Implementation of Open Source Software in Thiru A Govindasamy Government Arts College Library, Tindivanam: A Case Study

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Abstract

The rapid growth of information technology (IT) and information communication technology (ICT) has brought the number of open source software (OSS) for library automation, digital library /institutional repositories, content management systems, etc. This software will help librarians implement it in the Library and provide better service to users. This paper discusses the implementation of OSS in two applications such as library automation (Koha) at Thiru A. Govindasamy Govt. Arts College, Tindivanam and the functionality of the various library services.
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Keywords
Open Source Software; Academic Libraries; FOSS

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Introduction

The explosive growth of open source software (OSS) contains a number of application software for library operations such as library automation, digital Library and content management etc., OSS is generally inexpensive than commercial software and lot of cases it is available at free of cost. OSS offers more customization options than commercial software and provides many different customized versions of the same software

Koha is a free open-source software designed for libraries, specifically an Integrated Library System (ILS). This means it acts as a central hub for many core library functions, all in one place. **Free and Open Source:** Koha doesn't have licensing fees, unlike some library systems. Since it's open-source, libraries can customize the software to fit their needs. **Comprehensive Features:** Koha boasts a feature set that covers many essential library operations, including:

- Cataloguing and managing library collections
- Circulation option
- Acquisitions, ordering new materials
- An online public access catalogue (OPAC)

Web-based Interface: Koha interfaces are accessible through a web browser, so staff and patrons can use it from any computer with an internet connection. **Customization:** Koha is known for its adaptability. Libraries can configure the interface and features to match their workflows and user base. **Global Community:** Developed by a collaborative effort of libraries and software developers worldwide, Koha benefits from a large, active community that contributes to its ongoing development and support. In essence, Koha is a powerful tool that helps libraries run efficiently, manage resources effectively, and provide a user-friendly experience for their patrons.

Open Source Software

Open source software contains source code available for free through World Wide Web. If anybody wants to utilize the open source software, they can download it along with source code and may modify the source code according to their needs. Koha, Greenstone, Dspace and e-prints are library-related

open source softwares examples. Commercial software also contains source code but it is not given by the creator, even though we paid money for the concerned software. Only the original authors of commercial software can legally copy, inspect, and alter that software. Microsoft Office and Adobe Photoshop are examples of commercial software. Koha enables librarians to do housekeeping and transaction activities most easily. DSpace, e-prints and Greenstone (Institutional Repository / Digital Library) software's are helping to build a library's own collections. They helps to organize the digital collections to the libraries' taste, language, style etc., and brand them appropriately to reflect ownership of the collection. Drupal and Joomla softwares are used to create and maintain content management in the internet environment.

Thiru A. Govindasamy Govt. Arts College (TAGGAC)

It was established in the academic year 1969-70 in the name of the then Honourable Agricultural Minister Thiru A. Govindasamy and inaugurated by the then Honourable Food Minister Shri.P.V. Shanmugam on 29.07.1969. Initially it was functioned at Regional Agricultural Research Centre up to 23.07.1972. Afterwards, it is functioning in own building located at Melpakkam near Tindivanam. Presently, this College is having 10 undergraduate courses, 10 postgraduate courses, 3 M.Phil and 2 Ph.D programs. More than 3500 students are studying in this college in two shifts.

TAGGAC Library

To cater the ever-growing needs of students, staff and research scholar, the Library has a variety of collections such as 25450 volumes of books, 30 national journals and N-List online journals. This Library functions from 9 am to 5.30 pm. Recently, we have implemented Koha open source software for library automation and we have been uploading library users details and books information etc.

Review of Literature

Jayaprakash (2010) discussed the open-source software implemented and utilized in Bharathidasan University. He highlighted the open source software in various applications like Digital Library, Institutional Repositories, Integrated Library System, Content Management System and Learning Management Systems in Bharathidasan University. Sivasamy (2010) presented the case study about using Open Source Software at SRM University Library. Also, this paper discussed the retrieval mechanism of Dspace and Greenstone Digital Library software.

Vijaykumar Bhimrao (2020) described the benefits of Koha Open Source software in full Integrated Library System (ILS) features. They described from his study that there is no license cost, the product can be modified to our needs, etc. More than 300 libraries, including academic, public, school and special libraries, use Koha. Koha open source software is easy for people to create their digital library collection. Lalit Kumar, (2012) studied the automation status in L R Institute Of Engineering & Technology Solan, Himachal Pradesh. Library automation refers to the mechanization of library housekeeping operations predominantly by computerization. To develop and update the database using Koha Library integrated software to carry out the functions of the circulation section, book search, books due by the member, and overdue charges.

Objectives

- To implement the Library Automation process by using KOHA open-source software
- To utilize the open-source software for different library activities

Methodology

The present study was conducted to implement open-source software for library operations at Thiru A. Govindasamy Govt. Arts College, Tindivanam, Tamil Nadu. The study is based on my work experience in Ubuntu, Koha, MarcEdit, Cheese, Google input tools, etc.

Implementation of Open Source Software @ TAGGAC Library

The following open-source software are required to implement Library Automation and Institutional Repository at TAGGAC Library. The software requirements are,

- Linux – Ubuntu Operating System
- Koha – An Integrated Library Management Software
- Cheese – Ubuntu App
- MarcEdit – Data Migration Software and
- Google input tool

Brief descriptions of the above software are as follows.

Operating System – Ubuntu

Linux operating system is a program that is an interface between computer hardware and software. It controls all kinds of programs based on user needs. It is one of the important versions of UNIX operating System and its source code is freely available. Anybody can download and install Linux operating system in their desktop/computer at free of cost. Linux functionalities are similar to UNIX functionalities.

Ubuntu is one of the most important open-source software in the Linux-based operating system. It is a wonderful alternative solution for libraries to upgrade the new version of computers or for bulk purchases of computers requiring a new operating system. TAGGAC Library has installed the Ubuntu operating system on June 2016. So far, it is running without any difficulties.

Google Input Tools

Figure 1 shows that Google input tools for Windows are an input method of editor that allows users to enter text in any of the supported languages. They are currently available for 22 different languages, including TAMIL.



Fig.1: Google Input Tools

TAGGAC Library has installed this tool for Koha for Multi-lingual OPAC search. In addition, it can also be used to type Tamil language books titles in excel format. TAGGAC library contains 24500 volumes of books. The book details are entered in excel format in English and Tamil by using google input tools. Figure 2 shows multiple language (bilingual) data in excel format.

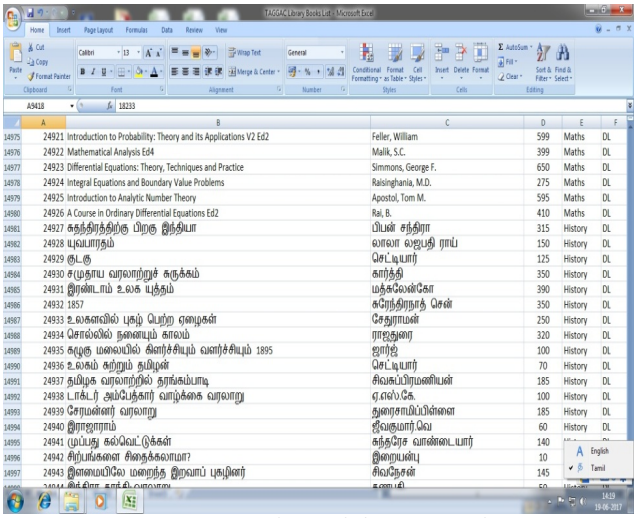


Fig.2: Bilingual data in excel

Data Migration – MarcEdit

MarcEdit software converts the bulk bibliographical records available in excel format into. mrk format. The .mrk formatted bibliographical records further converted into .mrc format. The converted bibliographical records (.mrc format) can be imported into library database through koha's tools. By clicking the icon "Stage Marc Records for Import", the .mrc formatted bibliographical records are uploaded and organized. By clicking the icon "Staged Marc Records Management," the organized records are saved in the library database. Figure 3 shows Marc Edit's Front Page.

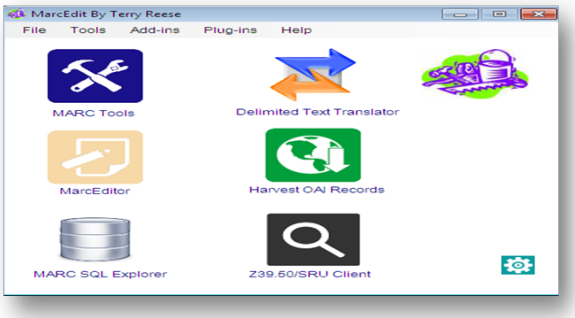


Fig.3: Marc Edit Front Page

Cataloguing

Online catalogues are very important for the implementation of Library Automation. The Catalogues contain bibliographic information of Books, Journals, Videos and CDs etc., There are two ways to catalogue the bibliographic records, they are

- Direct Entry (Original)
- Copy Cataloguing (Using Z39.50/SRU)

Direct Entry

Figure 4 shows that, the direct entry cataloguing pages of TAGGAC library.

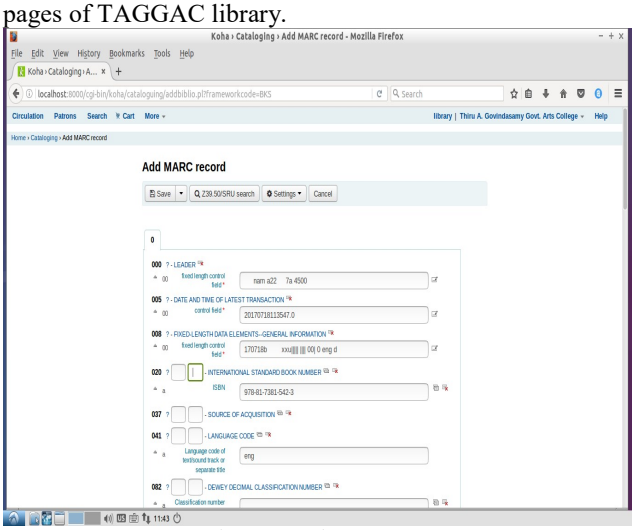


Fig.4: Koha – Cataloguing Page

Copy Cataloguing

Click New Record and choose the framework which is already defined. Click "New from Z39.50/SRU and choose framework, then enter the ISBN or ISSN number. Further, Z39.50/SRU will find the bibliographical information from the web. After getting the bibliographic information, copy it into our library database.

In addition that, the bulk bibliographical information available in Excel format can be imported into our library database by using MarcEdit and Koha. Using MarcEdit software, TAGGAC Library converted Excel data into mrc format. After that, these mrk formatted files are finally imported into Koha library automation software.

Library Automation - KOHA

Koha is a familiar open source library automation software with a web-based interface for students and staff. It contains different types of modules such as acquisition, patron, circulation, cataloguing, serials, report and administration etc., It has a web-based OPAC for searching the library resources which is uploaded in KOHA software. TAGGAC Library has implemented library automation using Koha-integrated Library software. This software provides access to bibliographic details of Books, Serials, CDs etc.; multi-lingual OPAC also provides access to the regional language books. Fig.5 shows that, the home page of TAGGAC Library automation.

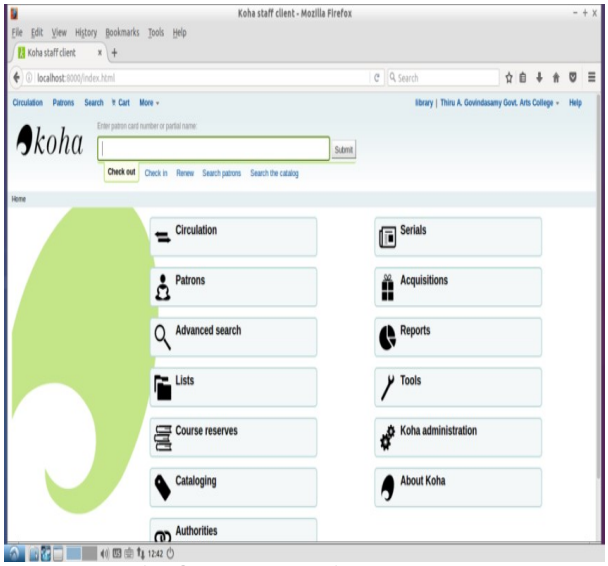


Fig.5: Koha @ TAGGAC Library – Home Page

Circulation

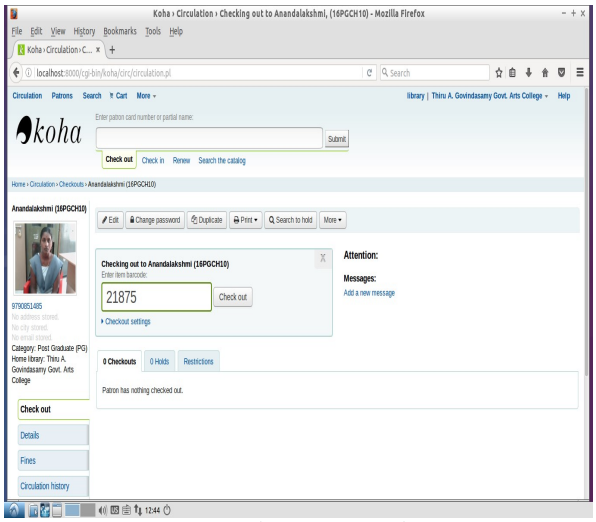


Fig.6: TAGGAC Library – Circulation Page

Figure 6 reveals that Koha open source software is used in library automation system. The functionality of Koha in circulation section is first opening the circulation menu and entering the ID number; then the display shows that member's name, photo and branch. Then enter the accession number of the book,

the display shows the title of the books issued and date of return.

TAGGAC Library Report Generation Page

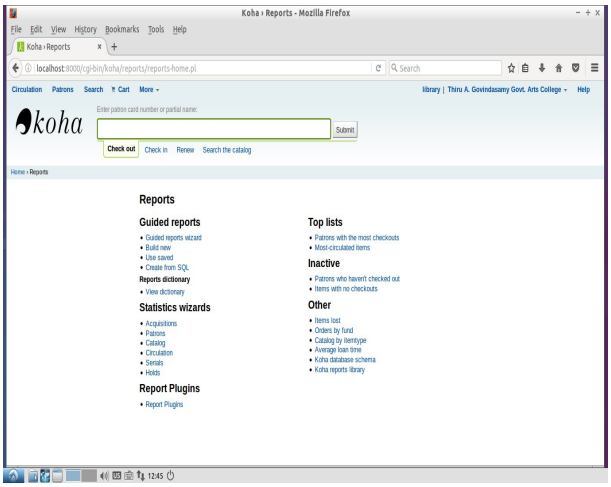


Fig.7: TAGGAC Library Report Page

Figure 7 shows that the report list is available in the Koha open-source software at TAGGAC library, Tindivanam. During the study, it is identified the following list of reports are to be generated through Koha open source software. The detailed lists are,

- Department-wise book list
- Issue and return book details
- Fine report

Koha's Multilingual Search

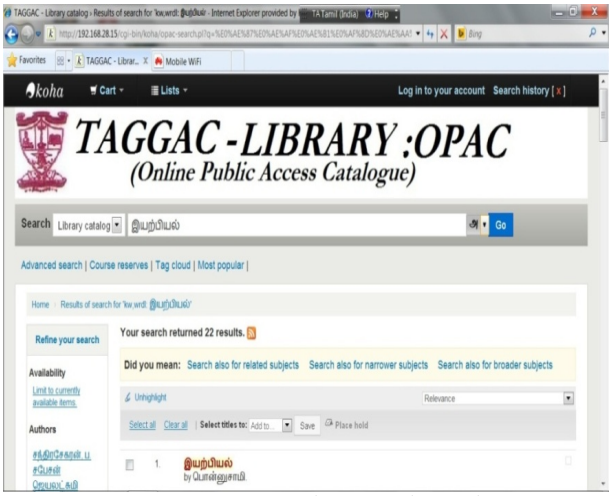


Fig.8: TAGGAC Library Bi-lingual OPAC

Koha's Multilingual search option helps to users in searching items in the specific language. This option is vital in the TAGGAC library OPAC, which has more than 4000 Tamil language books. Figure 9 shows that, the OPAC search page of TAGGAC Library. Through OPAC users can search the books via title, author and keywords etc., the search results are displayed in the TAGGAC Library search page.

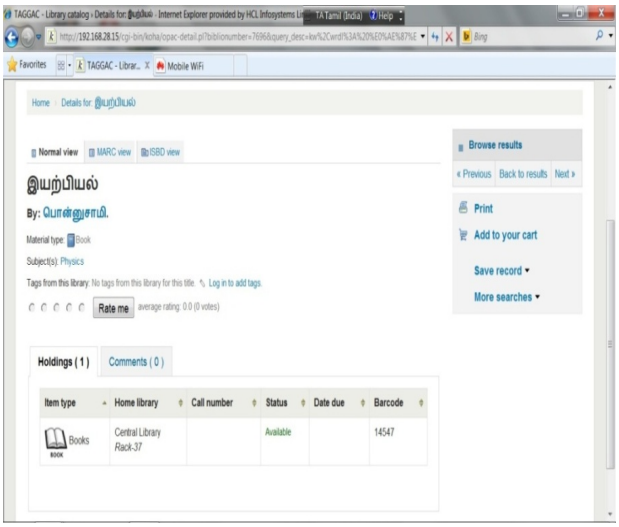


Fig.9: TAGGAC Library Bi-lingual OPAC result

Figure 9 shows that, the status of the searched books in our Library regarding the particular book is available are issued.

Members (Patron) Registration

It is an Ubuntu's webcam application software. It supports image and video capture. It is easy to take photos and videos etc., TAGGAC Library is utilizing this Ubuntu's webcam application for membership (patron) registration. Figure 10 shows that, image capture pages of TAGGAC Library. The captured member's images are uploaded into koha to complete the membership registration process.

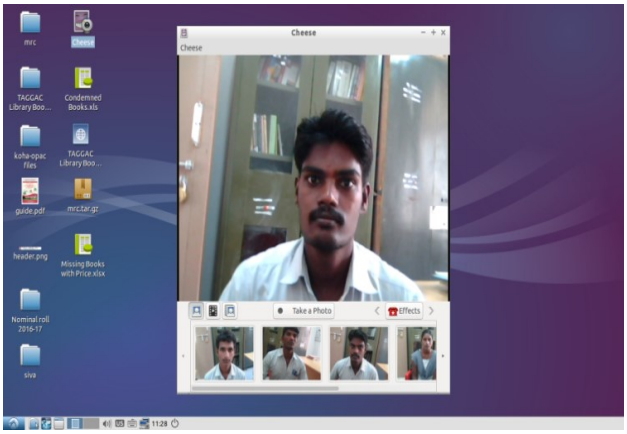


Fig.10: TAGGAC Library Cheese webcam image

KOHA Tools – Barcode Label Generator

Using the Label Creator, you may print almost infinite labels, including ones with barcodes, using custom layouts and templates. The Label Creator module has the following functionalities.

- Customize label layouts
- Create personalized label templates for printed labels;
- Assemble and regulate label batches.
- Export individual or more batches.
- We can export one or more labels from a batch.

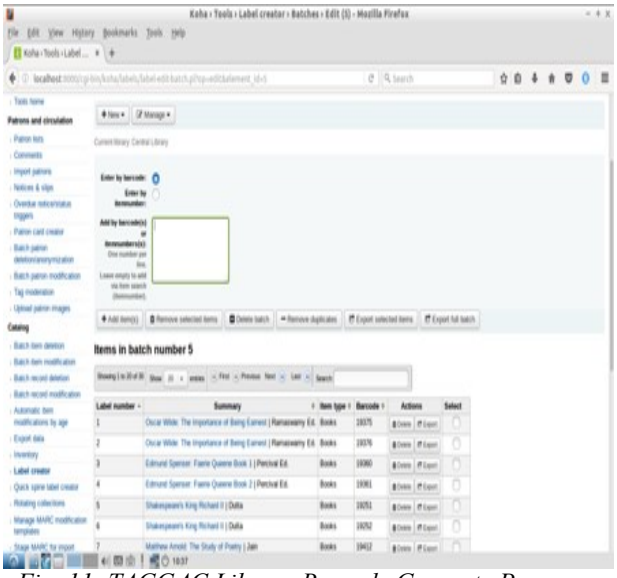


Fig. 11: TAGGAC Library Barcode Generate Page



Fig. 12: Bare code printout page

Conclusion

Information Communication Technology plays a vital role in all fields. With the advent of the Internet, information explosion has been occurring tremendously daily. So, Users are very difficult to get relevant information. Without ICT, libraries are not in a position to provide better service to the users. Nowadays, the cost involved in the purchase of commercial software is too high. Open source software is the best choice for fulfilling library needs. Various open-source software is available for library automation, digital library initiatives, and content management processes. To implement and manage this software, librarians must know the ICT activities. This paper has discussed the implementation of TAGGAC Library automation and its regular activities. Moreover, Koha open software has smooth functionality in TAGGAC Library automation and its day-to-day activities.

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