Design Of a Portal Website for One of The High Schools in Bandung

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Abstract

This study aims to create and construct a web gateway for a secondary school in Bandung. This website is anticipated to augment the engagement of students, parents, and school stakeholders in acquiring and disseminating information about school activities, student accomplishments, and diverse academic and extracurricular initiatives. The study technique encompasses user needs analysis, user interface (UI) design, and the development and execution of the website. The needs analysis approach entails interviews with school authorities, students, and parents to comprehend their expectations and prerequisites for the material that should be accessible on the portal. The outcome of this study is an online gateway that enables visitors to retrieve current information regarding class timetables, school notifications, event schedules, and students' scholastic accomplishments. In addition, the portal offers communication options that facilitate discussions and engagement between the school, students, and parents. This research is anticipated to benefit from enhancing communication and involvement among the school, students, and parents. Moreover, using information technology in education can enhance the efficiency and efficacy of the learning process at a high school in Bandung.

Keywords : *Vue JS Portal Website, High School, CRUD*

INTRODUCTION

Numerous schools are vying to advertise themselves through information media, employing appealing designs and innovative techniques to catch the interest of potential students. Effective presentation of information through well-designed visuals can enhance visual communication between creators and recipients. Hardianti & Riasti, (2013) asserts that the visual components of packaging, including color, form, brand, illustration, typography, and layout, are the primary factors in visual communication.

In the current digital era, there are numerous strategies for advertising schools. In addition to utilizing social media, digital posters, and television media, a frequently employed means for disseminating information about a school's profile is a gateway website. (Christover et al., 2023; Firliana & Stiawan, 2022) Portal websites are frequently utilized in digital marketing initiatives, including online advertisements, email marketing, and social media campaigns.

(Hakiki et al., 2021; Mubarak, 2019) Optimizing the design of a portal website can improve conversion rates and the overall efficacy of digital marketing initiatives. (Arief et al., 2021; Sitorus & Antonieta DC, 2022)

A well-crafted portal website can make a world of difference to the user experience. By improving usability and optimizing the user journey, through strategic item placement, clear messaging, user-friendly navigation, and an intuitive layout, the website can become a powerful tool. (Arfal Razya Suhendra et al., 2022; Song et al., 2019) Many educational institutions still maintain portal websites with overly formal designs, which fail to engage younger individuals. Therefore, it's crucial to have a portal website design that attracts young people and provides them with relevant information about the educational institutions they are considering. (Hidayat et al., 2023; Pranata et al., 2015; Yudianto & Sulistyo, 2022)

Basic Programming Concepts

Programming is the process of giving a computer a set of instructions using a language made up of words or codes to have it perform specific tasks. Bangun & Santoso, (2022) defines web programming as developing web-based programs or apps utilizing specific programming languages to manipulate data and provide the needed information for the website owner.

Portal Website

A Portal Website is a convenient hub that serves as a central point of access and information, gathering content from other sources. It typically provides a diverse range of material, including news, information, services, and other functionalities, all consolidated in one location to cater to the diverse demands of visitors. Abidatul Izzah, (2021) This platform has the capability to combine numerous forms of content and display it in a user-friendly way, allowing anyone to conveniently access and consume a range of services and information without the need to hunt for separate sources.

Consequently, a revamped portal website was created for a high school in Bandung, aiming to enhance the existing portal by implementing a visually appealing design and streamlining the dissemination of school-related information. This study aims to create a web portal that will enhance the promotional activities of a high school in Bandung, allowing it to effectively compete with other schools in drawing prospective students.

METHOD

Methodology for Conducting Research

The research methodology employed is descriptive Research. Descriptive Research, as defined by Sugiyono (2019: 206), aims to identify the existence of independent variables, whether a single variable or several variables, without engaging in comparisons or establishing relationships with other variables.

The data gathering methods employed to acquire information and data encompass:

Observation

This method is commonly employed for gathering data. Observation, a direct and hands-on approach, entails the act of directly observing a subject by physically visiting the location and gathering data firsthand.

Interviews

Interviews are a method of gathering data that entails asking relevant sources within a high school in Bandung, particularly the IT team, a series of inquiries to comprehend the difficulties or issues encountered in ongoing IT initiatives at the high school.

Analysis of Literary Works

This approach entails collecting theories and materials about website design and information management. Data gathering is performed by conducting comprehensive literature reviews.

Methodology for System Development

Prototyping is creating a preliminary version or model of a product or system to test and evaluate its design, functionality, and feasibility.

Prototyping is a collaborative technique that employs a fast and repetitive process for designing, enabling prompt evaluation by the

client. Throughout the process of developing the prototype system, the developer and the client maintain a constant and ongoing interaction, each contributing their unique insights and expertise.

Stages of Prototyping

Client Consultation

Assess the client's preferences and requirements to collect information regarding the concerns that must be resolved. This stage aims to identify solutions for the succeeding phases of development.

Construction and Enhancement

Engage in designing and implementing assessments in collaboration with the client, utilizing UML (Unified et al.) to define the necessary system and facilitate its development precisely.

Pilot Testing

Conduct a test on the prototype that has been built and assess it with the client to ascertain whether it fulfills the desired specifications.

RESULTS AND DISCUSSION

**Analysis and Design of Systems**

Evaluating a continuous system is vital to ascertain whether it aligns with its significant goals. System analysis is crucial since it enables the identification of an application's advantages and disadvantages. The application is an official website showcasing comprehensive information about the institution, utilizing a content management system platform known as WordPress.

a) Proposed System Upgrade

The author proposes a system upgrade that brings significant benefits by developing an alternate landing page website. Here is a summary of the system that is being suggested, highlighting the value it will bring to our operations.

1. The website has a minimalist aesthetic and a single page.

2. Backend administration page for storing student, teacher, and room data.

i. Use case diagrams
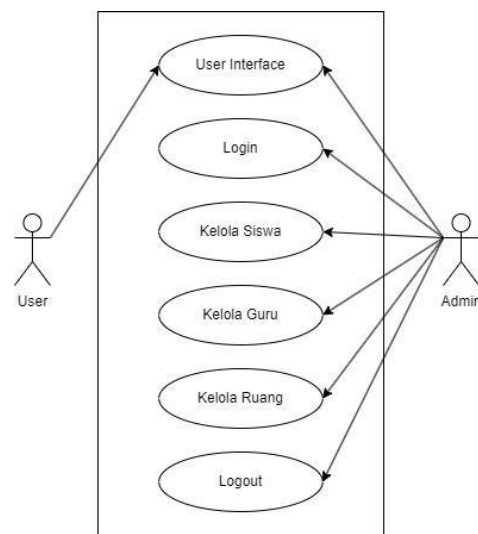
ii. Scenario Table

Use Case 2		
Nama Use Case	Login Admin	
Deskripsi	Autentikasi admin	
Aktor	Admin	
Pre-Condition	Halaman Login	
Post-Condition	*Dashboard* Admin	
Basic Flow		
Aktor		**Sistem**
1. Memuat halaman login		
2. Mengisi username dan password		
3. Login		
		4. Autentikasi data untuk login
5. Menuju halaman *dashboard* admin		a. Jika benar, sistem memberi role isAuthenticated dan isAdmin lalu masuk ke *dashboard* admin
		b. Jika salah, kembali ke no. 1

iii. Activity diagrams

Use Case 2	
Nama Use Case	Login Admin
Deskripsi	Autentikasi admin
Aktor	Admin
Pre-Condition	Halaman Login
Post-Condition	*Dashboard* Admin
Basic Flow	

| Aktor	Sistem
1. Memuat halaman login	
2. Mengisi username dan password	
3. Login	
	4. Autentikasi data untuk login
5. Menuju halaman *dashboard* admin	a. Jika benar, sistem memberi role isAuthenticated dan isAdmin lalu masuk ke *dashboard* admin
	b. Jika salah, kembali ke no. 1

b) System planning

i. Database Design
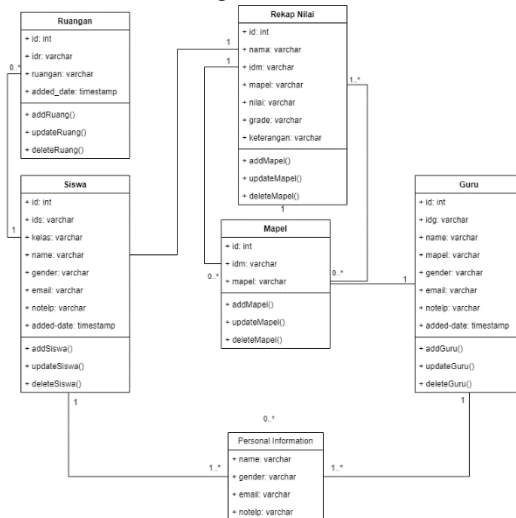
rekap_nilai			
No	**Nama**	**Tipe**	**Keterangan**
1	id	int	Primary Key
2	name	varchar	Index Key
3	idm	varchar	Index Key
4	mapel	varchar	Index Key
5	nilai	varchar	
6	grade	varchar	
7	added_date	varchar	

ii. Perancangan Interface
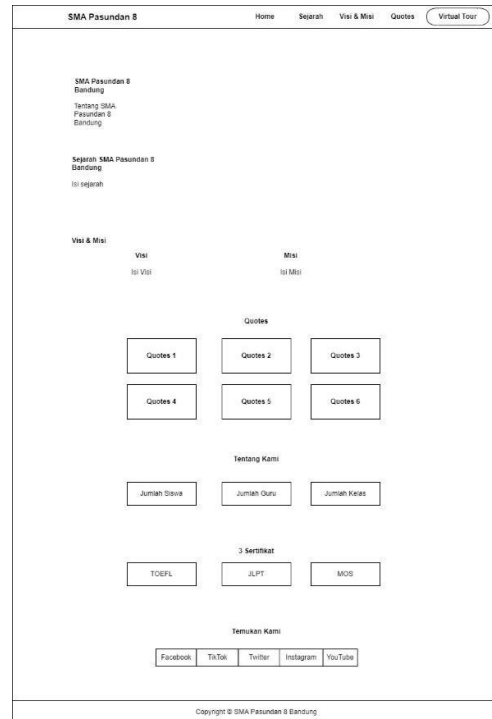
Implementation of the system

The system implementation step involves describing an application system to ensure its readiness for operation.

Login Page Display

Home Page/Dashboard Display

Student Data Page Display

CONCLUSION

After conducting an analysis, design, and testing for the portal website of a high school in Bandung, the author concludes that displaying minimal information is more effective for conveying information. In addition to presenting school information, the online portal can serve as a repository for entity data about one of the high schools in Bandung. This program is specifically created to enhance the accessibility of existing information for website visitors.

To achieve superior and optimal outcomes, the author recommends enhancing and advancing the application based on numerous of their conclusions. Here are a few recommendations proposed by the author to enhance this application: Creating a Student Login system to enable students to retrieve the lesson schedule. Expand the available information by including more details on extracurriculars and activities. In order to construct this application, it is advisable to have a deeper understanding of JavaScript, PHP, HTML, Database (MYSQL), and the Vue JS Framework.

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