OPTIMIZATION OF SLIMS (SENAYAN LIBRARY MANAGEMENT SYSTEM) IN IMPROVING THE PERFORMANCE OF LIBRARY SERVICE IN HIGH SCHOOL

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Abstract

Article Info	This research was conducted to implement SLiMS (Senayan Library Management System) in school libraries, where SLiMS is capable of handling library administration tasks that were previously performed manually, including collection management, inventory, catalogs, circulation, published data, and member data, as well as the borrowing process and collection returns. This study included interviews, observation, and documentation for students and teachers to obtain data. The findings of this study indicate that SLiMS adds value to the library through speedier library administration and management, enhanced librarian service performance, and increased library visits to support students' reading interests. As a result of system functionality testing using blackbox testing on seven scenarios, all system features are valid and in agreement with user needs analysis, allowing library system automation to optimize library services.
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1. INTRODUCTION

Utilizing information and communication technologies is essential for optimizing performance and operations in many institutional operational procedures. The advent of information technology has had revolutionary effects on society, and these effects have permeated all spheres of activity and organizations [1] including libraries. This also permeates the realm of education, including library administration [2]. The library is part of an educational institution that provides a variety of information sources, whether in the form of books, e-books, or other learning content, as well as services to support the learning process, research, and the development of each member's understanding. The library is primarily an educational resource center and information source for the user. Now, library management must be more professional and qualified so that it can optimize the role of information technology in processing data into information and fulfill service quality [3][4], including the implementation of a computerized system [5][6] or the application of information technology in assisting librarians in managing library administration, such as book data management, member data management, book lending circulation management, and other administrative tasks.

The library management information system is optimized through the use of information technology. The use of information technology as a means for acquiring, storing, and disseminating digital information [7][8][9]. The word is frequently referred to as the Digital Library. Integration with library information systems is possible for procurement, inventory, cataloging, collection circulation, member processing, and other fields. Library optimization is necessary to increase the quality of service provided to users and the library's ability to keep up with the growing quantity of collections, transactions, and

resource sharing with other libraries. The management of collections of library items at the library begins with acquisition, inventory, classification, cataloging, and labeling, followed by the shelving process [10]. All library material management tasks, from procurement to collection of library materials served, are performed manually. Similarly, in the Kintamani 1 High School library, all library administration management, including member data management, collection data, borrowing and returning data, is still processed manually and written in a folio book, and the library lacks a catalog of available collections and the most recent collections owned by the library. This was determined through observations and conversations with students, teachers, and librarians at the location of the study.

The library optimization system makes it possible to quickly, accurately, and easily track back numerous traditional operations as well as data processing or data entering activities. At least the data entry librarian is competent in using a computer-based automation system. Automation is the term for the use of technological equipment in tasks that support productivity and labor efficiency. Users can find out about all of the library's collection materials by using the SLIMS (Senayan Library Management System) automation system, and they can also suggest collections that are not yet in the collection through the SLIMS (Senayan Library Management System) to acquire a collection of library materials [11]. The scope of library service automation using information technology can operate an automated service system [12]. Therefore, the goal of this study is to put into practice a library optimization system using SLIMS (Senayan Library Management System) automation so that it aids librarians in managing library administration in a more computerized manner and it can be seen how it improves library services for students, the impact of students' reading interests [13], and the ability to build a system customized to the needs of librarians.

2. METHOD
2.1. Library Service Optimization
The optimization and automation of library services using information technology enables the automatic operation of service systems beginning with [14][15]:

1. Procurement or collection proposal

   With the SLIMS (Senayan Library Management System) automation system in the library, users can find out all library collection materials. Users can also propose collections that are not yet in the collection through the SLIMS (Senayan Library Management System) to procure material collections. References.

2. Inventory

   Giving inventory numbers to library materials, besides being done manually, can also be done automatically. This is to simplify and streamline librarian time in stock-taking activities.

3. Cataloging

   Cataloging is an activity of making a physical description of a book. This catalog serves as a tool to help users find out the location of the book. Making a series of catalogs manually takes a lot of energy, time, and money. With an automation system's implementation, making the catalog can be more effective and efficient.

4. Circulation

   It involves borrowing, returning, and giving late collection fines. Library automation will facilitate the process of circulation services; by using a computer, the work of borrowing books can be done quickly and easily, that is, by highlighting the user's card barcode, then highlighting the book's barcode, then stamping the return date, a transaction will automatically occur. Thus it can increase the efficiency of time, effort, and cost.

5. Periodic issuance management

   Periodicals can be managed through SLIMS (Senayan Library Management System). This is because SLIMS (Senayan Library Management System) has a particular periodical module.

6. Member Management

The existence of an automation system makes it easy to make membership cards, distinguish between types of members, and so on because they are automatically available.

2.2. Research Flow

There are various stages to the research process, and each stage aims to make it easier for researchers to formulate problems through the collection of data in order to develop solutions to the needs of library users for service features. Figure 1 below depicts the research flow.
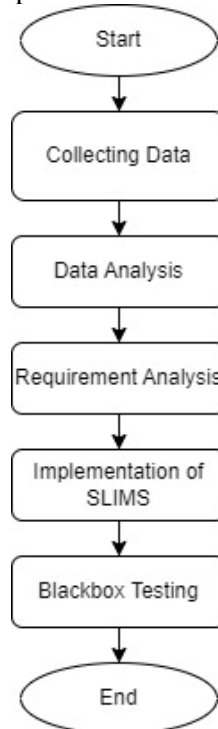

Figure 1. Alur Penelitian

Based on Figure 1, the stages of data collection can be explained, namely observing, documenting, and interviewing Kintamani 1 High School students, teachers, and librarians to learn that the library management business process still uses conventional methods in administration and services to students and teachers. The next stage is to carry out data analysis and needs analysis, which is useful to be able to determine the features of SLIMS that can be applied. The SLIMS system's functioning is tested in the final phase to ensure that its features are compatible with the needs analysis.

3. RESULTS AND DISCUSSION
3.1. Data analysis

The technique of gathering data through interviews can be used to explain the data analysis stage. The results acquired include some information about how to borrow and return library collection books as well as some other supporting data. From the observation process to the library administration process, which includes the processes of recording the collection of books available in the library, managing data on borrowing and returning books, and so forth. Members who visit the library choose the collection they want to borrow, give it to the librarian to record in the borrower's book, and then complete the borrowing

process. Additionally, when a member returns to the library with a collection they want to return, the librarian searches up the borrower's information in the borrower's book and logs the date of return. It will be determined from the return data whether or not the member is late in returning the collection. The member will be fined for being late, and if he doesn't return, he can borrow. Additionally, the officer will record the collection's identity information in a folio book while registering the book collection. paperwork proving library membership, documents proving the right to borrow and return books, and other related documents

3.2. Requirement Analysis

On the basis of the data analysis, the needs analysis phase identified the system characteristics required by users to facilitate management simplicity and the enhancement of library services. The required features include features for acquiring or proposing collections, book inventory features, book cataloging features, and transaction circulation features, which cover the process of borrowing, returning, and issuing fines for late collection. Library membership data management and periodical publishing management functions.

3.3. Implementation of SLIMS (Senayan Library Management System)

At the stage of SLIMS implementation, it is modified in accordance with the feature requirements analysis. In library administration, several SLIMS automation features are implemented.

1. OPAC (Online Public Access Catalog) Interface Page

The OPAC pages provided by SLiMS can be utilized by users as a source of collection availability information. There are two search options available on the OPAC page: Simple Search and Advanced Search. Simple Search is a straightforward search method for collections that allows users to enter any keywords from the collection's title, author, or subject. The Advanced Search method requires users to enter terms in more specific fields. The OPAC page is seen in Figure 2 below.
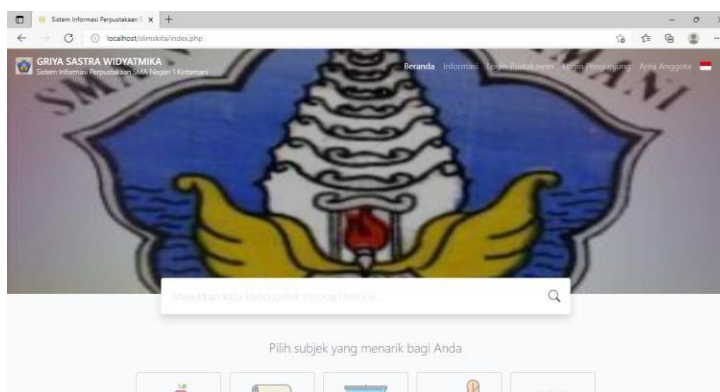

Figure 2. OPAC Display Page

The OPAC page is also provided with functions for user authentication. Adaptable user access rights allow this library to provide librarians, students, and teachers with access to the SLIMS application. Figure 3 below displays the login page.
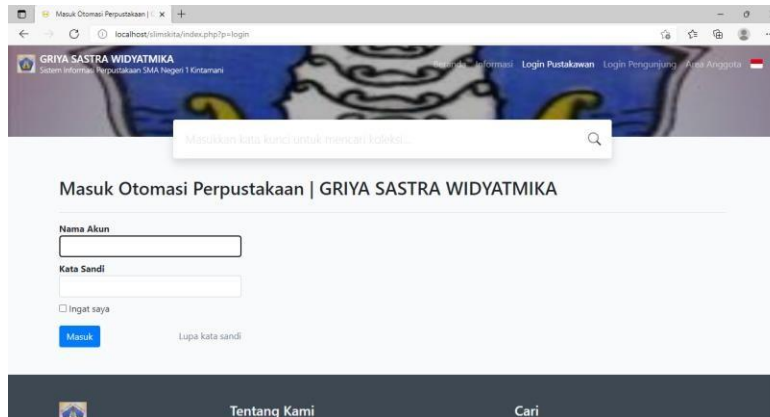
Figure 3. Login Display Page

2. Collection Page

On the bibliography menu, which is the page used to manage library materials and collections, users will find procurement management features and collection proposals. There is an add collection button on the bibliography page for adding a collection of books. Can be seen in Figure 4 below.
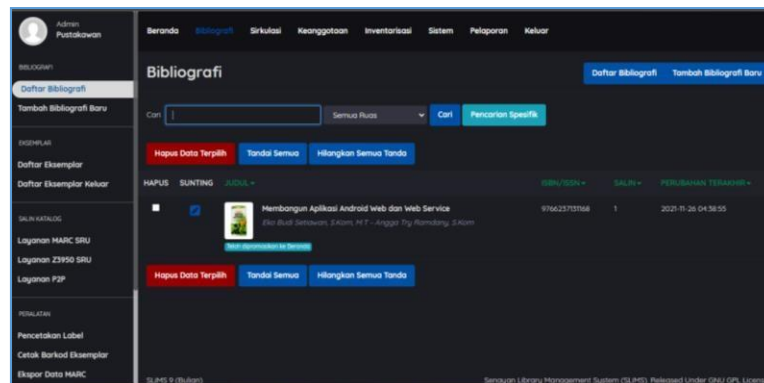

Figure 4. Book Collection Bibliography Page Display

3. Book Inventory Page

Inventory page is a page that librarians use to inventory library collections. When the inventory is initiated, all loaned collections will be regarded lost and entered into the missing copies menu until the relevant collections are entered into the copy data during the inventory process.
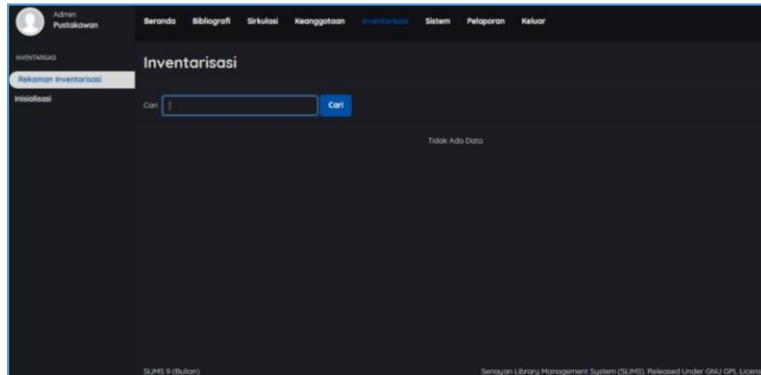
Figure 5. Book Inventory View

4. Book Catalog Page

The UCS settings page is utilized to make it simpler for SLIMS users to manage the SLIMS in order to connect it to the catalog settings of the library's book collection.
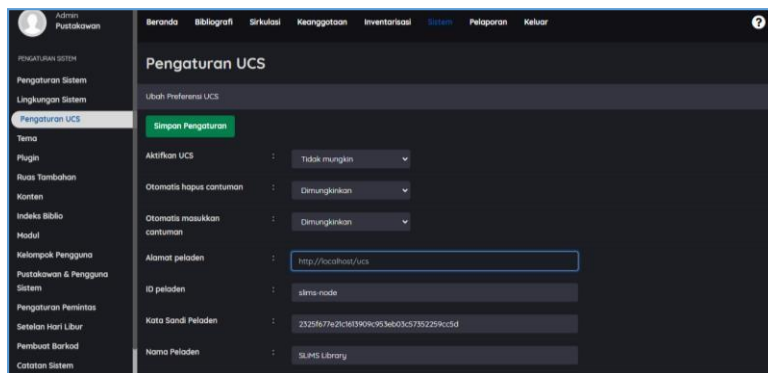

Figure 6. Book Catalog Settings page

5. Circulation Page

The circulation page is where borrowing, returning, extending borrowing, and collecting reservations take place. To conduct circulation transactions, the librarian merely needs to enter the library member's identification number.
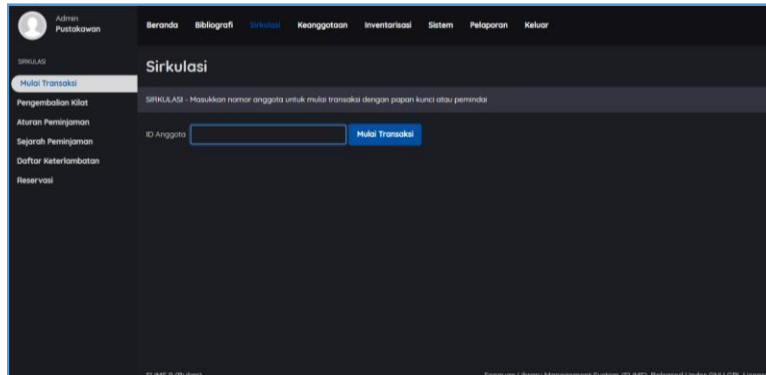
Figure 7. Circulation Page

There is a menu on the circulation page for printing labels and barcodes for each copy of the book. This considerably simplifies the management of book data for libraries.
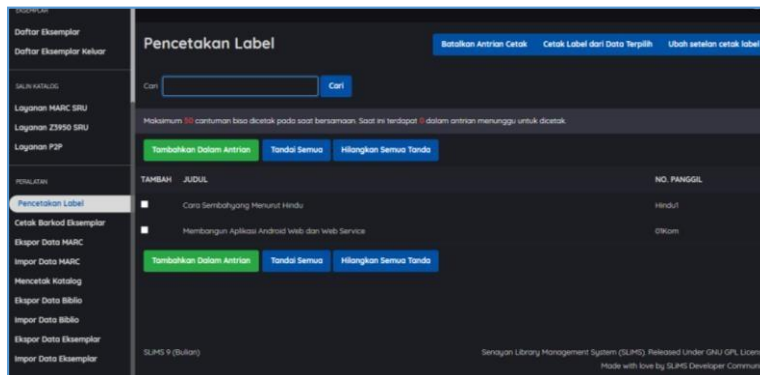
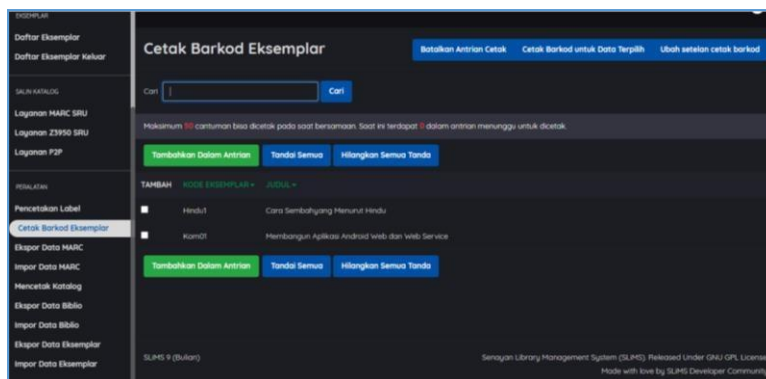

Figure 8. Book Label Print Page

Figure 9. Book Copy Barcode Printing Page

6. Issue Management Page

The export management menu for publication data management contains options for managing publication data. In the publication bibliographical settings, periodic publication arrangements can be arranged by exporting the publication.
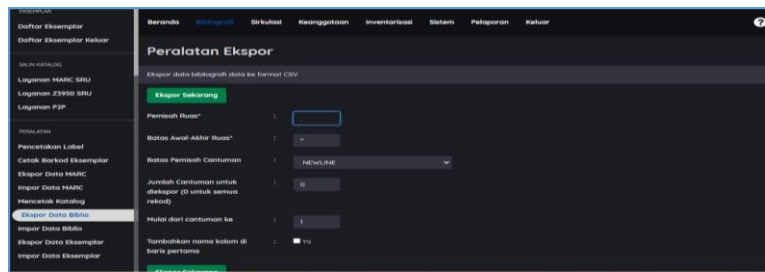
Figure 10. Issue Export Page

7. Membership Management Page

The membership page serves to manage library member information. Managed data consists of information pertinent to library needs, particularly circulation activities, such as member IDs, member names, etc.
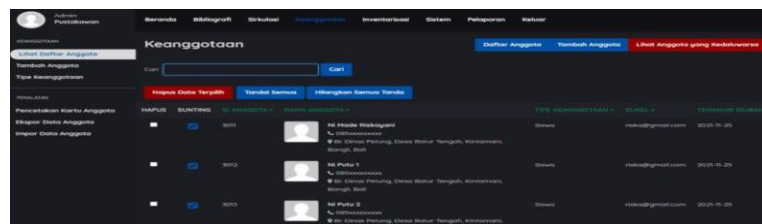

Figure 11. Library Membership Page

3.2. Black box testing

The testing step employs blackbox testing to assess the acceptability of system functioning for each system feature and process. By performing black box testing, it is hoped that each menu button's features and processes would be validated to ensure that there are no errors in system functionality[16]. Testing in a black box is shown in Table 1 below.

Table 1. Blackbox Test Results

No	Scenario Testing	Result	Information
1	Login Page	Success	Status Valid and the system is running as expected
2	Collection Proposals Page	Success	Status Valid and the system is running as expected
3	Book Inventory page	Success	Status Valid and the system is running as expected
4	Book Catalog Page	Success	Status Valid and the system is running as expected
5	Circulation Page	Success	Status Valid and the system is running as expected
6	Issue Management Page	Success	Status Valid and the system is running as expected
7	Membership Page	Success	Status Valid and the system is running as expected

3. CONCLUSION

The conclusion of the study is that the optimization and automation of the library system have been successfully implemented in accordance with data analysis and analysis of the needs of library users through the use of SLiMS (Senayan Library Management System), the open source nature of SLiMS facilitating development according to library requirements. So that the deployment of SLiMS can aid librarians in managing library administration, thereby enhancing the library's ability to support students' reading interests and providing useful information. The installed SLiMS has been packaged in such a way that, despite the complexity of existing library activities, it is simple for librarians to manage everything. In order to optimize the system's performance in accordance with the library's requirements, it is required to expand librarians' knowledge of technology and their capacity to operate and maintain the system.

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