Web-based SIA Pranata Sejahtera Using Laravel

Anggoro Bagus Dewaji[1], Albertus Dwiyoga Widiantoro[2], Agnes Advensia Chrismastuti[3]
[123]Department of Information System, Soegijapranata Catholic University
[123]Jl. Pawiyatan Luhur Sel.IV No.1, Bendan Duwur, Kota Semarang, Jawa Tengah 50234
[1]anggorobagusdewaji@gmail.com
[2]yoga@unika.ac.id
[3]a_advensia@unika.ac.id

Abstract— Pranata Sejahtera Cooperative is a savings and loan institution provided by Soegijapranata Catholic University for its employees. Based on interviews conducted with the treasurer and officers of the cooperative, the cooperative faces several problems. Some records exist using semi-manual methods, such as recording transactions from deposits, loans, and registered members. The next problem, cooperatives have experienced losses due to fraud in management financialBased on the problems experienced by the Pranata Sejahtera Soegijapranata cooperative, the researcher provides a solution for making a web-based accounting information system with the Laravel framework.

Keywords— Information Systems, Cooperatives, Analysis, Laravel.

I. INTRODUCTION

A cooperative is a business that can be built by an individual or a legal entity, by using the wealth separator of its members as capital to run a business [2]. Cooperatives have five types: producers, consumers, services, marketing, savings and loans. As in general, Pranata Sejahtera soegijapranata has cooperatives, the type is savings and loans. But the bookkeeping is semi-manual. So to publish a report it is always too late to post a report [9]. In addition, cooperatives also have poor internal control. Based on these problems, this research will solve the problems of the Pranata Sejahtera soegijapranata cooperative. Researchers will create an accounting system based on the Laravel web framework [1]. Accounting Information System is a system that helps process data in the form of forms and numbers [8]. Data is always needed in an organization, because with data we can get information. This information has useful value and can help organizations to make decisions [13]. Accounting information systems can help an organization record daily transactions [11].

Laravel is a web application framework with an expressive and elegant syntax [3]. Using the Laravel framework because it can save time in web development and costs in web development [7]. Choosing to use the waterfall method because it still needs to be done further analysis of the Pranata Sejahtera cooperative [10].

Based on the background that has been conveyed regarding the state of the Soegijapranata Unika cooperative, the formulation of the problem in this research is How to Design an Accounting Information System to Solve Problems from a Prosperous Savings and Loans Cooperative. The purpose of this research is to assist in the recording process and minimize the occurrence of *human error* [16]..

II. METHOD

Applied research is research that applies, tests, and evaluates those used to discover theories or principles [6]. So I chose the Waterfall method. This method has 6 main stages in research.

Figure 1 is a diagram or development process of the waterfall method, starting from analysis, system design, implementation, testing, deployment, and maintenance.

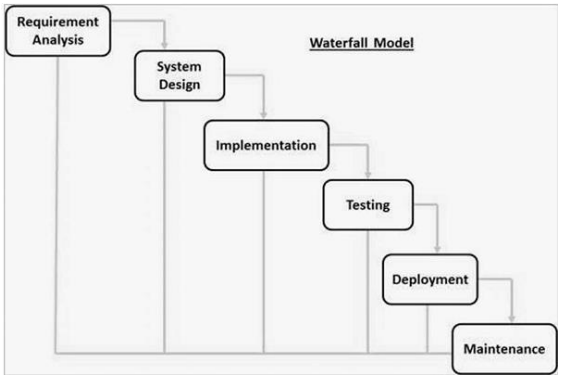

Figure 1 Waterfall Methodology

First requirements analysis, all possible system requirements to be developed are captured in this phase [4].

Second The requirements specifications from the first phase are studied in this phase and the system design is prepared. This system design helps in determining the hardware and system requirements and helps in defining the system as a whole.

Third With input from the system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is known as Testing.

Fourth All units developed in the implementation phase are integrated into the system after testing each unit. After integration, the whole system is tested for any errors and failures.

Fifth After testing, the system is tested by the customer.

The system that has been developed will be tested using the black box method. Black box testing itself is a software testing method based on its functional side [14].

Sixth, if there are several problems that arise when tested by the client. then to fix the problem, it is necessary to perform system maintenance. To make it easier to create a system, a flowchart is needed.

The flowchart diagram itself is used to describe the activities carried out manually and their processing [15].

Figure 2 Flowchart login

Figure 2 is an explanation of the login cycle. When a member logs in, the system will check whether the user exists or not. If the user exists then the system will detect the user level. Other members must re-login

Figure 3 Loan

Figure 3 is a loan flowchart. There are 2 ways to get a loan at the cooperative. The first member can come to the cooperative. The second member can borrow with the web. For members who want to borrow from the web, members must login first. Then members go to loan options and fill out the form. After submitting the form, the member has to wait whether the loan is approved or declined.

Figure 4 describes installments.

Since the installments are paid through salary deductions, the manager has two options. the first one changes the installment status one by one and the second the administrator can change the status entirely

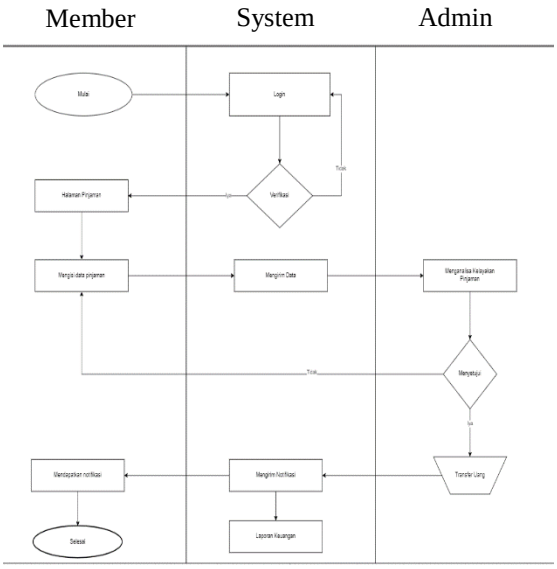

Figure 4 Instalment Flowchart

Figure 5 is a deposit flowchart.

I have asked the cooperative officers about savings and savings are divided into 4, principal savings, mandatory savings, voluntary savings, and other savings [5].

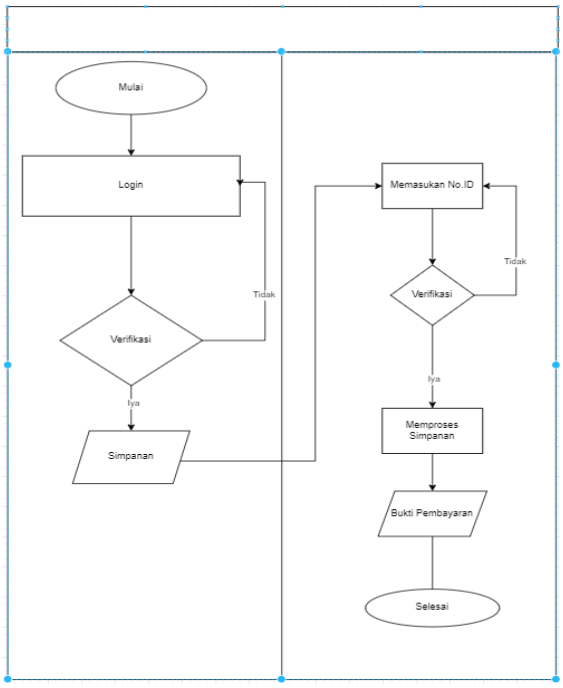

Figure 5 Deposit Flowchart

III. RESULTS AND DISCUSSION

Result and Discussion containsthe results, their relation with theory, and their comparisons with previous related studies.

A. RESULT

From interviews conducted with the management and the results of the first stage of analysis regarding the planning of system requirements needed by cooperatives, the authors found several problems that occurred in cooperatives such as bookkeeping which was done manually, the process of entering deposits was still manual, the process of making loans was still manually, and separate SHU calculations from the main system (excel). Therefore the author provides a solution that is to create a website-based cooperative system. Following are the results of the implementation of the cooperative system.

a. Login page

Figure 6 is the login page in the "SIA KOPERASI" system where each user must login first before being able to access the existing features.

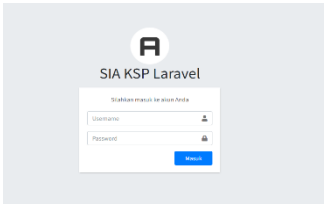

Figure 6 Login Page

b. Home

Figure 7 is the home page or dashboard. In this page if we login as an admin, it will displayed the total loan, deposit, member, and SHU. But, if login as members it will shown the accumulated total of the members each self.

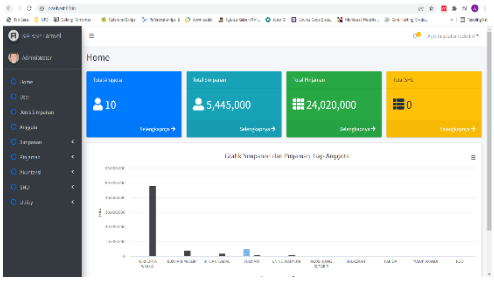

Figure 7 Home Page

c. User

Figure 8 is a page it can be used to controling the member's level. Like its admin or user.

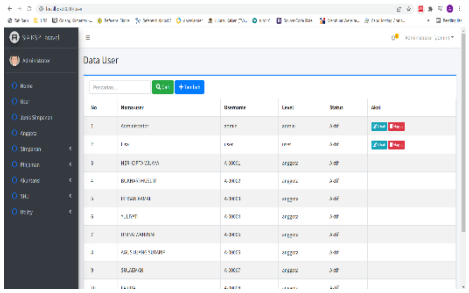

Figure 8 User page

d. Type of Deposit

Figure 9 is a page for add, edit and delete about type of deposit.

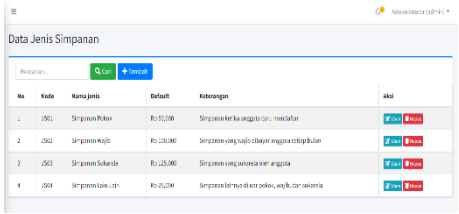

Figure 9

e. Member

Figure 10 is a page for add, edit, delete and detail. For members who wan to join koperasi, admin can be add members in this screen.

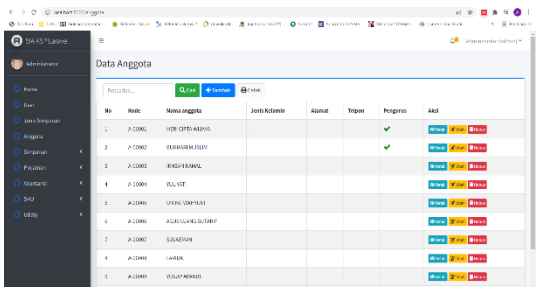

Figure 10

f. Deposit

Figure 11 is a page for add, edit and delete deposit of members.

Figure 11

g. Loan

Figure 12 is a page for add, edit and delete loan of members.

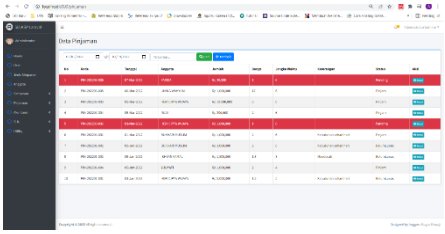

Figure 12

h. Accounting

Figure 13 is a transactional report Page from koperasi.

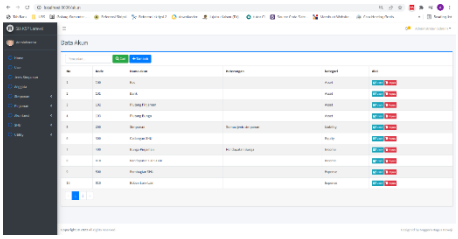

Figure 13

i. SHU

Figure 14 is SHU's page.

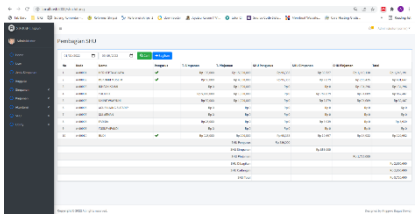

Figure 14 SHU page

j. Utility

Figure 15 is a page of utility. The function of utility page is controlling all the pages (name of system, percentage of SHU, and logo).

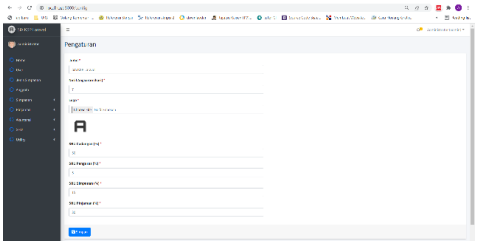

Figure 15 Utility Page

B. DISCUSSION

After the system has been built, various system features are tested.

The login feature, which consists of super admin, then admin and user, can function properly.

User features, which consist of adding a user and editing a user, can run well.

The features of the type of deposit, which consist of adding a type of deposit and editing the type of deposit, can run well.

Member features, which consist of adding members, editing members, and viewing member details, can work well.

The savings feature, which consists of adding deposits, editing deposits, and adding multiple deposits, can work well.

The SHU feature which consists of the SHU division can run well.

Report features consisting of accounts, journals, ledgers, profit and loss, balance sheets, and member balances, can run well

Utility features consisting of expenses, beginning balances, and settings can work well.

Table 1 is the result of testing from the executor or the cooperative

IV. CONCLUSION

Based on the results of research that has been carried out by the author at Pranata Sejahtera, it can be concluded that the design of the "SIA Koperasi" information system using the Waterfall method has been able to assist operational activities at Koperasi. Here are the conclusions from the results of the analysis of weaknesses and suggested solution:

SIA Koperasi accounting information system, it can help the admin to record accounting bookkeeping so the admin can be able published a report ontime.

With the accounting information system "SIA Koperasi" makes admin didn't manual report.

With the accounting information system "SIA Koperasi" can decrease of human eror.

The author suggestions to the owner for doing a periodic maintenance.

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