

ANALYSIS OF SCHOOL PAYMENT APPLICATIONS USING WEB-BASED MIDTRANS PAYMENT GATEWAY

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Abstract

School payments use the midtrans payment gateway in order to facilitate data collection and the process of processing student payment data so that it can produce fast and accurate financial reports. The research methodology used in the tuition payment system using the midtrans payment gateway is a literature study method, which is data collection carried out by taking data from various books in the library, journals and other books that can be used as a basis for analyzing problems that can be discussed in research, as well as the field study method, namely by conducting direct observations such as interviews and observations. The result of this research is the existence of an application tool made with the PHP programming language and data storage using a database from MySQL so that the payment process using the midtrans payment gateway in schools becomes more effective, efficient and practical.

Keywords: Information Systems, Payments, Schools, Midtrans

INTRODUCTION

The development of information technology has made it easier for users of the results of information technology in today's era, both for entrepreneurs, businesses, students and the community. The twenty-first century is a century of competition in all fields and aspects of life. Organizations in the private, government and school categories try to optimize existing resources to achieve the set goals (Sinambela et al., 2020). Meanwhile, in each agency, computers are one of the tools used to process existing administrative data, one of which is student financial administration data, so that parties in need can easily access the necessary student financial administration data (Supianto et al., 2019).

However, the processing of school payment data so far still feels difficult to do because data recording that is still manual sometimes causes errors, because the recording is done only in a moderate way. One of the problems that often arise is the school payment service and the difficulty of finding payment administration data if needed at a certain time because all data is still in the form of file files that do not have an integrated database. Another problem that arises is the administrative part of the difficulty in compiling reports and the process of collecting financial data that is separate in several financial books. Based on this, an application is needed that is able to overcome these problems so that management becomes more effective and efficient.

LITERATURE REVIEW

Technological advances have a multiplier nature because they provide benefits, namely providing progress in various fields, one of which is the payment system (Belliani & Sitorus, n.d.), According to (Syoviyana et al., 2024), "A payment system is a system that regulates agreements, and carries out operations and mechanisms for use, receipt of payment instructions and to fulfill obligations that will later be collected through payments between individuals, banks and other financial institutions".

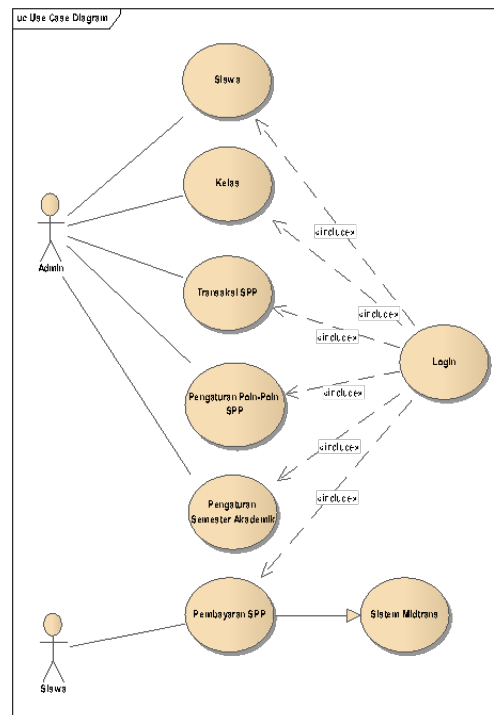
According to Pendidikan & Konseling, n.d., "An information system is a system in an organization that brings together the needs of daily transaction processing that supports the operational functions of the organization, this system stores, retrieves, changes, processes and communicates the information received using information systems or other system equipment". According to (Pendidikan & Konseling, n.d.), "An information system is a system that has components or subsystems to produce information".

According to (Akbar et al., 2023), "Information systems are data that is processed so that it can be used as a basis for making the right decisions". From the above opinion, it can be concluded that an information system is a collection consisting of software, hardware, communication networks and data sources in storing, retrieving, changing, processing, collecting, and communicating information in an organization.

According to the definition of payment, namely: The transfer of ownership rights over a sum of money or from the payer to the recipient, either directly or through the medium of banking services (Zhamilevich, 2023). Based on the explanation of the experts above, it can be concluded that payment is a process that includes a set of rules, institutions, and mechanisms used to carry out the transfer of funds, in order to fulfill an obligation arising from an economic activity.

METHOD

A use case diagram describes a function required by the system. A use case presents an interaction between the user and the system.



Picture 1. Use Case Diagram

- a. Use Case : Login
Actors : Admin and Students
Description:
 1. On the login page, admin and students fill in the username and password that has been registered
 2. If you fail to fill in the username and password, a login error message will appear
- b. Use Case : Students
Actors : Admin
Description:
 1. Admin selects the student menu
 2. Admin click the add student button
 3. Input student data and then save it
 4. Click the edit button to change student data
 5. Click the delete button to delete student data
- c. Use Case : Classes
Actors : Admin
Description :
 1. Admin selects the class menu

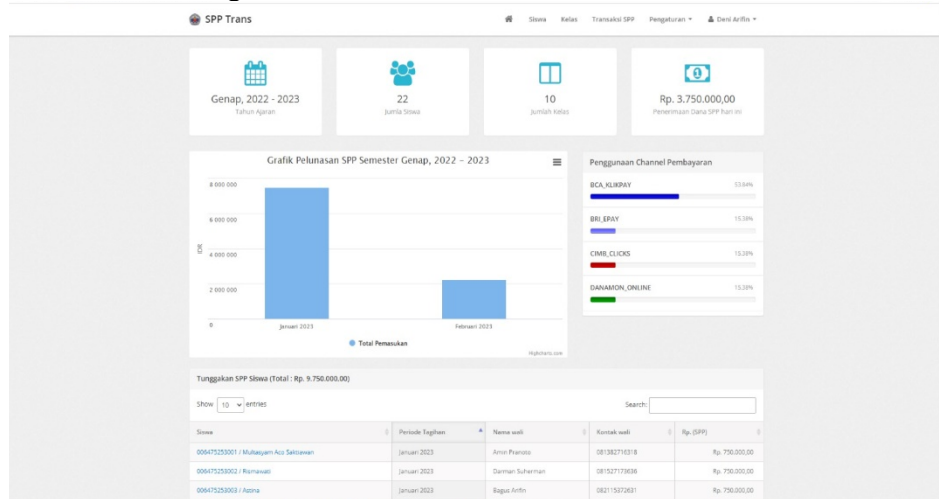
2. Admin selects a class
3. Click the print button to print student data
- d. Use Case : Payment Transactions
Actors : Admin
Description :
 1. Admin selects the SPP transaction menu
 2. Admin selects the school year, month period and class
 3. Click the search button then click the print button to print the whole
 4. The admin selects one of the students to view the payment status and clicks the print button to print one student
- e. Use Case : Admin settings
Actors : Admin
Description :
 1. Admin selects the settings menu
 2. Select the Payout points settings
 3. Admin click the add points button for Payment details
 4. Input the Payment points data and save it
 5. Click the edit button to change the Payment points data
 6. Click the delete button to delete the Payment points data
- f. Use Case : Academic Semester Arrangements
Actors : Admin
Description:
 1. Admin selects the settings menu
 2. Select the Academic Semester Setting
 3. Admin click the add school year period button
 4. Input data for the school year period and then save
 5. Click the edit button to change the school year period
 6. Click the Delete button to delete the school year period
- g. Use Case : Student Payments
Actors : Student
Description :
 1. Students select the payment information menu
 2. Click the make payment button
 3. Make a payment using midtrans

RESULTS AND DISCUSSION

System implementation is a procedure that is carried out to complete the design in the approved system design document and to test, install, start, and use a new system or improved system. The user of a computer for problem solving needs a good system, so as to enable the computer to successfully perform its task, which is to process data into information

App Display

a. Admin Home Page



Picture 2 Admin Home Page

b. Student Data Page

NIS	Nama Lengkap	Jenis Kelamin	Kelas	Absensi	Orang Tua / Wali
00647525000	Ali Alamsyah	Laki-Laki	XI IPA 1	0	Dani Permatasari 081922011000
00647525003	Aenna	Perempuan	XI IPA 1	0	Egusa Arifin 082110370031
00647525015	Basuki Rahmat	Laki-Laki	XI IPS 1	0	Dani Sugita 082194010018
00647525016	Budi Nugroho	Laki-Laki	XI IPS 1	0	Mulyono 081620110023
00647525005	Clarence Dewa Kambarsari	Perempuan	XI IPA 1	0	Dwi Lukmaningsih 081700200006
00647525019	Dimas Septura	Laki-Laki	XI IPS 1	0	Amriyati 081336030008
00647525019	Doni Rianto	Laki-Laki	XI IPS 1	0	Fabir Koesah 081302010014
00647525023	Fernando Simamora	Laki-Laki	XI IPA 1	0	Jonathan Simamora 081700411700

Picture 3. Student Data Page

c. Student Class Data Page

NIS	Nama Lengkap	Jenis Kelamin	Alamat	Orang Tua / Wali	Jml. Tunggikan
00647523009	Ali Alamsyah	Laki Laki	Jl. Padang No.9, RT.3/RW.6, Pa. Mangga, Kecamatan Setiabudi...	Devi Permangih 081523701360	
00647523003	Astma	Perempuan	Jl. Bumi No.2, RT.3/RW.2, Jatiwatu, Kec. Palmerah, Kota Jakarta...	Ragga Arfin 081132712031	1 Bulan
00647523005	Clarissa Devi Ambarsari	Perempuan	RW.4, Rawas Terate, Cakung, East Jakarta City, Jakarta	Devi Listianingsih 08179263266	
00647523023	Fernando Simamora	Laki Laki	Koromakan Jagati, RT.1/RW.022, Ptd. Benda, Kec...	Jonathan Simamora 081762011730	
00647523007	Fito Yulianto	Laki Laki	Cipinang Elak 2a, RT.3/RW.10, Cipinang Muara, Kecamatan...	Hendro Rahmanto 081300012018	
00647523011	Hermawan Dwi Putra	Laki Laki	Jl. Perintis Kemerdekaan No.5, RT.1/RW.15, Kago Putih, Yek...	Zamrudin 081725232020	

Picture 4 Student Class Data Page

d. Transaction Data Page

NIS	Nama Lengkap	Bulan Periode	Rp. (SPP)	Status Pembayaran	Tanggal Pembayaran	Metode Pembayaran
00647523009	Ali Alamsyah	01-2023	Rp. 750.000,00	Settlement	29 Januari 2023 21:51	BCA_KLIPAY
00647523003	Astma	01-2023	Rp. 750.000,00	Unsurupg Pembayaran		
00647523005	Clarissa Devi Ambarsari	01-2023	Rp. 750.000,00	Settlement	29 Januari 2023 21:41	BRI_PAY
00647523023	Fernando Simamora	01-2023	Rp. 750.000,00	Settlement	05 Februari 2023 01:27	DANAMON_ONLINE
00647523007	Fito Yulianto	01-2023	Rp. 750.000,00	Settlement	29 Januari 2023 21:50	BCA_KLIPAY
00647523011	Hermawan Dwi Putra	01-2023	Rp. 750.000,00	Settlement	29 Januari 2023 22:03	DANAMON_ONLINE
00647523010	Rivan Prasana	01-2023	Rp. 750.000,00	Settlement	29 Januari 2023 22:02	CMB_CLICKS
00647523006	Muhammad Khalifah Rusdi	01-2023	Rp. 750.000,00	Settlement	29 Januari 2023 21:47	BCA_KLIPAY
00647523001	Muhammad Ayo Setiawan	01-2023	Rp. 750.000,00	Unsurupg Pembayaran		
00647523002	Rika Hidayati	01-2023	Rp. 750.000,00	Unsurupg Pembayaran		

Picture 5 Transaction Data Page

CONCLUSION

With the creation of a tuition payment information system using the midtrans payment gateway in schools, the process of data processing and information presentation that has been done manually becomes easier and more efficient. With MySQL, data control becomes better and data is stored in the database. The design of this tuition payment information system is able to provide information about student data, especially student tuition fee payment administration data so that it can make it easier to make periodic reports according to needs.

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