

Design of Web-Based Accounting Information System for Umrah Registration and Religious Tourism Using Mysql Database at PT Nusantara Teguh Berkah

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Abstract

The development of computer systems in information technology is increasingly rapid and accurate with the times. Cash receipts are essential in an organization, institution, or line of business. The importance of having internal control procedures for cash receipts is very beneficial for the progress and interests of the company. In this case, the company made arrangements for the cash receipts accounting system, which included registration, filing of pilgrims, down payment and settlement, and making payment reports. In addition, there are features of the latest news and procedures for worship that can help worshipers access the latest information. So at this time, an accounting information system is needed in the process of cash receipts and registration of pilgrims at PT Nusantara Teguh Berkah. This system was designed using PHP and MySQL using the Waterfall Method. Because it is web-based, this system can be accessed anywhere and anytime using a laptop or smartphone. The results obtained from designing this system are to make it easier for the admin to manage cash receipts and congregation registration from manual to digital processes.

Keywords: Information systems, Cash Receipts, PHP, MySQL

INTRODUCTION

The rapid and precise progression of computer systems in information technology has rendered their utilization imperative across various domains of life, particularly in the business sector. The prevalence of computer systems equipped with application programs is apparent in many companies and institutions' utilization of such technology. This technology streamlines work processes, resulting in increased efficiency and providing users with expeditious, exact, and reliable information.

An instance of the utilization of this technology pertains to computer systems founded on web-based platforms. Web-based systems play a critical role in the operations of businesses such as PT Nusantara Teguh Berkah (PT NTB). PT NTB is a specialized service provider that caters to the needs of religious and halal travel agencies. The company offers

various services, including Hajj and Umrah pilgrimages, religious tours to Palestine, Wali Songo pilgrimages, Indonesia-Malaysia tours, and other related services.

The level of competitiveness within the business sector can be evaluated using proficient business administration, which encompasses the efficient handling of monetary transactions received from Umrah pilgrims or tour attendees. Pilgrims who have completed the registration process must procure the requisite documentation and satisfy particular criteria, which have implications for business administration, particularly regarding cash inflows. The cash receipts process entails a combination of manual and computerized procedures to facilitate the collection of cash from routine and non-routine sales transactions. According to Lutfiah and Kusumadiarti (2021),

accounting systems are developed as a means of internal control.

The implementation of a cash receipt system holds significant value for a company. Clearly defined procedures for cash receipts can yield substantial benefits for the company, such as facilitating revenue determination and promoting the company's progress and interests. Cash receipts are susceptible to inaccuracies, which highlights the need for internal control measures in cash management. The circumstance above has led corporations to arrange their monetary reception bookkeeping mechanisms, encompassing the recording or certification of pilgrims or excursion attendees, partial or complete payments executed through bank transfers or physical currency, and the creation of payment summaries. The objective of these measures implemented by companies is to optimize the cash receipt process, encompassing the stages of registration and payment reporting, to enhance its effectiveness, efficiency, and capacity to furnish prompt, precise, and reliable information. The reasoning mentioned above forms the basis for incorporating accounting information technology.

According to Lutfiah and Kusumadiarti's (2021) research, developing a comprehensive information system utilizing Visual Studio and MS Access for new students' registration and cash receipt processes can streamline user tasks. This system is designed to record, process, store, and generate student data reports. The employment of computerized information technology systems, including website-based programs, has become prevalent in addressing data processing challenges in organizations. This

condition has led to a significant decrease in manual data processing methods. These computerized systems are designed to develop comprehensive, interactive programs that enhance work processes (Gunawan et al., 2021). Utilizing the waterfall methodology in implementing an information technology system through a website guarantees a uniform and user-centric development process. According to Kesuma et al. (2018), the website is anticipated to function as a platform for addressing web-based marriage registration requirements at the Office of Religious Affairs (KUA) and disseminating information on religious practices and teachings that can be accessed online through mobile phones or laptops.

The Prototype Method involves the creation of provisional designs that necessitate modifications before attaining the intended results. According to Rahmansyah and Darwis (2020) and Sudirman and Trisianti (2021), the prototype functions as a preliminary model that offers a glimpse into the operational mechanisms of a fully developed system. The Rapid Application Development (RAD) model is a linear system design model that follows a sequential approach and emphasizes short development cycles, typically 60 to 90 days. RAD refers to a methodology that utilizes component-based construction approaches to achieve rapid development, which adapts a high-speed approach (Pricillia & Zulfachmi, 2021).

In light of the abovementioned concerns and research areas that require further exploration, the author is motivated to conduct an in-depth analysis and construct a comprehensive framework.

Develop a comprehensive accounting information system incorporating registration and cash receipt procedures. The intended outcome will be realized by utilizing computer-based information technology systems that incorporate a website-based design, implemented through the application of the waterfall method. The aim is to furnish practical, accurate, and reliable corporate information and enlighten prospective pilgrims with current news and instructions on spiritual customs at PT Nusantara Teguh Berkah.

The design process, also known as "design," includes the methodologies programmers use to convert the results of a systems analysis into a programming language. This process completes a comprehensive account of the implementation of system components (Roger & Bruce, 2015).

Development, also known as "systems building," includes producing a new system or improving a pre-existing system in part or whole. In short, "design and build" refers to visualizing, strategizing, and organizing disparate components into a cohesive and operational entity. According to Roger and Bruce (2015), "design" refers to turning analytical findings into software applications and improving existing systems.

According to Supardi (2015), applications are software devices that carry out various tasks. Flowchart, also known as "flowchart," is an analytical methodology that offers a precise, coherent, and systematic explanation of various aspects of information systems. The authors Gunawan et al. (2021) stated that companies use a set of conventional symbols to represent

transaction processing procedures and describe the movement of data within a system.

Data Flow Diagram (DFD) is a visual tool used to describe both computerized and non-computerized systems. This system is illustrated through a network of interconnected nodes, as stated by Raharjo (2019).

Entity Relationship Diagram (ERD) is a model used in database design to describe the required data types and their interrelationships. Entity-Relationship Diagram (ERD) is a tool used to represent configurations and associations between data. According to Gunawan et al. (2021), the fundamental constituents of the subject matter considered are entities, attributes, and interconnections between entities.

A website usually called the web, is a collection of digital content, such as text, images, video, audio, and animation, organized into web pages. According to Kesuma et al. (2018), it can be accessed online.

In software development, a framework refers to a whole set of commands or functions that programmers organize and use systematically to facilitate communication among themselves. The main goal of this system is to accelerate the development of comprehensive applications, focusing on minimizing the duration of website development (Erinton et al., 2017).

According to Kesuma et al. (2018), a database is a computer-based system specifically designed to store and present data or information that has been processed according to user needs.

XAMPP functions as an autonomous local host server, integrating four different operating systems: Apache, MySQL, Perl, and PHP. According to Rachman et al. (2023), PHP is used

for programming purposes, while MySQL is responsible for managing the database.

PHP, also known as Hypertext Processor, is a standard programming language used for website creation and development. Simanjuntak et al. (2019) stated that it is often used in conjunction with HTML.

MySQL operates as a database server, facilitating the management of data storage and retrieval. According to Gunawan et al. (2021), organizing data is intended to optimize accessibility and speed up retrieval.

METHOD

The investigators in this investigation opted for the qualitative approach. Qualitative research is employed to explore natural phenomena, whereby the researchers act as the primary instruments (Siyoto & Sodik, 2015).

The selected system development model for this study is the Waterfall Model, also called the Classic Life Cycle. The software development process follows a sequential methodology that includes distinct phases: analysis, design, coding, testing, and support (Yunita et al., 2017).

The Waterfall Model is chosen due to its systematic development phases, ease of use, and structured procedures. This approach is especially appropriate for software products with clearly defined initial requirements, thereby reducing errors. In addition, the software produced through this approach typically exhibits superior quality, and the documentation about system development is methodically structured, guaranteeing the fulfillment of each

stage prior to advancement to the subsequent phase (Pricillia & Zulfachmi, 2021).

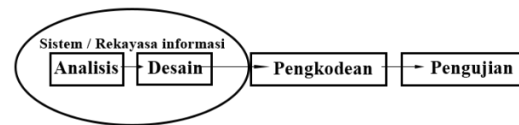


Figure 1. Illustration of the Waterfall Model

Black Box Testing is a method of web testing that entails assessing software solely on its functional specifications without scrutinizing its design or source code. This evaluation aims to ascertain whether the program's input and output functions are consistent with the prescribed specifications, as noted by Kesuma et al. (2018).

The primary aim of Black Box Testing is to detect defects or malfunctions in the software by analyzing its externally visible characteristics. In order to carry out the testing process, the tester must possess a comprehensive understanding of the program's scope, the intended business solutions it is expected to offer, and the system's objectives, as highlighted by Gunawan et al. (2021). The methods utilized for gathering data are as follows:

1. One research methodology involves observing a company's current state and gathering data about the registration process and the cash collection from pilgrims and religious tour participants.
 2. The methodology employed by the author involves conducting interviews, wherein direct question-and-answer sessions are held with staff members directly involved in the processes or issues being researched.
 3. The literature review is a method of gathering data that involves scouring various sources such as books, research
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journals, written documents, illustrations, and electronic sources to support the writing process.

RESULTS AND DISCUSSION

Information System Requirements Analysis

The development of PT NTB every year is quite significant, seeing from the interest of Indonesian citizens who want to carry out worship and tourism at home and abroad, as well as tourists who want to travel to Indonesia, so an information system that supports this development is very much needed.

Documentation of registration and receipt of cash or income that uses a different information system than before experiences many problems, such as differences in income from the actual amount and files that can be damaged or lost. Thus, the program needs analysis for the cash receipts process for congregation registration at PT. NTB is proposed as follows:

a. Visitor Needs

1. Visitors can view PT. NTB.
2. Visitors can register and complete data as prospective pilgrims.
3. Visitors can print proof of registration of prospective pilgrims.
4. Visitors can read the latest news about Umrah and tourism trips.
5. Visitors can see instructions for the Hajj and Umrah pilgrimage procedures.

b. Administrative and Financial Staff Page

1. Administrative and Financial Staff can check the completeness of the data form for prospective pilgrims.

2. Administrative and Financial Staff can manage data on applicants for prospective pilgrims.
3. Administrative staff can manage the latest news.
4. Administrative and Financial Staff can make payments for prospective pilgrims
5. Administrative and Financial Staff can make reports on congregation payments.

The flowchart of the proposed program is shown in the figure below:

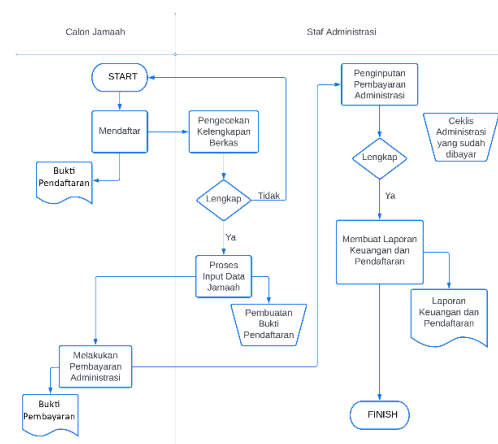


Figure 2. Proposal Flowchart

Design of Cash Receipt Information System and Registration of Pilgrims or New Participants

a. Making Data Flow Diagrams (DFD)

DFD is made to explain data flows that occur while the system is running so that the input and output can be known and where the system data will be stored. The information system for cash receipts and registration for pilgrims/new participants starts with filling out the prospective congregation/registration participant form on the website. Then participants can print

documents as proof of registration, which can be seen in the print menu. The system will also generate financial reports, which will be submitted to the director. For more details, see the image below.



Figure 3. Context Diagram

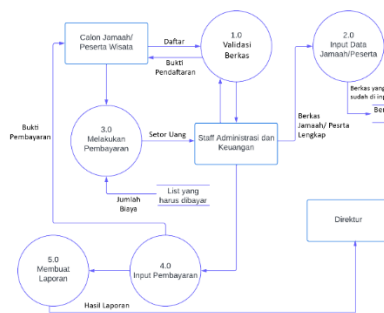


Figure 4. Level 1 diagram

The diagram presented in Figure 4 depicts a level 1 representation of the cash receipts system for new participants or pilgrims. This system comprises five distinct processes: file validation, congregation/participant data input, payment processing, payment input, and report generation.

- b. The user interface of the information system was designed

As mentioned above, the presentation showcases the outcomes of designing an information system that pertains to a web-based accounting information system program. The image below illustrates the display of the entry process to the processing process.

Homepage

Title: Home Page

The webpage serves as a preliminary platform for user visitors to access the list menu. Before accessing the menu, visitors are allowed to peruse current news and familiarize themselves with the procedures for worship. This webpage is intended for utilization by administrative personnel prior to accessing the system.



Figure 5. Main Page User Interface

List Page

Document Name : List Page

Function: A page for user visitors who want to register as pilgrims/tour participants.



Figure 6. Register Page User Interface

Admin Login Page

Document Name: Admin Login Page

Function: Page for administrative and financial staff to enter the system.

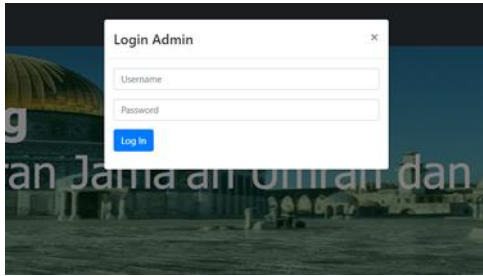


Figure 7. Admin Login Page User Interface

Dashboard Menu Page

Document Name: Dashboard Menu Page

Function: Displays all menus for displaying and managing data on pilgrims or tour participants, payments, and financial reports



Figure 8. User Interface Menu Dashboard

Registrant List page

Document Name: Registrant List page

Function: Displays and manages registrars of pilgrims/tour participants.

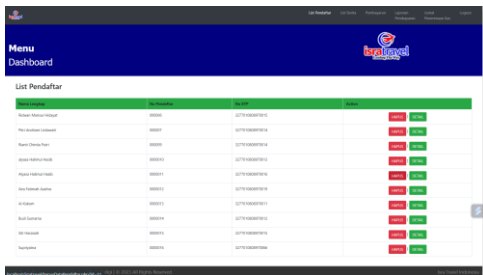


Figure 9. User Interface of Registrant List Page

Payment Page

Document Name: Payment Page

Functions: View and manage payments.

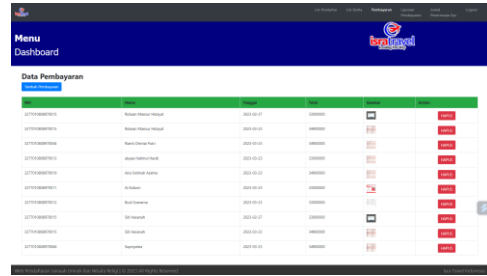


Figure 10. Payment Page User Interface

Payment Report Page

Document Name: Payment Report Page

Function: Print payment reports per required date or per period.



Figure 11. User Interface of the Payment Report Page

Cash Receipts Journal page

Document Name: Cash Receipts Journal page

Function: Is a general journal display and can be printed per date or per period.

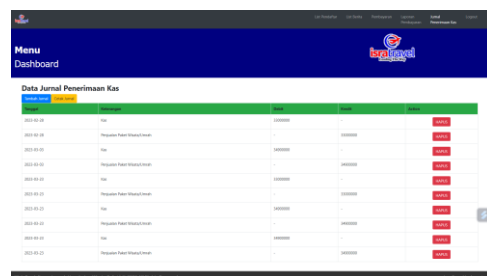


Figure 12. User Interface of Cash Receipts Journal Page

CONCLUSION

The accounting information system for cash receipts utilized in registering Umrah pilgrims and religious tourism at PT Nusantara Teguh

Berkah has encountered challenges in its design and implementation, resulting in the continued use of a semi-computer system. Consequently, the efficiency of calculating, reporting, and storing files has been compromised. The design of this accounting information system is founded on a website and utilizes a MySQL database alongside a user-friendly user interface. Implementing this accounting information system facilitates the automation of manual tasks such as registration, payment, data processing, and financial reporting, thereby enhancing user efficiency.

It is recommended that PT. Nusantara Teguh Berkah is considering implementing an accounting information system that utilizes an internet and server network to manage data for all involved parties effectively. The designed accounting information system is proposed as a reference point for advancing future accounting information systems.

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