



Web Based Application for Cash Register at PESSAS Organization

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Abstract— *Perantau Solidaritas Sepakat Se Teratak Teleng Organization (PESSAS) was established and based on an agreement through mutual consultation that grew and developed. It is to establish friendship among members and establish brotherhood among fellow migrants and residents of Teratak Teleng Jorong, as well as to assist and support all positive activities organized by Teratak Teleng government officials, all members of PESSAS are subject to compulsory fees. Currently what happens in the PESSAS organization, members sometimes forget to pay a monthly compulsory dues, so that cash income is not running well. And because of the absence of a system with clear cash records by the treasurer, sometimes the treasurer forgets to collect mandatory contributions to members who have not paid cash. Cash records in PESSAS organizations still use manual systems, which are recorded in books or papers so sometimes the results do not match the number of members with cash income. Cash recording application is a web-based application. This application was built to facilitate the treasurer in recording cash in the PESSAS organization. In this study the author uses his design using UML, and the method of developing SDLC with the Waterfall model.*

Keywords— *Cash recording, PESSAS, Organization*

I. INTRODUCTION

Nomads are a tradition of society Minang Kabau, a term used by the community to refer to associations of people who go from their hometowns to settle down and work and go home when they have a big day or interest [1]. Financial statements are a description of the performance of a company as a tool needed by internal and external parties in obtaining information about the company's financial position [2]. The development of technology is currently experiencing rapid progress with increasingly complex human needs for fast, easy information and coefficients. At present what happens to members who want to pay a mandatory monthly fee often forget that the contributions do not run smoothly because there is no system with clear records, which is only recorded using paper or books before being input to excel which requires a long time so the results do not match between revenue and expenditure. This may be a technical error or because of an organization's fault, such as a lost record book. With the application of financial cash recording will help members and administrators of PESSAS nomads in managing finances to facilitate the activities to be carried out by the organization. Based on the background described, it is hoped that this application will help the management and members of the PESSAS organization in managing finances. So that cash records are more transparent and computerized.

A. *Research Problems*

Based on the background described above, then the outline of the problem is:

- 1) How to clearly inform financial statements to all members of the organization?
- 2) How to make it easy to see the payment status of bills paid?
- 3) How to facilitate the process of managing active member lists so that they can be recorded correctly?
- 4) How to quickly inform all members about planned activities that exist and will be carried out in the PESSAS organization?
- 5) How to make financial management and financial reports transparent so members can see cash inflows from donors outside the organization?

B. *Limitation of Research*

In order for the research to be conducted is not too widespread, there are limits to this research:

- 1) This application uses data from members of the organization PESSAS.
- 2) The main focus of this application is only to provide cash in, cash out, member list, activity list, financial report but it will not be an accounting report (asset report, financial journal, etc.) is only a summary that can be understood by PESSAS organization members most don't understand accounting variables.
- 3) Members can see cash in and cash out directly.
- 4) This application is only run on the web.
- 5) Applications include cash reports in the organization PESSAS.

C. *Objectives and Benefits*

In general the purpose of this research is to find, develop and prove knowledge[3]. The expected goal of this research are:

- 1) To manage finances to be more transparent in the organization PESSAS.
- 2) So that members can directly see the payment status of the bills paid.
- 3) In order to be able to manage members who are active and not active in the organization PESSAS.
- 4) For members to be able to see a list of activities to be carried out by the organization PESSAS.
- 5) So that members can see cash inflows from donors outside the organization.

Theoretical benefits for development while practical benefits for solving problems [3]. And the benefits of this research are:

- 1) Monitoring of cash details of members in PESSAS, so members can check cash and cash out directly through the web.
- 2) Make it easier for members to check contribution bills, so members can immediately see the contribution bill status without having to wait for confirmation from the treasurer PESSAS.
- 3) Facilitating administrators in managing active and inactive members in the organization.
- 4) Members can see what is and will be carried out by the organization without having to wait for information from the management PESSAS.
- 5) Showing transparent financial management so members can see cash inflows from donors outside the organization.

II. STUDY OF LITERATURE

A. *Previous Research*

According to Muhammad Faqieh, Raswyshnoe Boing Kotjoprayudi, S.E.,M.M (2016) "*Based Application For Management of Cash in, Cash Out and Income Statement*"[4]. His research has produced an application design that can manage transactions and overall reports. In his research, it was stated that researchers used a perpetual recording method in which recording was carried out every time continuously based on transactions of income, expenses and inventory of goods that the company had done. This application is proven to be able to manage receipt transactions, cash disbursements and income statements.

Next, according to Agus Nur Rochim, Muhammad Hasbi (2013) "*Financial Management Application on PT. Surakarta*"[5]. PT. Surakarta who have used a computer as a tool in the company's operations, but the making of financial statements still use excel, resulting in recording of cash receipts and expenditures less effective. So that it is expected that the existence of a financial management application can save time and minimize errors in making reports. But in this study there is still no accrual basis system to supervise unpaid transactions.

For research conducted Sarah Kyla Yasmin Gumilar, Wardani Muhammad, Suryatiningsih (2017) "*School School Management Application*" Case Study : MA Persis Tarogong Garut[6]. Cash-in recording is done manually without using special software by using payment receipts that have been made after it is

recapitulated using Excel. So that the existence of this application can record income and expenses so as to produce more accurate reports with the Automation process.

In the research conducted oleh Riad Sahara, Indra Ranggadara (2017) “*Design and Implementation of Treasury Application Based on Mobile in Student Organization Mercu Buana University* [7]. Financial records of Mercu Buana student organizations that still use manual systems with or paper, the lack of calculation of total funds so that the revenue results do not match expenditure. Computerized applications are needed in financial records. In this study it was stated that the researcher used the PIECES method. The use of this application can help the needs of students both individually and organizationally.

Next is research Riad Sahara, Hendra Prastiawan, Ahmad Adi Pratama (2018) “*Analysis and Design Information System Personal Financial Management Based on Android* [8]. The development of information technology is increasing, but most people still use a lot of conventional personal calculation systems by recording small memos stored in pockets or wallets that can be lost or damaged at any time. The method used in this study is the Multimedia Development Lyfe Cycle (MDLC) method. It is expected that the application can help record financial statements and become a financial advisor.

Based on the related research, the researcher will carry out development by providing financial management solutions using accrual basis method recording so that the unpaid bill of money will be recorded to the accounts.

B. Financial Report

According to Magdalena Karismariyanti S.T,M.B.A Yogi Setiawan dan Rochmawati,ST,MT.(2016) Financial statements are written reports that provide information about the financial situation and its changes, as well as the results achieved in a certain period [9]. According to Ni Wayan Noviantari dan Ni Made Dwi Ratnadi (2015). Financial statements are a description of the performance of a company as a tool needed by internal and external parties in obtaining information about the company's financial position[2]

C. Accrual Basis

Accrual Basis is receivables that are recognized at the time of the transaction, not at the time of receipt of payment money [10]. Accrual Basis is an accounting basis that recognizes the effect of transactions and events at the time the transaction and event occurs, without having to pay attention when cash or cash equivalents are received or paid[11].

III. RESEARCH METHODS

A. Current System Business Process

Following is the business process of running PESSAS financial records.

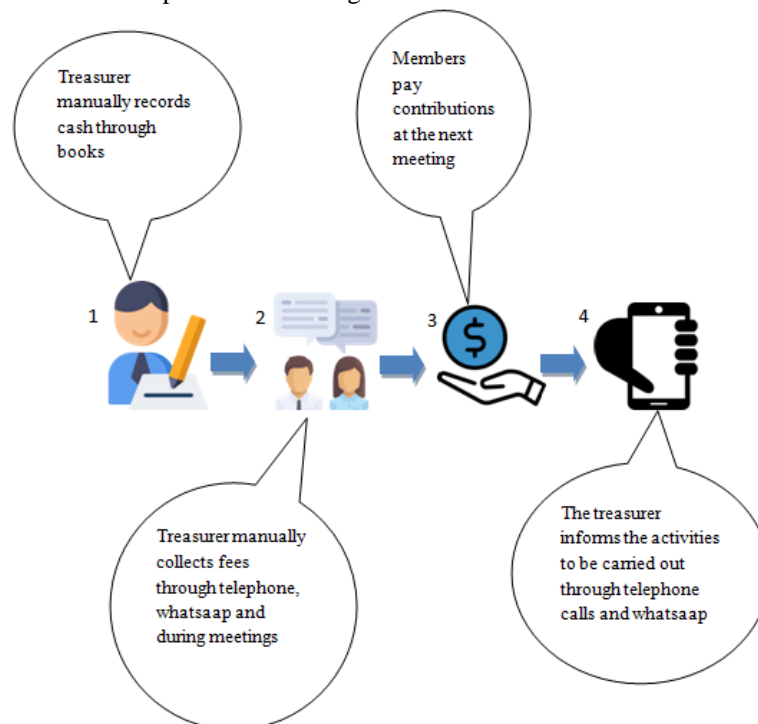


Figure 1 Business Process Running

Describing the current business process, the treasurer records financial reports manually using books and collects contributions through social media or at PESSAS meetings. Members pay at the next meeting. Then the treasurer informs the activities that will be held at the PESSAS organization via telephone, whatsapp, and other social media.

B. Perancangan Sistem SDLC Dengan Model Waterfall

SDLC (system development life cycle) Waterfall is the basis of the original structured design at present. By using the Waterfall method, analysts and users can be done from one phase to the next. This methodology is called the development of Waterfall because it moves from phase to phase in the same way as a waterfall. Although it's possible to back out in SDLC (for example, from design back to analysis), but it's very difficult[12].

The two main advantages of the waterfall methodology approach are identifying system requirements that must be carried out long before the programming starts and minimizing changes to the system requirements when the project takes place. The two main disadvantages are that the design must be completely determined before the programming begins. And if the project team missed important requirements, expensive post-implementation programming might be needed. A system can also require significant rework because the business environment has changed from when the analysis phase occurred.

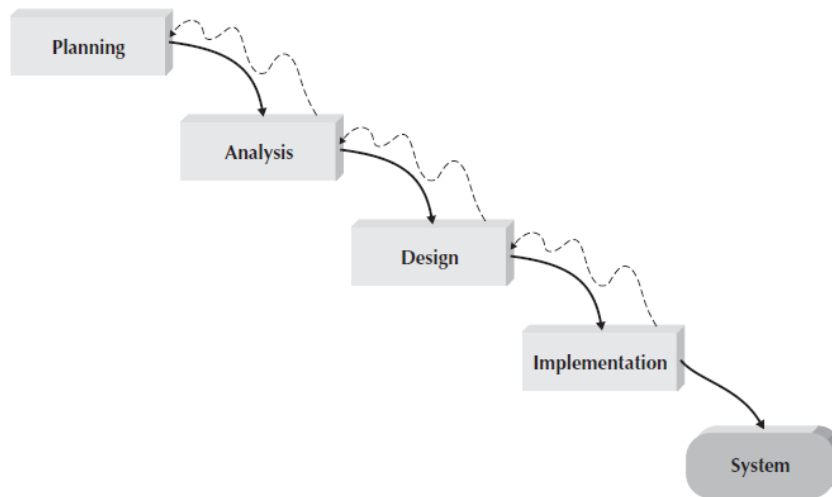


Figure 2 Tipe Waterfall[12]

1. *Planning*

In this initial stage the researcher looks for the problem by defining the problems that exist in the organization PESSAS.

2. *Analysis*

At this stage, analyze the data in the PESSAS organization and collect the system requirements that will be built.

3. *Design*

This phase, designing the system to be created, database specifications and program design to be developed.

4. *Implementation*

This akhi phase system that is ready will be tested first.

C. Use Case Diagram

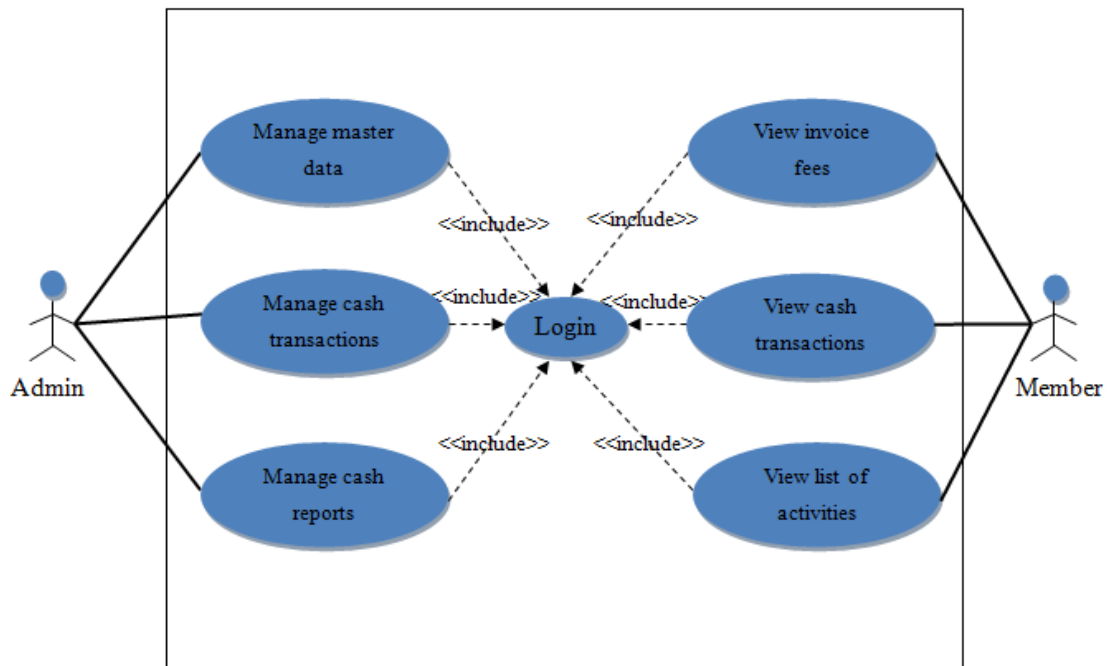


Figure 3 Use Case Diagram

The use case is made to define how the system must be run when the actor activates the use case[12]. So that the system that has been described using the use case diagram in the image will be explained in more detail and defined.

IV. RESULT AND DISCUSSION

A. IMPLEMENTASI

In the implementation phase, what is done is the process of applying the results of the system design. The results of this stage are a PESSAS nomads organization cash recording system that has been running well.

After analyzing business processes and system design methods sdic with the waterfall model, now the author will display the results of system development that have been analyzed and designed.

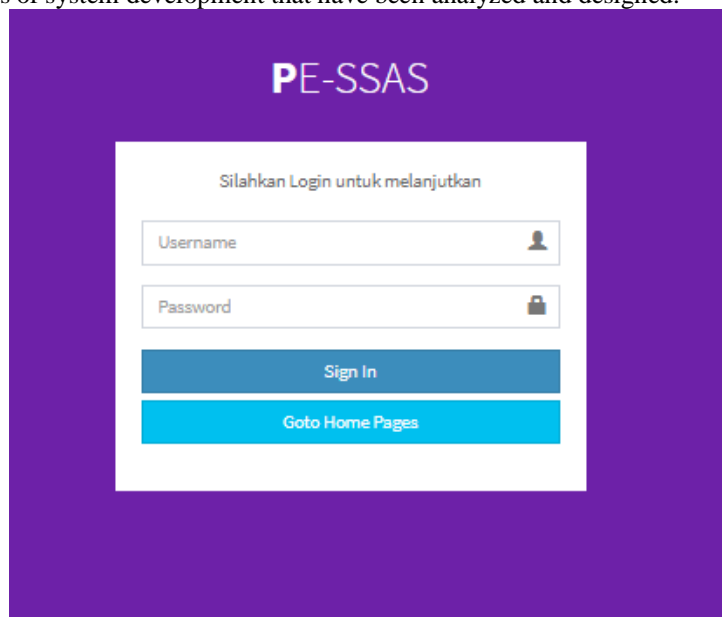


Figure 4 Login Page

Figure 6 is the login page display. This login page is like a gate that every user must pass before entering system. Each user enters a username and password that is in accordance with the data provided by the admin. In this page if the user incorrectly entered meal data, this login page will display a pop-up that failed to login and can't enter the application.

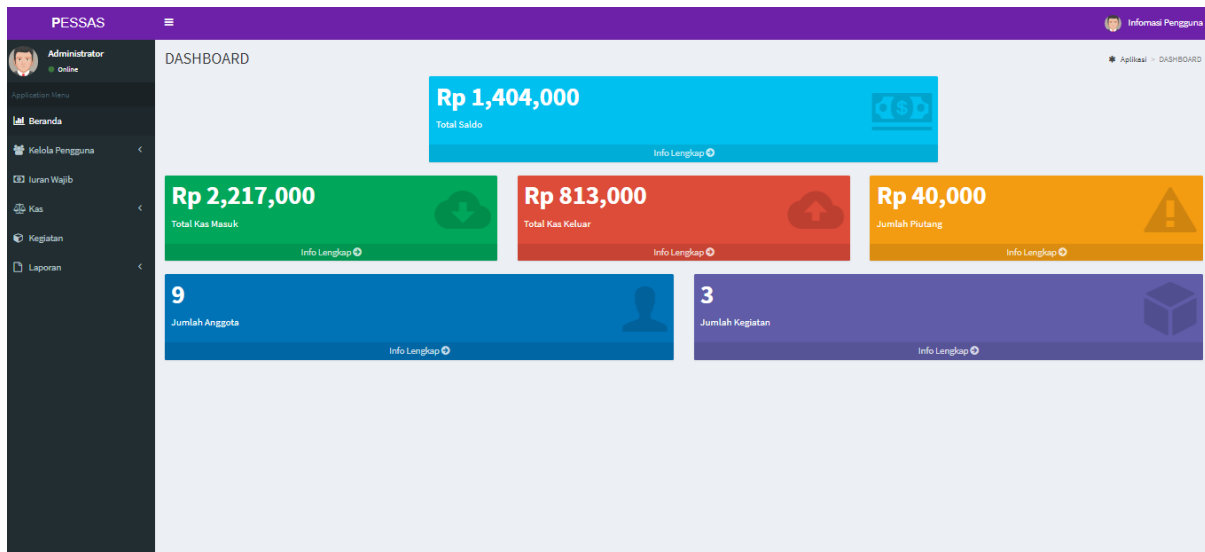


Figure 5 Dashboard Page

Figure 7 displays general information from the application. This page shows how many members, contributions, cash, activities and reports are contained in this application. This dashboard is very useful to help each user see the total amount of data in this application.

B. APPLICATION TESTING

Testing this application uses the Black Box Testing method, which focuses on the functional requirements of the software. Tests are carried out by running the PESSAS organization Recording Application. After the application is run, then it is to test the menus and buttons contained in the application interface whether in accordance with the initial design stage. The following is a table of test scenarios:

Table 1 Application Testing

No	Tested Interface	Testing Scenario	Test Result
1.	Login Admin	Login by entering the correct username and password	System Displays the dashboard
2.	Login Admin	Login by not entering a username or password	The system will display "Login Failed! Incorrect username or password. "
3.	Manage users	Admin adds user data by completing the complete form and clicking the submit button	The system successfully stores user data

4.	Manage users	Admin edit user data by clicking the edit button	The system successfully displays the edit data for the user data
5.	Manage users	Admin delete data manage <i>user</i>	The system successfully removes user data
6.	Manage users	Admin adds or edits user data by not filling in the complete form	The system keeps storing incomplete user data
7.	Manage User	Admin adds user data by completing the complete form and clicking the submit button	The system will save
8.	Obligatory contributions	The admin clicks the outstanding button	The system will display a list of members who have not paid contributions
9.	Obligatory contributions	Admin clicks on the button lunas	The system will display a list of members who have paid contributions
10.	Obligatory contributions	Admin submits the contribution form by completing the complete form	The system will display a list of new outstanding contributions.
11.	Obligatory contributions	Admin submits the contribution form by emptying one form	The system does not store contribution data
12.	Obligatory contributions	admin select the outstanding button, then click pay now	The indebted system turns paid off
13.	Cash	The admin clicks the cash in button	The system will display the cash register data
14.	Cash	Admin clicks on the add button, select one cash in or cash out and fill out the cash form	The system will store cash data

15.	Cash	Admin clicking the add button select one cash in or cash out and not filling out the cash form	The system still stores cash with empty data
16.	Cash	The admin clicks the edit button at the cash in	The system will update the cash receipt data
17.	Cash	The admin clicks the delete button at the cash in	The system will delete the selected cash entry data
18.	Cash	The admin clicks the cash out button	The system will display cash out list data
19.	Cash	The admin clicks the edit button in cash out	The system will update the cash out data
20.	Cash	The admin clicks the delete button in the cash out	The system will delete the selected cash out data
21.	Activities	Admin clicks on the activity menu	The system will display activity list data
22.	Activities	The admin clicks the add button for activities and fills out the activity form	The system will store activity data
23.	Activities	The admin clicks the add activity button and does not fill out the activity form	The system still stores activities whose data is incomplete
24.	Activities	The system will store activity data	The system will display the details of the activity
25.	Activities	The admin clicks the edit button on the activity page	The system will update the activity data that has been edited
26.	Activities	The admin clicks the delete activity button	The system will delete the selected activity data

27.	Activities	The admin clicks the complete button, after the activity is done	The system will display the status of the activity has been completed
28.	Report	The admin clicks on the cash in statement and fills out the form as the report wants to print	The system will display the cash receipt report according to the requested filter
29.	Report	Admin clicks on the cash out report and fills out the form as the report wants to print	The system will display the cash out report according to the requested filter
30.	Report	The admin clicks on the recapitulation report and then selects and fills out the form that the report wants to print	The system will display the cash in and out cash recap report according to the requested filter
31.	Report	After the report appears, select download report	The system will download the PDF report
32.	Member Login	Login by entering the correct username and password	System Displays the dashboard
33.	Member Login	Login by not entering a username or password	The system will display "Login Failed! Incorrect username or password. "
34.	Obligatory contributions	Members click the outstanding button	The system will display a list of members who have not paid contributions
35.	Obligatory contributions	The member clicks the paid button	The system will display a list of members who have paid contributions
36.	cash	The member clicks the cash in button	The system will display the cash register data
37.	cash	The member clicks the cash out button	The system will display cash out list data

38.	Activities	Members click on the activity menu	The system will display data on the list of activities that have been and have not been implemented
39.	Activities	Members click on the view button on the activity page	The system will display the details of the activity

V. CONCLUSIONS

With the implementation of the Overseas Organization Registering Cash Application, it can be concluded as follows:

1. This application is useful as a cash recording organization utilizing web-based technology that can facilitate each member of the PESSAS organization to see cash financial statements.
2. This application can record activities carried out by PESSAS, so members can check the details of activities directly.
3. With this application you can see active members participating in the organization.
4. This application can display financial report data according to the period that the PESSAS treasurer wants to print.
5. Applications can help members to see the status of mandatory contribution bills.

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