

CHAPTER 1

INTRODUCTION

Library is a collection of sources of information and similar resources, made accessible to a defined community for reference or borrowing. Thus the process of handling a library manually is very disorganized because of this, the computerized system for handling the activities of library management provides a comprehensive way to lessen physical labor, to reduce complexity of the manual system and sooner. Library Management System is an application that refers to library systems which are generally small or medium in size. It is used by librarian to manage the library using a computerized system where he/she can record various transactions like issuing of books, return of books, addition of new books, addition of new students, etc. Traditionally, library automation is referred to as the computerization of the entire library housekeeping operations such as acquisition, cataloguing, circulation & serials control. However nowadays, it is also referred to as the handling of large quantity of data and information efficiently and quickly with the help of computers and other modern information technologies. It enhances the speed, productivity, adequacy and efficiency of the library professional staff and saves the manpower to avoid some routine, repetitive and clerical tasks such as filing, sorting, typing, duplication, checking etc.

Mindanao State University-Main library has a unit library in every college. The resources that can be found in every unit libraries are limited because only related resources on a specific unit library of college are made available, and the transaction on every unit library is done manually, keeping records in every transaction by paper is tasking for a librarian.

As a result, some of the records may be lost because of the volume that must be kept and that they could not impose penalties for overdue of resources. On the other hand, resource transaction like inventory is also time-consuming, spending a lot of time and effort counting the resources and going over with its master list. Since inventory of the resources is done manually, there is a big possibility of committing errors during the process. Thus, a system must be developed and must be implemented in order to reduce work in every unit library of the Mindanao State University-Main campus.

Project Context

The MSU-College of Information Technology library is one of the unit libraries in Mindanao State University-Main campus. And their existing library process is mainly manual. Because manual system has caused a number of problems, the developers of this study thought of developing a computerized system in handling the transaction of library management that provides a comprehensive way to lessen physical labor and to reduce complexity of the manual system. This project aims to design and to implement a computerized library management system. Barcode scanner will be used to make the transaction more effective. A properly computerized library system and the use of Barcode Scanner will aid the librarian with quick and prompt services. Library automation refers to mechanization of library housekeeping operations predominantly by computerization. The most commonly known housekeeping operations are acquisition control, cataloguing, and circulation control.

Students, faculty members, and library staff of the different colleges in Mindanao State University-Main campus will benefit from the system, since the project will provide ease of daily access in the library. The students' browsing time through arrays of card catalogue are no longer needed. Getting the resource call number from the card catalogue is no longer a problem because

there will be a search engine that the system will provide to view the location and the details of the resources needed, and so that, searching for the resources will no longer be time consuming.

1.1 Purpose and Description

This capstone project entitled “*An Automated Library Management System for MSU Unit Library*” is intended to develop an automated system that will aid the process of the unit library of the Mindanao State University. This project aims to design and to implement a computerized library management system for all unit libraries of Mindanao State University, to lessen the repetitive and laborious work of certain librarian in keeping library transactions and records.

The “An Automated Library Management System for MSU Unit Library” is an offline web-based application system that will be used by the assigned college librarian, as well as the college inventory clerk of every MSU unit library, as a mean of record keeping of borrowers and resources stored in library system. Thus, this project is greatly beneficial specifically to the following people:

The College Librarian. This project will help unit librarians by providing them facilities to enter information into the system directly, to view all the information of the resources and the borrowers in a well-organized way by using the barcode scanner and to keep track all the transactions done inside the library instead of passing the information on paper.

The Borrowers (Student and Faculty members). This project will help the borrowers an easy access to the system, such as searching for the books that are stored in the database, and giving them a facility to verify their accounts and if there are accountable fines that exist during the overdue of the borrowed resources.

The College Inventory clerk. This will help the college inventory clerk by providing facilities to keep track of those new arrival resources, to classify and to index the new arrival

resources, to fill in the form order that the system provides and if there are resources that a certain college need.

1.2 Objectives

1.2.1 General Objectives

This capstone project entitled “*An Automated Library Management System for MSU Unit Library*” aims to develop and implement a computerized library management system to aid the College Librarian as well as the College Inventory clerk and the borrowers in organizing the process, storing and searching on the electronic resources for the Unit Library of Mindanao State University.

1.2.2 Specific Objectives

Specifically, this capstone project aims to:

- Develop the system requirements or system specifications based on the roles and activities given by the end users,
- Design a database to store the records of all transactions done in the system,
- Design and develop a library system for MSU unit library based on the given system requirements and specifications, and;
- To test and evaluate the functionality of the system.

1.3 Scope and Limitation

1.4.1. Scope

This capstone project focuses on the design and development of library management system for the unit library in MSU. This capstone project will be conducted and to be tested first in MSU-College of Information Technology Library, one of those unit libraries. This project focuses on the organizing, storing, and searching on the available resources with the corresponding transaction in the management of the said library. Different unit libraries of MSU are following the same rules and regulations given by the MSU Main Library. Only bonafide students or faculty members of the university are allowed to use the system. The end users of this system are the administrator, librarian, inventory clerk and the borrowers. The creation of librarian's account and inventory clerk account will be created by the administrator as long as they are members of the library organization. The creation of faculty members' accounts will be created by the assigned administrator provided that they are from the university and they have a valid university Identification Card. The creation of the students' accounts will be done by the administrator given that they are officially enrolled students and they have a student valid Identification Card and Borrowers' Card. The basic housekeeping of the library such as acquisition (receiving, ordering and recording of resources), cataloguing (classifying and indexing of resources) and circulation (lending and returning of resources, calculating fines, etc.) will be implement to this system. Only maximum of three books that can be reserved and borrowed by one borrower. The payment for the fines will be done outside the system though the system will notify the librarian about the status of the borrowers who overdue and the resources that they have borrowed. For the future researchers, it will have functionality that will allow the librarian to print the list of catalogued resources. Also allowing to print a list of order resources for easier and efficient transactions between the inventory clerk and the supplier when ordering number of books.

1.4.2 Limitation

Non-constituents of the University may be allowed to use the library subject to its rules and regulations and upon the Approval of the Director, University Library. No receipt to be provided for the borrowers after the billing of fines. Each college library has its own database which is not interconnected with other college libraries.

1.5. Significance of Study

This capstone project entitled “*An Automated Library Management System for MSU Unit Library*”, will be important to the assign at College Unit Library since it will remove the existing manual process of unit libraries here in MSU-main campus. This project aims to design and implement a computerized library management system for all unit libraries of Mindanao State University so to lessen the repetitive and laborious work of certain librarian in keeping library transactions and records.

College Unit Librarian can easily track down the overdue resources because this project has a notification for overdue resources. Also, the borrowers can view their information if they have overdue resources through this system.

This capstone project will use barcode scanner to make every transaction fast and more reliable than entering the digit that you want to input in the system. Since the Barcode Scanner provides an accurate and timely support of data requirement for sophisticated management systems.