International Journal of Academic Research and Development

HOME   EDITORIAL BOARD   ARCHIVES   INSTRUCTIONS   INDEXING   CONTACT US

CERTIFICATE

ISSN: 2455-4197

Research Journal Impact Factor: RJIF 8

Indexed Journal
Refereed Journal
Peer Reviewed Journal

Journal List

SEARCH

INDEXING

RJI FACTOR

ISSN INTERNATIONAL STANDARD SERIAL NUMBER

International Journal of Academic Research and Development is indexed, refereed, peer reviewed,

28	Application of open source software for libraries Anju Saini Abstract | Download | Pages: 110-112 How to cite this article: Anju Saini. Application of open source software for libraries. International Journal of Academic Research and Development, Volume 2, Issue 6, 2017, Pages 110-112	Librarian	India
29	Socio-economic and cultural status of marginalized groups in Andhra Pradesh-overview on dalits Dr. A Jammanna Abstract | Download | Pages: 113-119 How to cite this article: Dr. A Jammanna. Socio-economic and cultural status of marginalized groups in Andhra Pradesh-overview on dalits. International Journal of Academic Research and Development, Volume 2, Issue 6, 2017, Pages 113-119	History	India
30	Pradhan Mantri Jan Dhan Yojana: An empirical study in rural area Dr. Manas Naskar, Sourav Kumar Das Abstract | Download | Pages: 120-125 How to cite this article: Dr. Manas Naskar, Sourav Kumar Das. Pradhan Mantri Jan Dhan Yojana: An empirical study in rural area. International Journal of Academic Research and Development, Volume 2, Issue 6, 2017, Pages 120-125	Commerce	India
31	Historical sketch of local self-government in Anantapur region progress and process Penukonda Jyothi Abstract | Download | Pages: 126-131 How to cite this article:	History	India

Application of open source software for libraries

Anju Saini
MLIB, NET Kurukshetra University Kurukshetra, Haryana, India

Abstract
Information and communication technology has changed the dynamics of human life and society. The open source software is currently one of the options preferred by libraries. Software now-a-days has became the life line of modern day organization. They cannot carry on their tasks with effectively, efficiently and promptly without software. There are a number of open source software's available for automation of libraries and creation of digital libraries. This paper discusses the meaning, important issues, reasons why libraries prefer open source software, an overview of different types of open source software like Koha, Greenstone, Newgenlib, Invenio, Fedora, E-prints etc. at length.

Keywords: Open source software, libraries, Koha, Greenstone, Newgenlib, Invenio

Introduction
Today's age is rightly known as the age of information technology. Information is a infinite and dynamic resource that affects all walks of life. In recent years, internet has come out as the most powerful medium for the storage and retrieval of information. It is a collection of thousands of computers and network system of all sizes (Vyas, 2007). Similarly, information and communication technology has effected enormous changes in the area of library and librarianship. It has added new elements like e-journal, e-books, e-banking, e-mail, e-library etc. In the modern age, with the help of library automation, every librarian changes his library from the traditional into the modern. Through library software library provides automatic handling of different library activities such as library services, cataloguing, classification, indexing, and housekeeping operations with less staff and better speed of work. In the computerization of a library, library software plays vital role. The open source software is currently one of the options preferred by librarians.

What is open source software?
The open source software is a co-operation programming infrastructure that co-opts copyright law by free source code to the general public for any use, modification, unmodification without licensing restrictions. The free software movement was launched in 1993. In 1998 a group of individuals advocated that the term free software be replaced by open source software. Open source began with "open source software" or "free software" which was founded in 1998 by Eric Raymond and Bruce Perens. The most renowned example is the GNU General Public License (GPL).

Definitions of open source software:
According to OSI "Open source promotes software reliability and quality by supporting independent peer review and rapid evaluation of source code. To be certified as open source, the license of a program must guarantee the right to read, modify and use it free '' (Mukhopadhyay P.S.).

Why does librarian prefer using open source software?
Most of the libraries do not have huge amount of money to make experiments. They do not possess additional resources to meet the needs of software installation, training costs etc., unless of course, they opt for the open source software. First and foremost, Open source software is free for everyone; not only is the software free, but they are also free to change those parts which they don't like.

Advantages of open source software
- Open source software is free to use, distribute and modify. It has minimum / low costs. It generally requires no licensing fees.
- Source code availability also makes it more secure.
- Open source software has no limitations. It allows work with different types of system without limitations.
- Open source software is not dependent on the company or the author that created it.
- Open source software is concrete and portable. It provides less hardware costs and lower software cost to implement the same task as on windows.

Disadvantages of open source software
- Open source software is not free in the real sense of the term. It may involve some costs like paying for external support, implementation, maintenance, training etc.
- Open source software applications may be hard to set up and use.
- For running and installing the open source software there is no qualified staff, no service available.
- Open source software is not always secure because source code is freely available on the internet, so anyone can know how to break it.

Open Source Software for Library Automation
1. KOHA 2. NewGenlib 3. Greenstone 4. DSpace
5. EPrints 6. Fedora 7. Invenio

Koha

KOHA is the first open source software fully featured integrated library system (ILS) developed by katipo communications for the Horowhenua library trust, in New Zealand and first installed in January 2000. Koha is distributed under the General Public License (GPL). It requires pearl, mysql and apache and has been translated into many languages. Its new features include a new user interface design advanced search functions, better capabilities. Its search engine is based on 'Zebra Plugin'. It includes modules for circulation, cataloguing, serials, acquisitions, label etc.

Features of koha
- Web based.
- Full featured integrated library system
- Print barcode
- Checkout by keyword, title, calls No etc.
- Copy cataloguing and Z39.50
- No vendor locks in.
- Simple, clear search for all users interface.
- Linux, UNIX, windows platform.
- Multi-tasking and enables updates of circulation, cataloguing.
- Keyword and advanced searching.

Newgenlib

NEWGENLIB is an integrated library management system software. The software is provided by Kesavan Institute of Information and Knowledge management in Hyderabad, India. This software is developed by Verus Solutions pvt. Ltd. The latest version of NewGenlib is 3.1.1 in 16th April 2015. It includes modules for acquisition, serial management, technical processing, OPAC, etc. NewGenlib is distributed under GNU General Public License. It requires Java, Linux and windows.

Features of Newgenlib
- RFID technology.
- Data create and exchange format with MARC-21 format.
- SMTP mail server.
- RSS feed in OPAC.
- Source code and user manual
- Open access compatibility with the OAI-PMH.

Greenstone

GREENSTONE is an open source multilingual software issued under the terms of the GNU General Public License. Greenstone is produced by the New Zealand digital library project at the University of Waikato. It has been developed and distributed in collaboration with UNESCO and the human info NGO in Belgium. The aim of the software is to empower users, particularly at universities, libraries and other public institutions, to build their own digital libraries. It knows how to create collections from 'standard 'file format such as HTML files, email messages, PDF documents, JPEG and GIF images.

Features of Greenstone
- It runs all versions of windows, UNIX and it is very easy to install.
- It is highly interoperable using contemporary standards.
- Provides full-text searching and metadata based browsing facilities.
- It is widely accessible and the collections are accessed through a standard web browser.
- It provides the reader interface (which operates within a web browser) and librarian interface.

Dspace

DSPACE is available free as open source software. The first public version of Dspace was released in November 2002, as a result of the joint efforts of the developers of MIT (Massachusetts Institute of Technology) and HP (Hewlett Packard) and the source code is made available publicly according to the terms of the BSD open source license. It is a new ground breaking digital institutional repository that captures, stores, indexes, preserves and distributes digital formats. Dspace 6.X is a major update to the Dspace platform.
Features of Dspace
- Dspace supports, submission, management and access of digital content.
- It manages and preserves all formats of digital content (PDF, Word, TIFF, MPEG, JPEG files).
- Facilitates easy access to the materials both by listing and searching.
- Unicode facility.
- Customizable search.

Eprints

EPRINTS software has the largest and most broadly distributed installed base of any of the repository software systems. It shares many of the features commonly seen in the document management system, but is primarily used for institutional repositories. Eprints was developed at the University of Southampton School of electronics and computer science and released under a GPL License. A version for Microsoft windows was released on 17th May 2010.Version 3 of the software (based Perl) introduced a plugin architecture for importing and exporting data

Fedora

FEDORA (Flexible Extensible Digital Object Repository Architecture) open source software gives organizations flexible tools for managing and delivering their digital content. Fedora is developed by the community supported fedora project and sponsored by the Red Hat company. Fedora contains software distributed under various free and open source licenses. Fedora workstation, Fedora server and Fedora cloud are three distinct primary editions with Fedora version 21. Its latest version was released on 11th July 2017.

Invenio

INVENIO is developed by the CERN document server

software consortium and is available free for download. Invenio complies with standards such as the open archives initiatives metadata harvesting protocol (OAI-PMH) and uses MARC 21 as its underlying bibliographic format. Invenio is

an open source software that provides tools for management of digital assets in an institutional repository. The software is typically used for open access repositories for scholarly and published digital content as a digital library.

Table 1: General features of selected open source Software

Software	URL	Developed by	Latest version	License	Operating system	Language	Logo
Koha	http://koha-community.org	Katipo communication for Horowhenua library trust	17.05.01 in 2017.	GNU-GPL	Unix, linux, windows	perl	
Newgenlib	http://www.verussolutions.biz/web/	Verus solutions	3.1.1in 2015	GNU-GPL	Linux, windows	java	
Greenstone	http://www.greenstone.org	New Zealand digital library project with UNESCO and human info. NGO	3.07	GPL	Window, linux	Perl	
Dspace	http://www.dspace.org	MIT and HP	6.0 In 2016.	BSD	Window, linux	java	
Eprint	http://www.software.eprints.org	University of Southampton	3.3.15 in 2015	GPL	Linux, unix	Perl	
Fedora	http://www.getfedora.org	Fedora project(sponsored to Red Hat)	26 in 2017.	Various free software license plus proprietary firmware files	Linux	Java	
Invenio	http://www.invenio software.org	CERN document server software consortium	2.1.1 in 2015	GPL	Unix, window	python	

Conclusion

Digital libraries are a key to technology for developing countries. The growth of free open source software presents developing countries with an opportunity to escape from technological dependence on developed countries, but it also offers a challenge to build up local expertise. Open source software has much potential for libraries and information centers, including Koha, Newgenlib, Dspace, Fedora etc. It gives library staff an opportunity to be actively involved in development projects suggesting improvements and testing new versions. Koha, Dspace, Eprints, Greenstone are the topmost open source software which are widely used in India and the World over because of flexible searching, browsing and almost zero maintenance features.

Reference

1. Dhiman Anil K, Rani Yashoda. Manual of digital libraries, 2, 264-1279.
2. Chopra HS. ed. Librarianship in digital era: Proceeding of the conference. 2012.
3. Ramesha B. ed. Managing libraries in the changing information world: from surviving to thriving. 59th ILA international conference, 2014.
4. Khode Subhash, Chandei, Sunil Singh. Adoption of open source software in India. DESIDOC journal of library and information technology. 2015; 35(1):30-40.
5. Kumar Lalit, Singh Lokender. Open source software KOHA: A case study of L R Institute of engineering and technology. International journal of digital library services, 2012; 2:61-75.
6. Uzomba, Emeka Christian.The use and application of open source integrated system in academic libraries in Nigeria: KOHA example. Library philosophy and practice (e-journal), 2015, 1-37.
7. http://en.m.wikipedia.org/open source initiative.
8. http://cloudweaks.com/
9. http://Entrepreneurhandbook.co.UK/oss.
10. https://en.m.wikipedia.org/koha.
11. https://en.m.wikipedia.org/newgenlib.
12. https://en.m.wikipedia.org/greenstone.
13. https://en.m.wikipedia.org/Dspace.
14. https://en.m.wikipedia.org/eprints.
15. https://en.m.wikipedia.org/fedora.
16. https://en.m.wikipedia.org/invenio.
17. www.greenstone.org.