LABORATORY BORROWERE SLIP USING VBA MACRO PROGRAMMING FOR THE COLLEGE OF ALLIED MEDICINE

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ABSTRACT

A borrower's slip is a practice of displaying that you are borrowing something. It can be used in borrowing equipment in a laboratory or in other offices. That is why the proponents come up with an idea of creating a "Laboratory Borrowers Slip using VBA Macro Programming for College of Allied Medicine". This program can accept data that are inputted by the users that will be recorded or stored in a MS Excel document. This study is primarily concerned on the development of a laboratory administration system for the Lyceum of the Philippines University-Laguna, College of Allied Medicine. The proponents aimed to hasten and simplify the operations in the Allied Medicine Laboratory of the said institution and returning of equipment, tracking and recording utilization.

Keywords: *Borrower's slip; borrow; VBA Macro; laboratory; College of Allied Medicine;*

INTRODUCTION

In the present generation, wherein daily human activities seemed to describe everything the world fast paced stands for, it is observed that efficiency became the very standard of schools and firms in rendering quality services to their customers. Automation and computer aided information systems become the trend to boost their operation, granting access to easy and immediate progress and competitive advantage over others. Even schools and universities compete with the said automation.

Inventory management is a crucial matter in schools facilities like in the laboratory room. This is because laboratory equipment comes at a high price and thus utilization of the equipment should be accounted in every experiment of the class.

The College of Allied Medicine laboratories specifically the Anatomy and Nutrition Laboratory of Lyceum of the Philippines University – Laguna exhibit the need of an implementation of the said information system as object.

Students users are required to fill out a Borrower's Slip surrendered to the laboratory personnel. Utilization of materials is accounted by this borrower's slip. Remarks on the state of returned equipment are just noted by the personnel. Utilization reports are then typed periodically as equipment is used.

The disadvantage of existing manual system is hard to keep track on the inventory as utilization of equipment and student users are not easily accounted in real time basis. Since borrowing is also accomplished in a piece of paper, personnel of the laboratory's privacy are not practiced since students need to enter in the storage regularly for borrowing and returning transactions.

Objectives

The general objective of this study is to develop Laboratory Borrowers Slip using VBA Macro Programming for College of Allied Medicine which provides automated operating procedures in the borrowing and returning equipment.

Further objectives are specified as follows:

a. To develop a simple Laboratory Borrowers Slip using VBA Macro Programming for College of Allied Medicine
b. To develop a system terminal that enables inter-operability between the student's users and the laboratory technician of the facility.
c. To record data that is inputted by the users

METHODOLOGY

VBA Macro Programming Platform

VBA (Visual Basic for Application) is a programming language tool that use to design programs that can manipulate the MS Excel. It enables creating user-defined functions, automating processes and calculations. It develops on the abilities of previous application of macro programming languages such as Word's WordBasic. It can be used to control the features of the main application, including manipulating user interface features, such as menus and toolbars.

VBA Macro Programming is able to record data that are inputted by the user. Macros can allow the user to automatically generate customized reports, charts and perform other data processing functions.

Design of Laboratory Borrowers Slip

The basic procedures included in designing of a laboratory borrowers slip program include the three (3) steps:

a. **Data Input Selection for the System.** These data includes the name of the borrowers, the subject, the title of the experiment, the equipment to be borrowed by the users, the quantity of the equipment to be borrowed.
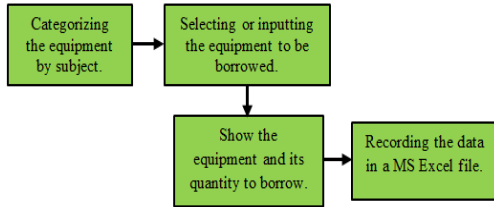
b. **Designing the Interface of the System.** The design of the program is with accordance to the type of the program that we are going to create. The touch of color green that represent the College of Allied of Medicine. The proponents also include the user-friendliness of the design for the total functionality of the program to be used.

c. **Coding.** The program is developed and coded in VBA Macro. Applying all the knowledge prior to the desired output makes use of the different codes for the particular programming language. The proponents also code it in a way where it can be easily understood, in order to easily troubleshoot the program if an error arises.

Block Diagram

The Block Diagram is a graphical representation for program design, which cans define the function of the input and output data wherein the commands is define as the set of

basic blocks. Thus, the input and output data are connected to blocks using arrow lines. It will also describe the summary of all the process of a borrowers slip program.

Figure 2.3. Block Diagram of Laboratory Borrowers Slip Program

Figure 2.3 illustrates the summary of how the process goes with the Laboratory Borrowers slip. It includes the quantity and the equipment to be borrowed.

IPO Chart

An input simply means an entry made into a system that can be used as showing the process.
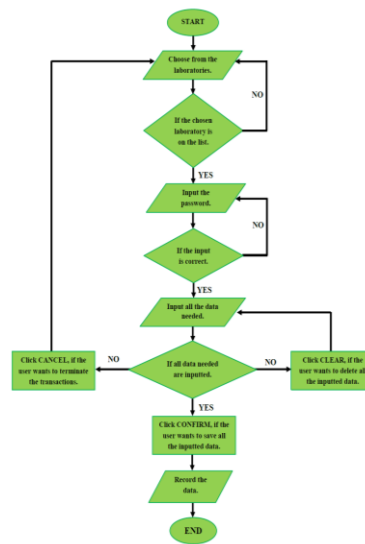
The process is used to complete a project as a whole. Thus, an output is an exit of a system and completing the project and showing it.

In the table below, shows the summary of inputs used, processes done and deliverables obtained are provided by the proponents. It also shows the flow of the inputs, outputs and processes which involved in the operation of laboratory borrowers slip program.

Table 2.4. IPO Chart of Laboratory Borrowers Slip

INPUT	PROCESS	OUTPUT
• The user will choose on what laboratory will be going to use. • Enter the password to access the form. • Fill-up the form with all the data needed.	• Click CONFIRM, to save the all the data that are inputted by the user. • Click CLEAR, to delete all the data that are inputted by the user. • Click CANCEL, to terminate all the process.	• All data that are inputted by the user will be saved in MS Excel file.

2.5 Flowchart

Figure 2.5.Flowchart of Laboratory Borrowers Slip Program

The figure above show the flow of the inputs, outputs and processes involved in the operation of the laboratory borrowers slip program.

RESULTS AND DISCUSSION

Project Description

The program that the proponents have made, tackles about the subject "Object Oriented programming". It is mainly about Laboratory Borrowers Slip using VBA Macro for the College of Allied Medicine. The user must know what laboratory will going to use. The user will now enter the password to have an access to the user form borrowers slip.

The first thing that the program will show is the list of laboratories where the user would select. After that the user will be directed to the admin that requires inputting the required input in order to access the program. Then it will show the user form laboratory borrowers slip wherein the users are required to fill-out all the data needed.

Properties of the Project

The Laboratory Borrowers slip is a pc-based program. Its software shows the list of laboratories and the transaction of the user. Since it is computerized, it is more convenient and efficient to use than the traditional way of filling out the form manually. Also this program is a user friendly because it is easy to use.

Functions of System

To understand each functions of the laboratory borrowers slip, the proponents tabulate them. Refer to Table 3.3 below for the Functions of Laboratory Borrowers Slip Program.

Table 3.3 Function of Laboratory Borrowers Slip Program

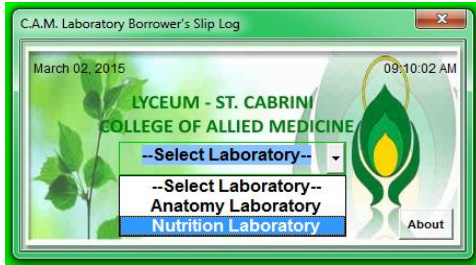| ITEM NO.	FUNCTIONS	DESCRIPTION
1	Faster data updates.	The data can be updated any time.
2	Accurate data.	The inputted data are accurate.
3	Faster and reliable.	The program will make work easier.
4	Program flexibility and accessibility	The program is accessible in every authorize person and especially the administrator.
5	User-friendly	The program was made under VBA Macro platform that can be easily to use and understand by the user.

Tools and Methodologies of the System

The program that the proponents have made is the "Laboratory Borrowers Slip using VBA Macro Programming for College of Allied Medicine" which has the ability to let the user select the laboratories where going to use. Then it will show the admin account that requires inputting the required password in order to have an access. After that the user are required to fill out all the necessary data. Then, the user will choose CONFIRM, if all the data are complete. CANCEL, if the user wants to abort the transaction and CLEAR if the user wants to clear all the inputted data.

Figure 3.4.1 Start Command Button

The figure above shows the start command button. By clicking this button, you will be able to access the administrator log-in.

Figure 3.4.2 Borrower's Slip Log

The figure above shows the home page of the Borrower's slip wherein the choices are the list of laboratories used by the College of Allied Medicine.

Figure 3.4.3 Anatomy Log-in User Form

In the Figure 3.4.3, show the log-in user form. By means of this user form, the borrowers slip will be secure.

Figure 3.4.4 Message Box

In the figure above, show the message box. This message box means that the user is successfully log-in in the borrowers slip.
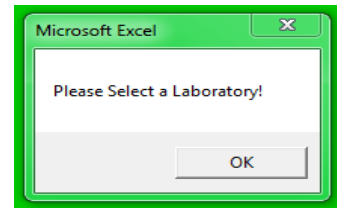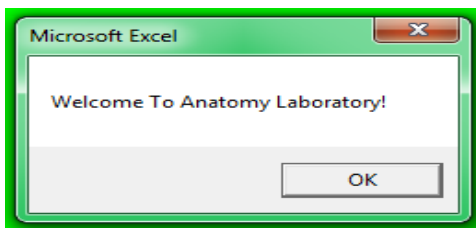

Figures 3.4.5Borrowers slip Home Page

In the figure above, shows the borrowers slip wherein the user can input data and will be recorded in a MS Excel document.

Figure 3.4.6 Error Notification in Selecting Laboratory

Figure 3.4.7 Error Notification in Inputting the Password

Figure 3.4.6 and Figure 3.4.7 shows an error notification. This will only appear to the

program if the user's input is wrong or the user does not choose from the choices. For example, in every laboratory before the user can access, the user must know the correct password, if not, the user will not able to input any data.

CONCLUSION

A borrower's slip is a practice of displaying that you are borrowing something. It can be used in borrowing equipment in a laboratory or in other offices. The Laboratory Borrowers Slip using VBA Macro Programming for College of Allied Medicine is a program that can accept and record data and stored in MS Excel document. Thus, the said program can be able to manipulate data as inputted by the users. In creating borrower's slip, enough knowledge is a must in order to do the coding accurately.

The proposed system of the proponent was implemented using VBA Macro. The input information will be serves as the record of the personnel in the laboratory. Also this Borrower's Slip program allows to quickly recording all the data. With the use of this program it will automatically show the transactions of the students.

RECOMMENDATION

The paper only focuses in Laboratory Borrowers Slip using VBA Macro Programming for College of Allied Medicine. The proponents of this study only use VBA Macro Programming

as a programming platform. In order to ensure higher functionality and to eliminate unexpected program lost, the proponents recommend future proponents to have separate program. The proponents should have a deeper knowledge in programming to improve the design program in the future. The design program of the proponents can be used by the College of Allied Medicine in LPU-L to improve the way of utilizing equipment or apparatuses in laboratory in order to be satisfied in services.

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