

ANALYSIS OF OPEN SOURCE SOFTWARE KOHA IN FULLY DEVELOPED DIGITAL LIBRARY ENVIRONMENT, IN LUCKNOW

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ABSTRACT

Digital libraries in this manner give new innovative platform to actualizing usefulness of conventional library systems by making them significantly more intense. Amid the previous decade a large number of digital libraries in an assortment of structures were fabricated all inclusive and are working operationally, with additional to come. Software determination is a standout amongst the most imperative assignments in the Libraries. Numerous softwares like-Koha, Joomila, Evergreen, NewGenLib, Alice, Libsys, and Soul are accessible for Library Management and Automation. This paper presents principle ideas, objective, part, Benefits, Modules, Function of Open Source Software Koha. It additionally give source code accessible. This paper is additionally present similar graph of other library automation software and feature the preferred standpoint, difficulties and proposal for the automation of library by free of cost. Koha is best software which satisfy the greater part of the necessity of libraries in lucknow, India.

KEYWORDS: innovative platform, Koha, Joomila, Evergreen, NewGenLib, Alice, Libsys.

INTRODUCTION

During the past decade thousands of digital libraries in a variety of forms were built globally and are functioning operationally, with more to come. Hundreds of research projects were then devoted to many aspects of digital libraries in many countries, and more are reported each year. A fully developed digital library environment involves the following elements:

1. Initial conversion of content from physical to digital form.
2. The extraction or creation of metadata to assist in object viewing, management, and preservation.

3. Storage of digital content and metadata in an appropriate multimedia repository.
4. Client services for the browser, including repository querying and work flow.
5. Content delivery via file transfer or streaming media.
6. Patron access through a browser or dedicated client.

Digital libraries thus provide new technological platform for implementing functionality of traditional library systems by making them much more powerful. Digital libraries developed today are based on innovative web technologies such as Semantic Web, Ontology Specification, Database Technologies, XML databases, text retrieval in different languages etc.

- The fundamental reason for building digital libraries is that they provide better delivery of information than was possible in the past.
- The digital library brings the library to the user.
- Computer power is used for searching and browsing.
- Information can be shared.
- It is easier to keep information current.
- Information is always available.

OPEN SOURCE SOFTWARE

Libraries can collect, organize and disseminate data and information in an effective manner if they have good information management systems support. Information systems require well-structured data and consistently applied vocabularies in order to be truly useful. In order to access information systems they require elements of readability, browse ability, search ability and interactive assistance. As the size of an information system increases it requires ability to browse and search. This is necessary when the users seeks specific information and when users can articulate their information needs. Interactive assistance is also necessary when an information system becomes very large or complex. For creating Digital Libraries, librarians started using either commercial software or Open Source Software (OSS). Many libraries realized importance of open source software and they took initiatives in using OSS tools for different applications in libraries.

Since 1997, Open Source software (OSS) have taken up a good market in computer industry. Large number of Open Source Software are available on Internet. The world's largest OSS development web site is SourceForge.net. It provides free hosting to OSS development projects with a centralized resource for

managing projects, issues, communications, and code. Currently there are 1,66,993 registered projects and there are 1,771,097 registered users. There is a general confusion, among the users about open source, freeware, shareware and public domain software licenses. Freeware is a software that is released free of cost in binary format only, usually prohibiting modifications and commercial redistribution on the part of the end user. Shareware is a software that is released free of cost in binary format only, usually allowed on a trial basis regarding time usage or functionality to encourage purchase. Public domain is a software whose copyrights has expired or has been released from copyright obligations by the author rendering it free of restrictions on usage and redistribution.

The open source model on the other hand is a collaborative programming infrastructure that co-opts copyright law by freely releasing source code to the general public for any use, modification, and redistribution without licensing restrictions. The source code refers to instructions written by humans in a computer programming language to be compiled into a binary format that can run on a computer, carrying out the tasks outlined in the source code.

According to Raymond, the definition of Open Source Software (OSS) is Software that is freely redistributable and can readily be evolved and modified to fit changing needs. In the open source movement, openness implies on ability to access and change the source code, at any time, to support a desired capability.

OSS is a term to describe the tradition of open standards, shared source code and collaborative development. OSS programs are available for any user for use. OSS are becoming increasingly popular software development method. It is both a philosophy and a process. As a philosophy it describes the intended use of software and methods for its distribution. In case of proprietary software the software is not free nor is the source code of the software available to the end user.

OSS place their source code in public domain, which allows third parties to contribute code and facilitates the creation of a self-organizing networked community of developers. There have been many successful open-source projects e.g. Linux Operating System, Apache Web Server, Perl, Sendmail, Bind, Tcl/tk and Python.

OSS guarantee free access to the programming behind the precompiled binary or source code. All OSS software are copyrighted and distributed with license terms and conditions designed to ensure that the source code is always available. The most popular Open Source license is GPL i.e. GNU Public License. Value of any OSS is measured in terms of its simplicity and connectivity.

Benefits of using OSS:-

1. Software does not depend on specific hardware or operating system platform in order to function.

2. With OSS, people can have any number of copies of programs on their machines, at home or at work.
3. Since source code is available one can customize the software as per the end user's requirements.
4. It is possible to incorporate the software into the another program to perform new functions.

Drawbacks of using OSS:-

1. Lack of formal support and training that a commercial software package offer. For open source software often support is provided only through mailing lists and discussion forums.
2. Installing and maintaining OSS generally requires a higher level of technological sophistication than that required for commercial software.
3. OSS are also not known for ease of use as the focus is usually on functionality.
4. With no vendor responsible for the software, support for the OSS applications can vary and often depend on the user/developer's communities commitment to the project.
5. Documentation manuals of OSS are not very simple.

In OSS several people are involved in developing OSS. There are different groups who are contributing to the development of OSS. First group is methodology gurus who spread importance of OSS, then product gurus who make changes in each OSS, then there are contributors of OSS who are programmers who develop products and release them into the OSS product inventory and finally there is great mass of OSS readers who analyze each OSS, critique on the code of OSS, find its faults and propose changes and enhancements. Thus in this hierarchy the success of OSS depends on the readers who use these OSS. The value of any OSS is measured in terms of its simplicity and connectivity. The simpler and more connective the software, the more it is used.

DIGITAL LIBRARIES OF USING OSS-KOHA SOFTWARE IN LUCKNOW

Koha is full featured Integrated Library System. It is web-based integrated library Software. Koha is the most impressive open-source integrated library system in use now a days by more than hundreds of libraries in the world. A Library Management System is an enterprise resource planning system for a library, used to track items owned, orders made, bills paid, and patrons who have borrowed. Koha name comes from a Maori term for a gift or donation Developed initially in New Zealand by Katipo Communications with Horowhenua Library Trust. Koha is the Webbased Integrated Library Software. Koha is advanced integrated OSS in use today by more than hundreds of libraries in the world. Koha Functionality has been adopted by more than thousands of libraries, each adding function and features depending the capability of

the system. Koha become a scalable solution for libraries of academic, public and special also. Koha is the most advanced, user friendly open source integrated library system in the market now a days, so that in lucknow most of the academic areas are used it. It is currently maintained by a dedicated team of software providers and library technology from around the globe.

Comparative Table for other Software

Sr. No.	Core Service	Libsys	New Genlib	Soul	Alice	Libsuite	Koha
(i)	Acquisition	✓	✓	✓	✓	✓	✓
(ii)	Cataloguing	✓	✓	✓	✓	✓	✓
(iii)	Circulation	✓	✓	✓	✓	✓	✓
(iv)	Serials	✓	✓	✓	✓	✓	✓
(v)	Web/OPAC	✓	✓	✓	✓	✓	✓
(vi)	Data Exchange	✓	✓	✓	✓	✓	✓
(vii)	Biblio format	✓	✓	✓	✓	✓	✓
(viii)	Standards	✓	✓	✓	✓	✓	✓
(ix)	Approx. Cost	4.5 Lakh	3.5 Lakh	50,000	3 Lakh	4 Lakh	Free

Features of Koha

- ◆ **Acquisitions:** Koha has a acquisitions module with complete functionality of recommendation, ordering, receiving, invoicing, budgeting, book funding, setting suppliers and exchange rates.
- ◆ **Circulation:** a complete featured and powerful circulation module with customised circulation rules to suit any kind of library; it fully automates the borrowing and item management.
- ◆ **OPAC-** Koha has all the elements and attributes of OPAC with a simple and clear interface, and in addition to it also supports content from sources of collections like Amazon, Google Books, etc.
- ◆ **Flexible reporting:** Koha provides access to the RDBMS, so reports can be easily customised and prepared as per the individual requirements.
- ◆ **Customisable item types:** The catalogue items can be opted as per the preference and requirements of the individual libraries.
- ◆ **Barcode/ RFID :** The ILS Koha is based on the web browser and its is fully compatible with all kinds of barcode, QR codes, RFIDs and other similar technologies.
- ◆ **User management:** The software provides incorporation with systems like LDAP, Active Directory, Radius and SAML to allow single sign-on facility for the user's management.

- ◆ **Metadata:** Koha has a potential to generate a qualitative metadata, it uses a full text indexing engine to allow for speedy and authoritative searching of metadata.
- ◆ **Standards:** Koha uses all latest standards including MARC21, UNIMARC, Z39.50, SRU/SW, SIP2 and many more are supported.x
- ◆ **Automated overdue notices:** Overdue notices are either provided by email or SMS.
- ◆ **Consortia Mode:** The ILS can work as multi-branch or single-branch mode in the consortia mode.
- ◆ **Translations:** Koha is translated into many languages and is available in nearly 62 languages.
- ◆ **Offline circulation:** Koha also provides provision to do offline circulations
- ◆ **Self-Check:** Koha also facilitates the use with SIP2 compliant self-check-in, check-out machines.
- ◆ **Faceted searching:** Koha provides the federated search results which are classified for its users.

Koha Requirement:

- ◆ Koha latest version freely available at www.koha.org
- ◆ Apache web server freely available at www.apache.org
- ◆ Any RDMS like MySQL freely available at www.mysql.com
- ◆ Perl Modules freely available at www.cpan.org
- ◆ Any version or flavor of Linux or WINDOWS Server

Koha Modules Include

- ◆ Administration
- ◆ OPAC
- ◆ Cataloguing
- ◆ Circulation
- ◆ Serials
- ◆ Acquisitions
- ◆ Patrons



Koha Home page showing all Modules

CONCLUSION

An assortment of software's are being utilized by the libraries in Lucknow, the individuals who incline toward open source sources software over business arrangements. The Koha is a standout amongst other web empowered open source software for library automation. Because of high cost of standard software, the greater part of the libraries are utilizing open source software. KOHA is accessible free of cost and giving all coveted software modules, for example, pupation and specialized help. Koha is the effective open source library administration instruments that arrangements fundamental to top of the line customization to oversee, seek and recover serials and its missing issue administration. The open source model of ILS software like Koha s can give an appealing other option to libraries, if just its standards can be acknowledged and things could change rapidly. To assess business and Koha open source ILS software for lucknow, uttar pradesh in highlights, demonstrated unwavering quality, support and vision.

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