CONTENT MANAGEMENT SYSTEM FOR SCHOOL INFORMATION WEBSITE

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Abstract

The website is one of the digital information media used by schools to display their profiles so that they can be known by the public. Some SMP Negeri in Kota Samarinda do not yet have a website as a media or school information center. This could be due to difficulties in creating and on the website of each school. From these problems, in this study researchers innovated to create a Content Management System (CMS) for school websites, especially at SMP Negeri 29 Samarinda. Laravel PHP framework is used with the system development method is the Waterfall method.

1. Introduction

In the current digital era, the development of information technology is accelerating. This development also affects the speed and convenience of the information publication media sector. Some activities that are very costly can now be carried out at a much lower cost and in a shorter time. So that with this development it can make it easier for people to get access to information, as well as disappearing distance and time limits to obtain information. The development of information technology also increases developments in the quality of information services such as school websites. The school website will support school data administration. The website can also be used as a medium of information for students and the public to find information about schools [1]. Based on Data Pokok Pendidikan (Dapodik) Kota Samarinda, scattered in 10 districts of Kota Samarinda have State and Private Junior High Schools (SMP) and Madrasah Tsanawiyah (MTs). The number of schools from State SMP / MTs is 49 and Private SMP / MTs is 43, so that the total in Samarinda City has 92 State and private SMP / MTs [2]. The author has done an internet search of 49 State Junior High Schools in Samarinda City to collect data on schools that already have a website or do not have a website. From this research, it shows that out of 49 State Junior High Schools in Samarinda City, there are 4 schools that have websites with the sch.id domain, 23 schools have blogs (schools that use blogspot or wordpress) and 20 schools do not have websites or blogs. From this data, it shows that SMP Negeri in Kota Samarinda does not have a website as a media or school information center. This can be caused by difficulties in creating and managing a website at each school. The problems faced by the School in building the School website include the absence of competent Human Resources (HR) to create and manage the School website, high costs and the manufacturing process requires an understanding of a complex programming language. From these problems, the researcher proposes to make a Content Management System (CMS) for the school website [3]. This CMS will be designed to make it easier for schools to create school websites without the need for mastery of complex web programming languages [4] [5]. So that the CMS website can help schools in publishing website-based school information [6].

2. Method

The research object was the State Junior High School 29 Samarinda Web which is located in Sempaja Utara, East Kalimantan. The system development method in this study uses the waterfall method, the method is chosen because it adapts to the needs of the system to be built, these are the steps in the waterfall method used in this study [7][8]:

1. Planning

The first step in the waterfall method, in this step you will find out whether building this system is a suitable solution, and can meet the desired needs.

2. Requirement Analysis

This step is taken to find new needs that cannot be overcome by the existing system, and from these needs determine what functionality must be in the system to be built.

3. System Design

In this step, to describe the results of the needs analysis into a diagram (CD, DFD, Flowchart) which helps in understanding how functionality works in the system to be built.

4. Implementation

The implementation step is carried out by starting to write a program in accordance with the results of the system design, writing the program is done in accordance with the program language of the platform that will be used by the system [9].

5. Application

This stage runs after the information system built has been implemented and can be used. In this stage, monitoring of the quality of the system that has been made is also carried out.

Data collection methods include observation, interviews, and literature studies. Observations were made by coming to SMP Negeri 29 Samarinda and seeing first-hand the processes that were happening to the object to be studied. Observations were made on Administrative Staff who were carrying out these activities. Interviews were conducted with interviewing parties involved in the news publication process at SMP Negeri 29 Samarinda. Furthermore, literature studies are obtained from books, journals, and internet articles. Analytical tools for documenting the system being built are context diagrams, data flow diagrams, entity relations diagrams, and hierarchy of input process output. Furthermore, the testing method used is the blackbox method where testing is done by trying all the features or activities from opening a website, logging in, inputting news, editing news, and deleting news [10].

3. Results and Discussion

3.1. Overview of the Current System

Based on the results of observations and documentation, it is known that currently SMP Negeri 29 Samarinda is using the Whatsapp Messenger application to publish information on lesson schedules, academic information, news, and photos of school activities. Several obstacles were found when searching for previous documentation that Whatsapp shared could not be accessed..

3.2. System Development Using Waterfall

The following are the stages of development carried out using the waterfall method in system design as follows:

3.2.1. Planning

In the planning stage, a bid was made for the procurement of a website so that the publication of information related to SMP Negeri 29 Samarinda was carried out. Upon the proposal offered, the school agreed to create a school website.

3.2.2. Requirement Analysis

After carrying out the planning phase, the next stage is to carry out the needs analysis phase where at this stage the focus is on finding information that is considered important. Several data collection methods are carried out at this stage, including:

1. Observation, this process is carried out by coming to the location and observing any processes or activities that occur in the process of publishing school information. The information obtained is that the news documents prepared by the Administration are Word, Excel or PDF files and the data is stored and shared via Whatsapp.
2. Interview, at this stage an interview is conducted with the parties concerned in the process of publishing school information. It is known that the school does not yet have a school website and information about the school is shared through social media.

3.2.3. Design

In this phase, the writer conducts the design in making the required system. In this phase using a Flow Chart or Data Flow Diagram (DFD) and the required database.

1. Context Diagram

Fig. 1: Context Diagram

2. Data Flow Diagram

Fig. 2: Data Flow Diagram

3. Database

a Entity Relationship Diagram (ERD)

ERD serves to describe the relationship between data in the table on the system to be built, the ERD of the system to be built is as follows.

Fig. 3: ERD

b Database Dictionary

Figure 3 is made into a table like the following:

Table 1: User

No	Nama Field	Tipe Data (Ukuran)	Jens Key
1	id	int(10)	Primary Key
2	name	varchar(255)	
3	username	varchar(255)	Foreign Key
4	email	varchar(255)	Foreign Key
5	role	varchar(255)	
6	password	varchar(255)	
7	remember_token	varchar(100)	
8	created_at	timestamp	

Table 2: Kategori

No	Nama Field	Tipe Data (Ukuran)	Jens Key
1	id	int(10)	<i>Primary Key</i>
2	type	varchar(255)	
3	name	varchar(255)	
4	slug	varchar(255)	
5	created_at	timestamp	
6	updated_at	timestamp	

Table 3: Berita

No	Nama Field	Tipe Data (Ukuran)	Jens Key
1	id	int(11)	Primary Key
2	user_id	int(11)	Foreign Key
3	category_id	int(11)	Foreign Key
4	title	varchar(255)	
5	slug	varchar(255)	
6	tags	varchar(255)	
7	content	longtext	
8	type	varchar(255)	
9	status	smallint(6)	
10	read	int(11)	
11	published_at	datetime	
12	created_at	timestamp	
13	updated_at	timestamp	

Table 4: Gambar

No	Field Name	Data types (Ukuran)	Key Types
1	<i>id</i>	<i>int(11)</i>	<i>Primary Key</i>
2	<i>type</i>	<i>varchar(50)</i>	
3	<i>caption</i>	<i>varchar(255)</i>	
4	<i>slug</i>	<i>varchar(100)</i>	
5	<i>link</i>	<i>varchar(255)</i>	
6	<i>tags</i>	<i>varchar(255)</i>	
7	<i>description</i>	<i>text</i>	
8	<i>read</i>	<i>int(11)</i>	
9	<i>featured</i>	<i>tinyint(4)</i>	
10	<i>status</i>	<i>tinyint(4)</i>	
11	<i>created_at</i>	<i>datetime</i>	
12	<i>updated_at</i>	<i>datetime</i>	

4. Hierarchy Input Process Output

The input process output hierarchy is a description of how the input process and output hierarchy in the information system will be built.

Fig. 3: Hierarchy Input Process Output

3.2.4. Implementation

1. The main page display of the website

Fig. 4: The main page display of the website

2. News View

Fig. 5: News View

3. School Profile View

Fig. 6: School Profile View

4. Brief History View

Fig. 7: Brief History Display

5. Admin Page View

Fig. 8: Admin Page View

6. Manage Menu View

Fig. 9: Manage Menu View

7. News Manage View

Fig. 10: News Manage View

8. News Add View

Fig. 11: News Add View

4. Conclusion

In this study, it is known that the content management system can facilitate schools in distributing school information in the form of websites without having to build programs from scratch. Making it easier for users, even beginners, to manage school information.

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