



Website Design at SMK Gema Bangsa

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Abstract

Along with the rapid development of technology, it has an influence on everyday life. Technology was created to facilitate human work. Every year, all educational institutions process school information data. This process is useful for providing information to students and guardians about school activities. Thus, schools need to continue to innovate in improving information services and more comprehensive socialization with student guardians in particular and the community in general. One of them is by utilizing technology and internet media. At SMK Gema Bangsa until now provides school information media that is still conventional using pamphlet media, the delivery of this information is still passive by installing the information media in front of the school gate, and on the side of the road in the school environment. Therefore, to make it easier for schools to provide information to the community, SMK Gema Bangsa utilizes Information Technology, so that in this study a Website will be developed at SMK Gema Bangsa as an information media and can also be used as information socialization.

Keywords : Website Design, Website, School Website

Introduction

Every school plays a crucial part in supplying the community with information service facilities. Mail information, or making boards, banners, and pamphlets, are just a few of the school information service facilities that are still in use today [1]. It is still customary for parents and kids to remain in the dark when it comes to media reports on schools because information is typically only shared within the context of the classroom.

SMK Gema Bangsa is a formal educational institution that manages instruction and specializes in multimedia. This institution is situated in Tenjolaya District, Bogor Regency's Cibitung Tengah Village. As the only school in Tenjolaya District with a multimedia department, SMK Gema Bangsa is still not well recognized in the neighborhood because information about the school is still disseminated through traditional channels. SMK Gema Bangsa continues to passively use printed media, such as leaflets, flyers, and banners, for information dissemination. SMK Gema Bangsa must locate and install information media in key locations, such as in front of the school gate, on the side of the road, and others, so of course this is a problem [2].

SMK Gema Bangsa needs to adapt information technology so that schools can more easily produce media and disseminate information to the community. As a result of this research, a website will be built at SMK Gema Bangsa as an information media and can also be utilized as information socializing.

The following problem formulation is derived from this backdrop of how to design and construct a website for SMK Gema Bangsa to serve as an information medium. And depending on how the issue has been formulated, the goal is to design and develop a website for SMK Gema Bangsa in order to make it easier to manage information media and information socialization.

Methodology

This study used a waterfall approach as its system development methodology. The waterfall model has five stages: modeling, construction, deployment, and communication. The stages of the waterfall method are as follows:



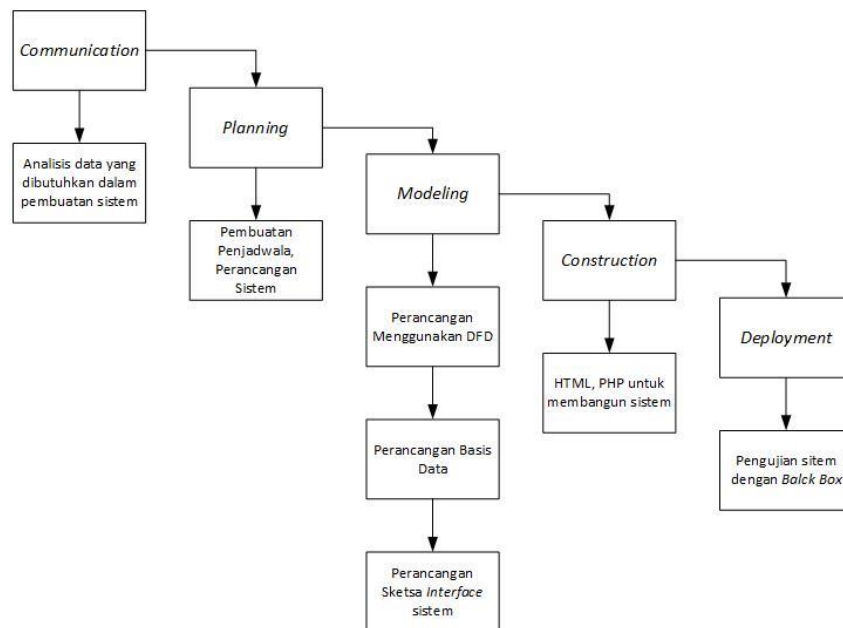


Figure 1 System Development Method

First Communication

The objectives of this stage, which are then specifically defined and serve as system requirements, are to communicate with and manage research licenses. These objectives are determined by the outcomes of user consultations.

Second Planning

Requirements like creating, scheduling, planning, and building the system are allocated at the system design stage.

Third Modeling

The software design is now implemented as a collection of programs or program components. Verifying that each item adheres to its specifications is part of testing.

Fourth Construction

This stage tries to implement a design or design that has already been developed into a format that a machine can comprehend.

Fifth Deployment

The system is installed and used at this point. Additionally, it corrects flaws that were missed during the implementation phase.

Result

First Analysis

The principal and staff interviews provide insight into what will be communicated to pupils about SMK Gema Bangsa School.

Process Analysis of the current system

This business process diagram functions normally for the printed and distributed distribution of information or an announcement to students or parents of pupils. as seen in Figure 1..

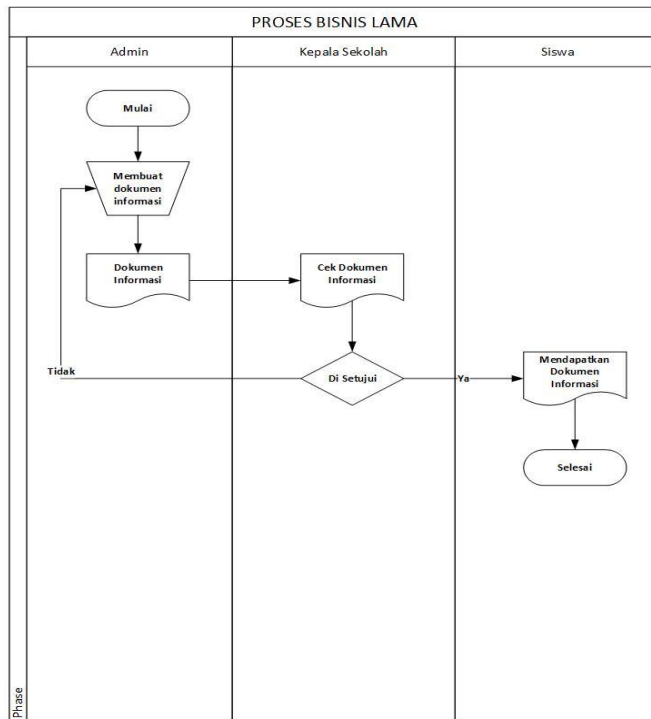


Figure 1 Process Analysis of the current system

Process Diagram of the New Business System

As shown in Figure 2, the developed system connects users with SMK Gema Bangsa School employees and is currently in use for computerized information transmission.

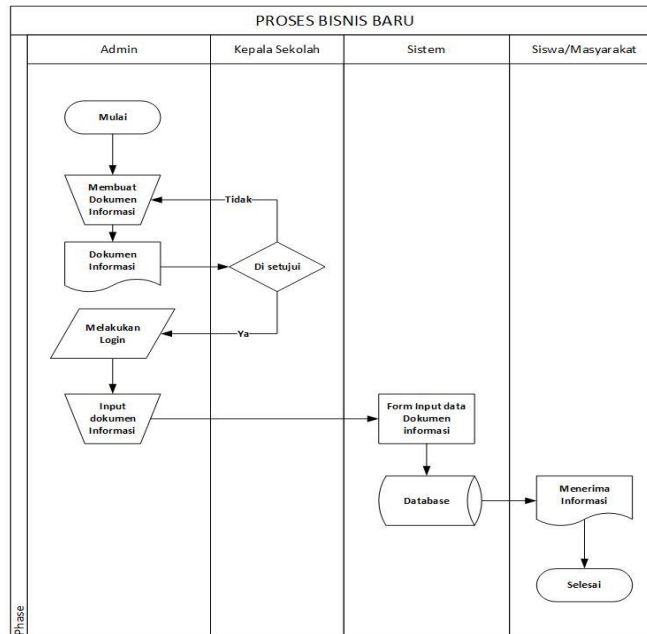


Figure 2 New Business System Process

Data Flow Diagram (DFD)

Data flow diagram (DFD) level 0 illustrates the overall website business process. The actions of the system's actors, including input and output, are described in this process. is seen in Figure 3.



Gambar 3 Diagram Konteks

Second Design

A web interface between the system and the user is designed (interface design) in this case study, and the design process is carried out to produce a rough sketch of the data structure design (data design), which is applied using an entity relationship diagram (ERD).

Entity Relationship Diagram (ERD)

A succession of entities, tables, and attributes that will be implemented into a database are described in an entity relationship diagram (ERD). Figure 4 can be used to present this.

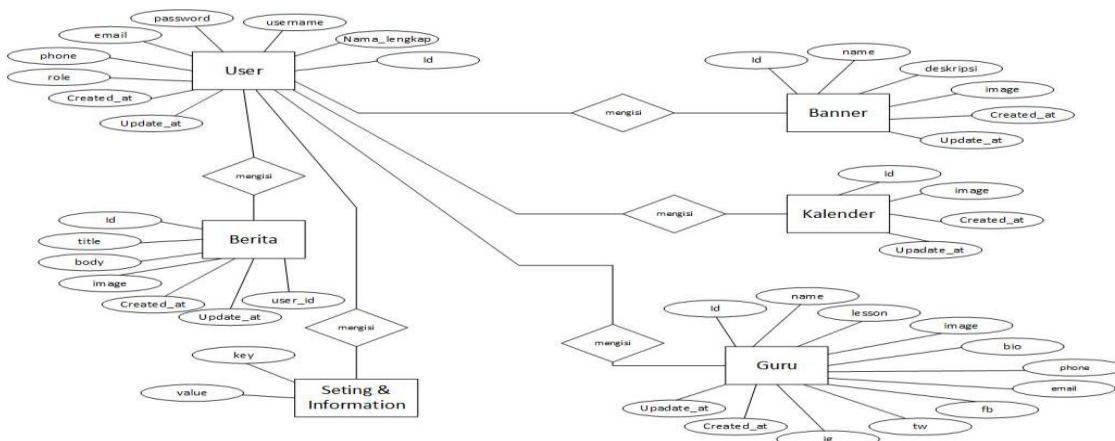


Figure 4 Entity Relationship Diagram (ERD)

Database Design

Following the completion of the ERD design, the database design process is discussed; this activity is a data transaction on the website.

First User Table

All of the system's data is managed and stored in the user table. is shown in Table 1.

Table 1 User Table

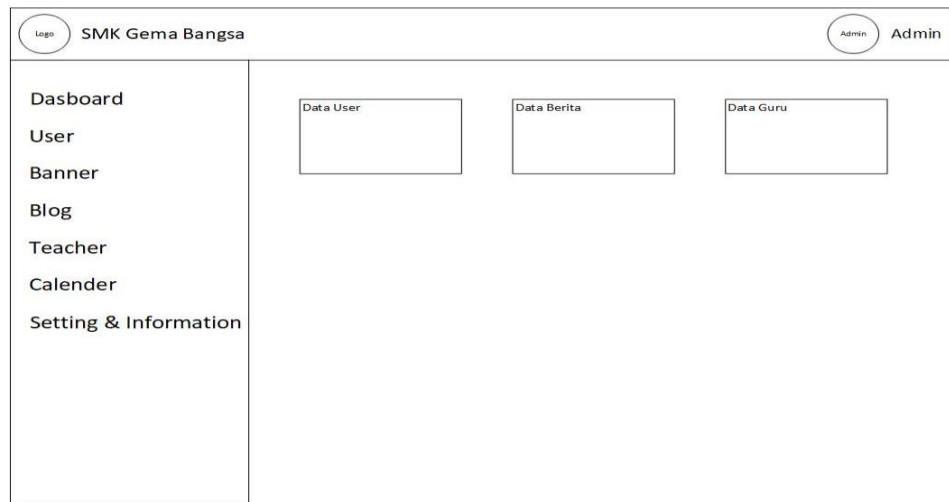
No.	Attribute Name	Data Type	Long	Description
1.	Id	int	3	Primary key
2.	Name	Varchar	25	-
3.	Username	Varchar	15	-
4.	Password	Varchar	15	-
5.	Email	Varchar	25	-
6.	Phone	Varchar	13	-

Website Display Design

Interface design is the process of creating a rough draft of an interface that will be shown and implemented as web pages to facilitate user interaction across the entire website. There are various designed user interface sketches, including:

First. Sketch of User Interface of Website Main Page

Perancangan sketsa user interface untuk halaman utama website dapat ditunjukkan pada Gambar 5.



Gambar 5 Halaman Utama Website

Third Implementation

By implementing, compiling, or writing HTML and PHP source code, program language design is completed to create a school website information system.

Login Page

The login page is a menu that allows you to access the admin area and provides a specific tabular information. You can access the login page at Gambar 6.

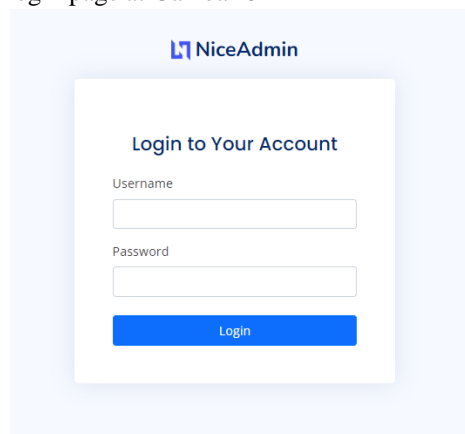


Figure 6 Login page

Dashboard Page

The dashboard page is the system's initial display and offers menu options. Figure 7 displays the dashboard screen after that.

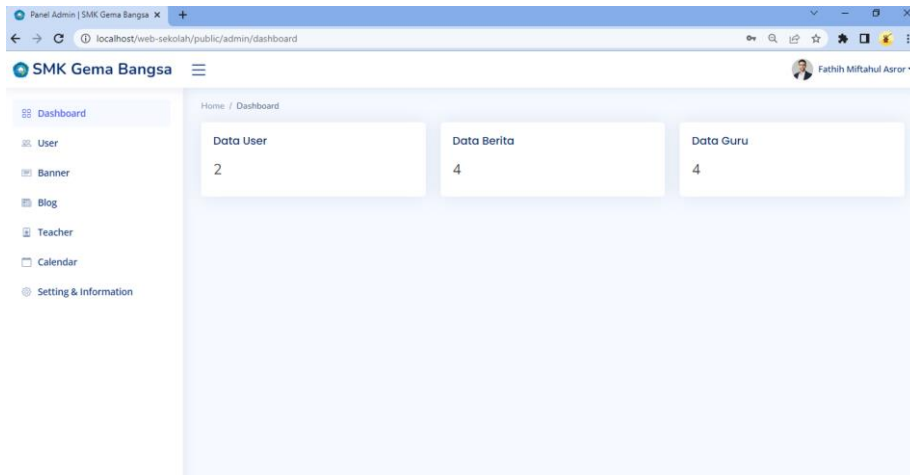


Figure 7 Dashboard page

Fourth Testing

At SMK Gema Bangsa, the school website design system was put to the test after the prior step of designing the program language had been completed. Black box and UAT (User Acceptance Test) testing were used in this work to evaluate systems with known input and output.

Black Box Testing

With this type of testing, the client or user is involved solely in running tests and executing units or modules, and the results are then compared to the expected procedure.

First Testing the Login Page

The user login module is tested to see if it has operated correctly and in accordance with the system design flow shown in Table 2.

Table 2 Login Testing Table

No.	Input Data	Expected Output	Observation Results	Conclusion
1.	Username : Admin Password : *****	The system can validate data for users who are not registered in the design and then cannot log in to the system.	Stay on the login page and cannot login to the system	Valid
	(Figure 4.32)	The system can validate the data of registered users to gain access rights to the main page of the system.	The user will enter the system page. (Figure 4.33)	Valid

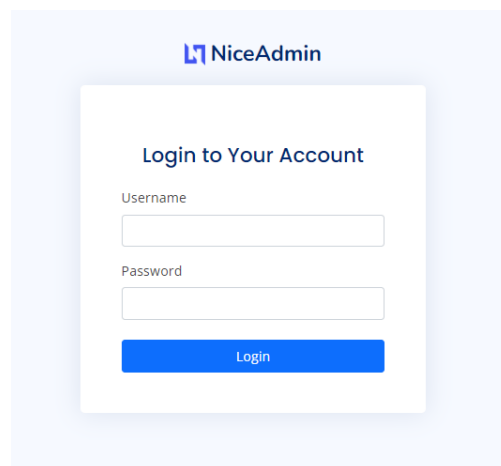


Figure 8 Login page

UAT Testing (User Acceptance Test)

Users are given the chance to use the system during user acceptance testing, and they are encouraged to respond to questions on a questionnaire with the evaluation criteria listed in table 3..
First User Assessment Weight

Table 3 User Assessment Weight

Value Weight	Description
1	Strongly disagree
2	Disagree
3	Moderately agree
4	Agree
5	Strongly agree

Second User Acceptance Testing Questionnaire

questions used in the user acceptance testing questionnaire, as follows;

Table 4 User Acceptance Testing Questionnaire Questions

No	Question
1.	Is the website of SMK Gema Bangsa easy to operate?
2.	Does the website of SMK Gema Bangsa have an attractive and attractive appearance?
3.	Does the website provide accurate information?
4.	Does the website provide detailed information?
5.	Do users find it easy because of the website to obtain school information?
6.	Do users feel safe accessing the SMK Gema Bangsa website?

Conclusion

Several conclusions can be drawn from the study done on the website design at SMK Gema Bangsa, including the following: 1) This website can help students get information about the school more easily and support staff productivity in managing information data because website data processing is computerized. 2) With the help of this website, schools are better able to provide students and student guardians in particular, as well as the general public, with information media and opportunities for school socialization.

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