LIBRARY SERVICE SYSTEM IN POCKET (ONLINE BOOK RESERVATION) NORTH SUMATRA PROVINCIAL LIBRARY AND ARCHIVES OFFICE

Ika Wardani[1*], Abdul karim Batubara[1*]
[1]Library Science, State Islamic University of North Sumatra
Email:[1] ika0601192032@uinsu.ac.id and [2] Abdulkarimbatubara@uinsu.ac.id

Abstrak: Through the library, the advancement of science and information technology also influences societal elements of life. The high level of community production makes it challenging for people to obtain library material needs, limiting engagement and library use. The Library and Archives Service of North Sumatra Province uses information and communication technology to meet user needs by developing technology-based services that facilitate effective and efficient library activities. Examples of these services include a library service system in a pocket (silapustaku) or online book reservations. To make it simpler to explain how the system functions and is utilized by the community, this study uses UML (Unified Modeling Language) modeling to examine the pocket library service system or online book reservation. A descriptive qualitative approach to the design of the UML system development is the research methodology adopted. The study's findings demonstrate a type of UML modeling design that enables each user to be viewed clearly and understood when utilizing the system. in order to build a library approach with the community and improve library performance via the use of technology.

Keywords: Information System, Online Book Reservation, *UML (Unified Modeling Language)*

Abstrak : Ilmu pengetahuan yang berkembang serta teknologi informasi yang berkermbang juga mempengaruhi aspek kehidupan di masyarakkat melalui perpustakaan. Perpustakaan dituntut untuk ikut berperan dalam meningkatkan kualitas layanannya dalam memenuhi kenutuhan informasi penggunanyal. dalam memenuhi kebutuhan pemustaka, Dinas Perpustakaan dan Arsip Provinsi Sumatera Utara memberikan inovasi pelayanan dengan pemanfaatan teknologi informasi dan komunikasi dengan menggunakan sistem layanan pustaka dalam saku (silapustaku) atau reservasi buku online sebagai pengembangan layanan berbasisi teknologi dalam proses memudahkan aktifitas perpustakaan yang efektif dan efesien. Penelitian ini bertujuan untuk menganalisis system layanan pustaka dalam saku atau reservasi buku online dengan menggunakan pemodelan *UML (Unified Modeling Language)* untuk memudahkan dalam memaparkan kerja system dan di gunakan oleh masyarakat. Metode penelitian yang di gunakan merupakan metode pendekatan kualitatif deskriptif dengan perancangan pengembangan *system UML*. Hasil kajian menunjukkan bentuk rancangan pemodelan menggunakan *UML* yang memungkinkan setiap pengguna dapat terlihat jelas dan mudah di mengerti dalam menggunakan system. Sehingga penggunaan teknologi mampu meningkatkan kinerja perpustakaan dan menjalin pendekatan perpustakaan dengan masyarakat.

Kata Kunci: Sistem Informasi, Reservasi Buku Online, *UML (Unified Modeling Language)*

INTRODUCTION

In general, the existence of information technology has become a big role in the world of education with the emergence of various digital creatives, along with the acceleration of the flow of information as an assimilation of globalization, including the library aspect. Currently the mastery of science, technology and information is proof of the concept of the competitive part of globalization[1]. Library is one of the public services and parties directly affected by the development of information and communication technology are managers and providers of information services[2]. There are many kinds of libraries that in their development always adjust in accommodating technological develop-ments. Libraries and librarians must be able to provide expertise in managing and providing user services[3].

Electronic communication devices such as computers greatly support library service activities in the process of management, management, and informa-tion services because they have effectiveness and efficiency that can accelerate library performance[4]. Public libraries must gradually implement aligned information technology that aims to provide excellent service to users, namely faster and more precise. It is certain that the information needs in the library are more easily obtained through access to the monitor screen provided by the library itself and cultivating the literacy ability of the community[5].

The latest development in society is the invasion of the internet and all its supporters, including search engines, social media, online multimedia, and interesting portals and websites[4]. The web itself is an inseparable part of internet resources that are very popular in today's era. The internet itself is widely used in obtaining information and even service transactions. The web itself uses a protocol called HTTP (hyperText Transfer Protocol) which runs on IP (Internet Protocol)[6], this is also starting to be applied to library operations through website pages. The web portal itself will later meet interaction needs for users and libraries so that services can be realized properly.

Due to the problem of limited time and distance with high productivity demands on an individual, it is difficult to use the library as a library material requirement for information and public education, so that user accessibility and interaction that occurs directly or indirectly in the library become hampered[7]. And related to this, efforts to meet the needs of its users at the North Sumatra Provincial Library and Archives Office are now implementing a revitalization of public library development with a library service system in pocket (silapustaku) or online book reservation. This service is through a website system that has been used by the North Sumatra Provincial Library and Archives Office to access collection lending services.

In this study, proposing the theory of innovation diffusion is an activity to communicate innovation and an important element in innovation diffusion, namely innovation, communi-cation through certain channels, time, and social systems[8]. This concept uses the library approach as a community service system

that is fast, easy, practical, searches save time and energy, the library itself is required to have a high value of benefits for the information needs of the community[9]. And services as a process of some Intangible activities themselves usually occur in interactions carried out between users and librarians or employees on duty. In addition, physical resources are also needed to be solutions to problems faced by users or customers. The level of service a user receives determines the success of the service. Quality refers to the attributes of a product as a whole that support its capacity to satisfy the needs of its users. User demands should come first and end to customer pleasure and a good view of service quality[10].

So this study aims to analyze the library service system in the pocket (silapustaku) of the North Sumatra Provincial Library and Archives Office based on webside and online book reservation policies so as to produce a form of UML (Unified Modeling Languag) modeling design. In system design, researchers use Unified Modelling Languege (UML) which includes Use Case Diagrams to illustrate user interactions with the system, activity diagrams to illustrate the stages of the system process designed. To facilitate whether it has been effective in explaining the work of the system and is used / used properly by the community.

METHOD

In this study, descriptive qualita-tive methods were used with a qualitative approach in which interviews, observation, and documentation techni-ques were used in collecting data. Data is obtained by means of Triangulation. Researchers conduct interviews with study participants or volunteers and use broad, frequently asked questions to better understand these key symptoms. After that, the data collected is in the form of words or text for later analysis. Miles and Huberman's data analysis method, which divides data analysis into three stages of data reduction, data presentation, and conclusion drawing is the basis of the data analysis method used in this study. The findings of the analysis can be images or descriptions or can be themes. In the report later, the qualitative approach will be presented in the form of a description[11].

In the program design method, the method used is the design development method through the UML (Unified Modelling Languege) system modeling stage, this method is a method from the system to a smaller model and easily analyzes the silapustaku system so that users can understand the process of using silapustaku or book reservations[12]. UML (Unifed Model-ling Language) is used as the main tool used in software analysis and design. UML is very helpful in terms of designing software systems that will allow users to create a methodology that describes a system of objects, databases and relationships[13].

In collecting data that is the object of research is an in-depth observation of the   system https://disperpusip.sumutprov.go.id/ process in conducting user interaction with the library. In addition, informant interviews were also conducted in this study using purposive sampling, where in

this technique the sample was determined by considering certain things according to the wishes of the researcher or it can also be said that informants were selected first before being selected [14]. based on the criteria, namely Lely Brayana Tambunan, SH as a librarian in the field of library service network developers and Yolanda Purba as a librarian in the field of multifunction and admin of online book reservations and Agustini, Rahma Julia Windi and RD as users who have made online book reservations (silapustaku) as supporting informants in research.

RESULTS AND DISCUSSION

The library service system in pocket (Silapustaku) is an online book reservation / ordering system. From the results of interviews that have been conducted, informant Yolanda Purba explained, "Online book reservation innovation has existed since the Covid-19 period yesterday / 2019, so when users cannot come to the library, the library provides another option, namely making an online reservation where they can order books online, we find it then users just pick up to the library".

This booking is one of the activities carried out by members of the library. Increasingly advanced technology makes it easier to order books that are not only done by users and librarians face-to-face, but can also be done remotely. For example, the same as the use of E-commerce is a form of trading transactions of goods or services using internet intermediary media[6], However, the library is a non-profit organization, so name customization is like online book

reservation. The interaction of internet use in this day and age is inseparable in everyday life in meeting the needs of the community, therefore information obtained from the internet can be easily accessed on the user's mobile phone whenever and wherever the information is needed[15]. Information and communication technology is any form of activity that can be combined with each other in the manipulation, management, and transmission of information from sender to user[16].

From the results of the interview that has been conducted according to informant Lely Brayana Tambunan, SH "Silapustaku/Online reservation is containned in web-based library services, digital services that have now been implemented by the North Sumatra Provincial Library and Archives Office. The presentation of this web-based library provides a variety of services that are easily utilized by the user community and have the virtue of being devoted to becoming a member of the library both online and in person. This online book reservation service is served online by users from opening the library's webside page through https://disperpusip.sumutprov.go.id/ this online service can be accessed 24 hours the webside."

The Library and Archives Office of North Sumatra Province continues to develop the service system to provide quality service quality. Development of silapustaku system as e-commerce with various android and web-based services. Each user has a different character of interaction with the system[15]. The application of this information system is very important to facilitate the operational

process of the library and the use of this system is expected to be able to improve the quality of existing services properly and quality[17]. Faster service makes time more effective and efficient and will get more optimal results[18].

According to Informant Agustini as a user who has made online book reservations stated "That it is good enough to use this online book reservation service, with this silapustaku service can greatly help users in accessing to meet the information and knowledge needs of the community. In addition, more importantly for me as a student, academics certainly need good information with various types of collections that can be accessed both printed and non-print without any time and distance constraints. With this online book reservation service, the collection of library materials really provides maximum benefits and functionality to users. However, not many people know the existence and use of this online book reservation service, some of whom know this online book reservation service is only for ordering books online."

As well as the results of interviews with other users, according to informant Rahma Julia Windi as a user who has made 2 online book reservations that "this online book reservation service is very good in meeting user satisfaction in terms of librarian services and book collections". And reaffirmed by RD as a user who has also made online book reservations according to informants "the online book reservation service of the North Sumatra Provincial Library and Archives Office is very helpful and makes it easier for users to still be able to borrow books with friendly librarians and fast response. It's

just that it has problems with books that are not available in online catalogs"

So this research succeeded in developing a UML design model on the online book reservation system. The results of this study are in the form of stages of using the online book reservation system which is adjusted to the UML mel Image 1:

Image 1: Website Menu Display of the North Sumatra Library and Archives Office

The description in image 1 is that there are several features or facilities provided to meet the needs of users on the website, including the first Disperpusip Profile, in this menu there is information about history, vision and mission, organizational structure, and work programs. Second E-book, this menu is used to marry the latest collections and regional deposit collections. Third Gallery, this menu is used to view photo and video albums. Fourth Activity, this menu contains news activities, articles and opinions, suggestion boxes and public expectation surveys, community satisfaction surveys, and online book reservations. Fifth Member Area, this menu is used to login and register to read digital books on the web. Sixth Regulation, this menu contains the

pergub, which is a collection of archive fields that request. Seventh Online membership list, in this menu contains the library member registration form. Kedepalan Online public access catalog, this menu is used to view the catalog. The ten Ipusda sumut, in this menu for reading online. Eleventh Gale database, this menu is specifically for English collections.
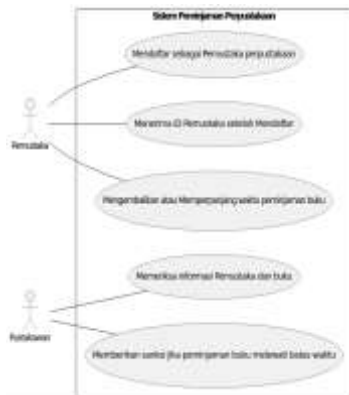

Image 2: use case diagram of an online book lending system

The description in image 2 is a use sace diagram of the online book lending system, namely activities for users to register members online and extend book loans and return books. Then the Librarian verifies, checks member data and books, as well as applicable sanctions policies.

Image 3: Use case diagram of online book reservation system

In image 3 is the use case diagram of the online book reservation system, namely the activities of users choosing and ordering books and librarians verifying book orders.
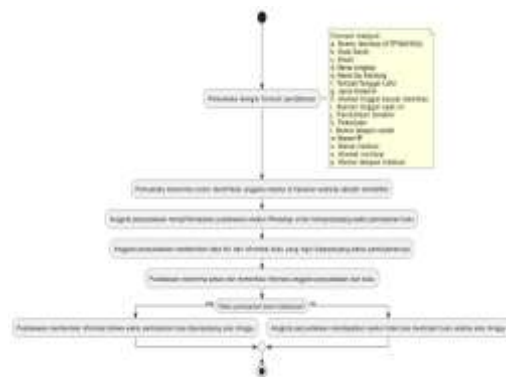

Image 4: Activiy diagram of online book lending system

In Image 4 is the online book lending activity diagram, which is the process that begins with the user's activity of filling out the online member registration form, which consists of: identity number (KTP/NIK/KIA), password, email, full name, birth mother's name, place/date of birth, gender, residential address according to identity, current residential address, last education, job, home phone number, mobile number, institution name, institution address, institution phone number. Then the system will receive a registration form and users receive library member identification numbers automatically. After that, library members/users inform the librarian via whatsApp will extend the book or return the book. Then users provide personal data and book information Those who want to extend the loan time, then the librarian will receive a message and check the information data of library members and books borrowed, if

the loan time has not expired or expired, the librarian provides information that the loan time can be extended by one week, and if the loan time has expired / ended, members of the library / users will get a card freezing sanction (saspen) cannot borrow books for 1 week.
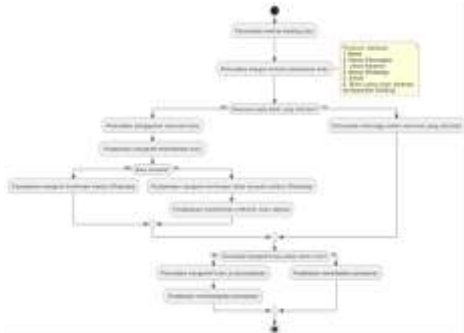

Image 5: Online book reservation activity diagram

In image 5 is the online book reservation activity diagram, which is a process that begins with the library activity to view the online catalog (Opac) to ensure the availability of the book you want to order. Then the user fills out the book ordering form consisting of: name, user number, gender, whatsApp number, email, books that want to be ordered based on catalogs / references. Then reservations at the allowed time in the form of reservations on Monday to Friday at 09-13 WIB, a maximum of 2 book titles in the collection of general services, fiction and children's services. otherwise users wait for the time allowed. And if yes, users can apply for book reservations, then the librarian checks the availability of books, if books are available, the librarian will inform via whatsapp.

CONCLUSION

Based on the results of the discussion, it can be concluded that this research has produced a picture of the form of modeling on the library service system in pocket (silapustaku) or online book reservations to facilitate the application of the system to users. So that the existing system can be re-empowered to help users access the information and knowledge needs of the community without the problem of distance and time limitations. The development of library service features in this study is declared feasible and applicable as a digital library that has adapted to the progress of existing information and communication technology.

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