DIGITALIZATION OF LIBRARY ADMINISTRATION SYSTEM AT UNIVERSITY

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Abstract - In the current era of the industrial revolution 4.0, the need for information technology in all fields is a necessity. This also applies in the world of education and literacy, especially library management. Information technology is really needed in library management so that the process of disseminating information and knowledge is faster and easier to access whenever and wherever. The use of this technology is believed to be able to improve the quality of human resources especially the quality of conducting research and publications. Research and publication become mandatory requirements for students to graduate. Therefore, it requires a lot of quality literature sources so that student research is getting better and more quality so that it can be accepted and published in accredited national journals or reputable international journals. This has become a big task for university managers and supervisors to encourage and involve students to be able to publish their research results. One of them is by providing digital system based library services that provide a variety of quality literature, both books and quality journals that can be accessed by all students. This research aims to design a digital based library management system. The results of the study are digital library management system programs from the initial display of digital library entry, data input, information on the availability of literature collections, the registration process, booking and borrowing books.

Keywords - Digital Library, Library Management.

I. INTRODUCTION

Currently there is euphoria among college librarians. The trigger for the situation is related to the widespread development of digital-based library concepts (Siswadi 2008). According to Oppenheim and Smithson digital libraries are information services where all information sources are available / processed in computers and functions of acquisition / retrieval, storage, retrieval, access and display using digital technology (Hartinah 2009).

The success of digital libraries is highly dependent on optimal and sustainable collaboration among users so as to create satisfaction among users, an in-depth assessment of user needs must be carried out before the digital library creation plan. There is a need for trained staff (librarians, operators, technicians / administrators). Digital libraries are economically more profitable than traditional libraries. Chapman and Kenney put forward four reasons: institutions can share digital collections, digital collections can reduce the need for printed materials at the local level, their use will increase electronic access, and the long-term value of digital collections will reduce costs associated with maintenance and delivery (Siregar& North, 2015).

Online journals are a separate phenomenon among the rapid development of current university libraries. The college library that used to be used to printed journals began to turn its attention to electronic journals. Some libraries like racing try to provide online journals as one type of digital collection. Some are still in the planning stage to provide online journals. Impressed the library imposes to provide online journals. Though not a little thought and costs that have been incurred for it (Siswadi 2008). The problem in this study is how to build digital library management in universities.

II. LITERATURE REVIEW

Digital Library

According to the Darmono Library in essence it is "a center for learning resources and a source of information for users. The library can also be interpreted as a collection of books or places where books are collected and organized as student learning media. " E - Library or digital library is a library that most of the collection or even the entire collection is in the form of digital that can be accessed using a computer. These collections can be grouped in various types such as books, pictures, magazines, newspapers, and even sounds. This grouping will of course make it easier for you when you are searching in this digital library or e-library. The definition of a digital library based on the opinion of Ismail Fahmi (2004) is a system consisting of hardware and software, electronic collections, management staff, users, organizations, work mechanisms, and services by utilizing various types of information technology.
Digital libraries indicate that the collection is digital and may not have a collection of prints. Digital libraries can be part of a library in general or stand alone. Digital libraries may be accessed via the

internet (being a virtual library) or only available on local networks.

Library Performance

The National Accreditation Board - Higher Education details the assessment of the physical condition and services of higher education libraries through the following aspects (Hasanah, 2009), (BAN-PT, 2010), (Abadi & Widyarto,2018):

Space and Equipment

1. In this aspect, it is necessary to consider the following, namely the adequate size of the room, the condition of the room that meets safety requirements (fire extinguishers), health and comfort (temperature, lighting, air circulation), assistive equipment for visitors (photo-copy machines, tools book catalog finder), and discussion room for student groups.
2. Library materials consist of the availability of textbooks, availability of practicum / practice modules for diplomas, availability of dissertations / theses / thesis / final assignments, availability of popular scientific magazines, availability of DIKTI / LIPI accredited scientific journals, availability of international scientific journals, including e-journal , availability of seminar proceedings in the last 3 years, Student to book ratio, ratio of textbooks in the last 5 years to the total number of accredited and international books and journals subscribed to the last 5 years
3. The use of libraries for library services, library opening hours reaches 8-10 hours per day, accessibility of e- library services with libraries in faculties / study programs, number of visitors (physical visitors and virtual visitors) and inter-library services
4. Regular library maintenance (fumigation, cleanliness) consists of the availability of maintenance and implementation / realization of maintenance programs.
5. Budget, the university library budget is regulated in the Indonesian National Standard (SNI) document number 7330 of 2009 points 12. The arrangement consists of only one sentence, namely: "Library budget is at least 5% of the total university budget outside of employee expenditure."
6. Qualifications of Library Staff in the form of quantity and quality (Educational background)
7. Information system consists of internet network, internet access, student to computer terminal ratio, lecturer to terminal ratio and internet bandwidth ratio.

Information Systems

Information is very important in decision making. Information can be obtained from information systems (information systems). According to Robert A. Leitch and K. Roscoe Davis in book sources Jogiyanto, HM (2008) Information systems are defined as follows: "Information systems are a system within an organization that brings together daily transaction processing needs, supports operations, is managerial and strategic activities from an organization and provide certain outside parties with necessary reports ".

Principles of System Development

In carrying out the system development process, several principles must not be forgotten (Jogiyanto, 2008). The principles of system development are as follows: 1) The system developed is for management that is after the system has been developed, then the one who will use information from this system is management, so the system must be able to support the needs needed by management. 2) The system developed is a large capital investment, ie every capital investment must consider the following two things: a) All alternatives must be investigated; If the alternatives are ignored and have already invested funds into a particular investment project, then investors will lose the opportunity to invest their funds in other investments. Therefore, from several existing investment alternatives, it must be investigated to determine the best or the most profitable alternative. b) Good investment must be of value; Investment is said to be profitable if it is valuable, which means that the benefits or returns are greater than the cost to obtain it.

System Development

In developing this system the author uses structured analysis and design methodologies. The analytical methodology and structured design are the methodologies used in the analysis and design stages. This methodology is included in the Data Oriented Methodologies group which emphasizes the characteristics of the data to be processed, more specifically structured analysis and design methodologies fall into the category of Data Flow Oriented methodologies where the methodology is based on solving the system into modules based on the type of data elements and behavior the logic of the module in the system. With this methodology the system can logically be described logically and described logically from the data flow and the relationship between its functions in the modules in the system. One of the tools used in this methodology is data flow diagram (Jogiyanto, 2008).

III. RESEARCH METHODS

Stages of Library DevelopmentIn building a digital library at the postgraduate institute of informatics and business darmajaya uses a type of qualitative research with survey methods to obtain data and gather information by conducting several phases of the

following steps, namely:1. CommunicationAs the first framework, the engineer engages in a question and answer discussion. This is done to find out the library system that is already running, the problems experienced by librarians in managing the library, and the librarian's expectations of the new system. Based on the results of the discussion, the engineer offered various solutions for librarians in the planning framework.2. PlanningPlanning (planning) is carried out based on the results obtained from the communication framework. The plan is in the form of a proposal to create a new system in the form of a software called Web-based digital library system. The proposal is in the form of software specifications based on elements of the system consisting of input (input), processing (storage), storage (storage), and output (results).3. ModelingThe model used use cases to obtain and analyze sufficient information requirements to prepare a model that communicates what is needed from the user's perspective of how the system is built and implied. The steps in the use case model are:1. Identify business people2. Identify the Business Use Case requirements3. Arrange scenarior4. Intface Design

IV. RESULTS AND DISCUSSION

Result

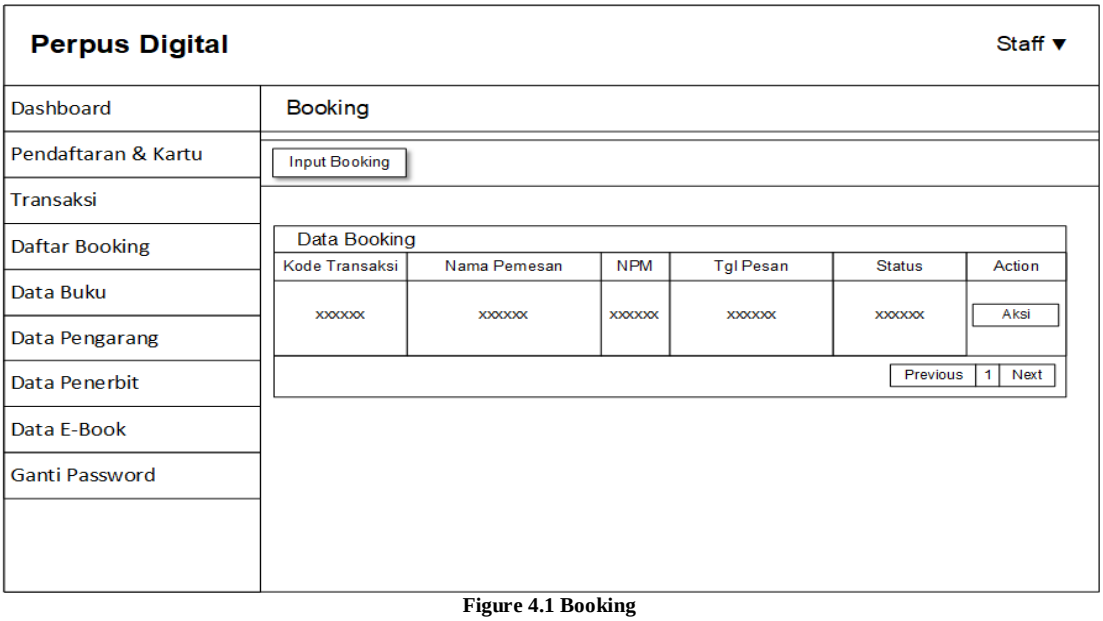


Figure 4.1 Booking

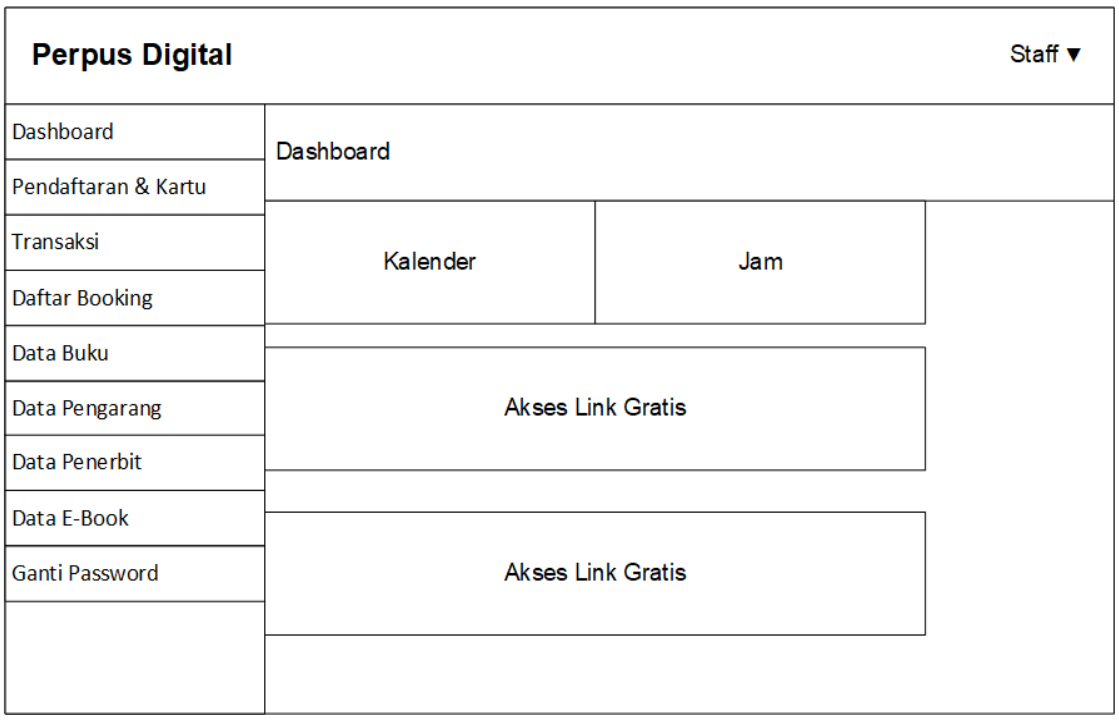


Figure 4.2 Dashboard

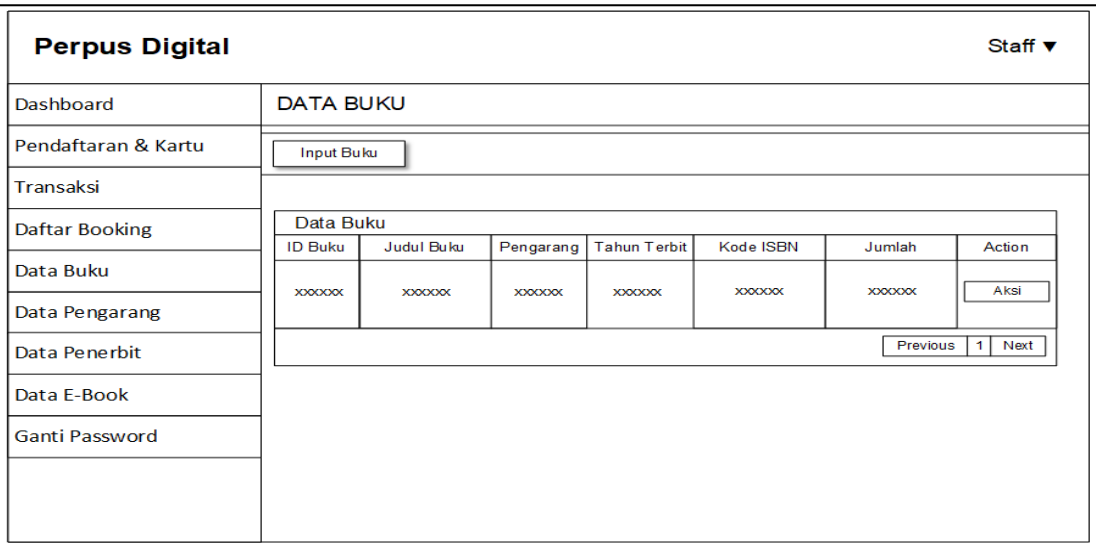


Figure 4.3 Data of Books

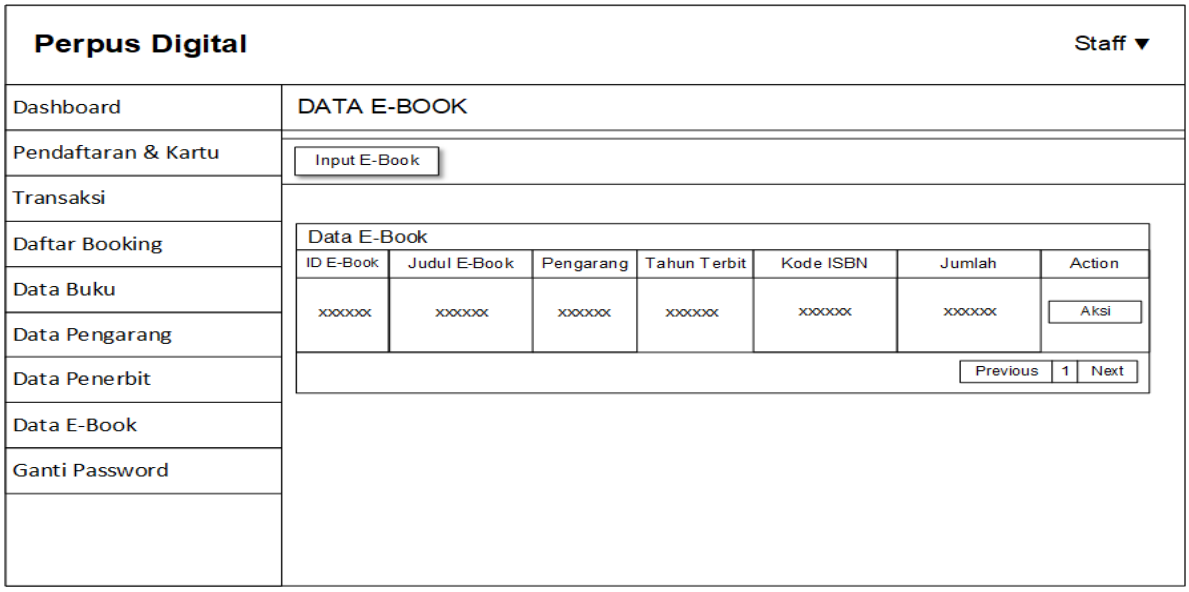


Figure 4.4 E-book

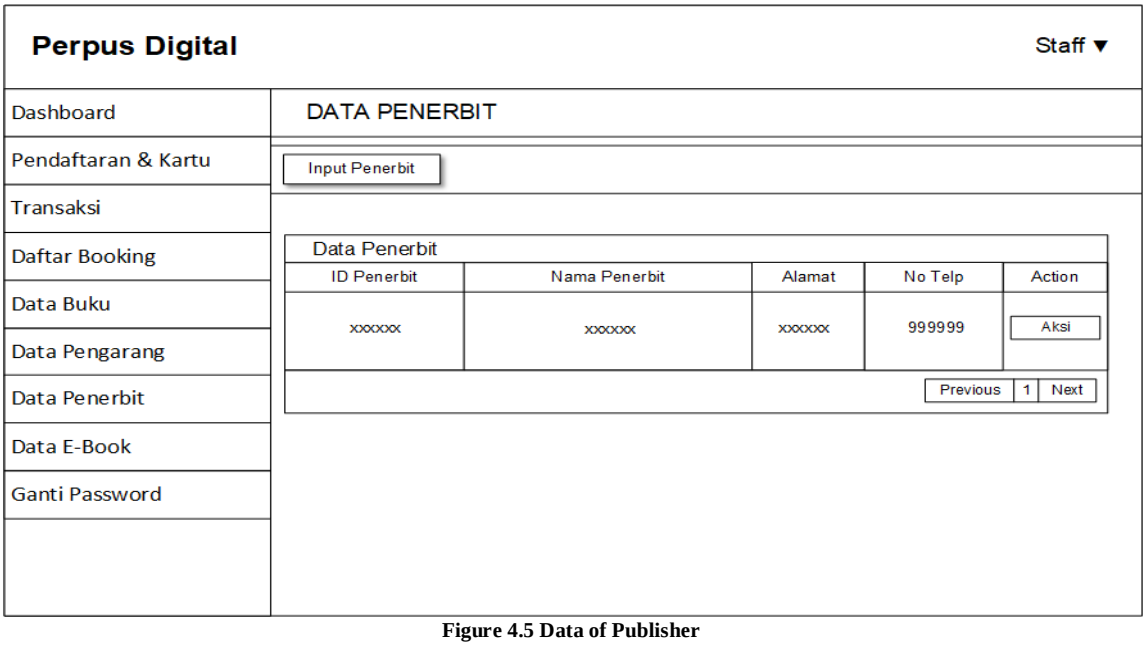


Figure 4.5 Data of Publisher

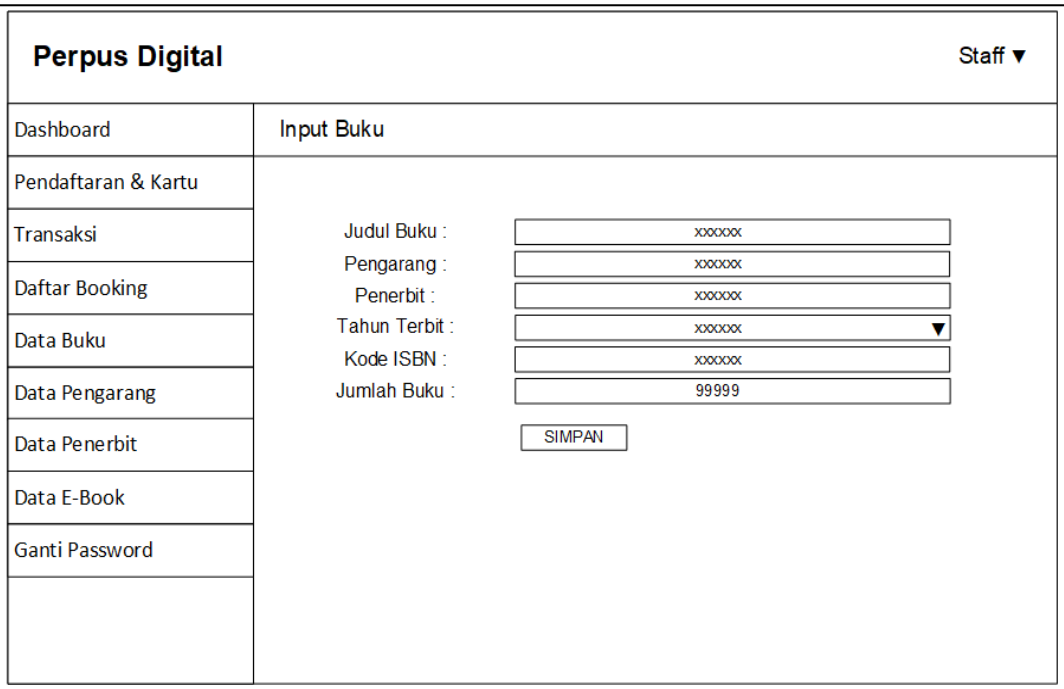


Figure 4.6 Input Data

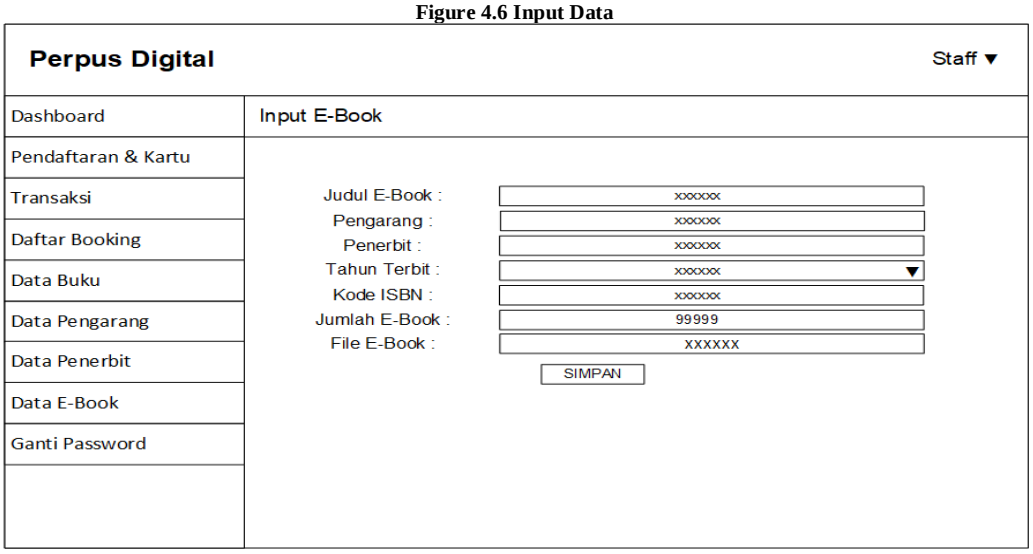


Figure 4.7 Input E-Book

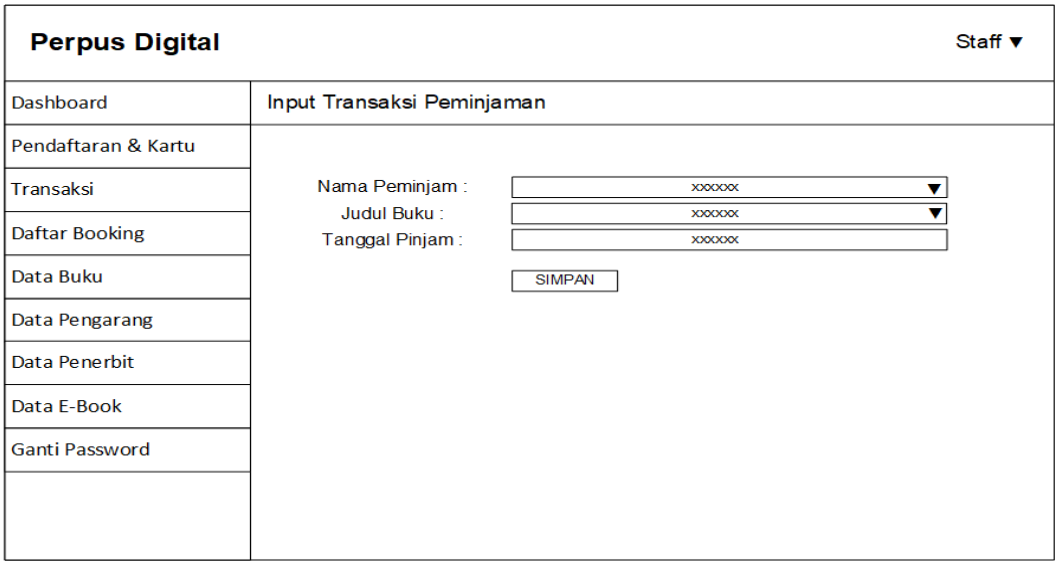


Figure 4.8 Input Transaction

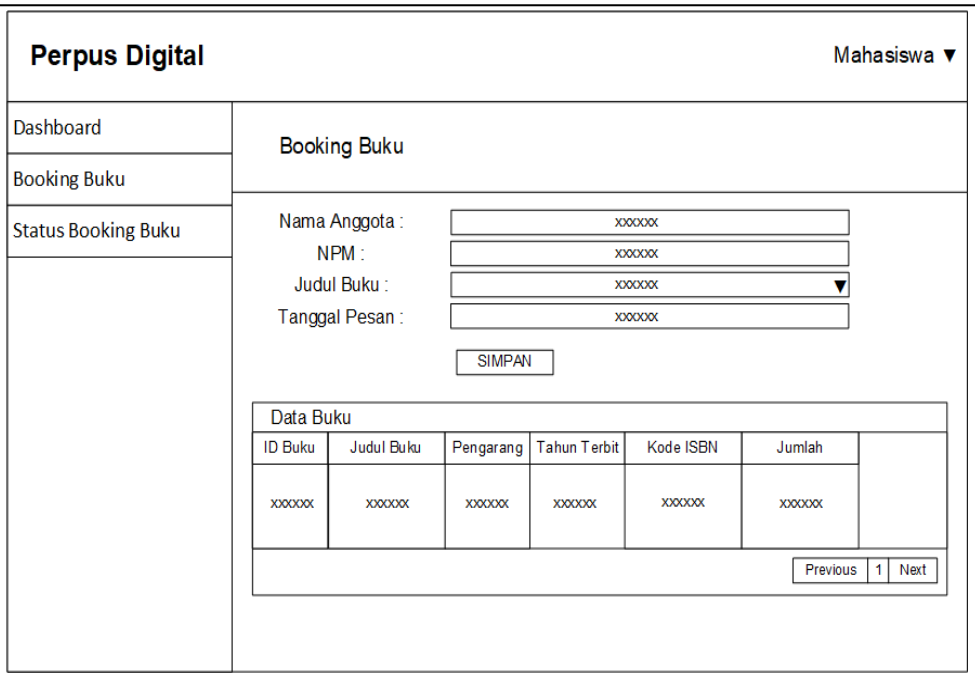


Figure 4.9 Booking of Book

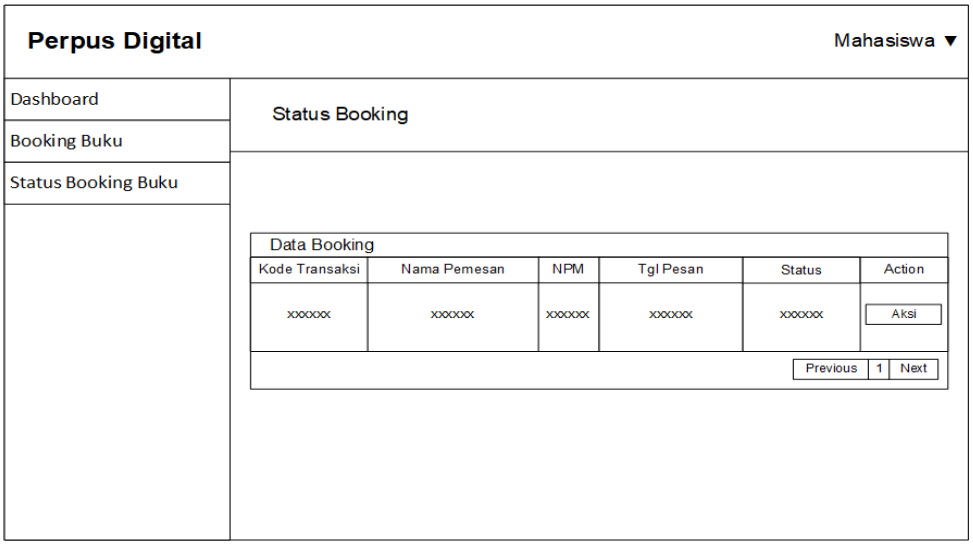


Figure 4.10 Status of Booking

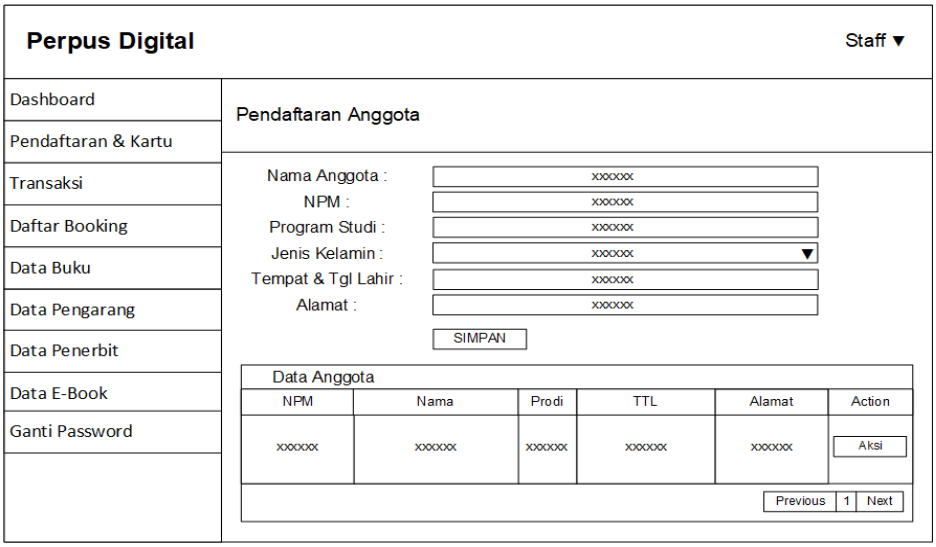


Figure 4.11 Admission

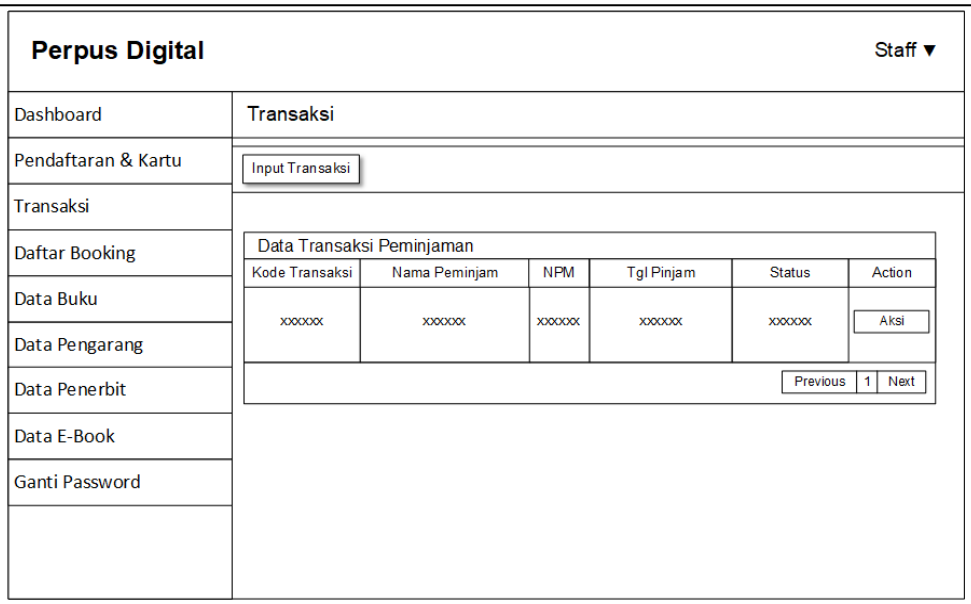


Figure 4.12 Transaction

Discussion

In carrying out the system development process, several principles must not be forgotten. (Jogiyanto, 2008). The principles of system development are as follows: 1) The system developed is for management that is after the system has been developed, then the one who will use information from this system is management, so the system must be able to support the needs needed by management. 2) The system developed is a large capital investment, ie every capital investment must consider the following two things: a) All alternatives must be investigated; If the alternatives are ignored and have already invested funds into a particular investment project, then investors will lose the opportunity to invest their funds in other investments. Therefore, from several existing investment alternatives, it must be investigated to determine the best or the most profitable alternative. b) Good investment must be of value; Investment is said to be profitable if it is valued which means benefits (benefits) or the return is greater than the cost to obtain it (cost).

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V. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The digital library program is made from the initial display into the digital library until the book lending process is complete. The appearance of the digital library is still simple. Having a copyright right that is in the copyright law the problem of transferring documents over a computer network has not been understood by the researcher.

Suggestions

If the digital library program is completed, start entering student data as the borrower's book data into the digital library program and start the existing books to be included in the digital library program, start editing and start uploading the complete document for the digital library.

ACKNOWLEDGEMENTS

The author would like to thank the Directorate of Research and Community Service of the Directorate General of Strengthening Research and Development at the Ministry of Research, Technology and Higher Education of Indonesia who has given financial support to this research.

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