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LIBRARY AUTOMATION: A LOOK AT THE X-L1B LIBRARY SOFTWARE

By

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ABSTRACT

The paper provides an in-depth discussion on the various component parts and operating procedures of X-LIB Library Automation System. It concludes that the software is very elaborate, flexible and easy to use in networking. Because of these, the paper recommends it for application in Nigerian Libraries.

INTRODUCTION

Since the 1971 Nigerian Library Association (NLA) Conference at which a theoretical demonstration and the application of computer technology in the library system was extensively discussed and the 1974 Ahmadu Bello University, Zaria Seminar at which the National Planning for MARC was established in Nigeria as a follow up to the NLA conference, the issue of Automating Library System has been taken seriously by various libraries in Nigeria.

Subsequently, by the late 1980's many libraries, especially academic and special had embarked on automating their libraries. However, an assessment of the state of automation projects in these libraries have shown as noted by Mohammed (1991), that the exercises were a joint effort between the libraries and the computer centers of the respective universities or parent organizations. This joint ventures created a lot of problems that nearly mar the automation projects.

However, the availability of PCs and the development of software in different capacities and forms have debunked the earlier conception that application of computer technology in libraries has to be through mainframe or ministructures central computer systems serving the parent organizations. These developments have no doubt enhanced and facilitated library automation in Nigeria. This point was further strengthened when

Ampitan (1995:19) noted that recent advances in computer technology has led to a tremendous upsurge in the computerization of library services in Nigeria libraries.

Another very important development that has equally enhanced and facilitated library automation in Nigeria is the effort by some Nigerian library schools to mount courses on library automation. Not only this, some library schools have also introduced courses on some aspects of computer, e.g., introduction to computers, computer appreciation course, etc. This effort is helping in providing the pre-requisite expertise which the joint venture has failed to provide.

Although some of the problems facing library automation in Nigeria as highlighted by Mohammed (1995:5) and Ampitan (1995:21) have been overcome. One basic problem that is of great concern to libraries that are yet to automate and those that have automated has to do with the choice of library software.

Library software are application software that have been developed in order to instruct the computer to perform quickly and accurately, certain library procedures, such as acquisition, cataloguing, circulation and serial control. Today there are many of these software that not only automate, process and retrieve information at a fast and efficient pace but also ensure proper management of library and information services. Among these software are TINLIB, LIBRI, URICA, ITS, URIDITE, CDS/ISIS and X-LIB. It is now a fact as observed by Young (1978) that the provision of these software have not only helped to provide accurate, consistency, reduction of duplication of efforts but also cost reduction and more efficient use of human skill. Similarly, Boss (1979) averred that automating by using of these software reduced time wasting clerical routines whilst providing better services and greater control over library collection. Consequently, the selection, acquisition and processing library materials; the provision of specialized services such as SDI and CAS; and Inter-library loan and resources sharing through networking have all been made easy and faster by these software.

However, good as these developments may be, it is sad to note that most librarians in Nigeria, either in libraries or library schools, lack adequate knowledge of these software

and their operating procedures. Therefore, the aim of this paper is to provide an in-depth discussion on X – library automation software. It is hoped that the paper will discuss the various component parts of the software, its features as well as operating procedures. It is assumed that detailed knowledge of this software, as provided in this paper will greatly enhance librarians and students of library and information science understanding of it, thereby making it's adoption easy. The article is significant in the sense that apart from adding knowledge, it will also allow adequate comparison to be made with other software. Discussions on merits and demerits and how to use the system had been excluded from this paper.

Fatuyi (1998:) has discussed the NARICT LIBRARY AUTOMATION SYSTEM (NLAS) and it's operating procedures in an article captioned: "The dBase-IV Library Application Software to Libraries: Practical Experiences" which focuses on how dbase iv has been successfully used to develop NLAS. The paper will in a similar way discuss the features and operating procedures of X-LIB library automation software.

THE X-LIB

X-LIB library automation system is a library management and documents retrieval software system developed in the late 90's by a team of experts with several years of varied experiences in library management and software development. The system automates the management of the library in totality. It consists of four main integrated menus with three additional functional menus that serve as housekeeping and system administration options.

The software uses windows environment. It can be run as a single user, multi-user and in network environments. It is also flexible in design and can support variable fields and records. Figure-1 below shows a typical display of the main X-LIB control system.

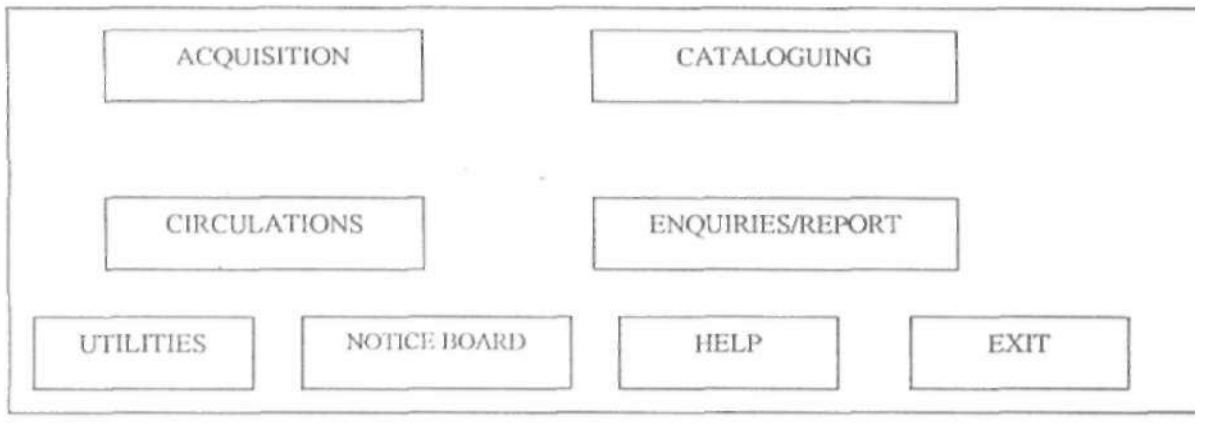


FIGURE - 1: X-LIB Main Menu

Each of the above consists of some sub-menus and modules which collectively enhance the functionality of the system.

THE ACQUISITION MENU

The acquisition menu has the capacity of efficiently and speedily performing requests and selections, and confirming orders and arrivals. It consists of four sub-menus: Request, Selection, Orders and Arrivals. These sub-menus have three types of modules that are common to them: Books, periodicals and articles. Figure-2 is a display of the acquisition menu.

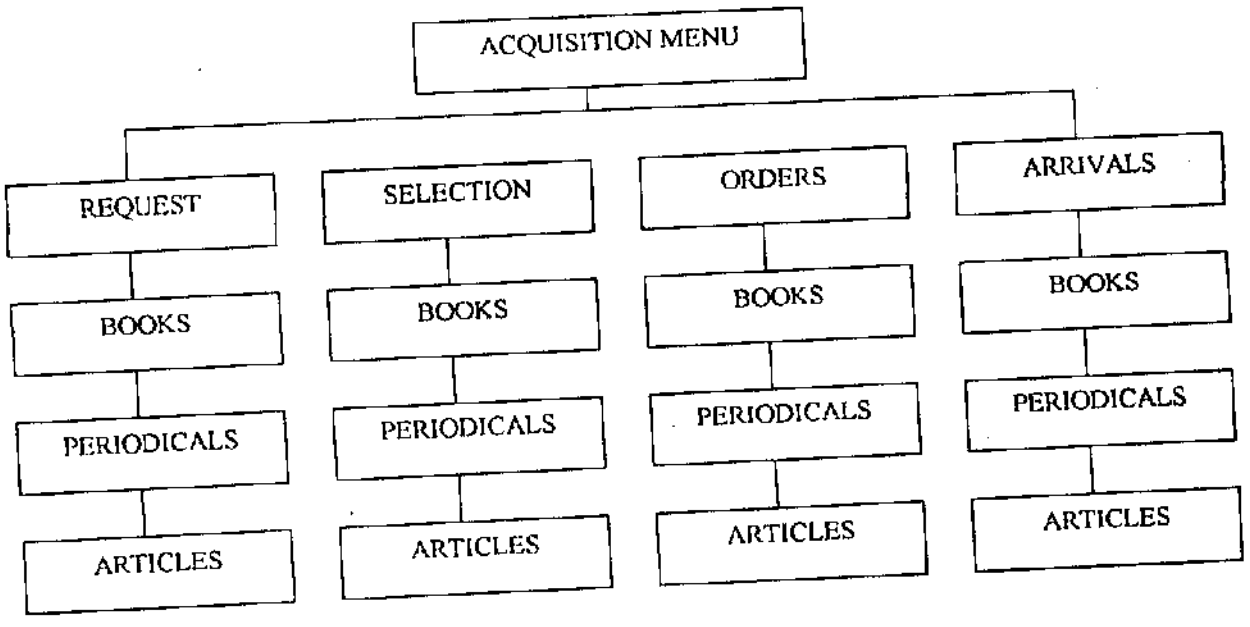


FIGURE - 2: The Acquisition Menu

Each of the above three modules, i.e., Books periodicals and articles has an entry mode plate that allows information to be input or retrieved. Figure-3 below is an example of Request entry mode plate.

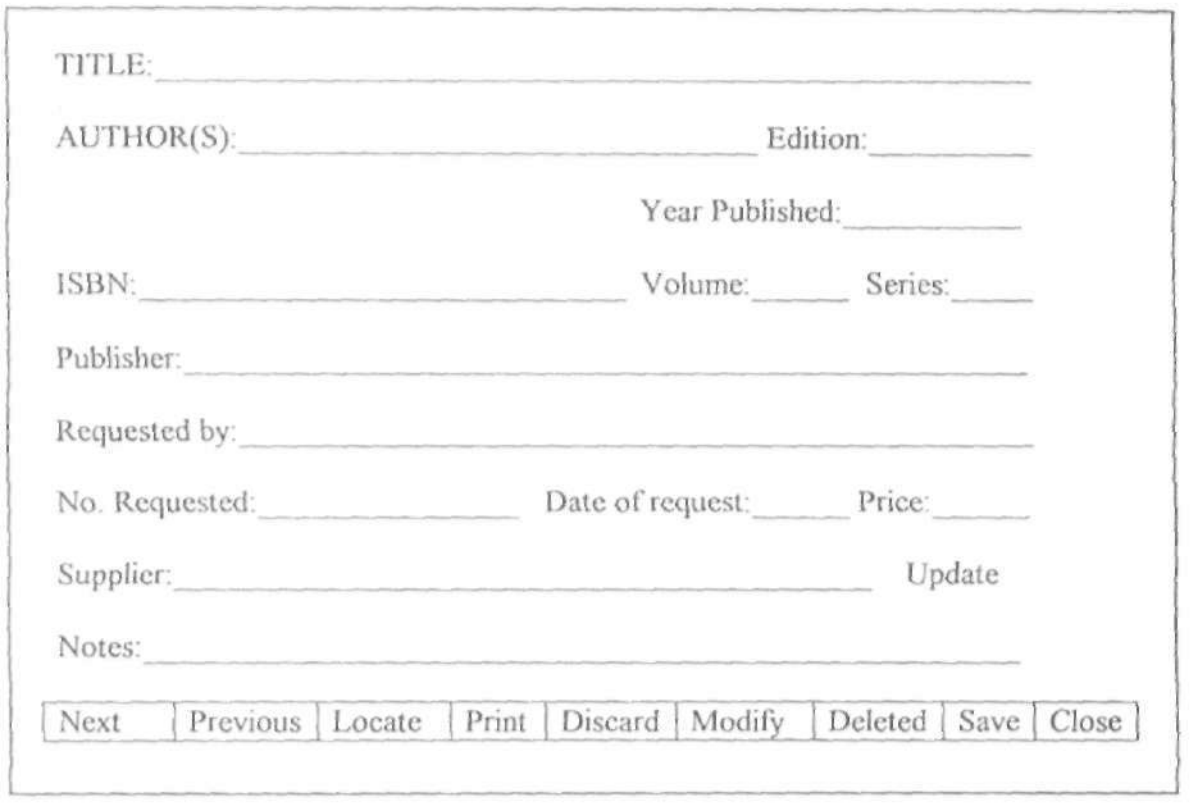


FIGURE - 3: Plate For Book Request

This is the same for periodicals and articles except in the areas of Volume No; Issue No and source. The options at the bottom of the plate allows for moving to the next page or previous, modification, saving as well as printing when the need arises.

The entry mode plate for selections cannot be accessed unless request have already been made in the system. When it is made, the selection entry mode plate will carry the same information as on request entry mode except the provision to indicate that the material is selected. Orders entry plate is too, the same as above but here, there is provision to check for copies in the library before orders could be placed, also provisions are made for order No, Account No., Unit Price, No. of copies and Sub total. Arrivals plate has in addition to the above, information such as status, e.g., Arrived/Yet to arrive, and date of arrival.

THE CATALOGUING MENU

This X-LIB cataloguing menu does not only effectively catalogue library materials by their author, title and other bibliographical information but a provision is also made for keying in Abstracts, subject groups and keywords. Also a provision is made for capturing graphical and audio information about each material. For example, the cover design of a book, photograph of the author can be captured, and the abstract or any part of the library material can be read into a microphone. Figure-4 is a graphical display of cataloguing menu.

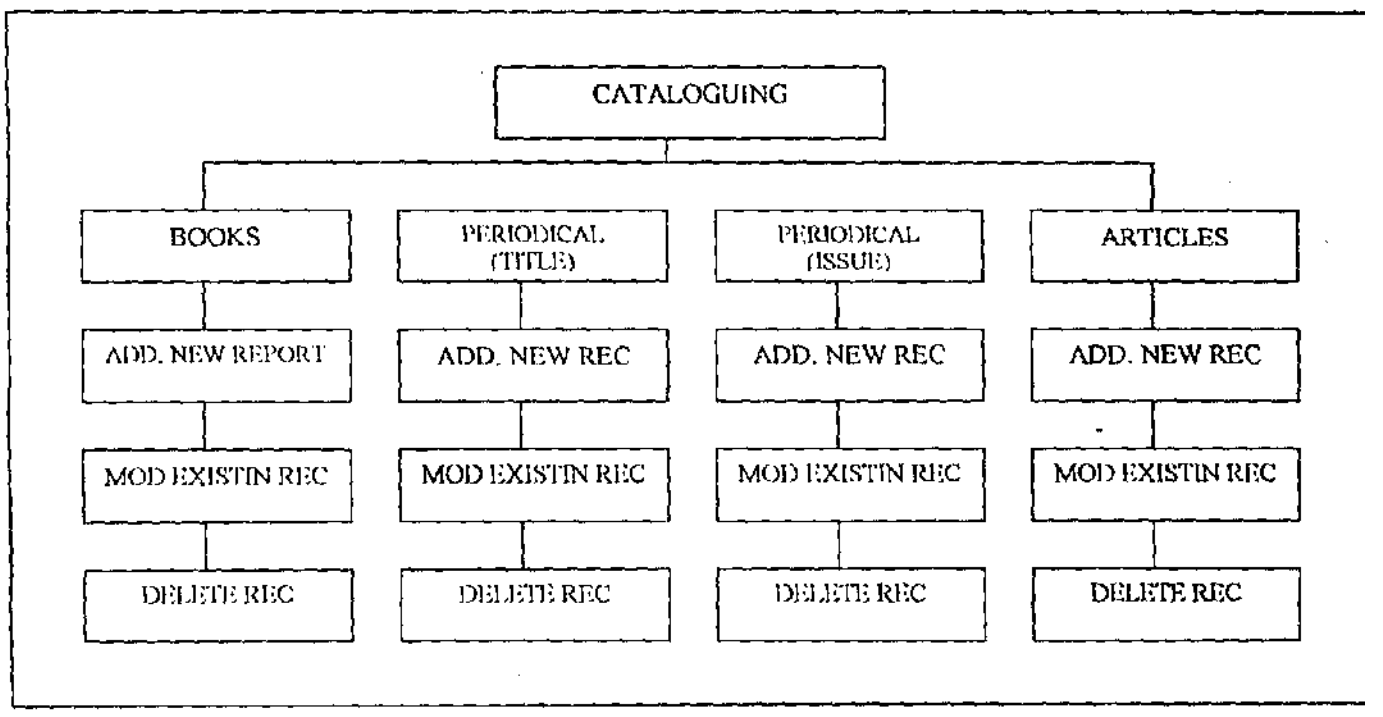


FIGURE - 4: The Cataloguing Menu

From the above diagram, it can clearly be seen that this menu has combined both cataloguing and serial procedures. Apart from cataloguing book titles, periodical titles and issues, articles from these periodicals can be adequately indexed and abstracted. These modules: add new record, modify existing records and delete records are common to all the four sub-menus. This means that a new record can be created for a book,

periodical (titles), periodical (issues) and articles, or an already existing records on the above can be corrected or removed.

Figigure-5 below represent a combination of entry mode plates for recording new books and articles. The plates consist of full bibliographical information, enough to describe a book or article and to differentiate one material from the other.

Book Title:_____
Article Title:_____
Accession No.:_____ Edition:_____
Year of Accession:_____
Parallel Title:_____
Author(s) :_____ *check for Duplication* ☐
Editor(s) :_____
Sources Reference: :_____
Volume:_____ Series:_____
Meeting:_____ Issue No.:_____
Publisher:_____
Year of publication: :_____
ISBN:_____ Class No.:_____
Binding:_____ Pages:_____ Language:_____

i. Nil
ii. Soft cover
iii. Spiral
iv. Hard cover
v. Others

Spine Label:_____ Publication Type:_____
Publication Class:_____ Nature of Acquisition:_____
Price ₦ :_____ Medium: (i) Books (ii) CD/DVD (iii) Slides (iv) Diskett, A/V Cassettes, Others
Abstract:_____
Keywords:_____
Subject group:_____
Library Branches:_____
Insert object (sound, video, graphics, etc.) ☐

FIGURE - 5: Catalogue Module: Article Record Addition & Book Record Addition

However, the entry mode plates for adding new Periodical (Titles) and Periodical (Issues) differs greatly from those of books and articles. The entry mode plate for periodical (Titles) serves as a manual card cardex in which all bibliographical information such as

ISSN, Title, Editor, Publishers, Frequency, etc., are recorded while as the entry mode plate for periodical (issues) serves as the manual stripdex. Here, periodical titles are simply arranged alphabetically. Figures 6 and 7 are the entry mode plates.

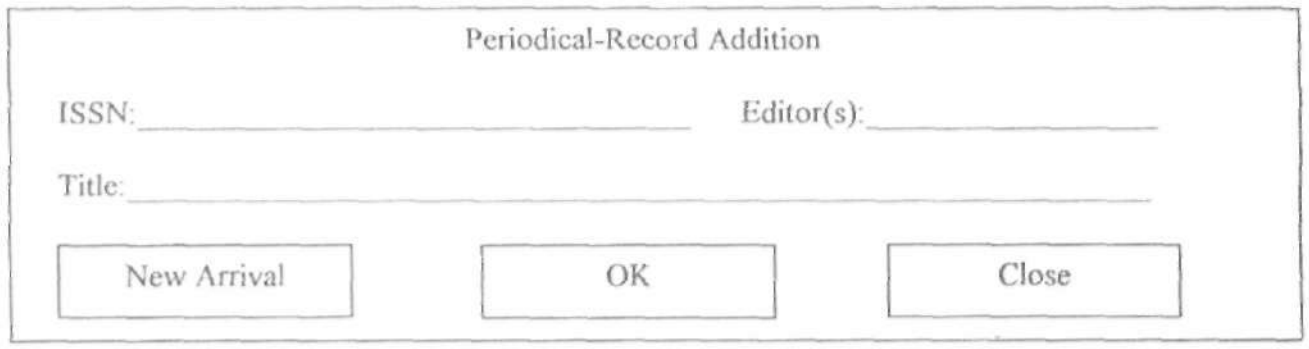


FIGURE - 6: Periodical (Titles) Record Addition

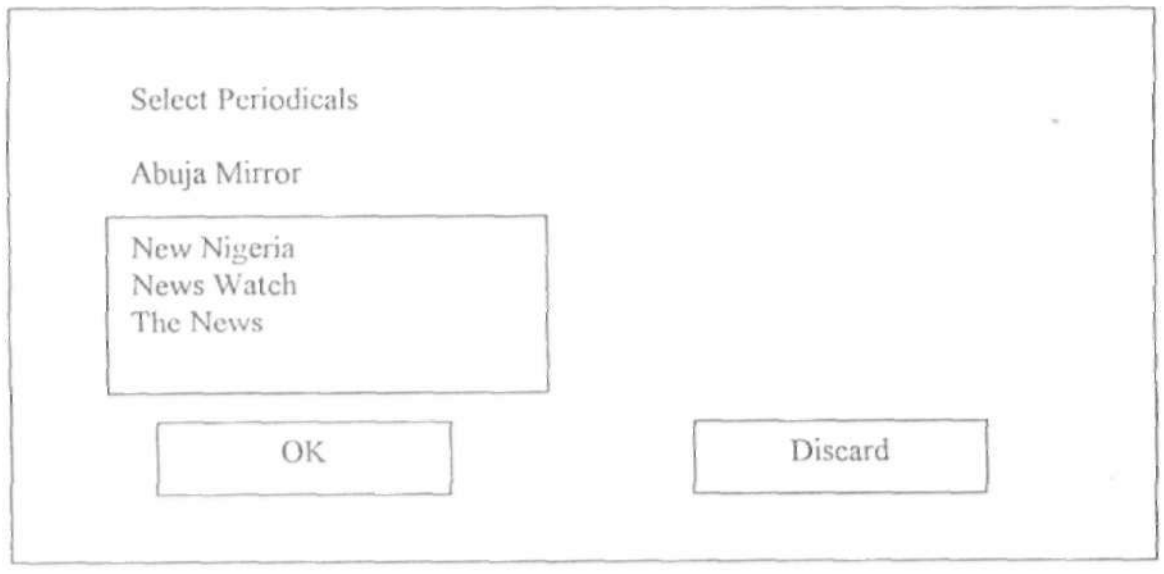


FIGURE - 7: Periodical (Issues) – Record Addition

To modify or delete any existing records, the modify and delete modules display a plate that allows searches to first be carried out. The title of book, Periodical (title), periodical (issue) or articles to be modified or deleted is listed and filtered. The plate will indicate Number of records found bearing that title. To modify or delete any title, the title is highlighted, and detail of it is revealed after pressing OK. Modification and deletion can

be done in this environment. Figure-8 is an example of entry mode plate for record modification. This is more or less the same with entry mode plate for record deletion that 'delete' is highlighted on the later plate.

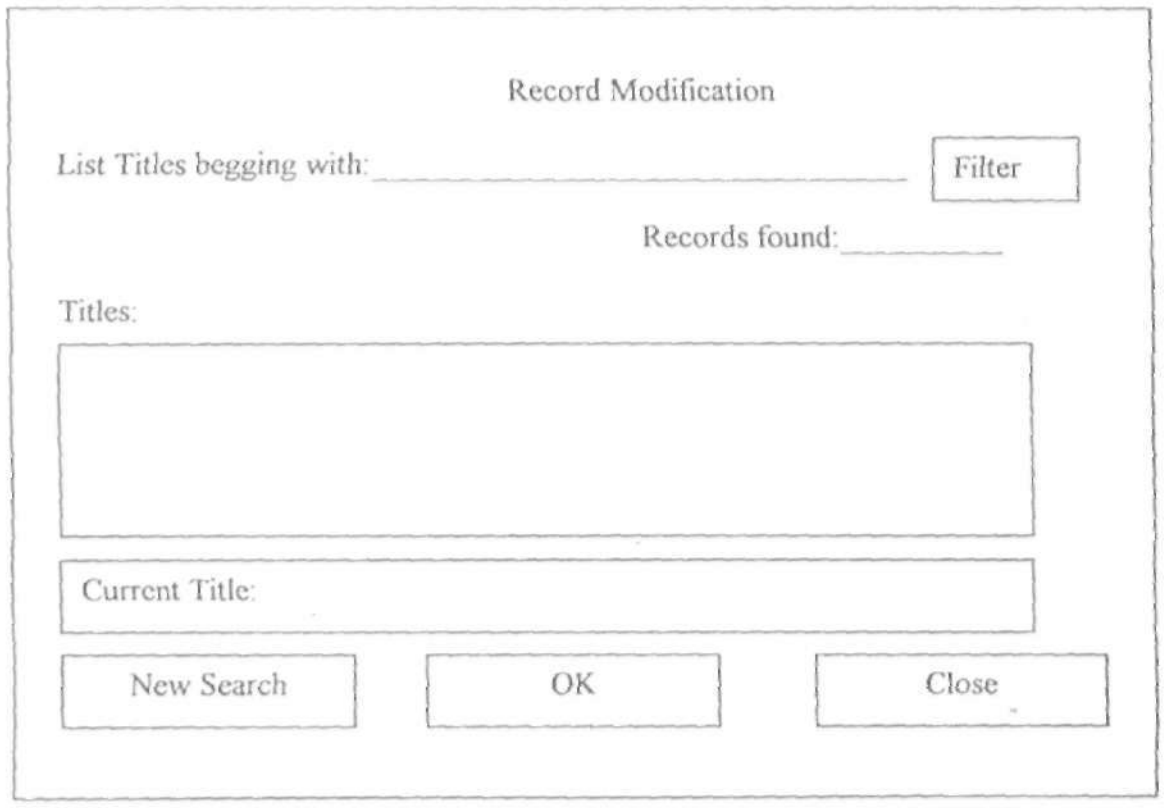


FIGURE - 8: Entry Mode Plate For Record Modification

CIRCULATION MENU

The essence of an automated circulation procedure is to actualize the concept of quick document delivery at maximum level. The automated circulation system should be able to among other things quickly provide information on available materials on the library stock, the library material on loan, by whom, date due, and materials on reserve. X-LIB is able to achieve these through three sub-menus: Borrower's Registration, Loan and Finance, Figure-9 below refers.

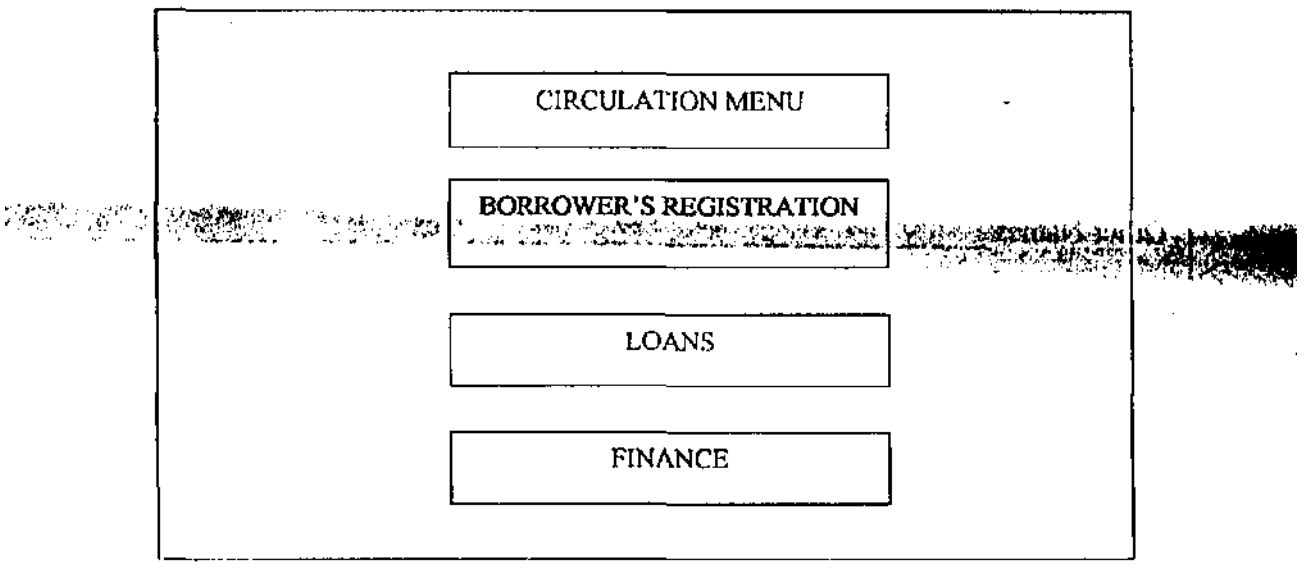


FIGURE - 9: Circulation Menu

Borrower's Registration

Every Library is supposed to register its patrons and possibly provide them with identity cards. To do this effectively, X-LIB provides an entry mode plate for this purpose. What is interesting in X-LIB system is the ability of the system to generate identity card form the registration entry mode plate. This is made possibly through scanning user's passport photographs into the system. Figure-10 below is the borrower's Registration entry mode plate.

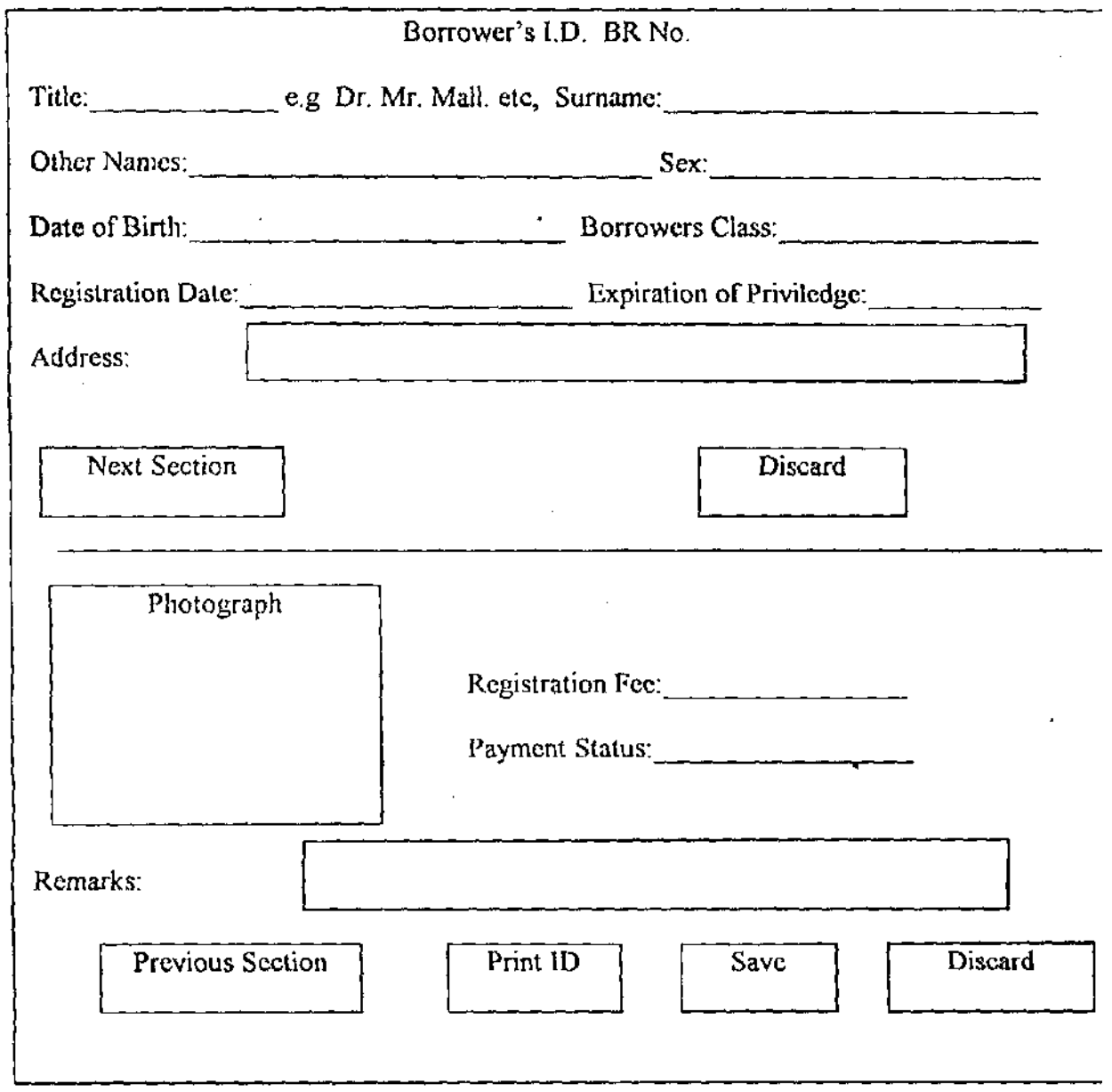


FIGURE -10: Borrower's Record Addition

Just like the Cataloguing menu, the Borrower's registration submenu has Add new record, modify existing record and delete record modules. This means that the record of a user can be modified or deleted. For instance in case of students, their record can be modified when they move to the next level or deleted when they graduate.

The Loans Sub Menu

The entry mode plate help in keeping records of the number of Library materials on loan, to whom, and notification of overdue and recall notices. Figure-11 below is loans entry mode plate.

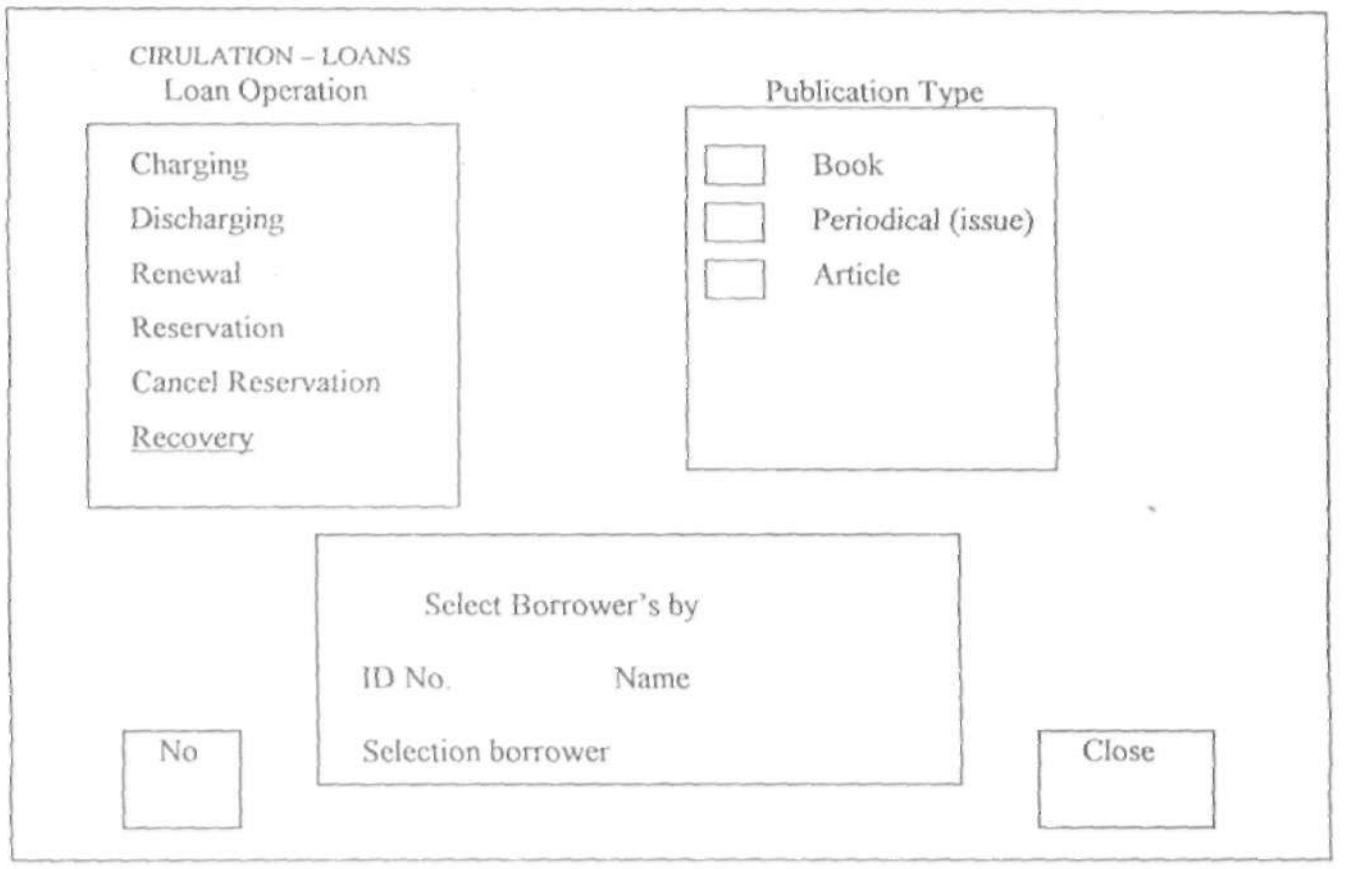


FIGURE - 11: Loan Entry Mode Plate

The loan sub-menu consists of three fundamental operations: the loan operation, publication type and Borrower. The operation has seven options, the publication type has three options while the borrower has two. Before loan entry mode plate could be effectively utilized, a combination of all operations has to be done because Library materials can only be charged or discharged by type, i.e., either books articles, etc., and to

a particular borrower, like wise renewal, reservation, etc. The borrower can be identified either by this name or by his identify card number.

ENQUIRIES/REPROT MENU

This is used to made inquiries on and printing out of all information on the system. This menu is so elaborate that it covers all aspect of acquisition, catalogue and circulation. Figure-12 is and elaborates inquiries/report menu.

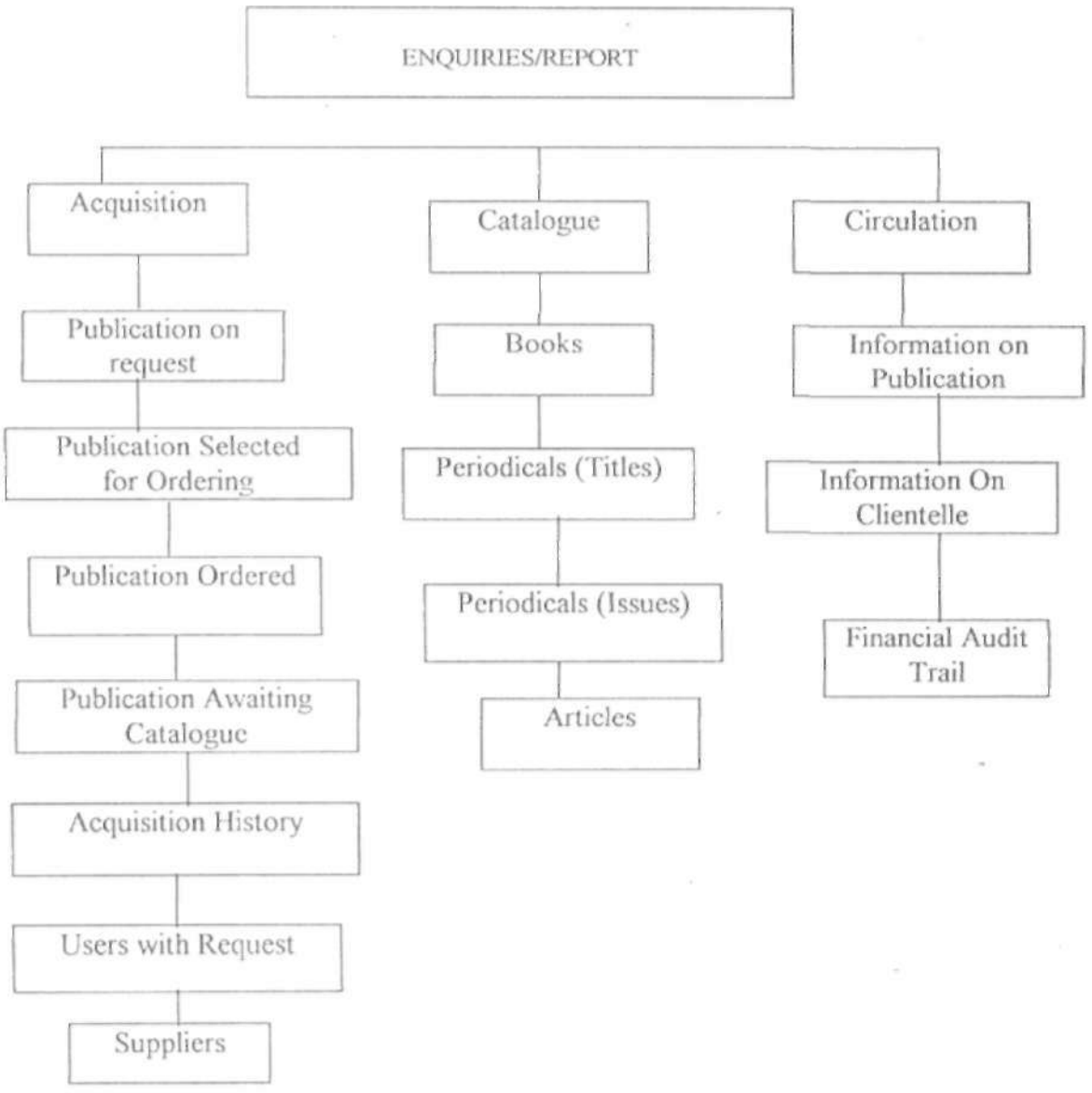


FIGURE - 12: Enquiries/Report Menu

Detail inquiries and report generation could be made on each of the above. For instance, under acquisition, such inquiries/reports on the total number of books ordered, Publication awaiting cataloguing, full acquisition history, etc., could be made. Under

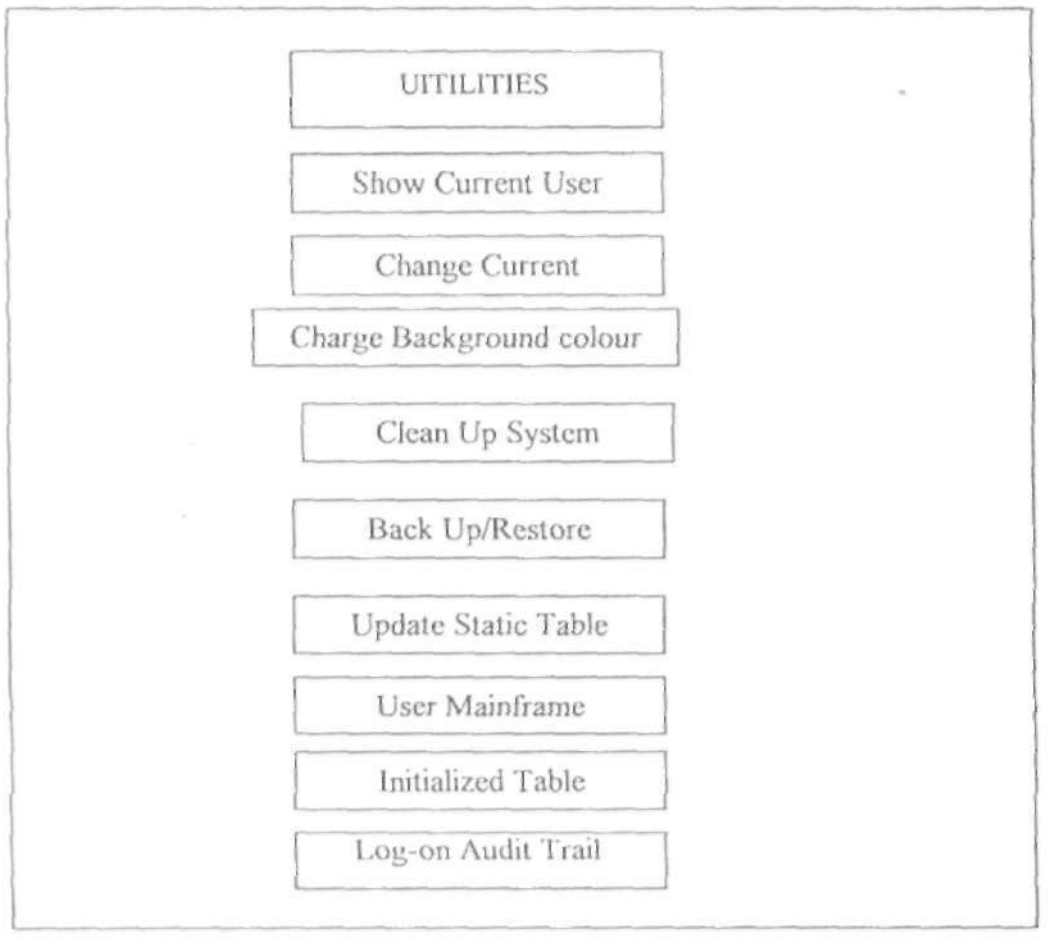
catalogues, inquiries/reports on the total number of books, articles, etc., so far catalogued could be revealed.

OTHER FUNCTIONAL MENU

Apart form the four main Z-LIB menus discussed above, the system has three other functional menus that help in housekeeping and system management. These menus are as follows:

Utilities Menu

This menu is purposely create to help in the management of X-LIB software in particular and the computer in general Figure-12 below indicates that this menu has nine sub-menus:



The nine sub-menu have so many option modules that enable the system to carry out of many functions. These include changing the back ground colour-choosing form 14 different designs, backup and restore data, soft data, initialize (refresh) data basis, clean up (up data) databases, etc.

Notice Board Menu

As the name suggests, the menu is especially useful for the library management top as information in both text and graphics to the users. Figure-14.

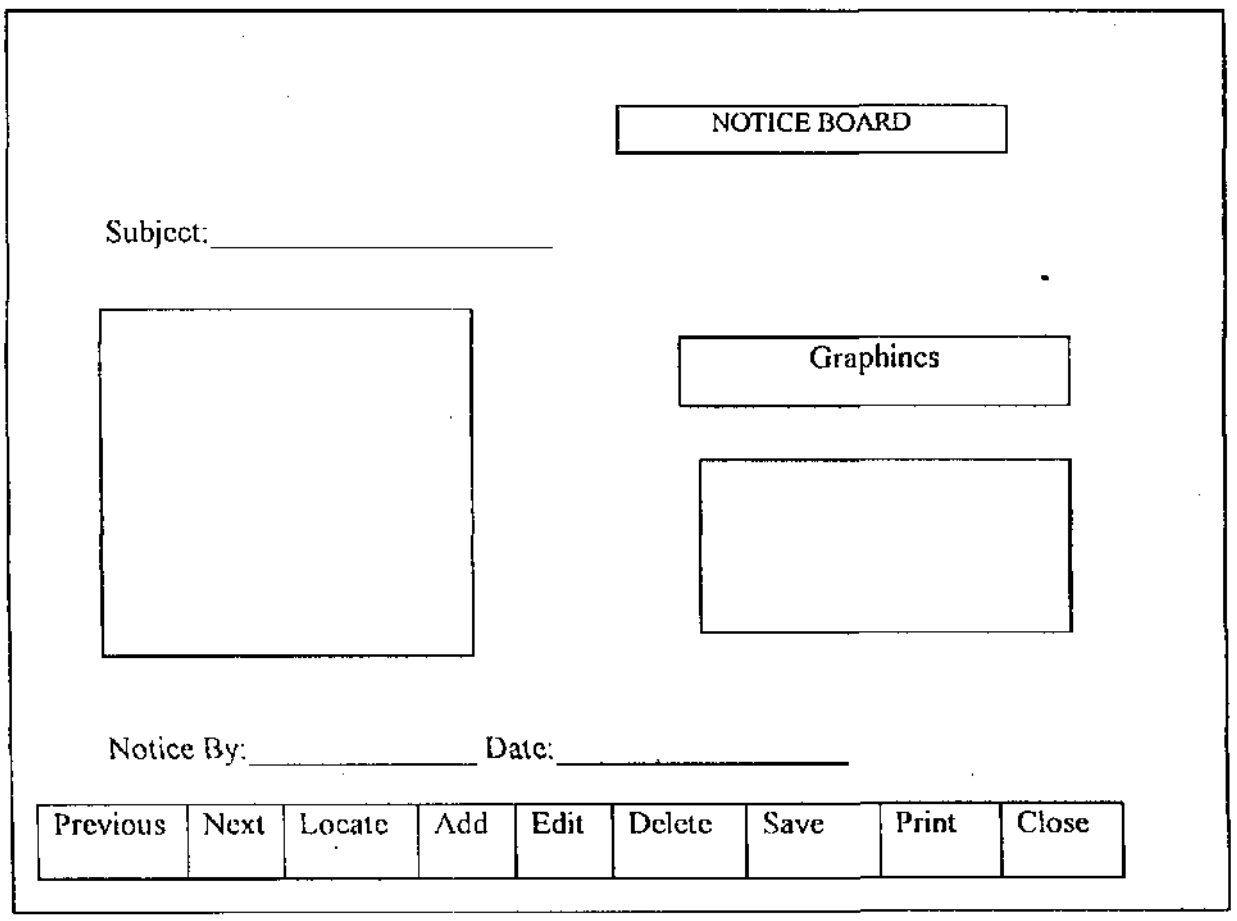


FIGURE - 14: Notice Board Entry Mode Plate

Help Menu

Help menu is essentially created to assist users in understanding X-LIB. There are, though in brief, discussion on such topic as the X-LIB itself and view help topics Figure-15 below is the help menu.

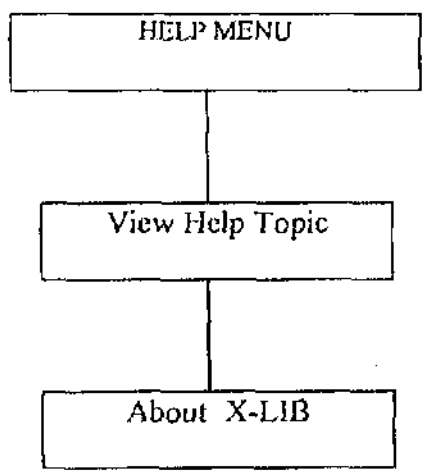


FIGURE - 15: Help Menu

CONCLUSION

From the above discussion, it can clearly be concluded that X-LIB System is indeed very elaborate. It has analyzed every minute library operation in acquisition, cataloguing and circulation control systems. Instead of creating serial control system X-LIB has combined it with cataloguing control system, making it possible not only to process serial materials but to also index and abstract articles from these materials thereby rendering indexing and abstracting services. Because of it's comprehensiveness, flexibility, and adaptability, X-LIB software is recommended for every library in Nigeria. The provision for it's multi-user usage and the fact that it can be used in network environments will go a long way in facilitating inter and intra-exchange of information within and among control systems as well as resources sharing among libraries using X-LIB.

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