

Basics of Library Automation

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ABSTRACT

- ❖ *Emerging needs of library automation*
- ❖ *An increase in the amount of information available and a decrease in the amount of available space*
- ❖ *An increase in library funds.*
- ❖ *An increase in the cost of printed and electronic materials.*
- ❖ *Resource sharing issues and challenges in automation of Libraries*
- ❖ *Selection of appropriate library management software*

It also debates upon the need for updating of library tools and technique under the changing environment. ICT plays vital role in functioning of libraries and its library operations in speedy mode. Automation reduces Labour work, duplication and manpower. This paper focused on the concepts of Automation, & emerging role of library management software for library automation and also discusses the pre requisition of library automation procedure and highlights the essence, need and development of library automations, whereby, weighing its merits, Benefits, Objectives, Precaution, Advantage, Open Source Software etc.

KEYWORDS: Automation, Library Software, Database, Need & benefits, Objectives, Precaution, Advantage, Library management software, Open Source Software etc.

INTRODUCTION

The library is the center spread information resources centre of any institution. Library Automation [4] eliminates manual handling of library processes, improves overall work efficiency and the service quality with no room for human errors. Acquiring, cataloguing, publishing, and circulating materials are just a few of the essential tasks of a library that are brought together by library automation. Its primary goal is to organise the resources of a modern library and to allow for the continuous flow of information to be controlled. The computer plays an important role in our daily life. Acquisition, cataloguing and circulation; which forms the backbone of the functioning of library are increasingly being dependent on computers. Computers are completely programmable e-devices which single handedly are capable of revolutionizing the whole world of library. They can bring about complete automation in operations, functions and processes of a system. The whole idea of library automation rotates around the usage of

computers and the associated accessories for boosting all library functions and operations in rapid, efficient and economic manner.

Meaning of Automation: D.S. Harder, while working for the General Motors Corporation (GMC) in the United States, coined the term "automation" [3,5] for the first time. In his use of the term "Automation," he was referring to the automatic handling of items between advancing manufacturing processes. Automated systems, according to the Encyclopedia of Library and Information Science, are technologies that are concerned with the design and development of processes and systems that reduce the need for human intervention in the operation of those processes and systems.

In Layman's language; library automation is using computers and its resource power as a lifelong steroid to boost library's functions and performance. It aims at reducing man hours and eliminating redundant processes. Overall, library management software consists of a variety of administrative process modules for carrying out day-to-day operations, such as archiving information in various types of media, transmitting information through various types of channels, and retrieving information through various types of strategies utilising ICT.

It is the use of semi-automatic date hungry devices to perform old school library activities like acquisitions, cataloguing and circulation in a more efficient, foster and economic way.

OBJECTIVE OF LIBRARY AUTOMATION: [2, 5]

- ✓ Sharing of the library e-resources.
- ✓ Everyday transactions like issue and return of books can be performed speedily & quickly.
- ✓ Making use of the OPAC, which is a great instrument for automating the operation of libraries.
- ✓ To reduce the number of unnecessary housekeeping tasks.
- ✓ To make information more readily available at a quicker proportion.
- ✓ To boost the level of service and the enhancement of quality of the production while simultaneously increasing efficiency.
- ✓ To control & management of library resources.
- ✓ Improvement of human services.
- ✓ Efficient and error-free Database Management for the purpose of recording keeping.
- ✓ Preparation of numerous reports in different formats.
- ✓ Automation information processing operates at a great speed.

NEED, PURPOSE AND BENEFITS OF LIBRARY AUTOMATION

Library processes are more tedious and repetitive than writing 'this is boring' hundred times in the notebook. It's very mechanical of work defies the laws set up by Newton a few centuries ago.

NEED AND BENEFITS OF LIBRARY AUTOMATION ARE AS FOLLOWS: [5,6]

- A reliable system capable of handling vast amount of data and information:
- Reducing the number of duplicate housekeeping operations:
- It is important to avoid wasting time on repetitive tasks.
- To improve the overall quality, timeliness, and effectiveness of service delivery:

Basics of Library Automation

- Enhance output and excellent control over circulation
- Greatly accelerates the fluency in the work of library.
- Meeting the requirements of a large number of users:
- Availability of information in a variety of formats: for example,
- Overcome geographical and other obstacles that stand in the way of effective communication.
- Library automation help in improving the productivity of efficiency or library staff effectiveness

FACTORS OF LIBRARY AUTOMATION:[4]

Libraries are being forced to automate due to a combination of growing information and shrinking space. Information is changing at a quick pace in an era of information explosion, with the quantity, diversity, and complexity of information expanding rapidly in every industry. It is possible for computer resources to consume massive amounts of information stored on extremely small storage devices.

Increasing demand of user as availability of information in various language and organizing the flood of information is also another important factors of library automation.

- Avoid duplication of work and save time of users and as well as library staff
- To Increased and improve the quality speed and effectiveness of service.
- It also overcome geographical and other barrier to communication.
- To meet the increased information requirements of users.
- To provide access to information from remote areas.

REQUIREMENTS OF LIBRARY AUTOMATION:[5]

Library Software: It must have a friendly user interface synchronizing with the needs and size of the library. Specialised software for multimedia collection can be provided as well as allowing remote access. Library software is divided into two major categories: open source software (which is freely available on the internet) and proprietary software, in which the vendor is solely responsible for the installation of the software and, even after the expiration of the warranty, the vendor continues to provide all technical support through agreements such as AMC (Annual Maintenance Contract).

Computer hardware and other different type of hardware: The computer server is the primary hardware component that hosts all of the modules of library software, and client computer systems are connected to it through the use of computer networking techniques to communicate with it. Other different type of hardware required such as computer server, computer system, online UPS; networking like LAN, Barcode scanner& printer, CCTV, RFID, OPAC etc.

Training of the Staff: Computer training is required for library personnel who will be responsible for handling computer gear and software, as well as data entry duties. The training of the personnel in the maintenance of the hardware and software, as well as in the extraction of the necessary data from the documents.

Maintenance and Development:Professionally trained staffs with compute background are employed inlibraries for troubleshooting hardware and software issues.

CREATION OF DATABASES OF RECORDS: [6]

The three vital data base are as follows:

Database of Library Books: Books, theses, dissertations, and reports are some of the few document kinds that are available in the library, and they all contribute to the database's overall composition. The records for recently acquired books are generated during the book acquisition process, and the records for older document collections are established through the process of "retro-conversion."

Database of Journals: It is composed of current journals and issues received, as well as entire data of journals and volumes of journals, as well as periodicals and issues that have been discontinued or have ceased to be available for publication.

Patron Database: An approved user database, as well as their permission categories, are stored in a patron database. These privilege categories define the amount and type of documents that they can borrow over a period of time. As a result of the addition of new users and the deletion of existing members. Patron databases must be updated more frequently in educational institutions because new batches of students enrol and depart after completing their courses in each session. This is especially true in educational institutions where new students enrol and depart after completing their courses in each session. The enrollment number of a student and the employee code of a member of staff can both be used to create a unique identification number that can be used throughout an institution.

PRECAUTIONARY MEASURE REGARDING LIBRARY AUTOMATION:[6]

- Select user friendly library management software and keeping in mind the ease of installation, backup and restore the backup must be the prime factor.
- The maintenance of any parallel server on different computer system along with the installation of the library management software on server is a must.
- If a library needs to maintain a proprietary software, then they should make agreement with the vendors like Annual Maintenance Contract (AMC).
- Care should be taken that the back of the library management software is securely stored.

List of some popular Library Management Software for Automation of Libraries

Some Popular Library Management Software are: [4]

- ALICE FOR WINDOWS
- TROODON
- SOUL
- LIBSYS
- BASIS PLUS & TECH LIB
- CDS/ISDS(WIN)
- NETTLIB
- CATMAN
- GRANTHALAYA
- LIBRA
- MAITRAGEE
- SALIM

Basics of Library Automation

- SANJAY
- TULIB
- WILISYS

SOME POPULAR OPEN SOURCE SOFTWARE ALSO FREELY AVAILABLE: [1,7,8,9]

- KOHA
- DSPACE
- GREEN STONE DIGITAL LIBRARY
- E-PRINTS
- FEDORA
- NEWGENLIB
- OPAL
- EMILDA
- GANESHA DIGITAL LIBRARY
- KNOWLEDGE TREE
- OPUS ROADS

Information about the developer of some major Software.[1, 6]

S. No.	Software Package(s)	Name of the Developers
1	ABCD (Automation Of Libraries and Centers of Documentation)	BIREME (WHO, Brazil)
2	E-Granthalaya	NIC
3	Evergreen	Georgia Public Library System
4	KOHA	Katipo Communication Ltd.
5	Liberty 3	Softlink Asia
6	Libman	Master's Software, Nagpur
7	Librarian Suite	Soft-Aid Computers Ltd.
8	Libsoft	LIBSOFT SOLUTIONS
9	Libsys	Libsys Corporation
10	Libtech	Libtech Software Developers
11	Netlib	Kaptron Pvt Ltd
12	NewGenLib	Verus Solutions Pvt. Ltd.
13	OPALS	Media Flex Inc.
14	SLIM++ & SLIM 21	Algorhythms Consultants Pvt. Ltd.
15	SOUL	INFLIBNET Centre
16	Troodan	Comtek Computers
17	Virtua	Virginia Tech Library System (VTLS Inc.
18	DSpace	Massachusetts Institute of Technology (MIT) and Hewlett- Packard Labs.
19	E-prints	University of Southampton

20	Green Stone Digital Library	University of Waikato, UNESCO and the Human Info(NGO)
21	FEDORA (Flexible Extensibl Digital Objects Repository Architecture)	Virginia and Cornell University
22	EMILDA	Sourceforge.net
23	Ganesha Digital Library.	YTLI and IDRC
24	Knowledge Tree	Knowledge Tree Inc.
25	OPUS	University of Stuttgart
26	ROADS (Resource Organization and Discovery in Subject Services)	Institute of Learn. & Res. Tech (ILRT) UK Office of Library & Info. Networking

CONCLUSION

Library management software selection is the most significant activity a librarian can undertake. Every programme has its own set of advantages and disadvantages; however, it should be chosen with the needs of the organisation in mind, as well as the fundamental requirements for library automation, such as software, hardware, people, and financial resources, as well as training for the staff. In addition to this, there are several additional variables that are significant in automating the library, such as the intranet, the internet, digital libraries, and so on. It is necessary for every library to automate the library in order to keep up with changing technology in order to give better services and facilities to its users. However, the success of any library automation programme is dependent on the planning and execution of the programme in question. Because of this, library professionals and librarians must take appropriate measures in the appropriate way.

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