



Website-Based Baiturrahman Mosque Management Information System Case Study Of Baiturrahman Mosque Pandu Raya

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Abstract

The Baiturrahman Mosque is a place for Muslims to gather to perform prayers or other Islamic activities based on the Shari'a and adab in it. These activities cannot be separated from the existence of administrators from each mosque, tasked with conveying information about activities at the mosque. The purpose of this research is to design and build a website-based management information system for the Baiturrahman mosque. The waterfall model is a system development model that is systematic and sequential in building software. Building a website-based mosque management information system. From the Baiturrahman mosque information system, there are several menus that local worshipers can use, such as qurban savings, information about mosque activities and finances.

Keywords : Information Systems, website, Mosque management, savings, Waterfall method.

Introduction

Muslims congregate at the mosque to perform prayers and other sharia- and adab-based Islamic rituals. One of the mosques in the Bogor region, namely on Jalan Destarasta, Pandu Raya, North Bogor, is the Baiturrahman Mosque. It serves as a place of prayer for local Muslims as well as a venue for mosque events. Worshipers in the area of the mosque have had difficulty obtaining information about the Baiturrahman Mosque, including information on the mosque's activities, infaq, and zakat, because the information is provided by the mosque's management through announcements. Considering the issues listed above, a comprehensive system that Muslims may utilize is required.

The first study conducted by Indra Wardana in 2013 outlined computerization in relation to administrative management at the secretariat and finances of the Jogokirayan Yogyakarta mosque, which includes reporting on congregational data, preacher reports, mosque activities, and even data collection obtained by the mosque. According to this study, there is a connection between the system requirements analysis and the administrative data gathered for the mosque that can be used to manage the secretarial and financial administration of the mosque [1]. In his research from 2018, Alldy Novryaldy outlined the significance of overseeing mosque administration in the city of Jogjakarta since the mosque profile would afterwards serve as a source of knowledge in an endeavor to grow the mosque.

This study revealed that the creation of a mosque profile system was very beneficial for Yogyakarta's Ministry of Religion [2]. Given the significance of mosque information that Surakarta residents must get, a website employing the hypertext preprocessor (PHP) and MySQL database management systems and the HTML and CSS programming languages was developed [3]. One of the large mosques in the village of Pabelan Kartasura Sukaharjo is having an information system designed for it. More specifically, the information system will be used to manage operations including controlling mosque money and borrowing locations [4]. Mosques, orphanages, and Islamic boarding schools are examples of social welfare in Singkawang City. In order to preserve data and information securely and to provide or receive support, the information system for orphanages, mosques, and Islamic boarding schools is unfortunately still employing manual methods [5]. The Al-Huda Karah Surabaya mosque's ongoing management continues to employ a manual method for mosque financial management and administration, giving the impression that it is strict and monotonous [6]. Information system for ZIS Mosque financial management. One of the large mosques in Windan Village, Makam Haji, Kartasura, Sukaharjo has an information system. This mosque used to manage



activity information manually, making it challenging for the neighborhood to receive information, even from mosque managers who were having trouble managing their data [7].

hence, the problem's formulation was produced. How to create and implement a website-based management information system for mosques. The goal of this study is to develop a website-based management information system for the Baiturrahman mosque in accordance with how the problem has been formulated.

Methodology

The Waterfall method was used by researchers to design this system since it is an organized approach. The steps in the waterfall approach are as follows. Pressman (2001, 29) states that after that, the author incorporates it into the design of a Baiturrahman mosque system that will be accessible online. The stages in Figure 1 are depicted as follows.

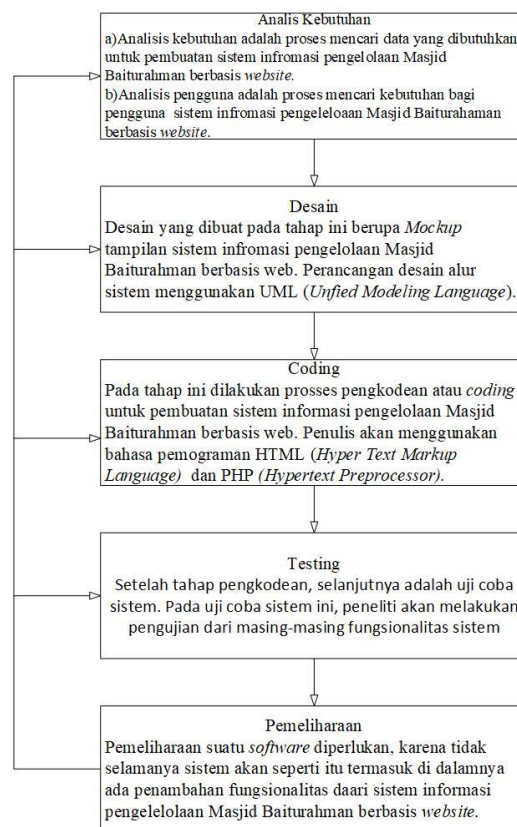


Figure 1 Waterfall method according to Pressman

Through the steps of planning, modeling, implementation (construction), and testing, progress is seen as continuously flowing downward (like a waterfall) in the sequential software development process known as the waterfall method. The waterfall technique comprises four logical phases that make up its development: requirements (an examination of the demands of system design), coding and testing, program implementation, and maintenance..

Needs analysis

Finding the information required to build a website-based management information system for the Baiturrahman Mosque is the process of doing a needs analysis.

Design

The management information system for the web-based Baiturrahman Mosque is currently designed as a mockup presentation. utilizing UML to create system flow designs (Unified Modeling Language).

Coding

Now, coding is being done to establish a web-based management information system for the Baiturrahman Mosque. The programming languages HTML (Hyper Text Markup Language) and PHP (Hypertext Preprocessor) will be used by the author.

Testing

At this point, system trials a type of testing are conducted. Researchers will evaluate each system's functionality during this system experiment.

Maintenance

Since the system won't always be this way, the process of maintaining a software is currently required. This includes adding features to the website-based Baiturrahman Mosque management information system.

Result

First Analysis

The management of the mosque was interviewed for the purpose of gathering information regarding how the public will be informed about the Baiturrahman mosque.

Old Business Process Analysis

Prior to the website-based Baiturrahman mosque management information system, business operations still rely on manual processes such looking through mosque management-stored archives for information. Figure 2 in the following provides a visual representation of the previous business procedure.

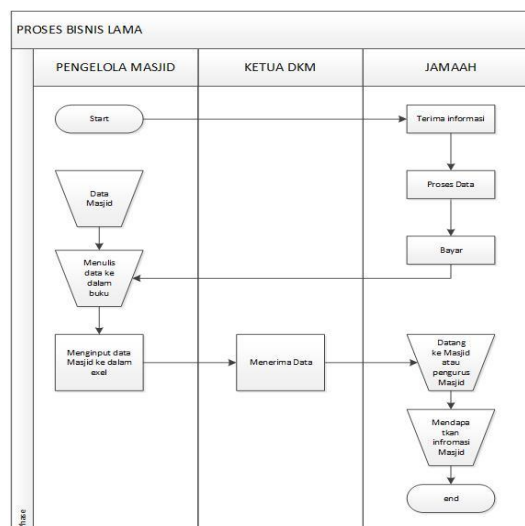


Figure 2 Old Business Process Analysis

New Business Process Analysis

The author attempts to streamline the management of Baiturrahman Mosque information using information systems since updating the outdated business process is important to make it easier to find information. Figure 3's new business process is described in the passages that follow.

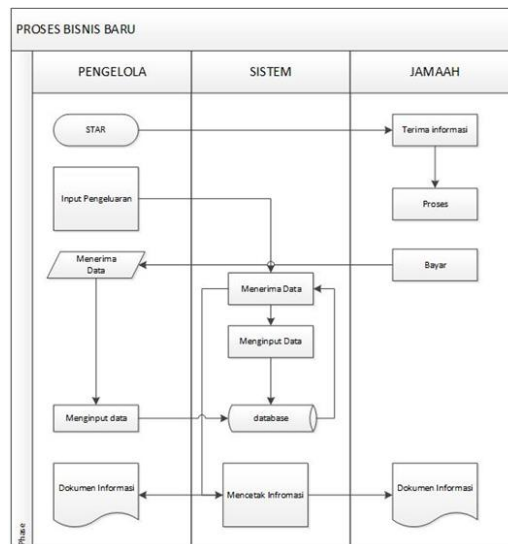


Figure 3 New Business Process Analysis

Second Design

The result of this stage is a web-based mosque management information system flow design.

Context Diagram

A context diagram is a visual representation of the creation process of a system. The business process outlines how actors (actors) interact with the system. Figure 4 depicts the study's context diagram.



Figure 4 Context Diagram Design

Use Case Diagram

Use case diagrams outline a system's anticipated capability. Use case diagrams describe a system's advantages from the perspective of those outside the system. In Figure 5, a use case diagram is displayed.

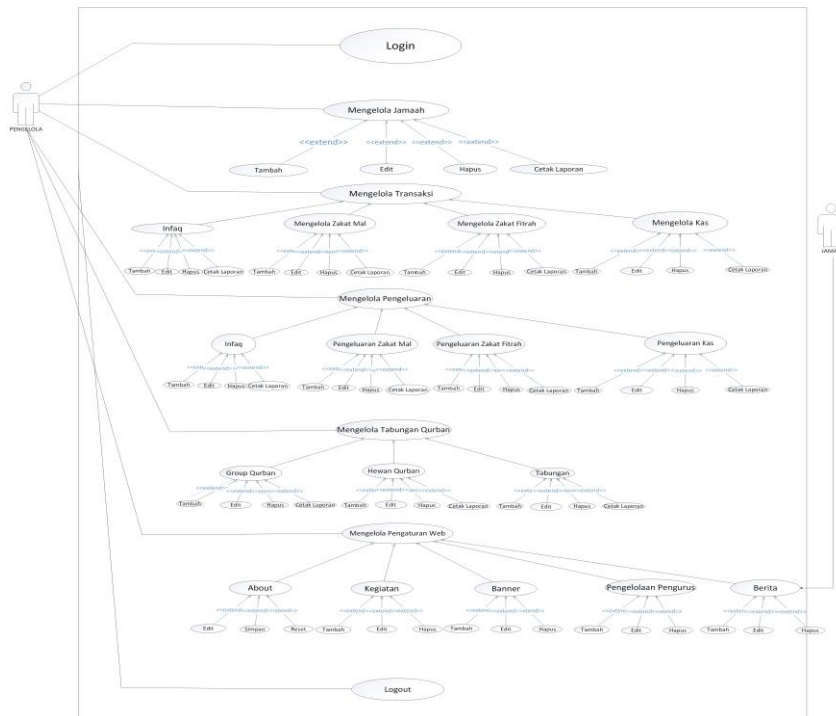


Figure 5 Use Case Diagram

Transaction Data Manager Activity Diagram

Whether a manager wants to handle infaq data, zakat mall data, zakat fitrah data, or cash data, he engages in the activity depicted in the activity diagram of transaction data management. Observing infaq data, zakat mall data, zakat fitrah data, and cash data are a few examples. Including cash data, zakat fitrah, zakat mall, and infaq data. Modify the data from infaq, zakat mall, zakat fitrah, and cash. zakat mall, zakat fitrah cash, and delete infaq data See Figure 6 for the transaction data management activity diagram.

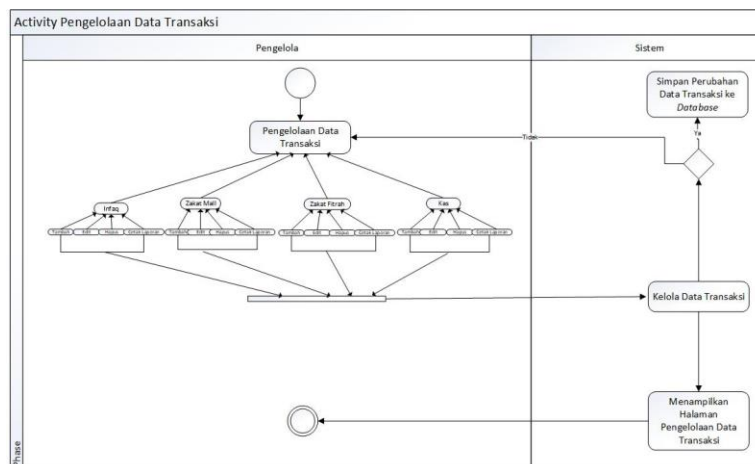


Figure 6 Activity diagram of Transaction Data Manager

Transaction Sequence Diagram

Managers can add, amend, delete, and print transactions sequence diagrams. The manager sequence diagram for fresh transaction data on the Baiturrahman mosque system is shown in Figure 7.

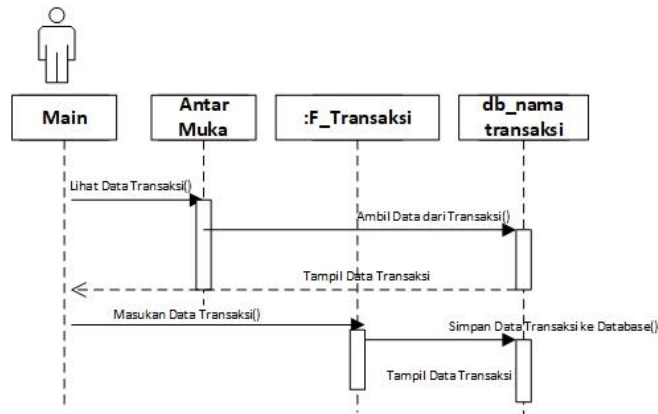


Figure 7 Transaction Sequence Diagram

Class Diagram

The foundation of object-oriented development and design is a class diagram, which is a specification that, when instantiated, creates an object. Class diagrams enable services to manipulate these criteria (methods/functions) when describing the characteristics of a system. Figure 8 provides additional information.

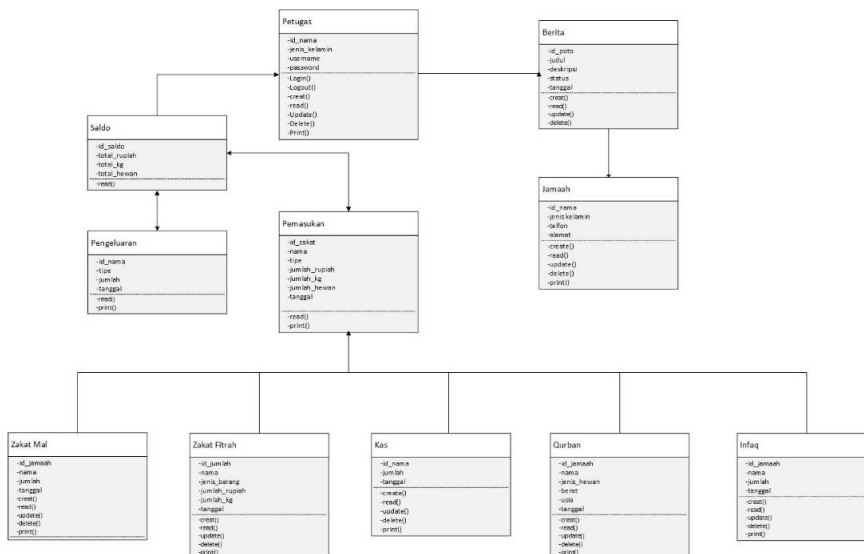


Figure 8 Class Diagram

Component Diagram

A component diagram is a diagram that shows the parts of the system and their connections. The interdependencies between different software components, such as those between executable files and their source files, are explained using component diagrams. Figure 9 displays the component diagram that follows.

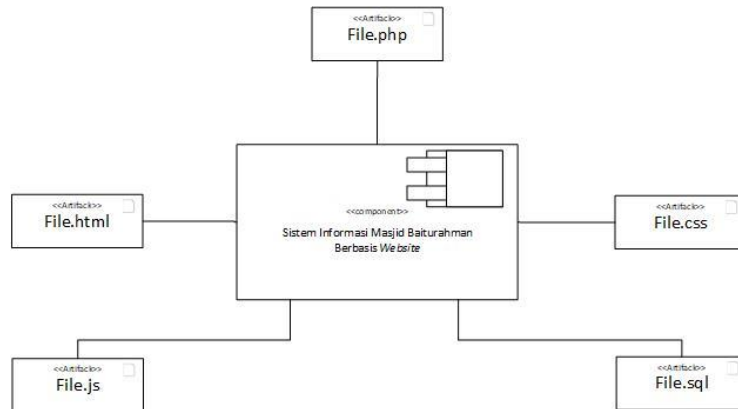


Figure 9 Component diagram

Thrid Interface Implementation

Login

The system login form is shown on this page. See the display in Figure 10.

The screenshot shows a login form titled 'Login Page'. It contains three input fields: 'Username', 'Password', and a blue 'Login' button. Below the button is a link for 'Forgot Password?'.

Figure 10 Login

Dashboard Page

When you first log in, the Dashboard page serves as the primary display. Figure 11 shows some of the buttons and menus on this screen..

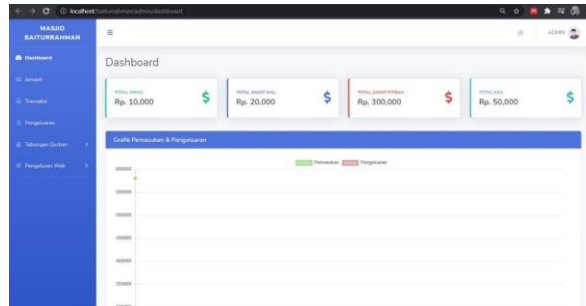


Figure 11 Dashboard page

Fourth System Testing

A stage of testing a built-in system is system testing. Blacbox testing is used to test the website-based Baiturrahman mosque management information system.

Blackbox Testing

Blackbox testing involves checking the accuracy of the conclusions reached by the system in response to a command. Blackbox testing of the management information system for the Baiturrahman mosque's website, as shown in Table 1.

Table 1 Blackbox Testing

No	Input provided	Scenario	Expected output	Output generated	Conclusion
1	Press Home Menu	Viewing the website display	Display website information	Display website information and description	Successful Testing
2	Press Login	Test the login function	Successful login and switch to the main menu	Successful login and return to the main menu	Successful Testing
3	Press Jamaah Menu	Test the congregation menu function	Displaying pilgrim data	Display congregation data with complete identity	Successful Testing
4	Press the add congregation button	Input added pilgrims	Adding pilgrim data	Congregation data increased	Successful Testing
5	Press the edit congregation button	Edit congregation data	Change pilgrim data	Pilgrim data changes	Successful Testing
6	Press the delete congregation button	Delete congregation data	Delete congregation data	Congregation data deleted	Successful Testing
7	Press the congregation	Print Jamaah	Printing congregation	Print out congregation data	Successful

	print button	data	data	as a pdf file	Testing
8	Press the Transaction button	Test the Transaction menu function	Display transaction data	Display transaction data by transaction type	Successful Testing

Conclusion

Referring to the results of the research and discussion that has been carried out, the following conclusions can be drawn, this baiturrahman mosque management information system produces a website-based system that can be accessed by worshippers. From the information system of the Baiturrahman mosque there are several menus that can be utilized by local worshippers, such as qurban savings, information about mosque activities and finances.

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