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*International Seminar and Conference
on Management, Research, and Transformation*

TUITION PAYMENT TRANSACTION PROCESSING SYSTEM AT MARKAZ AL-QURAN ISLAMIC BOARDING SCHOOL TASIKMALAYA CITY

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Abstract. This study aims to obtain comprehensive study results regarding the SPP Payment Transaction Processing System at the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City. The main problem faced by the institution is that the SPP payment process is still done manually, which often causes delays, recording errors, and difficulties in preparing monthly financial reports. To overcome this, this study uses a descriptive method to systematically describe the ongoing data processing process, as well as the Rapid Application Development (RAD) system development method which consists of the stages of project requirements planning, prototyping, testing and feedback, implementation (coding), and system maintenance. The results of the study show that the information system built using Microsoft Visual Studio 2008 is able to speed up the SPP payment transaction process, reduce input errors, and increase the efficiency of data management. This system is also equipped with student data search features, automatic payment reports, and a late payment notification system that helps administrative officers monitor payment status in real time. Thus, the implementation of this system has a positive impact on the effectiveness and accuracy of financial data processing, and supports a faster, more precise, and more transparent decision-making process for the management of the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City.

Keywords: transaction processing system; tuition payment; microsoft visual studio 2008.

1. Introduction

1.1 Background

The rapid development of science and technology has encouraged various institutions, including educational institutions, to adapt and utilize information technology to support their operations and work. Computer technology is now not only a tool but has also become a crucial part of organizational work systems due to its ability to increase efficiency, accuracy, and speed, particularly in data management and administration.

One common application of information technology is information systems. Information systems assist in computerized, structured data management, expediting transaction processes, and simplifying reporting. Many educational institutions have integrated information systems into their operations to facilitate their work, including the administrative management of Education Development Contribution (SPP) payments.

The Markaz Al-Quran Islamic Boarding School in Tasikmalaya City is an educational institution that balances religious and general curriculum. In its administrative management, particularly in the tuition payment process, this Islamic boarding school still uses manual methods. This creates various obstacles, such as slow recording, potential data input errors, long queues during payment, and difficulties in tracking student transaction histories. This situation certainly hinders the effectiveness and efficiency of the administrative department.

The use of a manual tuition payment system also causes delays in preparing financial reports and difficulties in real-time payments. Therefore, a solution is needed in the form of a payment information system that can automate this administrative process.

Utilizing desktop-based technology, the author developed a Tuition Payment Transaction Processing System at the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City using Microsoft Visual Studio 2008. This system was designed to address the challenges in recording and reporting tuition payments, while also improving the speed, accuracy, and ease of managing the school's financial administration.

Based on this background, the author designed an information system that is expected to provide solutions to existing problems and serve as the initial step towards a computerized administrative system at the Markaz Al-Quran Islamic Boarding School. The author is interested in conducting research entitled "Tuition Payment Transaction Processing System at the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City."

1.2 Accounting Information System

An AIS is an organizational component that classifies, organizes, and communicates relevant financial information for decision-making by external parties, such as creditors, tax authorities, and internal parties, such as managers and employees (Nasution, 2020: 3).

1.3 Transaction Processing System

A Transaction Processing System is a collection of economic data derived from research or business operations as a result of internal or external business activities. It serves as financial information and data that can be used for management at the operational and other levels (Tatyana et al., 2023).

1.4 System

A system refers to a collection of closely interrelated elements that enable a business to achieve specific goals (Rahmawati and Sumarno, 2020: 3).

1.5 Transaction

A transaction is an agreement between two parties where one party sells something (goods or services) to another party (the buyer), and the buyer must pay the seller for the goods or services purchased (Sembiring et al., 2022: 79).

1.6 Tuition Fees

Tuition fees are a mandatory fee that must be paid by each student as a source of funding for the school to support educational activities (Fahlevi et al., 2023).

2. Problem Analysis

2.1 Document Analysis

The Markaz Al-Quran Islamic Boarding School in Tasikmalaya City uses several documents to carry out its activities, such as recording and processing tuition payment transaction data. These documents include:

1. Tuition Payment Card
2. Tuition Payment Book
3. Tuition Payment Report

2.2 Technology Analysis

The equipment used at the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City to manage tuition payment transaction data manually uses a book.

The device specifications that support the proposed tuition payment transaction system program include:

1. Hardware
 - a. Computer
 - b. 6 GB RAM or more
 - c. 250 GB hard drive or higher
 - d. USB Mouse and Keyboard
 - e. Printer
2. Software
 - a. Windows 11 Ultimate or later
 - b. Microsoft Access 2019
 - c. Microsoft Visual Studio 2008
 - d. Crystal Report
3. Brainware

This system is used by the payment administration staff to process tuition payments at the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City.

2.3 Information System Development Methods

According to Fahlevi (2024), the RAD method is a linear sequential software development process that emphasizes short development stages. The steps used in developing a RAD (Rapid Application Development) system are as follows:

1. The initial stage is determining project requirements.
2. The second stage is prototyping, which allows the developer to quickly provide a prototype of the features and functionality that meet user requirements.
3. The third stage is the testing and feedback stage, which assesses the program's functionality, appearance, and interface being developed.
4. The fourth stage is the implementation stage, or the final product. In this stage, testing is conducted, if necessary, by users and developers to obtain feedback and produce the final product.

3. Results and Discussion

3.1 System Testing

Testing was conducted using the Black Box Testing method, which tests system functions without viewing the program code. Testing was conducted on the following features:

1. Login: successfully logged in as an officer.
2. Student data input: data successfully saved in the database.
3. Tuition payment transactions: the amount is correct and recorded automatically.
4. Report printing: the report results are displayed and printed according to the data.

All features functioned as required, and no errors were found during testing. The payment feature is designed to automatically record transactions and reduce manual input errors. This is crucial for more efficient financial administration processes.

A tuition payment transaction processing system developed using the Rapid Application Development (RAD) method and Visual Studio C# 2008 has been

successfully designed and tested. Test results indicate that all key features function effectively and meet the needs of the Islamic boarding school. This system can improve the effectiveness, accuracy, and efficiency of the payment process.

Based on the system testing results, all key features appear to be functioning as expected. This demonstrates the system's ability to accommodate user needs, particularly in simplifying the recording and reporting of tuition payment transactions. Furthermore, feedback from administrative staff indicates that the system's interface is quite easy to understand. However, there was some feedback regarding the need for an automatic recap report feature and a payment due date reminder system. Therefore, this system can be considered feasible for implementation, although further development is warranted based on the future needs of the Islamic boarding school.

3.2 Study Limitations

This research still has several limitations. First, the system has not been tested in real time in the Islamic boarding school environment because it is still in the development stage. Second, the system's features are still limited to tuition payments and do not cover other payments such as activity fees or exams. Third, there is no integration of automatic notifications to students' guardians.

3.3 Research purposes

1. Obtain the results of a study on the current system for processing tuition payment transactions at the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City.
2. Obtain the results of the study on the proposed system to help simplify and expedite the processing of tuition payment transactions at the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City.

3.4 Flowmap In Progress

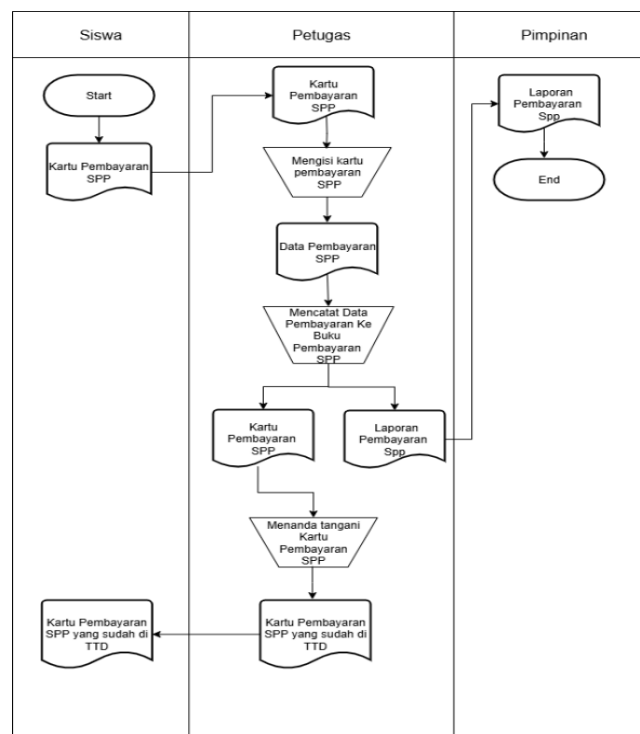


Figure 1. Proposed Flowmap

Tuition Payment Transaction Processing System at Markaz Al-Quran Islamic Boarding School Tasikmalaya City

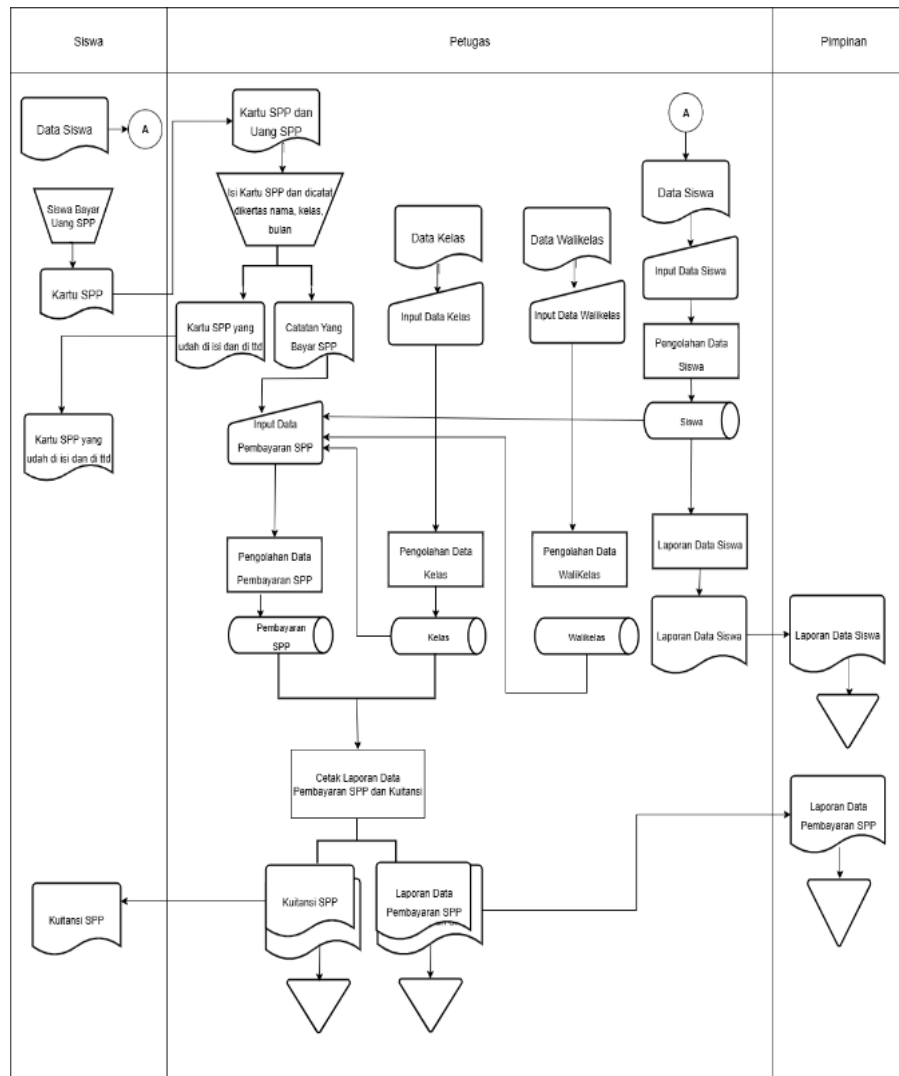


Figure 2. Diagram Context

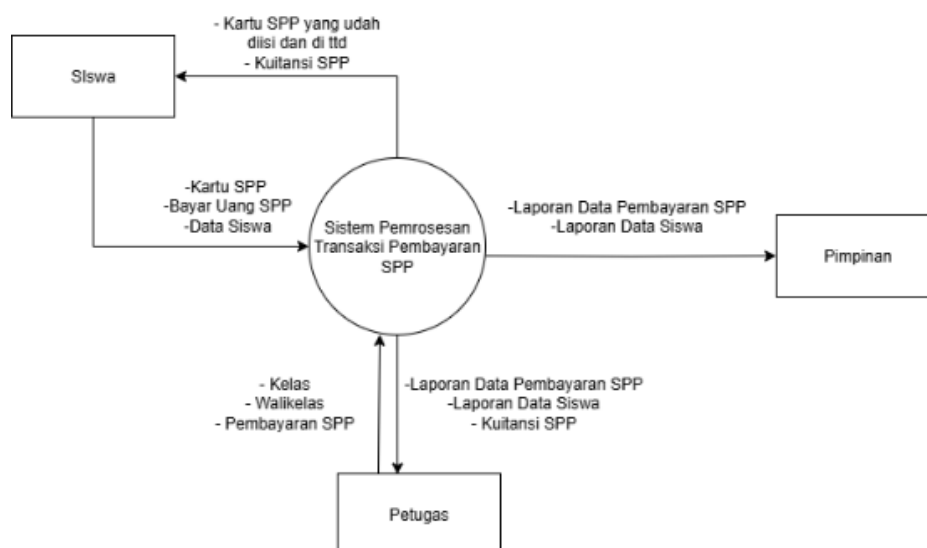


Figure 3. Context Diagram of the Tuition Fee Payment Information System

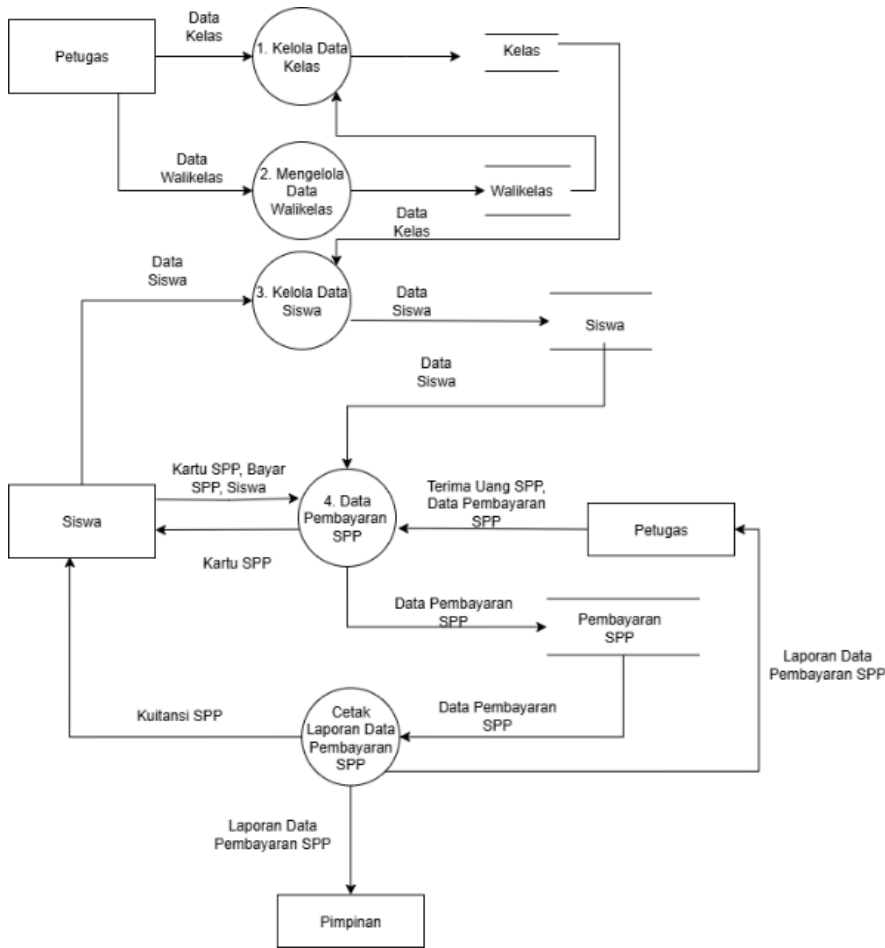


Figure 4. Data Flow Diagram (DFD) of the Tuition Fee Payment Information System

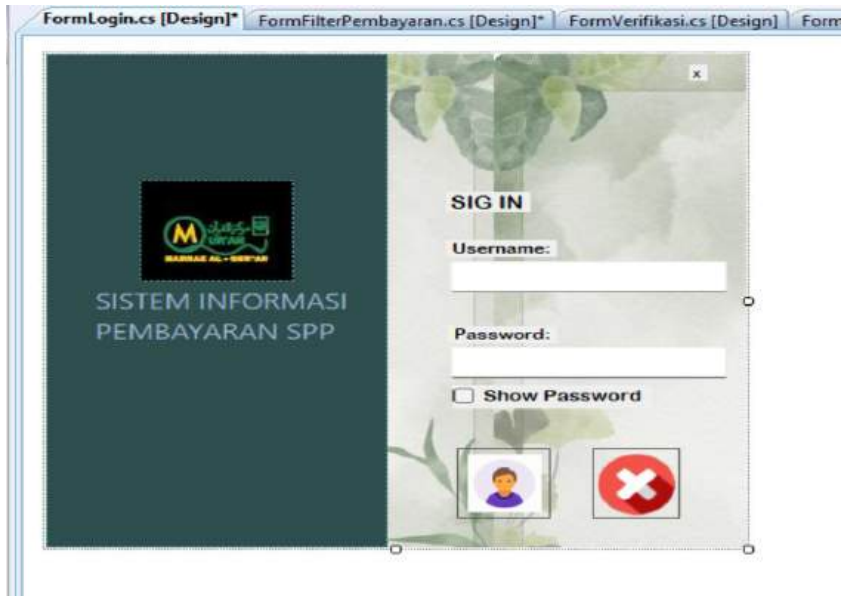


Figure 5. Login Screen Design



Figure 6. Main Menu Screen Design



Figure 7. Student Data Input Screen Design



Figure 8. Homeroom Teacher Input Screen

Figure 9. Class Data Input Screen Design

Figure 10. Payment Transaction Screen Design

Nama	NIS	Kelas	Tanggal Pembayaran	Status Bayar	Bulan	Total Bayar
Hani Zalfa	500032780226220004	XII	21/07/2025 12:48:3	SUDAH BAYAR	januari	87000

Figure 11. Report Screen Design

FormCetak

Tanggal Mulai: 23/08/2025

Sampai Tanggal: 23/08/2025

Kelas:

Keterangan:

CETAK KEMBALI

Main Report

23/08/2025

DATA PEMBAYARAN SPP
SISWA / SISWI MARKAZ AL-QURAN

Jl. Padatuka Babakan Jawa Pintu RT.01 RW.10 Kel Sukamajukaler, Kec Indhiang, Kota Tasikmalaya

Nama	NIS	Kelas	Tanggal Pembayaran	Status Bayar	Bulan	Total Bayar
Hani Zalfa	500032780226220004	XII	21/07/2025 12:48:3	SUDAH BAYAR	Januari	87000

Figure 12. Payment Report Screen Design

Form1

LAPORAN BAYARAN SISWA

Laporan Per:

NAMA SISWA:

Kelas:

PENCARIAN SISWA KEMBALI PENCARIAN KELAS

Main Report

23/08/2025

Laporan Pembayaran SPP
Markaz Al-Quran Tasikmalaya

Jl. Padatuka Babakan Jawa Pintu RT.01 RW.10 Kel Sukamajukaler, Kec Indhiang, Kota Tasikmalaya

NIS	Nama	Kelas	Tanggal Pembayar	Bulan	Total Bayar
5000327802262200	Hani Zalfa	XII	21/07/2025 12:48:32	Januari	87000

Current Page No: 1 Total Page No: 1+ Zoom Factor: 100%

Figure 13. Student Data Report Design

FormFilterPembayaran

FormFilterPembayaran

Filter Siswa Berdasarkan Bulan Dan Kelas

Filter Siswa:

BULAN:

KELAS:

FILTER HOME

Figure 14. Student Filter Screen Design

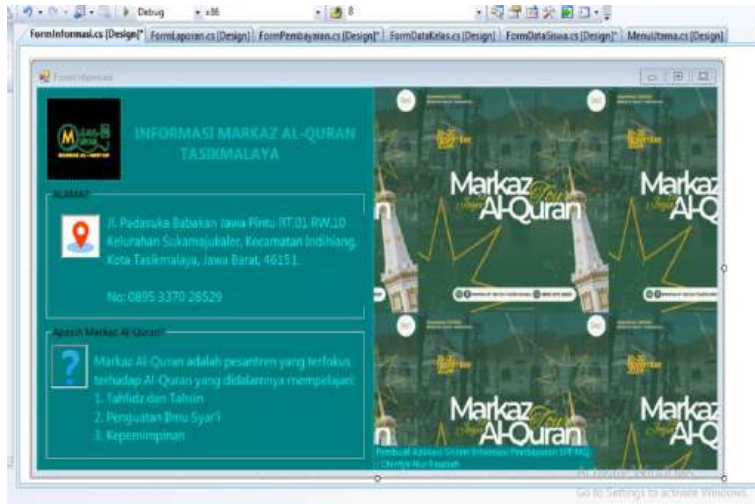


Figure 15. Information Screen Design

4. Conclusion

Based on the problem background, input, analysis formula, and discussion conducted by the author, it yielded useful results that can be used as input for the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City, especially in the tuition payment section. The author concludes that:

1. The current system for tuition payment at the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City still utilizes a manual system because it is not yet computerized.
2. The proposed system, using Windows C#, has proven to be helpful, simplifying work, producing appropriate and more accurate data, and streamlining the tuition payment process at the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City. Some of the advantages of the proposed system include:
 - a. The processing of tuition payment transaction data at the Markaz Al-Quran Islamic Boarding School in Tasikmalaya City allows for rapid data processing, reducing the time required to create financial reports.
 - b. The Tuition Payment Transaction Processing system reduces input errors and speeds up the administrative work process in managing tuition payments.
 - c. Supports management in decision-making.
 - d. Simplifies data storage and prevents duplication.
 - e. Ease of searching for required data.

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