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# Website-Based Savings and Loans Data Processing Information System at the Office of Cooperatives and Umkm Medan Helvetia District

**Eka Putra[1], Robi Krisna[2], Rian Farta Wijaya[3], Randi Rian Putra[4]**
[1] Department Computer Systems, Faculty of Science and Technology, UNPAB Medan
Jl. Jend. Gatot Subroto Km. 4,5 Sei Sikambing 20122 Medan City
Email: ekaputra@dosen.pancabudi.ac.id
[2]Departement Legal Studies, Faculty of Social Sciences, UNPAB Medan
Jl. Jend. Gatot Subroto Km. 4,5 Sei Sikambing 20122 Medan City
Email: robikrisna@pancabudi.ac.id
[3.4] Department of Information Technology, Faculty of Science and Technology, UNPAB Medan
Jl. Jend. Gatot Subroto Km. 4,5 Sei Sikambing 20122 Medan City
Email: rianfartawijaya@dosen.pancabudi.ac.id , Email: Randirian@dosen.pancabudi.ac.id

## *ABSTRACT*

*At the Cooperative Office, currently the process of processing savings and loans data is not optimal because the processing of savings and loans data still uses manual methods. Data processing like this can lead to data loss and insecure data storage. Therefore, the research will create a data processing system with sufficient computerization. So that the report that will be needed can be processed appropriately by the medan helvetia sub-district cooperative. From the problems that have been obtained so that a solution arises from its handling by implementing a web site-based savings and loans information system, so that with the existence of a web site-based information system, this research can facilitate and assist in the process of processing data at the medan helvetia sub-district cooperative office.*

**Keywords:** *Data, Savings and Loans, Cooperatives, Websites*

## Introduction

The development of a country can be known in terms of income, welfare, and health in a country. Welfare in a country is very important to provide. The reason is, if a country is not prosperous, then the development and improvement of the country occurs. If a country is healthy and prosperous then the income within a country increases. If a country's income increases to change and develop, its society will be prosperous and healthy. A country's opinion can be in the form of cash. If a country's treasury increases then the development of everything that includes that country can be carried out [1].

Cooperatives as a form of organization that is important in increasing economic growth. Savings and loans cooperatives are one of the alternatives for members to get funds in an effort to improve the standard of living, meet daily needs and develop a business. In addition, savings and loan cooperatives are also one of the options for investing funds (saving). People like to save in savings and loan cooperatives because in addition to practical and also get year-end interest or can also get residual business proceeds [2]. The main activity of the Cooperative is to carry out savings and loan transactions, in this case it is only intended specifically for cooperative members[3].

System design is the determination of the processes and data required by the new system, if the system is computer-based, the design can include specifications of the equipment to be used. To be able to achieve what is meant, it is necessary to design a system[4][5].

A system is a flow of inputs, processes and outputs in a particular environment [6]. A system can also be defined as a collection or set of components[7]. In other words the system comes from the Latin systema and the yunani sistēma language. A system is a collection of elements that are interrelated and work together to obtain inputs addressed to the system and process those inputs until they produce the desired output.[8] A system is a network of interconnected procedures, gathered together to carry out an activity or for a specific purpose [9]. The system is also inseparable from information because information is the result of the system, so information is d or describes an event that is happening, where the data will be processed and applied in the system into useful input for a system[10]. Information can also be interpreted as information is very important for companies in making every decision making [11].

The development of information systems is a combination of information technology and the activities of people who use that technology to support operations and management [12]. Information systems are one of the important factors for an agency / company in supporting operational activities [13]. Information system is a system in an organization that brings together the needs of daily transaction processing that supports the managerial operation function of the organization with the strategic activities of an organization to be able to provide certain outsiders with the necessary reports [14]. Information systems within organizations capture and manage data to generate useful information that supports the organization and its admins, consumers, suppliers, and partners [15]. Information system is a system in an organization that brings together the needs of daily transaction processing that supports the managerial operation function of the organization with the strategic activities of an organization to be able to provide reports needed by certain outside parties [16]. An information system consists of a web-based system or application whose information system uses web technology, namely the Internet to the browser. The web can be accessed anywhere and conveys information to users [17].

PHP is a language for creating interactive web pages that blend with HTML that is run on the server side [18]. PHP is a server-side scripting language designed for web development. In addition, PHP can also be used as a general programming language [19]. A Website (Website) is a collection of web pages related to other related files. On a website there is a page known as a home page. is a server-side scripting language that blends with HTML to create dynamic web pages [20]. Web is the most visible part of the world's largest network, the internet [21].

## Research Methods

This research requires the methods used to conduct research so that it is able to answer the problems being studied and aims to make the research more structured and conceptualized. So that each stage will be seen its achievement in accordance with the expected goals and responsible for the research[22][23].

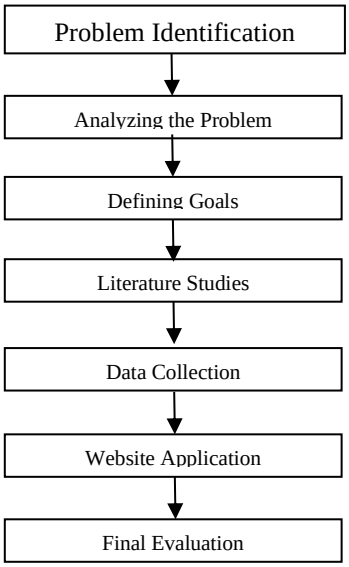


Figure 1. Research Flow[24]

Based on the framework in figure 1, each step can be described as follows:

1. Problem Identification
   Problem Identification is the first step taken in this study. At the stage of identifying the problem, it is intended to be able to understand the problem to be studied, so that in the analysis and design stage it does not come out of the problem under study
2. Problem Analysis
   The problem analysis step is a step to understand a problem that has been determined by its scope or limitations. By analyzing the predetermined problem, it is hoped that the problem can be understood properly.
3. Defining Goals
   Based on understanding the problem of the problem, the objectives to be achieved in this study are determined. On this goal, targets are determined to be achieved, especially those that can overcome existing problems.

4. Studying literature related to titles
   To achieve the goal, some literature is studied that is expected to be used. Then the literature studied is selected to be able to determine which literature will be used in this study. Literature sources are obtained from the library of Universitas Pembangunan Pancabudi, books and journals that explore website-based applications.
5. Data Collection
   At this stage the researcher comes directly at the research site to inquire about the data researched in the cooperative office
6. Website
   At this stage, the author will design a new system using a website-based application.
7. Final evaluation
   Make a report from the research containing a research report on the problems and solutions that exist in the object studied by the author[25]

***1. Observed parameters***

The parameters observed in the form of complaints about savings and loan data are still processed manually, so that it can result in less secure data storage than that researchers make a website-based application in the data processing process, so that the savings and loan processing process can help the cooperative to input data and store the data[26].

***2. Types and Scope of Research***

In order for this research to be directed and the problems faced later are not broad and in accordance with the researchers have stated above, researchers can limit the scope of this research to data processors regarding savings and loans at the Medan City Cooperatives and SMEs Office.

## Results and Discussion

***1. System Design***

The system design in this study is in the form of a system design that uses Unified Modeling Language which consists of use case diagrams, activity diagrams, sequence diagram, classes, diagrams, interface designs and the results of screenshoots [22].

1. User Diagram Use Case
   This stage is the interaction of visitors with applications in the system that the researcher has created. The Usecase diagram image can be seen in the following figure:

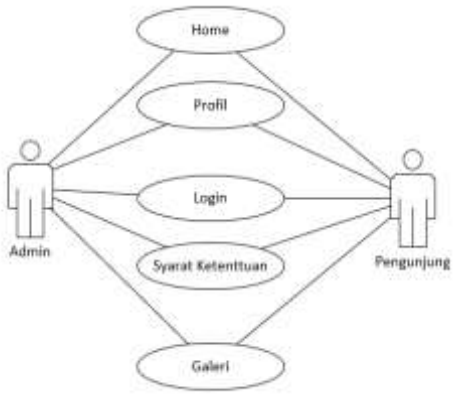


Figure 2. Use Case Diagram Visitor / user

2. System Design With Activity Diagram
   Activity diagrams are techniques for describing procedural logic, business processes and workflows in most cases. The activity diagram illustrates how the activities that occur in the system to be designed. Activity diagrams are the same as flowcharts that menggambarkan proses yang terjadi antara aktor dan system, designing an activity diagram for the savings and loans system is as follows[20]:

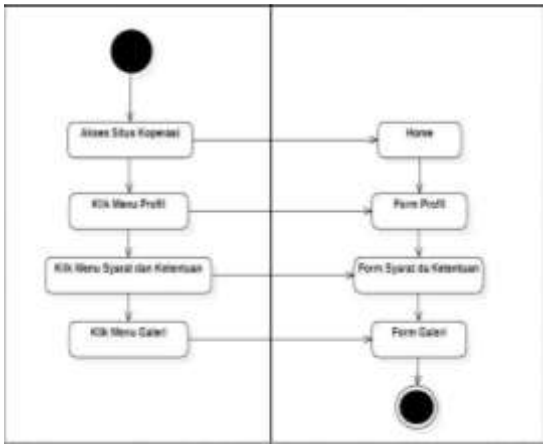


Figure 3. Activity Diagram

3. System design with *Squency Diagram*
   Sequence diagrams used to illustrate the behavior of actors on a system in detail according to time. This diagram shows a number of examples of objects and messages (messages) placed between objects in the use case, the design of the Sequence diagram in this system explains the sequence of steps that admins and users take to manage system information, As in the picture below is as follows

:

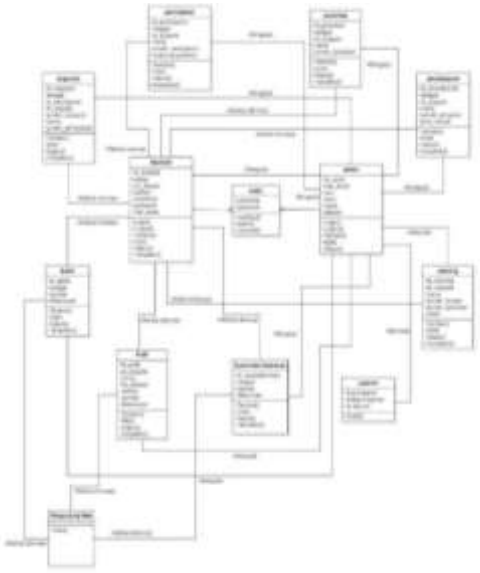

Figure 4. Sequency Diagram

4. System Design With *Class Diagrams*
   Diagram classes provide an overview of the relationships between the tables in the database. Each class has an attribute and a method or function according to the process that occurs, as for The Class diagram image can be seen in the following figure:

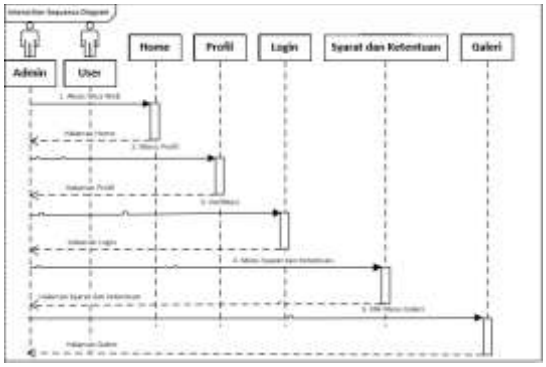


Figure 5. Class Diagram

***2. Results***

In this study, it has just produced a soft device in the form of a savings and loans application that functions to assist cooperatives in carrying out the process of collecting savings and loan data.

1. Home Page

This display is a display to display all the features in the system according to the design that has been made. Here's the picture below;


Figure 6. Home

2. Login Page

A display is a view used to access and manage data that will be displayed on the website. This page can only be accessed by users who have a username and password. Here's the picture below;

Figure 7. Login

3. Dashboard Page

This view is a view of all savings and loans data in the helveltia terrain cooperative. Here's the picture below;

Figure 8. Dashboard

4. Members Page
This view is a view for processing member data. Here's the picture below;

Figure 8. Member

5. Lending Page
This view is a view to process the processing of borrowing data. Here's the picture below;

Figure 9. Lending

6. Storage Page
This view is a borrowing view used to edit or modify previously created data. Here's the picture below;

Figure 10. Storage

7. Withdrawal Page
Display is a view of the withdrawal menu that contains withdrawal data, edit withdrawals and delete withdrawals

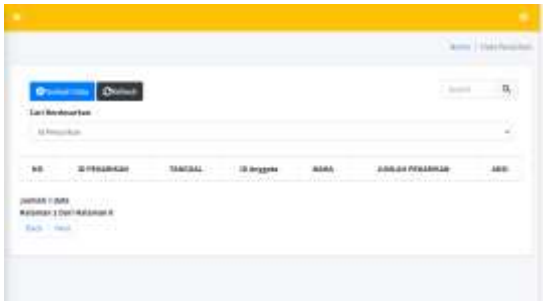

Figure 10. Withdrawal

8. Account Page

This view is a view of the account menu that contains account data, edit accounts and delete accounts.

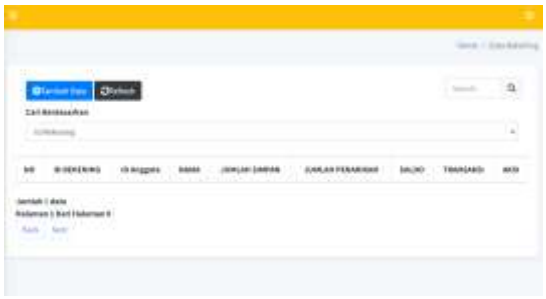

Figure 11. Account

9. Installment Page

This view is a display of the member installment data menu to display the installment data of each member that has been added by the admin. Here's the picture below;

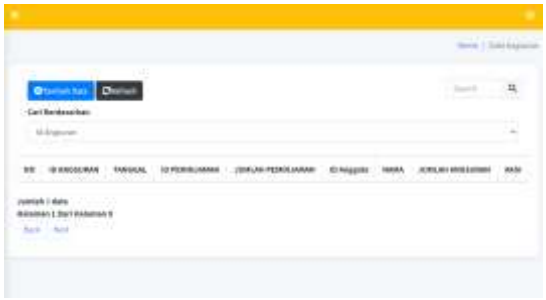

Figure 11. Installment

10. Admin Page

This view is an admn data display that uses a savings and loan application that already has an account. Here's the picture below;

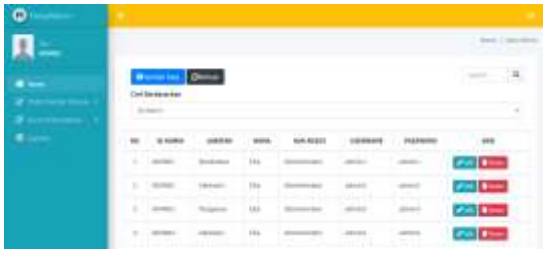

Figure 12. Admin

11. Save and Borrow Data Output Page
This view is a report view of all savings and loan data that has been processed by the admin. Here's the picture below;

Figure 13. Output

## Conclusion

The savings and loans data information system at the helvetia medan cooperative office which is currently still being carried out manually, creating obstacles including the data processing process. The savings and loans data information system is designed using a web site-based programming language and database storage using MySQL Xampp. With this web-based information system, it can help and facilitate the process of finding data and storing savings and loans data at the medan helvetia cooperative office .

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