Using Android in Accessing Transactions Data on Library Book Loan

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Abstract: *This research is motivated by the existence of some problems that arise in the management of the Library which is still done manually. For example, the more complex library collections, circulation library transactions resulting in frequent delays in service to members of the library, and others. Therefore, a new system will be created which is expected to address these issues better. The purpose of research is to produce software (application program) for web-based library information system that is expected to overcome these problems with better. Type research used is applied research is one type of research that aims to provide solutions to certain problems practically. The research design is done by Waterfall method which includes preparation stage (data readiness, software or hardware used), design stage (data analysis, menu design, interface, design, coding), testing phase and maintenance/development stage. At the coding stage, the implementation of the web-based program using PHP program, HTML, Dreamweaver editor with the database using MySQL. The results of this research are the availability of a web-based library information system that provides easy access to various information needed.*

Keywords: Library information, MySQL, PHP.

1. Introduction

This research is designed with the aim of overcoming various problems that occur in the management of Ujung Pandang Polytechnic Political Commerce Department which is still manual based. Increasingly complex library collections and library transaction circulation resulted in frequent delays in the service of library members and the lack of information on the existence of some books due to improper recording. Therefore, a new system will be created which is expected to address these issues better. The system to be created is web-based using PHP and MySQL. With a web-based system, software (application program) can be run either online or offline. Based on the above description, then the problem in this research is how to design-build a web-based library information system that can be used at libraries in the Department of Administration Commerce Politeknik Negeri Ujungpandang.

An information system is a system within an organization that reconcile the needs of daily transaction processing that supports organizational, operational functions that are managerial with the strategic activities of an organization to be able to provide to only outsiders with the necessary reports (Sutabri, 2004). Definition of database proposed by Sutanta (2004: 18) as is an integrated data (stored data together) on media without a data duplication (if any then the data duplication must be minimal possible and controlled). The data is stored in specific ways so that it is easy to use or re-displayed, and can be used by one or more optimal application programs. The data is stored without having to depend on the program to use it in such a way that the process addition, retrieval, and modification of data can be done quickly and controlled.

PHP (Personal Home Page Tools) is a programming script that is located and executed on the server. One of its functions is to receive, process, and display data from and to a site (website). The data will be processed by a database server (database program located on the server, e.g., MySQL) for following results are displayed in the browser of a site. Thus PHP can make the site more dynamic because the site data can always be changed on demand. Anhar (2010: 23) defines PHP a programming language in the form of scripts that can be integrated with HTML. MySQL is software that belongs to DBMS (Database Management System) which is Open Source. The open source states that this software comes with source code (code used to create MySQL), also, of course, the form of executable or code that can be run directly on the operating system and can be obtained by downloading on the internet for free (Kadir, 2008). The library is defined as a room or building used to store books or other publications that are usually stored according to a particular arrangement used by the reader not to be sold (Basuki, 1993). The objective of the research is to produce a software (application program) for library information system in Ujung Pandang Polytechnic State Administration Business Department which is web-based with PHP and MySql.

2. Method

The type of research used is applied research is one type of research that aims to provide solutions to specific problems in a practical way. The research design is done by implementing waterfall method by using data flow diagram or Data Flow Diagram (DFD), as follows:
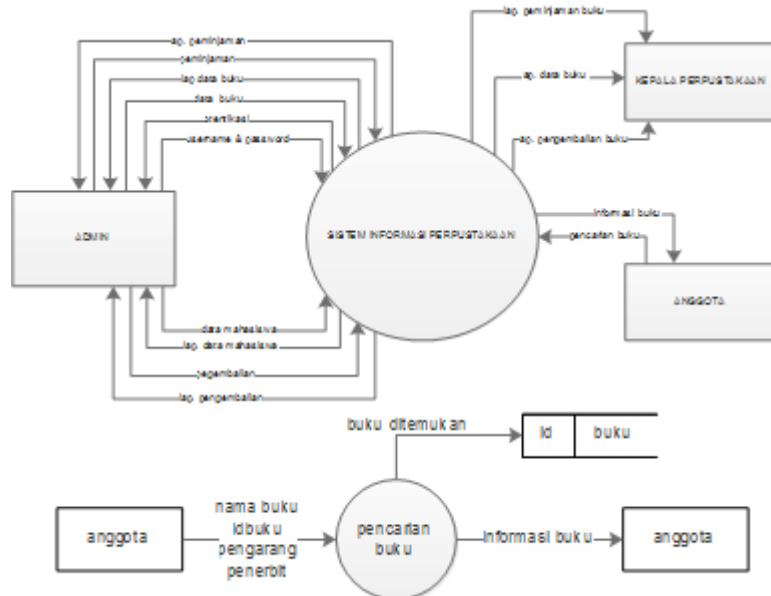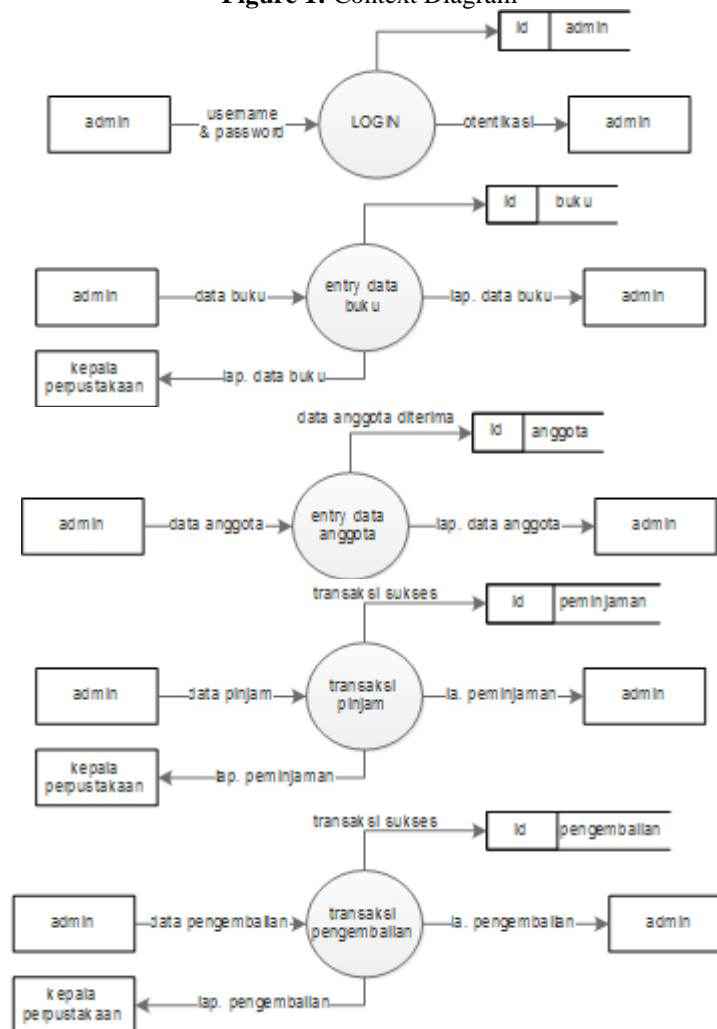
Figure 1: Context Diagram

Figure 2: Admin Diagram Level 1

The next stage researchers design/design menu structure and display interface program (interface). Implementation design by coding in PHP and HTML programming language.

3. Results and Discussion

On this page visible login form and book data is displayed. The status of the book is described with the "Ada" or "none" description. Also, the "Search" button is used to determine the position of a book in a storage cabinet. For example, to find the position of the book "Draft Letter Business" then by

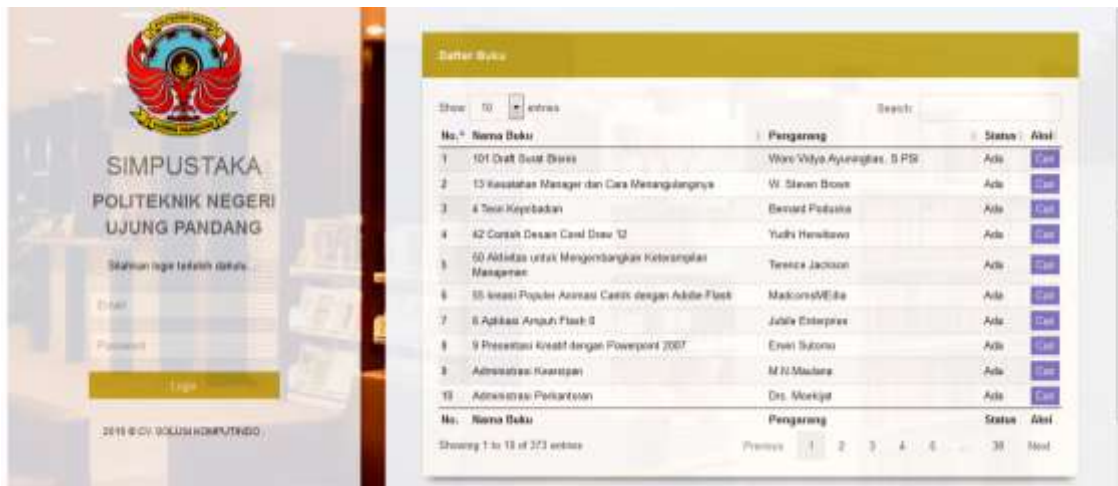pressing the "Search" it will produce the image as follows:

Figure 3: Home Display

The position of the book in question is shown in red on the floor plan. On this page, admins can send warnings to members who have delinquent books that have not been returned via SMS by clicking the "Send Warning" button. The "Print" button on the top right corner serves to print the names on the list and the fine. The last thing that needs to be presented in this research report is the existence of a facility that allows each member can monitor all book transactions ever done through android. First of all, members who want to check their lending deals install this app via "Play Store." Next, the member logged in with the Students ID. The process can be explained through the picture on the side. Members/borrowers can log in by using stops for students and nip for lecturers. Members of the library can view the history of transactions ever done, and can view the list of books that have not been returned.

4. Conclusion

The results of this study have resulted in web-based library information system with PHP and MySQL named "Sisfo Library." Some of the uniqueness of this information system is to search the position of the book on the storage cabinet by using a red picture signal. Furthermore, this system also has an SMS integration in the form of sending an alert via SMS to members who are late to return the book. The last is that each member of the library can monitor their transactions that have been done through Android. Suggestions for the admin and library members to optimize the library information system and expected suggestions from users for improvements and upgrades to the system in the future.

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