

## EVALUATION OF LIBRARY AUTOMATION SOFTWARE: LIBSYS AND KOHA

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### ABSTRACT

*The present study on Koha and LIBSYS respectively have been undertaken both library management software's are good but there is a scope for improving also in both softwares. From the study we found that many features from Koha are better than the LIBSYS such as portability, report generating time, field length of titles, OPAC which provides options for user suggestions, comments, and tags. But LIBSYS also has its own features like article indexing system, service of customization, maintenance and security of data is provided by the vendor or local service providers.*

**KEYWORDS:** *Library Automation, Open Source Software, KOHA, LIBSYS*

### INTRODUCTION

Automation is a process of using the machinery for easily working and saving the man-power and time. The main purpose of library automation is to free the librarians and library staff and to allow them to contribute more meaningfully to the spread of knowledge and information. To improve the quality, speed and effectiveness of services, improve access the resources on other networks and systems, including the Web, improve the management of their physical and financial resources, facilitate wider dissemination of their information products and services and Enable their participation in resource-sharing library networks.

Today automation is necessary because of information explosion, availability of information in various formats such as print, nonpoint, graphical, audio-visual etc., different approaches and needs of the user, limitation of the library like time, space & human power duplication in housekeeping operation. Library automation software's/library management software's are tools of library automation. On the basis of that various commercial and open source library management software's are available in the market. Now a day's open source software's are provided all those facilities which are provided by the commercial one. Because of that most of the libraries are switching over from commercial library management software to open source library management software.

The present research aims to evaluate two different software's from these software's one of that is 'LIBSYS' which is commercial and 'KOHA' which is fully open source library management software.

## Objectives

- To evaluate LIBSYS and Koha.
- To compare the general features of LIBSYS and Koha.
- To compare the modules, user usability of the software under study.
- To compare security aspects of both the software.

## Scope and Limitations

- The present study focused on only LIBSYS & KOHA software's for evaluation.
- For identifying, evaluating software for the library the following criteria are selected: 1. Maintenance support, 2. User friendliness, 3. Documentation, 4. Flexibility.

## METHODOLOGY

Koha and LIBSYS respectively have been taken up for the study. Koha, the popular and widely used Open Source Integrated Library Software and LIBSYS, commercial software is taken as the sample to measure the perceptions. LIBSYS, the mostly used Integrated Library Software is the sample for the commercial software. The study listed the most common features that are available in ILMS and listed the available and Non-available items of the software's on the bases of software evaluation criteria.

### Library Automation

Library automation software is application software that performs day-to-day library activities through human interventions. Library automation packages are developed in view of the two most essential activities of any library – housekeeping and information retrieval.

Encyclopedia of Library and Information Sciences defines Library Automation as the use of automatic and semi-automatic data processing machines to perform such traditional library activities as acquisitions, cataloguing, and circulation (Allen Kent, 1997).

### Commercial Software

Commercial software typically provides solutions to particular application problems. LIBSYS is provided by New Delhi based Software Company, LIBSYS corporation. LIBSYS is the most trusted brand for libraries in India. The LIBSYS system provides basic modules for library management software such as Acquisition, Cataloguing, Circulation, Serial, Article Indexing, and OPAC System.

### Open Source Software

Open source software is software that provides access to the source code, meaning that users are free to see how the product is made. Koha is an integrated library management system that was originally developed by Katipo Communications Limited of Wellington, New Zealand for the Horowhenua Library Trust (HLT), a regional library system located in Levin near Wellington. Many of the libraries presently using Koha are small and medium-sized, mainly school, college, public and special libraries.

## Installation

This study was carried out by installing LIBSYS and Koha software and making the comparison of the features of the software.

## Evaluation of LIBSYS & KOHA

### Publication of software

Koha is published by koha-commuity.org and LIBSYS is published by LIBSYS Corporation.

### Version

Koha has published 3.20.000 version and LIBSYS has brought its version 7.3 in the market.

### Programming language

Every processor has its own language and can execute only those programs that are written in that language. Koha uses Perl and PHP as the programming language and LIBSYS use JBOOS and Java 1.36. It could be pointed out that Java1.3, PHP and Perl are the most advanced programming languages. While in this scenario LIBSYS have more advanced programming language than Koha.

## Hardware

**Table 1: Hardware Requirements**

	Hardware Requirement	Koha	LIBSYS
1.	Processor	Pentium-4, 2.6 Or Higher Processor	Quad Core Processor
2.	RAM	2GB RAM	4GB RAM
3.	Drive	DVD Drive	DVD Drive
4.	HDD	80GB	120 GB
5.	Operating System	Linux Preferable Windows (On Above Conditions)	Linux Windows Preferable Unix Novel

## Software Requirement

Software requirement for any software is the support programs which are essential to run software on the operating system. Koha and LIBSYS also have some software requirements which are shown as follows:

**Table 2: Software Requirement**

	Software Requirement	Koha	LIBSYS
1.	Web Server	Apache Web Server	IIS Web Server
2.	Database Management System	My SQL Database	My SQL Database

## Web Server

A Web server is a computer that is set up with software and networking capabilities to deliver Web pages on the Internet or an Intranet. Koha uses Apache as a web server which is free web server; it can run on almost any OS including UNIX, Apple's OS X, and on most Linux Distributions. It optimized for most of the OS including UNIX, Apple's OS X, and Linux. The original Apache web server is based upon HTTP code largely credited for revolutionizing the entire World Wide Web. As an open- source software product, the earlier days saw it being used to mainly work with UNIX and Unix-like platforms, even though it could be tweaked to work within the windows environment.

LIBSYS uses IIS web server. It is supported by Microsoft. IIS Server is a flexible, secure and manageable Web server for hosting anything on the Web. From media streaming to web applications, IIS's scalable and open architecture is ready to handle the most demanding tasks. It could be analyzed that apache is quite better than the IIS because IIS is only supported to Microsoft and it isn't able to customize as much as open-source web servers while apache is open source and it supports to other operating systems also.

### Database Management System (DBMS)

A database management system (DBMS) is system software for creating and managing databases. The DBMS provides users and programmers with a systematic way to create, retrieve, update and manage data. Both Koha and LIBSYS are using MySQL as a database management system. MySQL the SQL part of MySQL stands for "Structured Query Language" - the most common standardized language used to access databases. MySQL is a client/server system that consists of a multi-threaded SQL server that supports different back-ends, several different client programs and libraries, administrative tools, and a programming interface. It is an open source relational database management system. It is based on the structured query language (SQL), which is used for adding, removing, and modifying information in the database. Standard SQL commands, such as ADD, DROP, INSERT, and UPDATE can be used with MySQL.(MySQL,2016)

### Some Other Features of the Software

Some features like a specific backend RDBMS, portability, networks support etc. as follows:

**Table 3: Some Features of the Software are Very Essential while Operating Software**

	Features	Koha	LIBSYS
1	Portability	Import /Export	Partial- Only Import
2	Report Formation	In Word, Excel, Pdf And HtmlForm	In Word, Excel, Pdf Form
3	Field Length	0-500 Characters	0-122 Characters
4	Multilingual Support	Yes	Yes

### Modules

The LMSs presently follow a modular approach for the housekeeping operations. Generally, the whole package is divided into modules for each operational subsystem. Modules are divided into sub-modules and each submodule supports various facilities to carry out tasks related to the library housekeeping operations and information services. Here comparison made of all modules from Koha and LIBSYS which are as follows:

**Table 4: Modules**

Koha		LIBSYS	
1.	Acquisition System	1.	Acquisition System
2.	Cataloguing System	2.	Cataloguing System
3.	Circulation System	3.	Circulation System
4.	Serial System	4.	Serial System
5.	OPAC System	5.	Article Indexing System
6.	Administration	6.	OPAC System
7.	Patron Management		
8.	Reporting		

### Bibliographic Records

A bibliographic record is an entry in a bibliographic database (or a library catalog) which represents and describes a specific resource. A bibliographic record contains the data elements necessary to help users identify and retrieve that resource, as well as additional supporting information, presented in a formalized bibliographic format.

**Table 5: Bibliographic Records**

	<b>Koha</b>	<b>LIBSYS</b>
Record Holding	Unlimited	Unlimited
Standard Format	MARC AACR2 ISBD	MARC AACR2 MONOMENIC
Retrieval Time	8-10 Sec For 1-10 Lakh Records	8-15 Sec For 1-10 Lakh Records
Retrieval Standard	Z39.50, SRV	Proprietary System Or Z39.50

### Standards Format Support

Standard format support is most important in the library management software because of library networks, consortia's and for union catalogues bibliographic standard are very important for import-export of the data. Koha has MARC and ISBD standers support while LIBSYS have MARC, MONOMENIC And AACR2 standards. It is analyzed that both Koha and LIBSYS having MARC format which is the standard format.

### Retrieval Standard

Z39.50 -- properly "Information Retrieval (Z39.50); Application Service Definition and Protocol Specification, ANSI/NISO Z39.50-1995" -- is a protocol which specifies data structures and interchange rules that allow a client machine (called an "origin" in the standard) to search databases on a server machine (called a "target" in the standard) and retrieve records that are identified as a result of such a search. In LIBSYS have Z39.50 connectivity tool but it cannot work properly as well as its import system is vendor dependent so its performance also depends on the vendor's service. It found that the Koha has Z39.50 as default whereas in LIBSYS it is available but cannot work properly.

### Security

In any library software security of data and authentication is a very important feature. There are two types of security feature along with library management software which is access security and data security. Access security is to preventing unauthorized access through firewalls and proxy settings in the server which provides user authentication. LIBSYS and Koha both having these features. Data security is for protection of data, the system should have a backup facility in the database for the prevention of data Koha and LIBSYS both have a backup facility for databases.

### Findings

Findings are based on the evaluation of LIBSYS and Koha as follows:

- LIBSYS uses most advanced programming language than Koha.
- Koha is compatible with less quality processor than LIBSYS, Koha needs less space on HDD and RAM than LIBSYS for the entire installation.
- LIBSYS and Koha both use the MySQL as relational database. Koha is compatible with the only MySQL whereas

LIBSYS is compatible with other databases also so LIBSYS can use more advanced database like oracle.

- Reports can be generated in almost all formats using Koha and LIBSYS whereas in LIBSYS report cannot be generated in HTML while it is possible to Koha.
- Both Koha and LIBSYS are very good in cataloguing module with MRRCformat.
- Koha for membership there is a separate module which is called as patron. Which provides all activities like new registrations of students, staff and other members and provides there details Whereas LIBSYS provides all membership facilities in circulation module itself.
- Both Koha and LIBSYS provide all the functions for the serials module.
- OPAC of Koha is much better than the OPAC of the LIBSYS. Koha has an option for suggestions from users via OPAC, tag and comment facility and virtual shelf on OPAC of LIBSYS lacks with these facilities.
- Article indexing system provides in LIBSYS only as a separate module whereas Koha lacks the article indexing facility.
- LIBSYS provides basic modifications at user end whereas Koha provides all administrative modifications.
- In LIBSYS security is handled by the vendors and service providers but in Koha, library staff should have to train in Koha so they can handle security features and in LIBSYS security updates are paid but in LIBSYS and Koha is have security updates free of cost.
- In Koha Source code is open and anyone can change and customize the software. It provides all modules customization. Both library management software is user-friendly and easy to understand.

## CONCLUSIONS

On the basis of analysis and interpretation of further, I am concluding that LIBSYS has very less field length for title field it should be increased so as to accommodate lengthy title. Koha can add some other features such as article indexing system, content analysis system etc. for the betterment. Koha should add some more security features for the security of data.

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