Design of the Monthly Educational Development Contribution Payment Application for Santri at the Syekh Hamzah Al Fansury Islamic Boarding School in Subulussalam City

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ABSTRACT

Article Info

Pesantren Sheikh Hamzah Article history: Pondok Al Fansury in Received 15 Januari 2025 Subulussalam City prioritizes optimal educational services, Revised 30 January 2025 including in the aspect of paying the Education Development Accepted 20 February 2025 Contribution (SPP) for around 300 students. The growing number of new students requires the development of a more Keywords: efficient and detailed payment system. Currently, the payment Payment of Education process still uses manual methods that tend to be ineffective. **Development Contribution**, Santri, Web-based The recording of SPP payment transactions is done through Application. cards which are then manually recapitulated into the ledger by the treasurer. This condition creates a risk of errors and data loss, especially if the payment card is lost. With the SPP payment application, it is expected that efficiency and data security will increase. SPP payments will be recorded more accurately and stored securely in the database. The use of a computerized information system is also expected to minimize errors and facilitate access to payment data, especially in making financial reports. This research is an effort to develop a web-based SPP payment application for the Sheikh Hamzah Al Fansury Islamic Boarding School. A qualitative approach was used to understand the needs of potential users, while the waterfall software development method was chosen to ensure a structured application design process. The results showed that this application was successful in simplifying the payment process, printing receipts, and presenting reports accurately. It is hoped that this application can be an effective solution to improve the quality of tuition payment services for students at the Sheikh Hamzah Al Fansury Islamic Boarding School.

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1. Introduction

Technology and science have evolved to make human life easier. Adequate natural resources and human resources allow many fields of science and technology to develop very quickly. One of them is the field of information technology and data processing. Today, we can create any kind of data and information we want, and there are many opportunities to expand it.

Education Support Contribution is a monthly payment that students have to pay to the school. Decided by the school committee and parents, SPP is intended to improve the quality of education through improving educational facilities and infrastructure (Mufariya et al, 2019: 19). Meanwhile, according to Imam Sutoyo (2020: 145) Education Support Contribution or SPP is a monthly payment that students must pay for each level of education. In pesantren, tuition payments are also made for each level of education. A number of fees charged to students are known as SPP, which are intended to help schools accelerate the teaching and learning process. Their activities are financed by funds generated from SPP payments. This makes this activity an important administrative task in a pesantren. As a result, in order for all pesantren activities to run smoothly, this activity must be carried out effectively and efficiently.

Pondok Pesantren Syekh Hamzah Al Fansury is one of the organizations engaged in the world of education. In principle, the Sheikh Hamzah Al Fansury Islamic Boarding School always tries to provide the best service according to the needs, including services in paying tuition fees to students. Currently, the number of students at the Sheikh Hamzah Al Fansury Islamic Boarding School is approximately 300 students. With the increase in new students which continues to increase every year, the need for services related to Education Support Contributions needs to be improved and developed in improving the existing system by correcting its shortcomings.

By considering the financial activities in the financial department of the Sheikh Hamzah Al Fansury Islamic Boarding School, the system currently used is still considered less effective. All payment transactions must be recorded on the santri SPP payment card by the treasurer, who then recapitulates the data into the ledger by hand. This can lead to errors in calculations and report generation. The current financial report is inadequate because the payment process is not done directly by the system. In addition, the treasurer has to recheck the ledger, which is definitely ineffective. If a student's SPP card is lost, officers will have difficulty finding previous payment data. With the SPP payment application, it is expected that data will be presented more efficiently, results will be saved, and data will be more secure.

When students pay SPP, the recording process still uses a ledger. This results in more complicated payments, less supervision, more time spent, and more difficult to gain access to data when creating financial reports. Because the payment data is increasing, the administration has difficulty finding santri data when needed and takes a long time. By using a computerized information system, managing the overall data becomes easier.

Creating complete and accurate information at least reduces problems that often occur due to errors that may not be desirable. This shows that organizations, institutions, offices, and educational institutions have high standards (Ubbaidillah and Evayani, 2020: 560).

With the development of the payment system, it can play a role in creating progress and convenience in the life of the boarding school. The use of computers in a boarding school can be a tool in processing tuition payment data, as well as making financial reports. Based on the problems found, changing the system to a computerized application is expected to make it easier, save time, and the level of data accuracy increases in SPP payments at the Sheikh Hamzah Al Fansury Islamic Boarding School, so it is necessary to design an SPP payment application so that these problems can be resolved.

2. Theoretical Basis

Design

Design is an engineering representation that means something to be built, system design is a stage of system development on an ongoing system. In the ongoing system, the system design stage is known as the system design method. The system development used in this research consists of planning, analysis, design, and system maintenance (Adi Ahmad and Rizal Amri, 2021: 298).

Design is a process to determine how something will be done. This process involves architectural descriptions, component details, and obstacles that will be faced during the work process. Design is the process of creating new system specifications based on suggestions found in system analysis. Based on the explanation above, it can be concluded that design is a plan, description, and framework of a system before it is made or changed (Mochammad Farhan Setiawan, 2020: 203).

Based on the above definition, the author draws the conclusion that design is the process of planning and creating a representation of the system to be built or changed. This involves making plans, architectural descriptions, component details, and considering the obstacles that may be faced during the process. Design also includes system development on an ongoing system, including the planning, analysis, design, and maintenance stages of the system. Thus, system design is an integral part of the system development stage that produces the specifications needed for implementation or changes to be made.

Application

An application is a subclass of computer software that directly utilizes the capabilities of a computer with the intention of performing a job according to the user's wishes. This is different from system software, which combines various computer capabilities, but does not directly implement them in order to complete a specific job. Examples of applications include word processors, worksheets, and media players (Lukas Tommy et al, 2020: 110).

Applications are software that can be used through user commands. The purpose of creating an application is to help facilitate various purposes, for example searching for

documents, compiling reports, documents (Karyawanto, 2021: 45). Software programs that run on certain systems and help with various human tasks are called applications. In addition, experts have put forward various definitions of the word "Application". According to several experts, below are some of the most common definitions of applications (Adji Arianto et al., 2022: 49).

Software

According to Alek Sudarso (2022: 05) Software is a computer program that contains a set of instructions for running a data processing process. Software functions as a liaison between humans and computer hardware, translating human language into machine language so that computer hardware can understand the wishes of users and follow instructions, thereby producing the results humans want. A set of electronic data stored and organized by a computer is called software. Electronic data can be in the form of programs or instructions that can be used to execute commands. Any kind of program used to operate a computer and its equipment is also called software. Language software, also known as language software, is used to create application software to solve problems in a program created by the manufacturer of application software to solve problems in a particular application.

Education Development Contribution Payment

Payment can be defined in two ways, narrowly or juridically technical. Payment is the repayment of a debtor's debt to a creditor in the narrow sense, such payments are made in the form of goods or money. But in a juridical sense, payment can also be in the form of services, such as doctors and teachers. Based on the above understanding, payment functions as a tool to fulfill obligations for all activities needed to achieve a goal (Alda Anesa Vetdri et.al., 2023: 2448).

Education Development Contribution (SPP) is one way to provide money in exchange for learning and teaching activities carried out at schools or course institutions. From this understanding, SPP is carried out when there is reciprocity between teachers or tutors who provide lessons and students who receive lessons from schools or course institutions. The school or course institution also acts as a facilitator of the learning process. Based on the above statement, SPP is responsible for providing monthly dues or funds to pay school facilitators or teachers (Alda Anesa Vetdri et.al., 2023: 2449).

Design of Education Development Contribution Payment Application

SPP payment application is software that helps manage SPP payments and get reports by utilizing school computer facilities to optimize the payment process, create receipts, and create reports (Alda Anesa Vetdri et.al., 2023: 2449). The design of the Education Development Contribution payment application is the process of developing an information system that functions to assist the SPP payment process. The purpose of this application is to facilitate the management of SPP payment data, improve data accuracy, and reduce difficulties in searching for SPP payment transaction data.

This application is usually made to help school activities, especially in the administration department, in knowing SPP payments quickly and accurately as well as recording and storing the transaction data. Thus, this application can help reduce the difficulty for administrative staff in finding SPP payment transaction data, especially when the data or documents are increasing. By designing an effective SPP payment application, schools or educational institutions can improve administrative efficiency, increase parental involvement, and strengthen education financial management.

Student

Students who learn about Islam at an immersion school or boarding school are called santri. Santri will experience changes in their lives. If they are used to living at home and depending on their parents, they are then required to live in a pesantren, which means they have to accept the change. Santri are an important part of the pesantren as they are the ones who study there. They have to follow the rules and practices of the pesantren in their daily lives as well as follow the orders of their kyai (Zaini Hafidh and Irfan Goffary, 2023: 12).

Islamic Boarding School

Pesantren is a unique place with characteristics that are not shared by other places. The Kiyai, the santri, the mosque, the hut, and the teaching of classical religious books are the main components of the traditional boarding school education system. The basics of pesantren consist of five main components: dormitory (pondok), mosque, santri, teaching of classical religious books, and kyai. Pesantren preserve Islamic values by focusing on education. It also strives to educate its students, who are expected to understand Islam well. After that, they can teach it to the community, to which the students return when they finish school at the pesantren (Zaini Hafidh and Irfan Goffary, 2023: 12).

Islamic boarding schools are unique places that have main components such as dormitories (huts), mosques, santri, teaching classical religious books, and kyai. The main focus is on maintaining and educating Islamic values. Santri, as students, study in depth in order to be able to teach Islam to the community after completing their education at the pesantren.

Website

A website is a collection of web pages containing information that are interrelated with each other. Most people can access the web server, which can be accessed via the internet network or local area network (LAN) (Yeni Susilowati, 2019). Meanwhile, according to Sawlani (2021: 36) A website (sometimes shortened to web or site) is a term that refers to a group of web pages, which are usually part of a domain or subdomain on the internet world wide web (WWW).

A web application is an information system that allows users to interact with the system through a web-based interface. This interaction is divided into three stages: request, processing and answer. A website consists of a collection of interrelated pages that display information such as text, images, animations, sounds, or a combination of all of them.

These pages can be static or dynamic and form a series of interrelated buildings called a page network (Mufariya et al., 2019: 21).

According to Micki Ronaldo and Donaya Pasha (2021: 17) Some examples of web browsers that are popular today are Google Chrome, Mozilla Firefox, and Opera. There are 2 types of websites, namely:

a. Static Website

Is a website that is not easy to change its contents by users. To make changes to the content, users must change it by coding on the website page or changing through the data base.

b. Dynamic Website

Is a website that can be adjusted easily and can change content automatically without changing the website code structure.

PHP (Processor Hypertext Protocol)

Processor Hypertext Protocol is an open-source server-side web programming language. Because it is processed on the server computer and integrated with HTML, PHP is referred to as a server-side programming language. PHP is not the same as client-side programming languages like JavaScript, which are used by web browsers. Rasmus Lerdorf first created PHP in 1995, and currently, PHP is managed by The PHP Group. As its name suggests, PHP is used to create personal websites. PHP has evolved into a web programming language that can create simple web pages as well as popular websites used by millions of people, such as WordPress, Wikipedia, and others.

Basically, if there is a request from the client, the server will work. In this case, the client sends a request to the server using PHP code. The PHP system starts with a request originating from a web page by the browser. The browser finds the webserver address based on the URL or website address on the internet network, identifies the desired page, and conveys all the necessary information. Next, the webserver will find the requested file and display it in the browser. After obtaining the file, the browser immediately translates the HTML code (Suharjanto Utomo and Mochamad Alvi Hamdani, 2021: 03).

MySql

According to Suharjanto Utomo and Mochamad Alvi Hamdani (2021: 03), one of the most well-known types of database servers is MySQL. MySQL is popular because it uses SQL as the basic language to access its database. MySQL is available for free under the GNU General Public License (GPL). In this situation, users can use this software freely without worrying about its license. MySQL is one type of RDBMS (Relational Database Management System). Therefore, the terms table, row, and column are used in MySQL. MySQL databases can consist of one or more tables.

MySQL is widely used in web database systems that use PHP, and PHP also provides database facilities. Because PHPTriad is equipped with a MySQL database, there is a place to store data and retrieve data. MySQL is also equipped with SQL commands and syntax, like other SQL (Structured Query Language) database systems.

Xamp

Xampp is a program that consists of a MySQL server and is supported by PHP as a programming language to create dynamic websites. Xampp also has the Apache web server that runs on various platforms, such as OS X, Windows, Linux, Mac, and Solaris. Web applications are stored on this web server, where users can access them via the internet. When every change, whether small or large, is uploaded to the new web server, it can be checked to ensure that the changes meet expectations. For web server-side scripts like PHP, new checks will appear when using this web server. Therefore, this web server is necessary. Unlike client-side scripts such as HTML, CSS, and JavaScript, the browser can easily determine whether the script meets the requirements (Priyanto Hidayatullah, 2021: 161).

3. Research Methodology

This research is a type of development research, aimed at producing new products or technologies, in this case, a monthly tuition fee payment application for students at Pondok Pesantren Syekh Hamzah Al Fansury. The approach used is a qualitative approach, which allows researchers to deeply understand the views, experiences, and needs of potential users of the application. Through in-depth interviews, direct observations, and analysis of user needs and preferences, this research will produce a more suitable and acceptable application design for users. The qualitative approach also allows researchers to explore the perceptions and experiences of students regarding the monthly tuition payment process, as well as providing them with the opportunity to give useful input and feedback in the development of the application.

Thus, through a combination of development research and a qualitative approach, this study is expected to produce an application that is more effective and beneficial for users in the environment of Pondok Pesantren Syekh Hamzah Al Fansury. The application design method used is Waterfall. This method was chosen because the application design process is carried out step by step, starting from analysis, design, coding, testing, and maintenance.



Figure 1. Waterfall Model

4. Results and Discussion

Login Page

This display consists of a Username and password used to log in to access the main menu of the application. If the entered data is correct, it will proceed to the main menu display. On this page, the data to be entered must match the data stored in the database, namely the Username and password.



Figure 2. Login Page

Dashboard Page

The dashboard page is the initial page for users after verification or login. The dashboard view serves as the starting point for opening the application, which contains all the submenu pages, including the class data page, academic year data page, student data page, tuition fee billing data page, tuition fee payment data page, user data page, and tuition fee payment report data page.

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Figure 3. Dashboard Page

Class Page

The class data page displays the class name data. In this class data display, there are several icons that function to add class name data, edit class names, and delete class data.

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Figure 4. Class Page

Academic Year Page

The academic year data page displays the academic year data. Just like the class page, this page has several icons that function to add academic year data, edit the academic year, and delete academic year data.

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Figure 5. Academic Year Page

Student Page

The student data page is a page that displays student data. to display the santri data, the admin is required to first select the academic year of the santri they want to display. The student page contains a menu icon for adding data, which is useful for adding students, and then there are menu icons for editing and deleting the student data.

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Figure 6. Student Page

Tuition Fee Billing Page

The SPP billing data page is a page that contains the academic year, billing month, billing year, and the amount of SPP billing per month. On this page, there are menu icons to add SPP billing data, as well as menu icons to edit and delete billing data.

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Figure 7. Tuition Fee Billing Page

Tuition Payment Page

Before making the monthly tuition payment for the students, the admin must first select the academic year and choose the name or student ID (NIS) of the student who will make the tuition payment.

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Figure 8. Tuition Payment Page

Report Page

The report page is a page for viewing payment report data and printing payment reports. The printed payment report will be submitted to the head of the Islamic boarding school. The tuition payment report is printed based on the required academic year.

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Figure 9. Report Page

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Figure 10. Tuition Payment Report Data by Academic Year

5. Conclusion

This research aims to design and build an application that can simplify the monthly payment process of the Education Development Contribution (SPP) for students at Pondok Pesantren Syekh Hamzah Al Fansury, Subulussalam City. This application was developed using the PHP programming language and MySQL database, and has been tested using the Black Box method, which shows that all features are functioning as expected. With the presence of this application, the payment process becomes more efficient, making it easier for the treasurer to record transactions, print receipts, and prepare financial reports. In addition, the data search feature provided allows the treasurer to quickly find payment information without having to search manually through physical records, thereby increasing accuracy and efficiency in managing the financial administration of the pesantren.

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