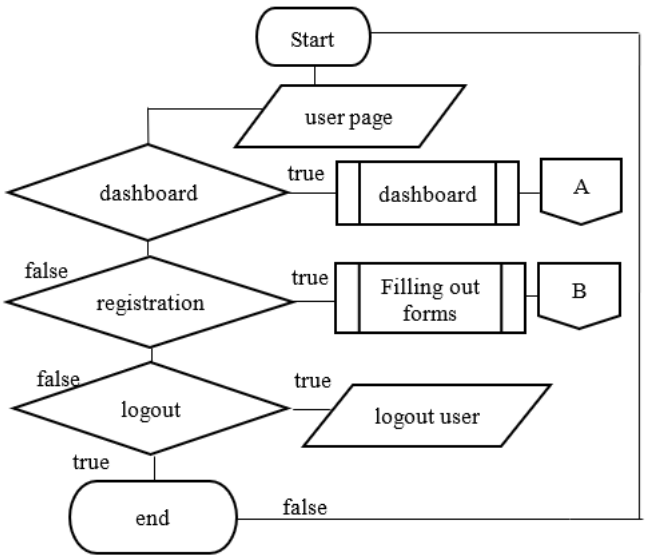

Figure 6. New student page flowchart

• Student page flowchart

This flowchart depicts students logging in by entering the username and password that were created during the registration process. If you have previously registered, participants can access the user page as shown in Figure 6.

4.1.2 Use case diagrams

The use case diagram of the New Student Registration information system at Fardillah Moncongloe Vocational School, which consists of new student users and admin, can be seen in Figure 7.

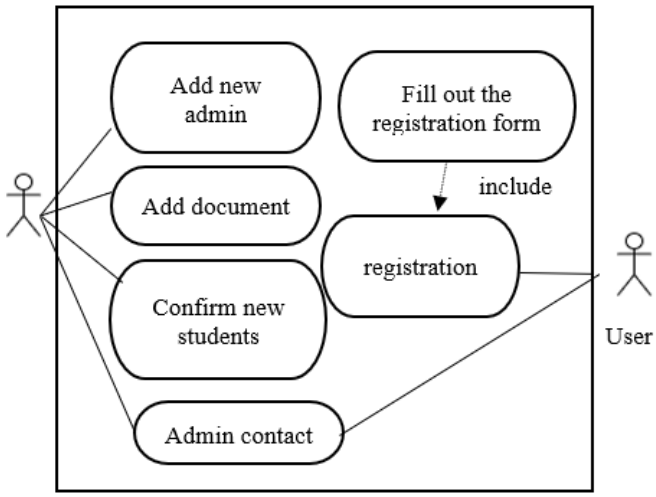

Figure 7. Use case diagrams

4.2 System view

System implementation is carried out on each page that has been created.

(1) Main Menu Display

Figure 8 shows the main page of the New Student Registration Information System at Fardillah Moncongloe Vocational School. This main menu page can be accessed by everyone and there are several main menus, namely the announcement menu, guide menu and login menu.

(2) Login view

On the Login Page, Figure 9 is a form to open the program and functions as security for the data contained in the program. This login is intended for Admins and new students.

(3) Registration menu display

In the registration menu as in Figure 10, it functions for new students who have never registered, so they must register first in the form of their respective email and password.Its function is to authenticate new users or students who will register and access the website on the PPDB information system.

(4) User home view

Figure 11 shows the Dashboard Page for users and there is a registration guide and Logout menu.

(5) Form registration view

Figure 12 shows the Registration Page for users. This section contains Academic Data, Personal Data, Parent Data and School Data as well as files that must be input.

(6) Admin dashboard view

Figure 13 shows the Dashboard Page for Admin and there is a form menu, registered user menu, admin management menu and logout.

(7) Manage Forms view

The display for Manage forms can be seen in Figure 14,

which shows the names of new users or students who have filled out the form.

If you click the View Details option, new student data will appear as shown in Figure 15.

(8) Registered user display

Figure 16 provides a display for the user by displaying the user's email and registration date and can delete the user's data.

(9) Manage admin view

In Figure 17, it shows the admin management page which has registered a special admin email and can delete admin data.

If you want to add a new admin, you can click the "Add New Admin" button, it will appear as in Figure 18.

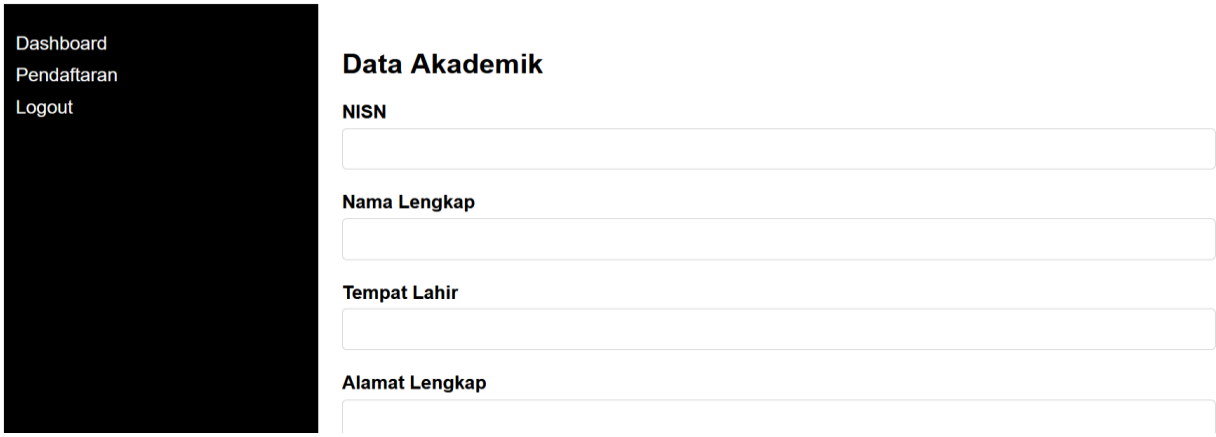

Figure 8. Main menu display

Figure 9. Login view

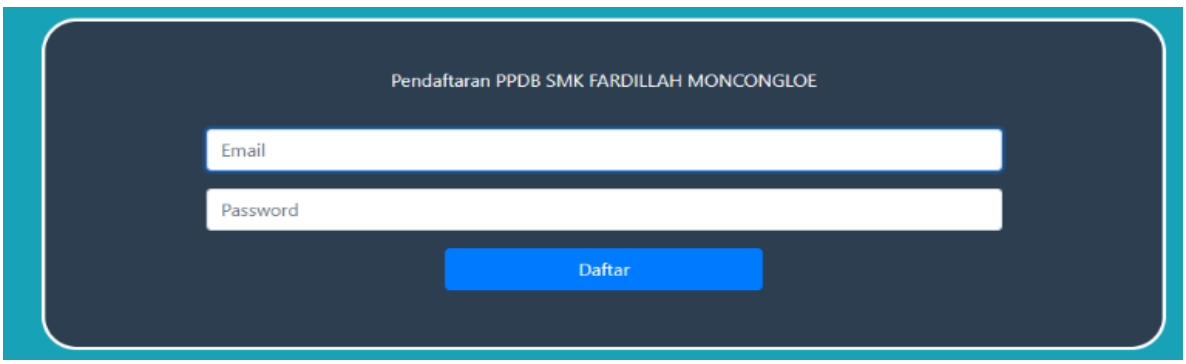

Figure 10. Registration menu display

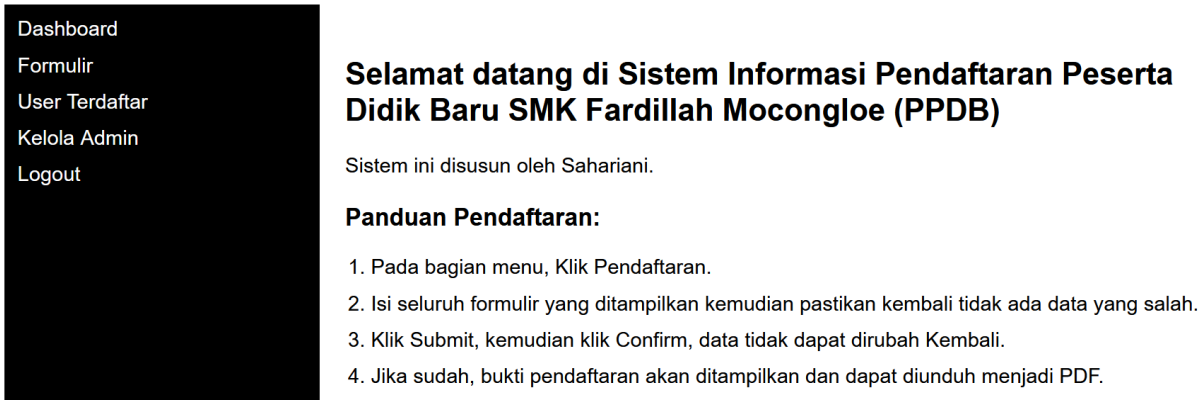

Figure 11. User home view

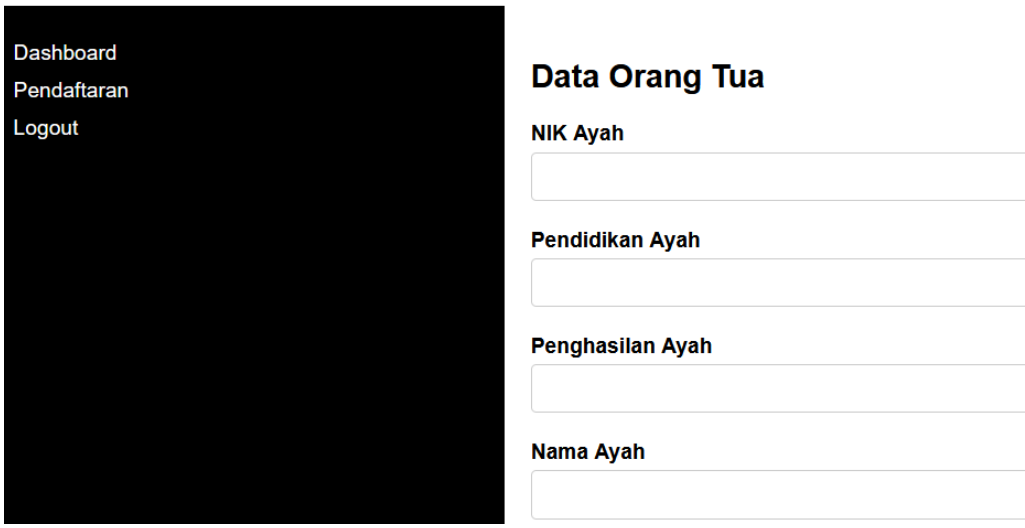

Figure 12. Form registration view

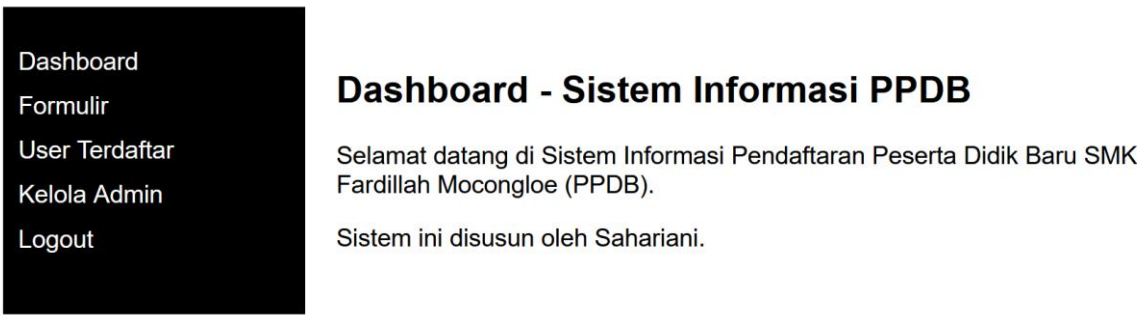

Figure 13. Admin dashboard view

Figure 14. Manage forms view

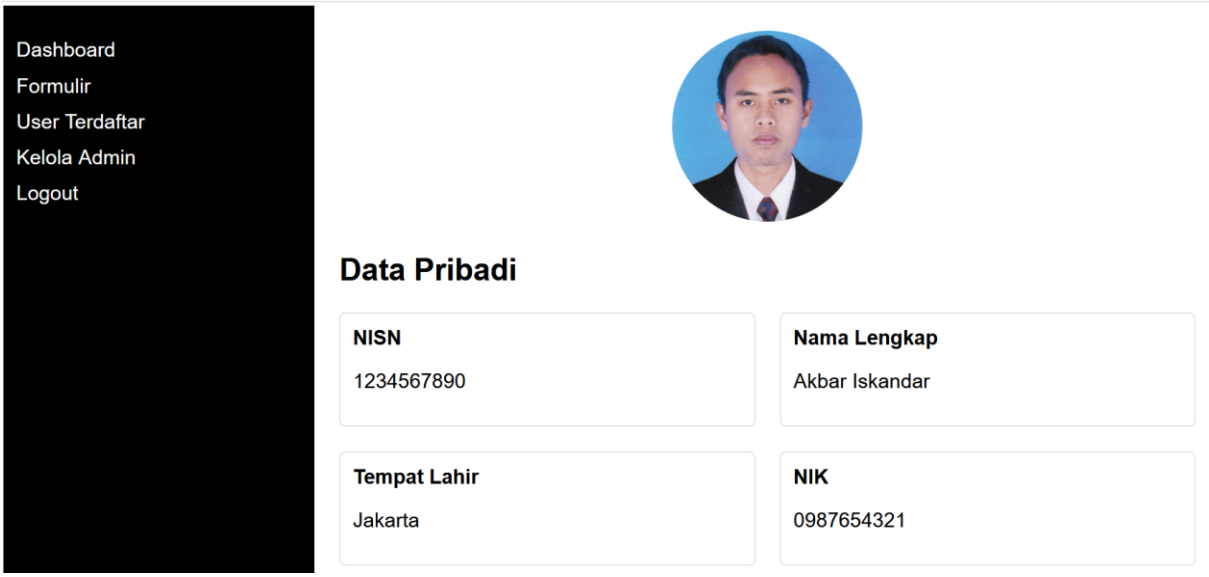

Figure 15. Student data display

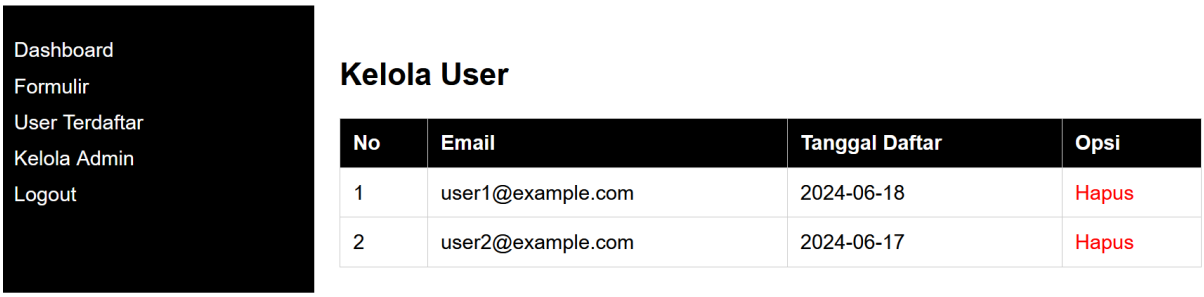

Figure 16. Registered user display

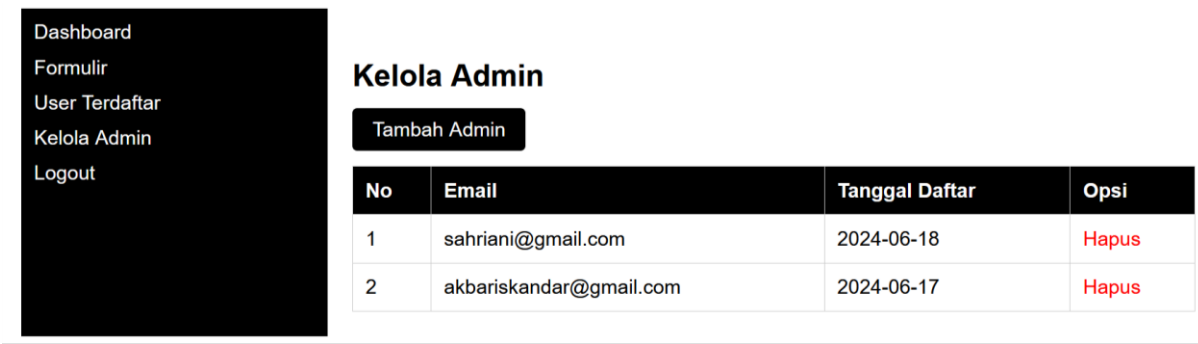

Figure 17. Manage admin view

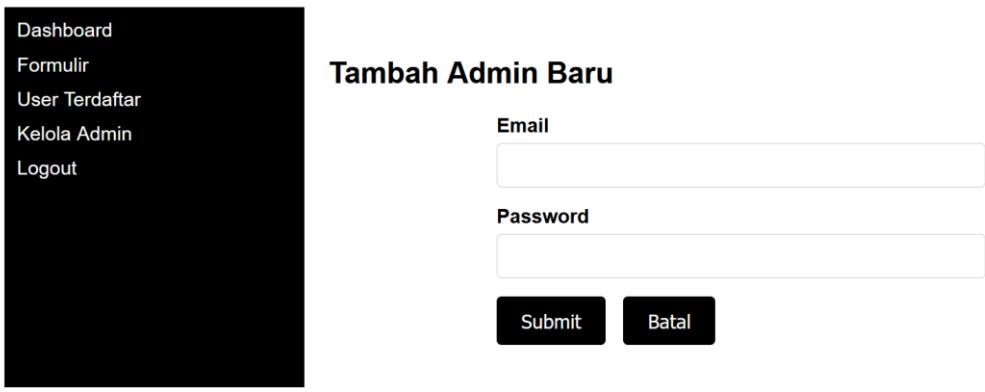

Figure 18. Add new admin view

4.3 System testing results

The results of the design and implementation of this new web-based student registration system are very encouraging. The registration process becomes much more efficient because prospective students and their parents have the ability to fill out the registration form flexibly, wherever and whenever they are. Moreover, there has been a significant increase in interactions between prospective students, parents and school officials. They can easily communicate with the school, both for questions and clarification, via online platforms. Data management also becomes more accurate thanks to digital storage of registration data, so the risk of errors in data management can be reduced.

This platform overcomes the challenges that often arise regarding distance and time constraints in the registration process. However, it is important to consider regular maintenance and system updates to maintain platform performance and security. Apart from that, outreach efforts are also needed for prospective students and parents who may not be familiar with the use of online platforms. Overall, this system design has provided a modern and effective solution in the registration process at Fardillah Moncongloe Vocational School.

The database structure for the New Student Registration information system at Fardillah Moncongloe Vocational High School involves four main tables: "Students," "Parents," "Users," and "Documents." Each table is designed with appropriate columns to store relevant information, and the relationships between tables are explained through the use of foreign keys. Below is the complete database structure for the New Student Registration information system at Fardillah Moncongloe Vocational High School:

Students Table: This table stores information about registering students, including their name, date of birth, gender, address, phone number, email, and registration date. The primary key, student_id, is generated automatically.

Parents Table: It contains information about the parents or guardians of students, including their name, phone number, email, and relationship to the student. The student_id serves as a foreign key connecting it to the Students table.

Users Table: This table is used to store system user information such as username, password, user role (admin, staff, or student), and email address. The primary key is user_id.

Documents Table: It stores details of documents uploaded by students during the registration process, such as birth certificates or identification cards. Each document has attributes like document type, file path, and upload date. The student_id is used as a foreign key to connect it to the Students table.

With this database structure, the student registration system at Fardillah Moncongloe Vocational High School can store and manage student, parent, user, and document information in a structured and efficient manner. Here is the complete PHP MySQL database structure for the New Student Registration information system at Fardillah Moncongloe Vocational High School:

```
<?php
// Database connection
$servername = "localhost";
$username = "username";
$password = "password";
$database = "fardillah_school";

$conn = new mysqli($servername, $username, $password, $database);

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Creating the Students table
$sql_students = "CREATE TABLE Students (
    student_id INT AUTO_INCREMENT PRIMARY KEY,
    first_name VARCHAR(50) NOT NULL,
    last_name VARCHAR(50) NOT NULL,
    date_of_birth DATE NOT NULL,
    gender ENUM('Male', 'Female') NOT NULL,
    address TEXT NOT NULL,
    phone_number VARCHAR(15),
    email VARCHAR(100),
    registration_date DATE NOT NULL
)";

if ($conn->query($sql_students) === TRUE) {
    echo "Table Students created successfully";
} else {
    echo "Error creating table: " . $conn->error;
}

// Creating the Parents table
$sql_parents = "CREATE TABLE Parents (
    parent_id INT AUTO_INCREMENT PRIMARY KEY,
    student_id INT,
    first_name VARCHAR(50) NOT NULL,
    last_name VARCHAR(50) NOT NULL,
    phone_number VARCHAR(15),
    email VARCHAR(100),
    relationship VARCHAR(50) NOT NULL,
    FOREIGN KEY (student_id) REFERENCES Students(student_id)
)";

if ($conn->query($sql_parents) === TRUE) {
    echo "Table Parents created successfully";
} else {
    echo "Error creating table: " . $conn->error;
}

// Creating the Users table
$sql_users = "CREATE TABLE Users (
    user_id INT AUTO_INCREMENT PRIMARY KEY,
    username VARCHAR(50) NOT NULL,
    password VARCHAR(255) NOT NULL,
    role ENUM('Admin', 'Staff', 'Student') NOT NULL,
    email VARCHAR(100)
)";

if ($conn->query($sql_users) === TRUE) {
    echo "Table Users created successfully";
} else {
    echo "Error creating table: " . $conn->error;
}

// Creating the Documents table
$sql_documents = "CREATE TABLE Documents (
```

```
    document_id INT AUTO_INCREMENT PRIMARY KEY,
    student_id INT,
    document_type VARCHAR(50) NOT NULL,
    file_path VARCHAR(255) NOT NULL,
    upload_date DATE NOT NULL,
    FOREIGN KEY (student_id) REFERENCES Students(student_id)
)";

if ($conn->query($sql_documents) === TRUE) {
    echo "Table Documents created successfully";
} else {
    echo "Error creating table: " . $conn->error;
}

$conn->close();
?>
```

Before this new web-based student registration system is used, testing is first carried out to guarantee that an event or input will execute the output according to the previous design. Table 1 shows the system test architecture.

Table 1. System testing results with black box testing

No.	Test Cases	Test Scenarios	Expected Results	Results
1	Registration Process	Students and Parents access the registration form.	The system receives and stores data successfully.	Valid
2	Application Interface	Students and Parents try to navigate the user interface.	The interface is easy to navigate without any difficulty.	Valid
3	Data Security	Students and Parents fill in personal data on the form.	Personal data is secured and protected.	Valid
4	Error Management	Students and Parents intentionally fill out forms with email formatting errors.	The system provides clear error messages.	Valid
5	Responsive Performance	Students and Parents access various sections of the application.	The system responds quickly.	Valid

Table 2. Rating scale

Evaluation	Information	Score
SP	Very good	4
P	Good	3
CP	Pretty good	2
T.P	Not good	1

Apart from back box testing, system quality testing was carried out using responses from 400 respondents regarding the criteria for the Registration Process, Friendly User Interface, Maintained Data Security, Well managed Errors, and System Performance. According to their impression of the statement or question, respondents were asked to choose one option on the instrument provided with a Likert scale, as shown in Table 2.

The rating scale used in assessing this application uses a Likert scale with 4 (four) options, namely "Very Good," "Good," "Quite Good," and "Not Good," which is useful for measuring the level of satisfaction and views of users towards the application [38, 39]. In use, respondents are asked to choose one of these four assessment levels based on their perception of the application. The "Very Good" option indicates very high satisfaction and a positive view of the application, while "Good" indicates satisfaction with some positive notes. "Fairly Good" reflects satisfaction in some aspects but also acknowledges room for improvement, whereas "Not Good" reflects dissatisfaction or disappointment.

This scale provides nuance in measuring user views and helps in identifying areas that require improvement or improvement in the development of new student admissions applications. The results of using this Likert scale can provide valuable insights for developers to improve the quality and performance of applications according to feedback from users. The number of respondents was 400 people with data distribution, 62% of the total respondents (n = 250) were male, and 38% (n = 150) are women as seen in Figure 19.

Based on the results of the overall analysis of variables (registration process, application display, data security, error management system, system response) using descriptive analysis shows that around 37.5% or around 150 respondents expressed a very high level of satisfaction with the web-based New Student Registration information system. Additionally, it is around 62.5% or 250 respondents stated that they were satisfied with the system used, and there were no respondents who stated that they were dissatisfied with the system as shown in Figure 20. Through these findings, it can be concluded that users of the new student admissions application are very satisfied with the existing system.

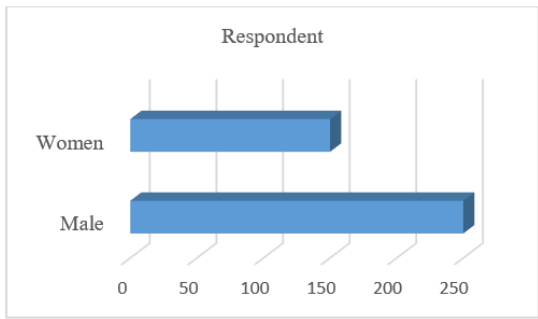

Figure 19. Graph of the number of respondents

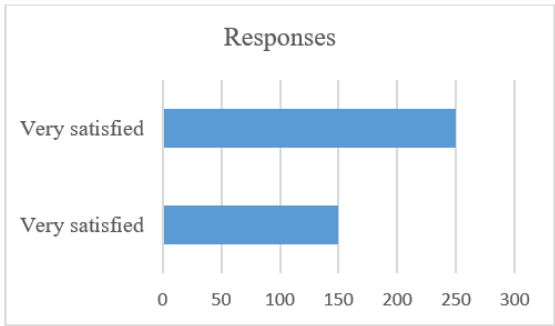

Figure 20. Respondent response graph

Referring to Figure 20, ensure that the application for new student admissions meets the quality requirements in accordance with the standards in the usage model and software product quality model because it has succeeded in achieving an overall excellent quality level. This illustrates dedication in application development that pays attention to important aspects such as reliability, functionality, security, and efficiency.

In this context, this system has proven reliable in carrying out its tasks, reducing the risk of failure and providing confidence to users. Apart from that, users will also get a positive experience when interacting with this application, thanks to an easy-to-use, responsive and intuitive interface. With all these advantages, new student admission application users can enjoy great benefits, not only in increasing the efficiency of the new student admission process, but also in providing a better experience to prospective students and optimizing the recruitment process.

Furthermore, based on the results of the analysis of each variable such as the web-based New Student Registration process, it can be seen that the majority of respondents gave very positive assessments on various aspects of this application. In testing the registration process, 67.7% of respondents stated that this process was very good, while 32.3% said it was good. This shows that most users feel good the registration process went very well or well. These results indicate that the registration process in this system is considered efficient and effective by users.

Furthermore, we also considered the appearance of the application, where the analysis results showed that 70% of respondents (70.3%) felt that the appearance of this application was very good, while 24.3% thought it was good. This reflects that the user interface design has met the user's needs and resulted in a positive user experience.

In terms of data security, the majority of respondents (44.7%) stated that their data was very safe, while 52.7% said it was good. This indicates that the system has succeeded in protecting users' personal data well and giving users a sense of confidence regarding data security, while the system's error management also received a positive assessment, with 57.7% of respondents considering it very good and 41.7% calling it good. These results show that the system is able to resolve errors effectively and provide adequate solutions to users when problems occur.

Finally, in terms of system response, 67% of respondents stated that the system response was good, while 31.7% considered it very good, this illustrates that the system responds well to user actions and provides an overall satisfactory user experience. This is in line with the research results [40, 41] which states that technological advances increase efficiency and save time and influence the way students learn as generation z.

This shows that the registration system new student manages to meet the expectations of most users, both in terms of its functionality and in more general aspects of use. In addition, supported by test results and user opinions, it confirms that this system is effective and reliable in the registration process at Fardillah Moncongloe Vocational School.

5. CONCLUSIONS

Based on the results of the previous analysis and discussion, it appears that this new student admission application has met excellent application development standards based on the user's perspective and the results of black box testing. So, with this information system, it is hoped that all problems faced by the new student admissions executive committee can be resolved properly, as well as making it easier for prospective new students or parents to register for school online wherever they are.

Other positive responses from respondents related to the registration process, application display, data security, system error management, and system response, show that this application has succeeded in providing a satisfying experience to its users, as well as providing great benefits in the efficiency of the registration process and maintaining integrity and security. data, all united in one satisfying package for the user.

Suggestions for further research in the 5.0 era, it is very important to continue to advance and optimize new student admission applications. While the positive results from respondents are a good first step, future research should deepen the analysis of the use of these applications and involve the development of AI (artificial intelligence) to improve their functionality. Consider leveraging the latest technology such as big data analytics to provide deeper insights into student enrollment trends.

In addition, focus attention on a more personalized and immersive user experience by using VR (virtual reality) or AR (augmented reality) methods. Ensuring data security remains a top priority, especially in an era where privacy issues are increasingly important. Finally, it is necessary to continue to monitor the latest technological developments and trends in the world of education to ensure that this application remains relevant and able to meet user needs in the future. With this approach, future research can ensure that new student admission applications can continue to develop and provide a superior experience in the 5.0 era.

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