**Chapter 1**

**INTRODUCTION**

Information technology has developed the life of human being and made the lives easier by the various kinds of applications. There are many tools, technologies and systems that have been produced and invented through the use of IT.

Computer works in many ways totally different from human beings. The flow of works in an automated system can differ quite considerably from the manual system. In present time, IT in business was really rising, making extremely demand in our society. It helps us in minimizing time in doing our works and brings us a quick result in a short period of time (Howard, 1990). These computer technologies usually use in different aspects because it helps a lot in terms of their services.

Nowadays all the businesses are shifting into computer based system because its purpose is to give an efficient and easy way of doing activities with less time spend daily. This application exceeds even in educational institutions and the finest example is library management system.

**Project Context**

The project entitled TechnoLib Innovation Solution is a library management system that deals with generating reports, inventory of books, monitoring transactions, and searching of books.

The main problem in the manual library management system is that all the transactions are taking more time. Another problem is the manual inventory of books.

Computerized library management system can give more reliable monitoring in every day transaction, it provide an easy and fast book inventory, it gives the user to search a book in an instant way, it supplies file maintenance more rapidly and generating reports effortlessly. This computerized library system can basically responds to the needs of the librarian and other user’s organization.

**Purpose and Description**

The proponents analyze the findings in system evaluation to improve and apply the suggestions of the respondents to the proposed system.

**Purpose.** A computer has a wide range of used, in each and every aspect of human life. Computer has become very important nowadays because it is very much accurate, fast and can accomplish many tasks easily. Otherwise to complete those tasks manually much more time is required. It can do very big calculations in just a fraction of a second. Moreover it can store huge amount of data in it. We also get information on different aspects using internet on computer. Related to this, the researchers aimed to help the library users to have an idea about the TechnoLib Innovation Solution.

**Description.** The theoretical framework shows the Input-Process-Output of the proposed system. The existing system is a manually operated; it covers a manual process of transaction such as borrowing and returning of books, book inventory, manual entrance access, and card catalogue for searching. In the proposed system, the manual library management system will be improved by the used of TechnoLib Innovation Solution to make it more efficient and reliable.

The proponents analyze the findings in system evaluation to improve and apply the suggestions of the respondents to the proposed system. In the system design stage, the proponents formulate a systems interface and layout. In system development stage it includes coding and testing of a system and the output is the TechnoLib Innovation Solution and that will be evaluated by the respondents.

**Objectives**

Educational institutions have been using a manual library system for the past many years. Due to increase number of library user, the librarian has difficulty in organizing and maintaining the library operations and functions.

**General Objective.** To design, develop, and deliver a software solution that will manage the daily operations in the library efficiently.

**Specific Objectives.** The following are the specific objectives that the system must accomplish.

* 1. To understand how the existing (present) system operates;
  2. To determine the problems encountered in the existing (present) system;
  3. To develop a software application that would be:

1. build a reliable monitoring of the library in every day transaction
2. provide easy but secure entrance access to the library
3. build a system that can receive input generated
4. automatically output in an easy way
5. build a set up configuration for the user
6. build an easy update on the information in the library
7. build a system that will help the readers to search a book in an instant way
8. provide easy and fast book inventory.
9. Give an opportunity for the librarians to reduce the time spends.
10. provide a database that can handle lots of information in the library
11. provide a barcode generated for the library users and book
12. provide computerized fine fees collection
13. build a LAN-based computerized card catalog for the library users
14. build a system that can monitor and control those PC inside the library.
15. build an information kiosk for the users.
    1. To determine whether the proposed project technically, operationally, scheduled and economically feasible to implement; and
    2. To endow with an implementation plan for the proposed software/ system.

**Scope and Limitations**

Educational institutions have been using a manual library system for the past many years. This section presents the scope and limitations of the project.

**Scope.** The proposed system provides a computerized entrance access using barcode scanner for log-in and log-out of the library user. The system include modules for adding, deleting and updating record of admin, librarian, assistant librarian, security, book and user account registration. The system also has an automatic annual updates of the user/student records. The system can monitor all the transaction in a library from entrance access, up to exit of the library user. It can also monitor the status of the PC and its location. The system also provides a fast book inventory. TechnoLib Innovation Solution includes report generation for transaction monitoring such as record of logs, user transaction records, book transaction records, account monitoring records and it can also recover deleted records. It can also generate reports in inventory of books and advisory. The system has the capability to determine if the book is available or has been borrowed and can notify if the borrowed book is overdue. It can also provide computerized fine fees collection. The system has the capability to determine if the user is already log-in before he or she can borrow a book. The system provides a computerized catalog for searching the information of the book, exact location and specific status of the book. The system can also generate its own barcode and color code for the arrangement of the book. Users can edit their information through the use of RRJ Application, another subsystem of the project.

**Limitations.** Furthermore the system does not have an online public access catalog and is not responsible for any unethical act of the students inside the library. On the other hand, the features that the system cannot handle are the anti-theft security of the library and it cannot handle the outsider or visitors who will use the library. The system does not have an online public access catalog and is not responsible for any unethical act of the students inside the library. On the other hand, the features that the system cannot handle are the anti-theft security of the library and it cannot handle the outsider or visitors who will use the library.