



Web-Based School Payment Information System for Public High School 2 Kampung Rakyat

Mira Handayani Siregar¹, Syaiful Zuhri Harahap², Musthafa Haris Munandar³, Masrizal⁴, Ade Parlaungan Nasution⁵, Yudi Triyanto⁶

^{1,2,3,4}Information System, Faculty of Science & Technology, Labuhanbatu University, Jln.S.M. Raja No.126 A Aek Tapa Rantauprapat, Kab. Labuhanbatu Sumatera Utara, Indonesia

⁵Management, Faculty of Economy and Business, Labuhanbatu University, Jln.S.M. Raja No.126 A Aek Tapa Rantauprapat, Kab. Labuhanbatu Sumatera Utara, Indonesia

⁶Agrotechnology, Faculty of Science & Technology, Labuhanbatu University, Jln.S.M. Raja No.126 A Aek Tapa Rantauprapat, Kab. Labuhanbatu Sumatera Utara, Indonesia

e-mail: mira.hndyn@gmail.com, syaifulzuhriharahap@gmail.com, harismunandaar@gmail.com,
masrizal120405@gmail.com, adenasution@gmail.com, triyantoyudi81@gmail.com

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ABSTRACT

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The progress and development of information technology is currently very rapid. Likewise, the world of education should also always experience development. Kampung Rakyat 2 Senior High School (SMA) is one of the schools that still uses manual means in paying school fees. Payment of school fees is an activity carried out every once a month that is charged to students, where the money will be used to pay salaries for honorarium teachers and other needs. Data collection methods used are observation, interview, and literature study. And using the UML system design method Diagram (Use Case Diagram, Activity Diagram, Sequence Diagram and Class Diagram), with database design and designing interface menus. The programming used is website programming using MySQL and PHP databases. This research resulted in a web-based school payment information system for Kampung Rakyat 2 High School. Hopefully with this information system can simplify and shorten the work of officers, so the process of entering data on payment of school fees can be completed in a short time.

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1. Introduction

Kampung Rakyat 2 Negeri 2 Senior High School (SMA) is the first public school in Teluk Panji which was established in 2012 in Labuhanbatu Selatan Regency which has been accredited B, where there are two majors, namely Science and Social Sciences, where the total number of students of the first Senior High School 2 Kampung Rakyat reached 639 students. Therefore, Public Senior High School 2 Kampung Rakyat must have a program so that there are no errors in data processing, such as data on school fees payments at Kampung Rakyat 2 Public Senior High School.

Payment of school fees is an activity that is carried out once a month that is borne by students, where the money will be used to pay teacher salaries, honoraria and other purposes. The problem with Kampung Rakyat 2 Negeri 2 Senior High School is that the payment of school fees is still handwritten, namely by storing data in the form of bookkeeping, which contains the number, Nis, name and description in the bookkeeping. Where in this bookkeeping is made in one school year, and in this payment of school fees, there is no set date for paying tuition fees, so that many students are late paying school fees, and no card is made of proof of payment of school fees given to students because they are not there is a budget for making the card. The State Senior High School 2 Kampung Rakyat requires an Information System in Processing School Fee Payment data, with this information system it is hoped that school fee payment officers can simplify and shorten their work, so that the data entry process for tuition payments can be completed in a short time.

2. Research Methodology

The data test method is a system requirement that will be built through several activities such as interviews, observation, and literature study. After that, an analysis of the application is carried out. In



conducting this research, the authors conducted the data in the following ways:

- a. **Observation Method**
A data method by means of peering, the data collection process is taken from the South Labuhanbatu Education Office.
- b. **Interview Method**
That is to ask questions and answers directly to the leadership and employees of the agency so that they get regulated data. There are also tools used are writing tools such as pens, pencils and books.
- c. **Literature Method**
Conduct data assessments by collecting and reading books, searching (browsing) on several sites, as well as scientific writings related to this research.

3. Discussion

Procedure design is a design that is done to determine the details of the algorithm that will be expressed in a program. The procedural design for this school fee payment information system is as follows:

3.1 Use Case Diagram

Describes the sequence of activities carried out by actors and systems to achieve a specific goal. Although explaining activities, use cases only explain what actors and systems do, not how actors and systems carry out these activities.

The following is a diagram of the process design context in system design:

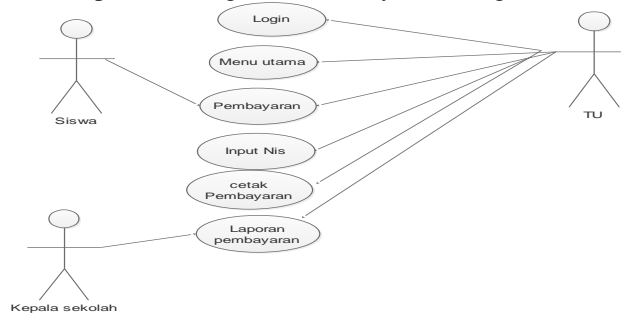


Fig 1. Use Case Diagram Payment of tuition fees

Information :

- a. Student Actor makes tuition payments by mentioning the registration number to the administrative actor (TU).
- b. The TU administrative actor receives money before entering the system, TU logs in by entering the student's identification number, then imports the nominal money paid and then TU prints the tuition payment slip.
- c. The principal receives a payment recap report from the TU regarding all data on tuition payments in order to check the amount of money per month.

3.2 Sequence diagram

Depicting interactions between objects in and around the system its use is to show a series of messages sent through several objects.

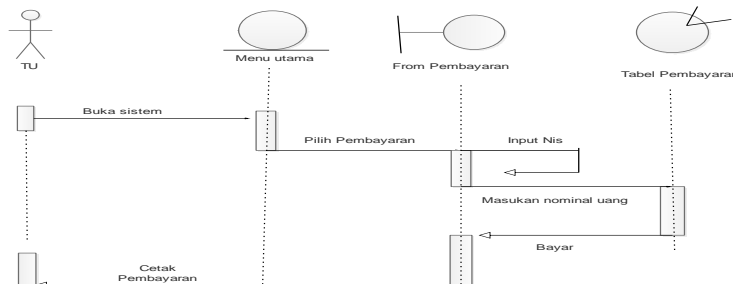


Fig 2. Sequence Diagram Payment of tuition fees

Information :

- a. TU opens the system and then the main menu display appears, TU clicks the payment menu.

- b. Then TU inputs the student identification number, a payment display will appear, TU enters the nominal money and selects the month then click pay.
- c. After a piece, the TU can print a payment receipt.

3.3 System Design

The design of a program system is needed to clarify the details of the course of the program so that it is easy to understand, how the program process is translated into a programming language. As for the programming described using Activity Diagrams, here is an overview of programming in the form of an Activity Diagram:

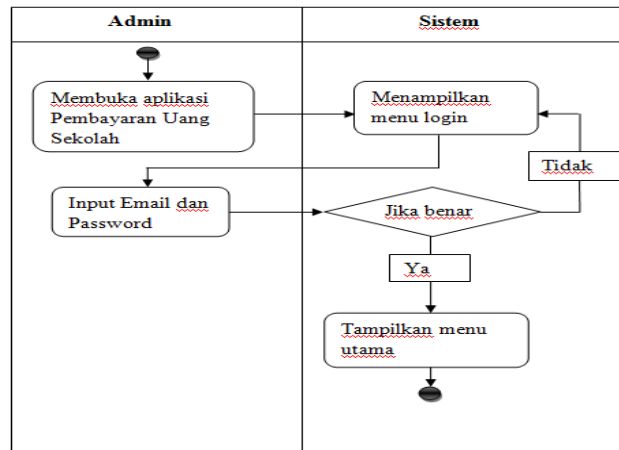


Fig 3. Activity Diagram Login

Information :

- a. Admin opens the school fee payment application then selects the Login menu
- b. The system displays a login form.
- c. Admin input username and password then submit to the system.
- d. The system processes the data entered by the admin if it is correct then the main menu will appear, otherwise the main menu will not appear.

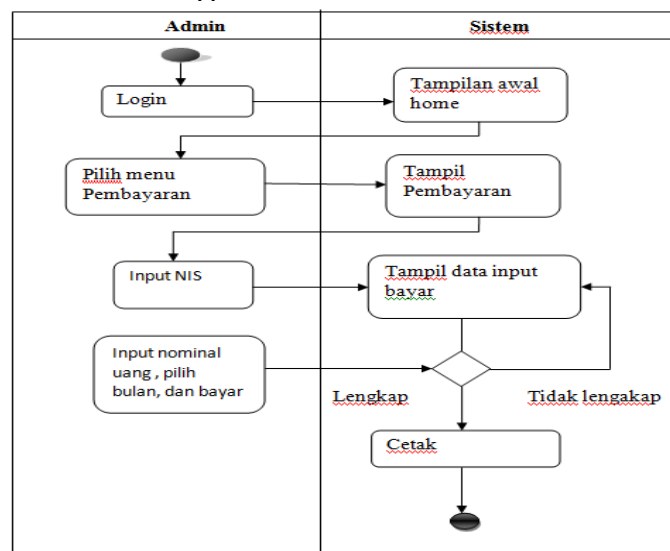


Fig 4. Activity Diagram Payment input

Information:

- a. After the admin correctly enters the username and password, the admin can login.
- b. The system will display the initial Home screen.
- c. Admin selects the payment menu
- d. The system displays a display of tuition payments.
- e. Admin inputs the student ID number. If the admin incorrectly enters the student ID number, the system will display a blank pay display. If the student ID number is correct, the system will display the correct payment display.
- f. Admin input the nominal money, select month and pay. Then the admin can print it.

3.4 Interface Design

The interface design for the Payment of School Fees Information System at the Public Senior High School 2, Kampung Rakyat.

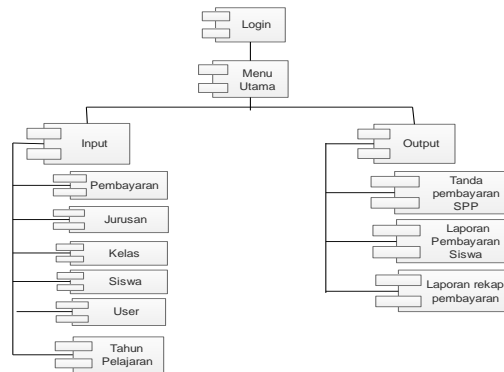


Fig 5. Component diagram Admin

Implementation is an action or form of real action in carrying out a well-designed plan. In other words, implementation can only be done if there is already planning and not just an act. The recommended scope of implications includes both hardware and software environments.

3.5 System View

Implementation of the display / interface is done with each application page created and its coding in the form of a program file.

3.6 User Display

The following displays the user contained in the Payment Application for School Fees at SMA Negeri 2 Kampung Rakyat, as follows:

3.7 Login Display

Before entering we have to enter a username and password first. For example username: teacher password: teacher then we log in.



Fig 6. Login View

3.8 Home Menu Display

After we log in, the home menu will appear where there is a payment menu, reports, master and user data.



Fig 7. Home Menu Display

4. Conclusion

Based on the design and implementation of the School Fee Payment Information System (case study: Public Senior High School 2 Kampung Rakyat), it can be concluded that:

- This school fee payment information system can make it easier for users to enter data on payment of school fees at Public Senior High School 2 in Kampung Rakyat.
- This school fee payment information system can make it easier for users in their work to organize and manage new tuition payments.
- This information system for paying tuition fees can make it easier for users to produce a required report according to their wishes or goals.

5. References

Journal Article

- [1] R. Aisyah, R. Watianthos, and M. Nasution, "Sistem Informasi Data Guru Mtda Pada Kantor Kesra Setdakab Labuhanbatu Berbasis Web," *J. Ilm. AMIK Labuhan Batu*, vol. 5, no. 2, pp. 35–45, 2017.
- [2] R. Yunida *et al.*, "Sistem Informasi Seleksi Penerimaan Beasiswa Ptn Siswa / I," vol. 6, no. 2, pp. 24–34, 2018.
- [3] I. R. Munthe, "Perancangan Sistem Informasi Pengarsipan Data Penduduk Pada Kantor Camat Bilah Hulu Kabupaten Labuhan Batu Dengan Metode System Development Life Cycle (SDLC)," *Inform. J. Ilm. AMIK Labuhan Batu*, vol. 5, no. 1, pp. 22–31, 2017.
- [4] P. Uang and S. Berbasis, "Sistem Informasi Pencatatan Pembayaran Uang Sekolah Berbasis Multiuser Tri Setyawati," 2014.
- [5] P. Utomo and D. Ariyanti, "Sistem Informasi Pembayaran dan Pendaftaran Siswa Baru Berbasis Web," vol. 4, no. 2, pp. 4–6, 2014.
- [6] A. Hendini, "Pemodelan UML sistem informasi Monitoring Penjualan dan stok barang," *Pemodelan Uml Sist. Inf. Monit. Penjualan Dan Stok Barang (Studi Kasus Distro Zhezha Pontianak)*, vol. IV, no. 2, pp. 107–116, 2016.
- [7] V. Sihombing, "Sistim Informasi Pengolahan Data Jemaat Gereja Huria Kristen Batak Protestan (HKBP) Yogyakarta Berbasis Web," *J. Inform.*, vol. 2, no. 3, p. 4, 2014.
- [8] R. Hidayat, S. Marlina, and L. D. Utami, "Perancangan Sistem Informasi Penjualan Barang Handmade Berbasis Website Dengan Metode Waterfall," pp. 175–183, 2017.
- [9] U. Mulayana, D. Gustina, S. N. Mandiri, and U. P. I. Yai, "Perancangan Sistem Informasi Penjualan Handphone Berbasis Web Pada Toko Ilham Cellular Jakarta," pp. 39–46, 2013.
- [10] D. I. Tika Sari Ramadhani, Sudi Suryadi, "Sistem Informasi Stok Gudang Pada Platinum Hotel," *J. Ilm. AMIK Labuhan Batu*, vol. 6, no. 2, pp. 35–40, 2018.