CHAPTER I: The Problem and a Review of Related Literature

Introduction

Today’s Generation People uses innovative technologies to make our time faster and easier. It has a series of understandings and emotions that the previous generations did not possess and therefore, people must always give them the benefit of the doubt.

At the same time, they also have some corrupt thoughts and negative ethical traits which must be removed from their character. In the previous Generations the thoughts and minds of the people were not as open as the generation of today.

According to S.B Nangia in 2007 “ If the library needs a frequent listing of a newly received periodical parts for public consultation, then this can be produced easily by the computer”

The researchers observed who have used a library are familiar with the circulation desk. Circulation desk is a hub of activity with people asking many questions and bringing up armloads of library materials. In fact, from the viewpoint of many library users, the circulation desk is the library. In order to use the library, they have to talk with the circulation desk staff or Student’s Assistant (SA) and applies for a “library card”. Users have to “check out” materials at the circulation desk. And of course, if items become “overdue”, users can expect to receive some kind of “overdue notice” from the circulation desk requesting that the item be returned and a bill outlining the “overdue fines”.

All of these procedures tend to lead to certain stereotypes about the library and library personnel. In fact, many people think librarians spend all day checking out books and putting them away. The basic purpose of circulation is the control and regulation of library materials. Researchers have come to assume that the use of library materials outside as standard operating procedure for most types of libraries.

According to the Danjuma Library (2015) “System will provide a centralized database of books and management of the library circulation activities”

Policies had to be established for how long materials might barrowed and procedures developed for dealing with library users who had kept materials beyond the loan period. As a result, circulation services became important part of basic library functions and a key to good public relations.

REVIEW OF RELATED LITERATURE AND STUDIES

According to Andrew Hauge (2012)

* Raspberry Pi is a computer which you’re already familiar. It uses different types of processors so you can’t install Microsoft Windows on it but you can install Linux operating system. You can use it to surf to the internet, send an email or write a letter using processor.

According to Upton (2012)

* Your Raspberry Pi board is a miniature marvel, packing considerable computing power into a footprint no larger than a credit card. It’s capable of some amazing things, but there are a few things you’re going to need to know before you plunge head-first into the bramble patch.

According to Richardson (2013)

* It’s tempting to think of the Raspberry Pi as a microcontroller development board like Arduino.

According to Elsevier (2010)

* Barcode is a symbol that contains encoded plaintext data that can be read by standard optical scanners/decoders, thereby automating data representation and retrieval while eliminating potential human error.

According to Benjamin Johnson (2012)

* Barcode is designed to eliminate manual entry and error.

According to L. McCathie (2004)

* Barcodes have become a universal tool used by organizations in SCM since the early 1970s and it is now a multi-billion dollar business.

According to L. McCathie (2004)

* Radio Frequency Identification (RFID) uses “tags that emit radio signals and devices called readers that pick up the signal”, with the ability to hold large amounts updateable information and is not limited by optical scanning.

According to Christophe Jechlitschek (2013)

* RFID reader and a few tags are in general of little use. The retrieval of a serial number does not provide much information to the user nor does it help to keep track of items in a production chain. The real power of RFID comes in combination with a backend that stores additional information such as descriptions for products and where and when certain tag was scanned.

According to Paul Cobbaut (2015)

* Linux is by far the most commonly used operating system in the world.

According to Machtelt Garrels (2010)

* Linux systems have two basic modes for a system to run in: either quick and sober in text console mode, which looks like DOS with mouse, multitasking and multi-user features, or in graphical mode, which looks better but eats more system resources

THEORETICAL / CONCEPTUAL / OPERATIONAL FRAMEWORK

According to the Circulation Management System the beneficial to this are the Students, Librarians, Faculty member’s administrator and parents for various reasons.

Students can expand their horizons more effectively with an automated library.

Teachers can reinforce their classroom instruction with assignments that guide students to research opportunities within the school libraries.

Parents can feel good about the school library being available to their students anytime the students want to access it via a web browser.

This Circulation Management System is what the researchers chose by following the principles listed below:

Searching Facilities

Responsibility of the Librarians

Quick Access

Figure 1. Theoretical

To adapt these principles to the researchers, they came up with the following conceptual framework. Borrowing (who claimed to have the return material), Returning (who return the borrow material).

**Automated**

**Circulation**

**System**

**Returning**

**Borrowing**

Figure 2. Conceptual Framework

Affectivity of the system will depend on these two variables: the Borrowing System, and the Returning System. To gather data on these, the researchers formed the following operational framework:

**RETURNING**

**BORROWING**

Figure 3. Operational Framework

STATEMENT OF THE PURPOSE

The purpose of Automated Circulation System will greatly improve the efficiency of the school library. This study has the following hypothesis: The profiles of the respondents taken are their names, Student ID number, Year, and Course and Title and Author of the Book Borrowed. The manual system is very time consuming inconvenient when it comes to recording, organizing and retrieving barrower’s record in the log book. There are few solutions but many a times, we “making them works” by finding “ways to work around” system inadequacies.

Moreover we have limited staff resources, these “work around” waste time, effort and skills that should be spent on user services. Solutions do not keep up with the technological changes and hence prove to be time wasters. Automated Circulation System is a small footprint software suitable for personal / individual libraries. You can store the information about the books and other material and control the movement of the same.

The Researcher’s objective to this is to design and develop a library system that will serve as a proposal to help librarians save time with the automation of its daily operation. Our propose system has the following advantages:

1. User friendly interface
2. Fast Access to database
3. More storage capacity
4. Search facility
5. Quick transaction

**SIGNIFICANCE OF THE STUDY**

**FACULTY MEMBER’s -** Itcan reinforce their classroom instruction with assignments that guide students to research opportunities within the premises**.**

**STUDENTS –** It can expand their horizons more effectively.

**SCHOOL –** This project could be satisfying about by enhancing the curriculum.

**LIBRARIANS –** The work in progress will be smooth.

**ADMINISTRATORS –** It can help to complete the accreditation requirements needed.

**RESEARCHERS -** We will benefit from this project because we know we enlarge, widens and we learned about it.

**DEFINITION OF TERMS**

**Automated -** In this study this will operate by using computers instead of people to do work.

**Circulation System -** It is the act of passing information of a group that works together from person to machine or machine to person.

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