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Web-Based Accounting Information System In Managing Educational Development Donation Payments (A Study At A Vocational High School In Bandung)

Meike Nadya Chandra¹, Hasanah Tisna Amijaya², Adjat Sudarjat³, Aris Dianto⁴

STMIK Mardira Indonesia^{1,2,3,4}

Email: meikenadya8@gmail.com¹, hastie@stmik-mi.ac.id², ajat.sudrajat@stmik-mi.ac.id³,
aris.dianto@stmik-mi.ac.id⁴

ABSTRACT

³
This study examines the development and implementation of an accounting information system for managing tuition fee payments in educational institutions. The primary aim of this system is to improve efficiency and precision in the administration of tuition fee payments, minimise manual errors, and deliver more transparent and accurate financial reporting. This system is designed to streamline the recording, monitoring, and reporting of tuition fee payments by leveraging information technology.

The technique employed in the development of this system encompasses needs analysis, system design, software implementation, and testing and assessment. This accounting information system encompasses multiple functions, such as payment registration, transaction verification, payment status monitoring, and automated financial report preparation. The deployment of this system is expected to yield substantial benefits for school administrators, parents, and other stakeholders.

The research findings demonstrate that the implemented accounting information system can decrease administrative time and expenses, enhance data accuracy, and facilitate quicker access to payment information for all stakeholders.

Keywords: Accounting Information Systems, Tuition Payment Management, Administrative Efficiency, Financial Reports, Information Technology

INTRODUCTION

With the rise ²in student enrolment and the intricacy ³of financial activities, the demand for a readily available information system intensifies. Different categories of payments, including tuition fees, extracurricular activity fees, uniform expenses, and additional contributions, must be administered with transparency and precision. Discrepancies in the documentation and presentation of financial transactions can result in significant complications, including uncertainty for parents and students, as well as challenges in the school's financial reporting. Consequently, the implementation ⁴of a web-based accounting information system presents a pertinent and novel alternative. This system facilitates more precise and effective handling of payment data while also granting enhanced accessibility for all stakeholders, including school personnel and parents.

⁹Accounting Information System

An accounting information system processes ⁵data and transactions to furnish users with the necessary ⁶information for planning, controlling, and operating a business (Efuntade & Efuntade, 2023; Emadi, 2023)

Administration

Administration, in a specific context, refers to the methodical collection and documentation of

data and information to enable comprehensive access and interrelation of the content. (Riwajanti, 2022; Supriati & Supriatna, 2023)

Educational Development Contribution

Educational support contributions are obligatory monthly fees made by students at school. An agreement between the school committee and the parents collects tuition fees. Tuition payments are designed to enhance the quality of education by funding upgrades in teaching and learning facilities and infrastructure. (Pebriadi et al., 2024)

Cash Receipts

Cash receipts is a system designed to handle transactions related to sources of cash income received by the company (Rahayu & Yulianto, 2023).

Visual Studio Code

⁷Visual Studio Code (VS Code) is a robust and efficient ⁸text editor developed by Microsoft for multiple operating systems, including Linux, macOS, and Windows. (Khoerunisa & Supriyati, 2023)

Web

A website comprises a series of interconnected web pages, often housed ⁶on a web server accessible by the internet or a local area network (LAN). (Ritchi et al., 2019)

Database

A database is characterised as an organised and integrated collection of data that facilitates rapid manipulation, retrieval, and search capabilities. (Monteiro & Cepêda, 2021)

Laravel

Laravel is a PHP framework distributed under the MIT license, constructed on the MVC (model, view, controller) paradigm (Al-Okaily, 2024)

METHOD

This study's approach comprises several critical steps to guarantee the efficient creation and execution of the accounting information system. A needs analysis is conducted to determine the specific requirements of educational institutions regarding tuition fee management. This study guides the system design, guaranteeing its alignment with the requirements of school administrators and stakeholders. Following the design phase, the programme is executed using suitable technology to enable the necessary functionality for payment registration, transaction verification, and payment status monitoring.

During system development, thorough testing and evaluation are conducted to ensure its dependability and accuracy. This includes evaluating the system's ability to generate automated financial reports and its usability for both school staff and parents. The testing step is crucial for identifying potential faults and refining the system further. The implementation of this accounting information system is expected to

yield substantial benefits, including decreased administrative expenses and time, increased data precision, and greater accessibility to payment information for all stakeholders.

RESULTS and DISCUSSION

SYSTEM ANALYSIS

Running system

Students submit their tuition costs directly to the staff, who subsequently register the payment and annotate the tuition card presented by the student as evidence of payment. All tuition fee information is recorded in a ledger. When a student attempts to make a payment or if discrepancies arise, the staff consults the ledger to verify the student's payment status. This approach lacks time efficiency, particularly when students consistently make late payments, as personnel are unable to ascertain the status of these payments swiftly. Upon reaching capacity, the ledger is archived as a physical document, which frequently results in retrieval delays and the risk of losing critical records when needed.

Use case diagram

A use case diagram comprises actors, use cases, and their interrelations. The use case diagram is crucial for visualising, describing, and documenting the system's behavioural requirements. This explains the actions users can undertake inside the existing system.



Figure 1. Proposed System Use Case Activity diagram

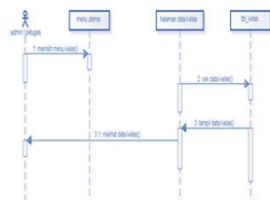


Figure 3. Class Data Sequence Diagram
Class Diagram

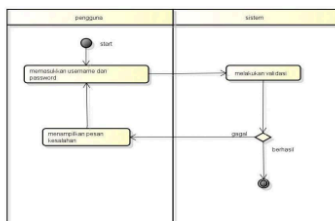
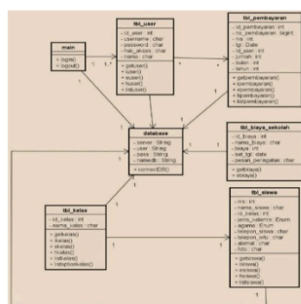


Figure 2. Login Activity Diagram

System design

Sequence diagram

A sequence diagram illustrates an object's output in a use case by detailing the object's lifespan and the messages exchanged between objects. This is a sequence diagram for the Educational Development Contribution payment information system at a vocational



1 **Figure 4. Class Diagram**

Menu Structure Design

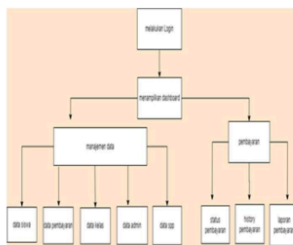


Figure 5. Menu Structure

Interface Design

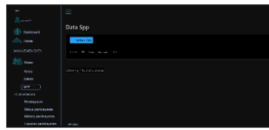


Figure 6. Page Educational Development Contribution

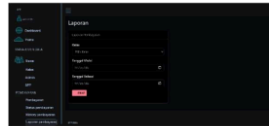


Figure 7. Payment Report

System Implementation

The requirements for the application design serve as the fundamental basis to ensure that the design aligns with the previously defined objectives. The proposed approach encompasses both software and hardware environments.

Hardware Implementation

1. Hardware = Processor, Memory, Mouse, keyboard
2. Spesifikasi = Intel(r) core(tm) i5-2430m cpu @ 2.40ghz 2.40 ghz

Software Implementation

The construction of a web-based accounting information system for educational contributions (SPP) necessitates consideration of both hardware and software requirements to facilitate the constructed system. The requisite software specifications are as follows:

1. Sistem operasi: microsoft windows 2013
2. Database server : mysql, phpmyadmin 8.0.28
3. Browser : mozilla, google chrome
4. Control panel : xampp 3.3

Database implementation

The discourse on the table structure in the database outlines the configuration of the database tables, which are derived from the design outcomes presented in the preceding chapter. This programme comprises a single database featuring multiple tables, including:

1. Users database table

Table Name: users

Information : This table contains user data

id	username	password	email	status
1	admin	admin	admin@gmail.com	active
2	user1	user1	user1@gmail.com	active
3	user2	user2	user2@gmail.com	active
4	user3	user3	user3@gmail.com	active
5	user4	user4	user4@gmail.com	active
6	user5	user5	user5@gmail.com	active
7	user6	user6	user6@gmail.com	active
8	user7	user7	user7@gmail.com	active
9	user8	user8	user8@gmail.com	active
10	user9	user9	user9@gmail.com	active

Figure 8. Users Data Table

2. Educational Development Contributions database table
 Table name: Educational Development Contributions
 Information : This table contains data on educational development contributions.

Figure 9. Table of Educational Development Contribution Data

3. Student Database Table

Table name: Student

Information : This table contains student data

Figure 10. Student Data Table

4. Officer database table

Table name : officer

Information : This table contains officer data

Figure 11. Officer Data Table

5. Payment Database Table

Table name : payment

Information : This table contains payment data

Figure 12. Payment Data Table

6. Class Database Table

Table name : class

Keterangan : This table contains class data

Login page view

To initiate a programme, you must first authenticate by inputting your username and password. The login form serves as the system's initial interface, enabling access to the system and facilitating progression to the subsequent phase.



Figure 13. Login Page Display

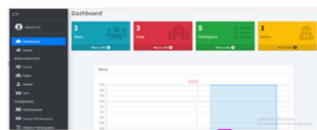


Figure 14. Dashboard Page View

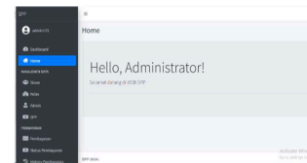


Figure 15. Home Page View

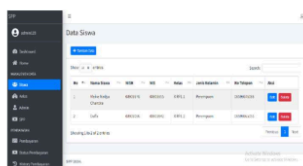


Figure 16. Student page view

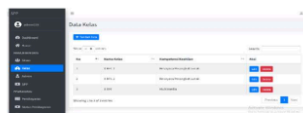


Figure 17. Class Page View

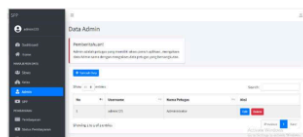


Figure 18. Admin Page View



Figure 19. Educational Development
Donation Page View

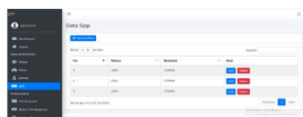


Figure 20. Payment Page View



Figure 21. Payment Status Page View

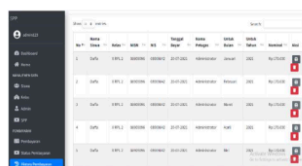


Figure 22. Display The Payment History
Page

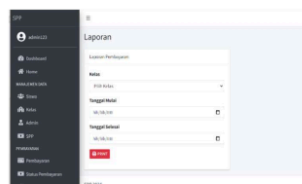


Figure 23. Payment report page display

CONCLUSION

The web-based accounting information system for managing SPP (educational contributions) can improve efficiency, transparency, and accuracy in payment management. This system facilitates expedited and simplified access for users, including students, parents, and school administration, to oversee and administer SPP payments in real-time.

This system, equipped with automation and reporting capabilities, mitigates the risk of human mistakes, accelerates the data reconciliation process, and delivers more precise and prompt financial information.

Below are a few recommendations: Consistent maintenance of both software and hardware is essential for optimal performance. Implementing data backups is crucial to avert

data loss in the event of software or hardware malfunctions. Furthermore, supervision by authorised individuals is essential to prevent any data manipulation.

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