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Website Based Cibendung Village Information System Design

Evan Triyadi[1], Sigit Sugiyanto[2]
[1,2]Department of Informatics Engineering, Universitas Muhammadiyah Purwokerto, Indonesia, 53182

sigitsugiyanto@ump.ac.id

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Abstract

The design of the Cibendung Village information system aims to manage, access and record Cibendung Village so that information about Cibendung Village so that the information presented is important, up-to-date, interesting information and has become a lot of public attention to be more open. Therefore, the Cibendung Village Website has information features about media and communication about Cibendung Village. This feature is to get a lot of information to people who are more open than other social media such as Facebook, Twitter, Instagram and others and easy access to the website. Therefore, a web-based Cibendung Village Website was created using the waterfall method. This waterfall model provides sequential software starting from data analysis, design, coding, and testing implementation. After going through these stages, A Website-based Cibendung Village website was created to retrieve data, manage the website and access the website online to facilitate website access and get related information about Cibendung Village.

Keywords: Website, Waterfall, Back End, Cibendung Village

Abstrak

Perancangan sistem informasi Desa Cibendung bertujuan untuk mengelola, mengakses dan mendata Desa Cibendung, sehingga informasi mengenai Desa Cibendung agar informasi yang disajikan merupakan informasi yang penting, terkini, menarik dan banyak menjadi perhatian masyarakat menjadi lebih terbuka. Oleh karena itu, Website Desa Cibendung memiliki fitur informasi tentang media dan komunikasi tentang Desa Cibendung. Fitur ini untuk mendapatkan banyak informasi kepada masyarakat yang lebih terbuka dibandingkan dengan media sosial lainnya seperti Facebook, Twitter, Instagram dan lainnya serta kemudahan akses ke website. Oleh karena itu, dibuatlah Website Desa Cibendung berbasis web dengan menggunakan metode waterfall. Model waterfall ini menyediakan perangkat lunak yang berurutan mulai dari analisis data, desain, pengkodean, pengujian dan implementasi. Setelah melalui tahapan-tahapan tersebut, maka terciptalah sebuah website Desa Cibendung berbasis web untuk mengambil data, mengelola website dan mengakses website secara online untuk mempermudah akses website dan mendapatkan informasi terkait Desa Cibendung.

Kata-kata kunci: *Website, Waterfall, Back End, Desa Cibendung*

1. Introduction

The development of information technology is increasingly rapid. Therefore, more and more new ideas are emerging in the world of information technology. Coupled with the availability of communication devices such as Wi-Fi, gadgets, and cellular phones based on internet services and the mushrooming of social media sites such as Facebook, Twitter, Instagram, and WhatsApp [1]. Policy implementation supports the government's track record in absorbing the aspirations of the wider community through effective social communication media. The purpose of the media is to convey the message from the communicator to the imaginary. These media are important for the development of information in the community, and the speed of information in the field of websites among Indonesian people today will make the delivery of this information more easily accepted by the public. One of them is information systems. An information system is a device consisting of interconnected components that collect, process, store, and disseminate information to support decision-making and monitoring in an organization. Information systems aim to generate information through important data and process data into useful forms for users [2].

With the development of information systems, they are now very fast and rapid to help ease of work. Monitoring is needed to make a website a medium for presenting information. Monitoring aims to determine whether a system can display data accurately, especially the Village Web Site [3]. Cibendung Village is one of the villages in Banjarharjo sub-district, Brebes Regency. Introduction of Cibendung Village information system Currently the manual system is still used, so the information system still tends to use social media information systems. To improve the information system further, Cibendung Village needs an information system website to introduce Cibendung Village to the wider community easily.

With the background above, we can formulate the question of how to build a "Website-Based Cibendung Village Information System Design". The purpose of this implementation is to make applications/websites in Cibendung Village that are still manual become computerized to make it easier for the Village or the community who want to find information about the Village.

2. Method

This study uses the waterfall method, as shown in **Figure 1.**

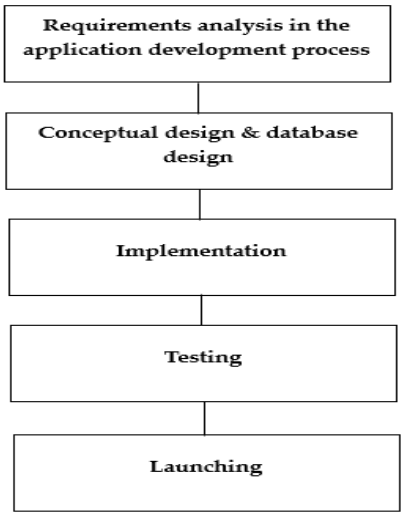

Figure 1. App Design **[4]**

3. Results and Discussion

3.1 Needs Analysis

In developing applications, it requires some analysis. The needs that will later be used for application development. Needs analysis is divided into several points, namely.

a. Data Requirements

1. Observation: The data obtained came from observations of Cibendung Village's people searching for news about Cibendung Village.
2. Interview: The data collection then interviewed one of the village officials in Cibendung Village.

b. Tool Requirements

1. Hardware

   Hardware used in the Cibendung Village application development process, such as One Laptop unit with specifications Processor Intel(R) Core (TR) i5-4210 CPU @ 1.7 CPU @ 1.00GHz 1.19 GHz, and 4 GB RAM.

2. Software

   Visual Studio Code is the application creation code editor **[5]**, XAMPP is an application access server **[6]**, and MySQL is an application database **[7]**, Web Browser Google Chrome **[8]** and Ms. Visio as a UML (Unified Modeling Language) design **[9]**.

3.2 Design

The designs used include Use Cases and Activity Diagrams as application workflows **[10]**. For the creation itself, use Ms.Visio because it is easy to use, and there is no limit to the diagrams used. The designs used include Use Cases and Activity Diagrams as application workflows **[11]**. For the creation itself, use Ms.Visio because it is easy to use and there is no limit to the diagrams used.

a. Desain Use Case Diagram

The Use Case Diagram in the image below explains that the Admin is tasked with managing all the data on the website; while visitors can only see the website, the display of the Use Case Diagram can be seen in **Figure 2.**

Figure 2. Use Case Diagram

b. Desain Activity Diagram

Figure 3 is an overview of the activities carried out by the admin to log in to the Ciebndung Village profile website.

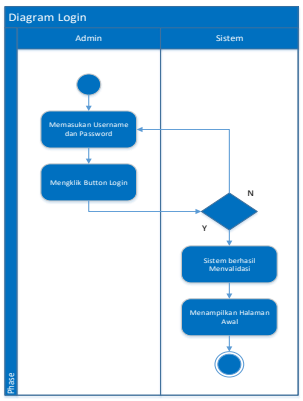

Figure 3. Activity Diagram Log in

Figure 4 is an overview of the activities carried out by the admin for input to add news on the Cibendung Village profile website.

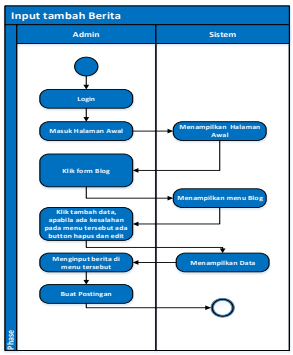

Figure 4. Activity News diagram

Figure 5 is an overview of the activities carried out by the admin to add users to the Cibendung Village profile website.

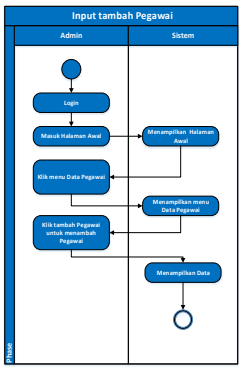

Figure 5. Activity Diagram Pegawai

c. Database Design

At the database design stage, a design table is made, which includes a user table, an employee table, a table about the village, and a news table **[12]**. **Figure 6** presents the relationship database.

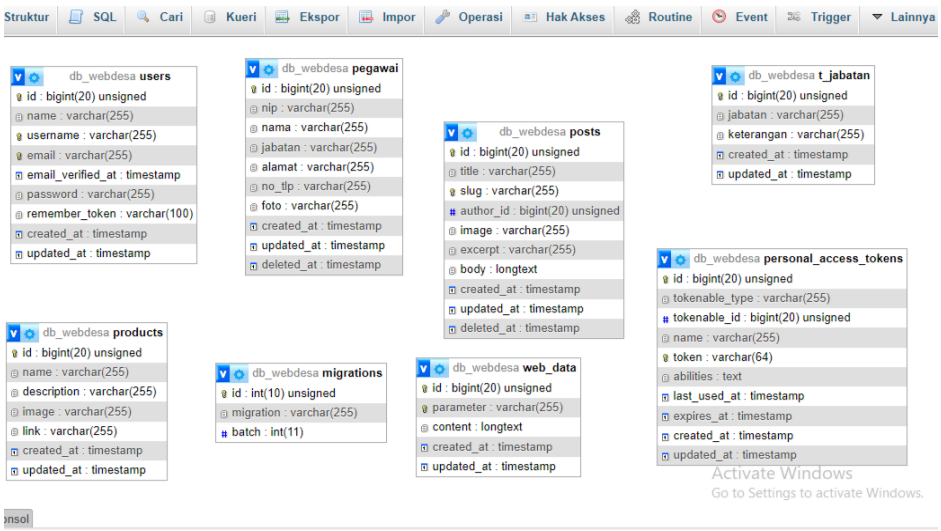

Figure 6. Table Relationships Database

d. Design Mockup

Figure 7 is an initial look at the login design.

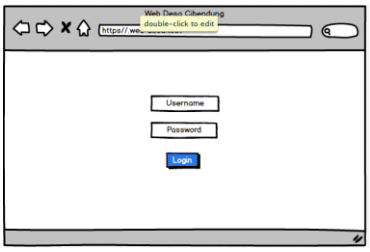

Figure 7. Page Design Log In

Figure 8 shows the initial design of the Cibendung Village website.

Figure 8. Page Design Home

Figure 9 shows the design of the news section of the Cibendung Village website.

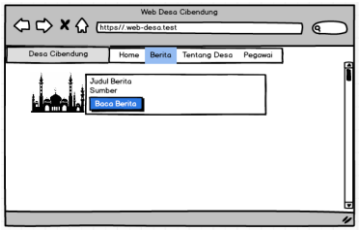

Figure 9. News Page Design

Figure 10 shows the design display of the employee section of the Cibendung Village website.

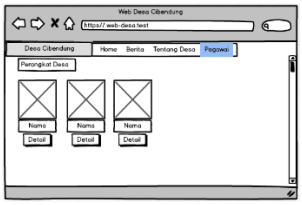

Figure 10. Employee Page Design

3.3 Encoding

Coding is the result of coding on a web page with a display that has been designed according to the initial design **[13]**. Login page to access the next page by entering a username and password so that an application's data is safe and only certain users can access it **[14] [15]**. The login page for admins can be seen in **Figure 11.**

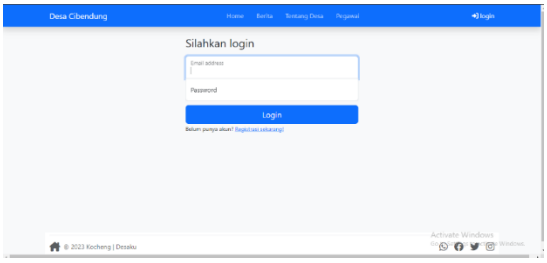

Figure 11. Page Views Log In

In **Figure 12**, The dashboard page is the main page that will appear when the admin successfully logs in by entering the correct username and password.

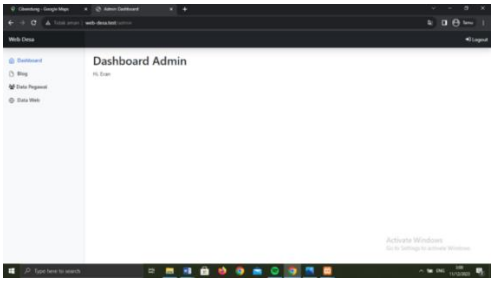

Figure 12. Page Views Dashboard

In **Figure 13**, the home page is the main page that will appear for users when they visit the Cibendung Village profile website. This page has several menus that can be accessed, including the News menu, the About Village menu, and the Contact menu.

Figure 13. Page Views Home

The News page is the main page that will appear for users to see the news. The news page view can be dimmed in **Figure 14.**

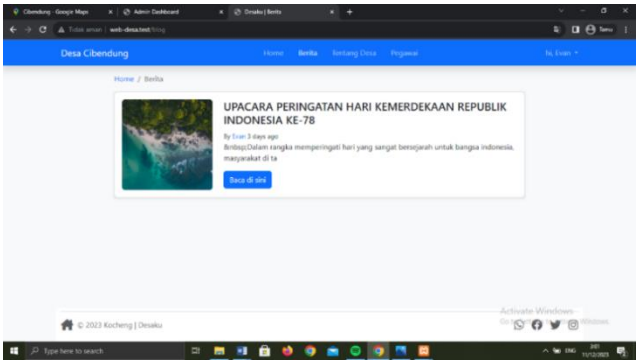

Figure 14. News Page Views

The About Village page is the main page that will appear for users to see the vision, mission, and about Cibendung Village. The page view about the village can be edited in **Figure 15.**

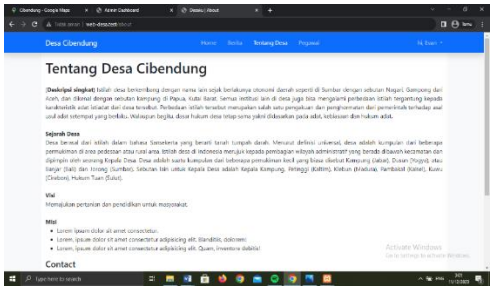

Figure 15. Page View About the Village

In **Figure 16,** The employee list page is a page that provides information on the name of the senior, a photo of the employee, and the duties of the respective salty employee.

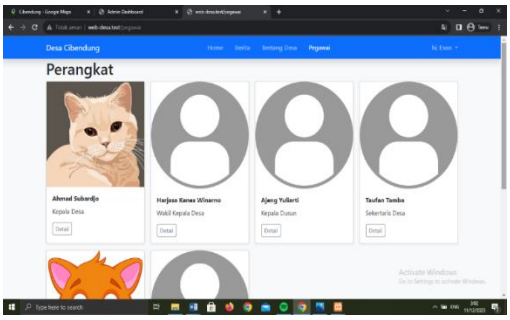

Figure 16. Employee Page View

3.4 Testing

The system testing and analysis process stage helps determine the conformity and shortcomings of the system to the existing design. **Table 1** is testing process.

Table 1. Testing Process

No	Testing Unit	Input Case	Excpeted Result	Actual Result
1	*Login*	Admin Compliant	*Login Succeed*	Login successfully
2	News Input	Corresponding data	Revamped successfully	Revamped successfully
3	See about the village	Clicking the menu	Revamped successfully	Revamped successfully
4	Employee Data Input	Corresponding data	Revamped successfully	Revamped successfully
5	View news menu	Clicking the menu	Revamped successfully	Revamped successfully
6	View employee data	Clicking the menu	Revamped successfully	Revamped successfully
7	Edit as Admin	Corresponding data	Revamped successfully	Revamped successfully

3.5 Implementation

Currently, the Cibendung Village website has not been implemented for users. The implementation stage itself is not direct; it may be explained to the village apparatus and then conveyed to the community. The system will be used after the community understands how to use it.

4. Conclusion

Based on the description above, it can be concluded that the design of the Cibendung Village web-based application has been successfully built and can be accessed at any time without having to come to the village hall first.

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