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**DESIGN AND IMPLEMENTATION OF LIBRARY
AUTOMATION USING KOHA (Open Source Software) AT
JAWAHAR NAVODAYA VIDYALAYA, BOUDH**

**A PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS**

For the Degree of

POST GRADUATE DIPLOMA IN

LIBRARY AUTOMATION AND NETWORKING



2015-16

Guide:

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CERTIFICATE

*This is to certify that Mr. Alekha Karadia has done this project work entitled “**DESIGN AND IMPLEMENTATION OF LIBRARY AUTOMATION USING KOHA (Open Source Software) AT JAWAHAR NAVODAYA VIDYALAYA,BOUDH**” submitted in partial fulfillment of the Requirements for the degree of Post Graduate Diploma in Library Automation and Networking (2015-16) of Sambalpur University. To the best of my knowledge and Belief, this project is the outcome of the investigation carried out by him with All sincerely and diligence. Hence, I forward and recommended that, this project is candidate's original work and is worthy of examination.*

Prof. Bulu Maharana

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DECLARATION

I hereby declare that the project entitled "DESIGN AND IMPLEMENTATION OF LIBRARY AUTOMATION USING KOHA (Open Source Software) AT JAWAHAR NAVODAYA VIDYALAYA,BOUDH" which is being submitted in partial fulfillment of the course requirements leading to the award of Post Graduate Diploma in Library Automation and Networking (2015-16). The project is prepared by my own efforts. All the information is true to the best of my knowledge and belief.

I further declare that this project has not been previously prepared and submitted to any other institution/university for any degree/diploma by me or any other person.

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Place:

(Alekha Karadia)

Date:

Abstract

Automating a School library is the process which restructures its functions and reinvents its services. By keeping a database as the basis, automation converge new technologies of information storage and retrieval with traditional housekeeping operations. The most popular open source solutions used in Jawahar Navodaya Vidyalaya, Boudh for digitization, preservation and dissemination of digital assets. The management and technical challenges faced in the organization and dissemination and various open source solutions Koha used for digital preservation and dissemination of knowledge worldwide .

Keywords: Koha, Digitization, Automation, Digital Library

1. Introduction

Technology has become as the culture among the stakeholder in all walks of life due to the reach, the cheaper cost, multiplication, virtual reality and easy to use. Automation is an immense process for any system including higher education and institutions. Higher academic libraries across the globe were the forerunners in integration of data bases of resources and end user and integrating for effective approaches.

Hence the current concepts of digital presence of various business and social practices existing in the web as the outcome of automation and mechanization that was taken place in early eighties and ninetys of the previous century in libraries and other institutions.

Library Automation refers to the use of computers to serve the needs of library users. The operations of a library get a quantum jump with the introduction of computers. The computers help to provide fast and reliable access to the resources available in the library as well as elsewhere. The application of computers in the library operations avoids repetitive jobs and saves lot of labour, time, speeds up operations, increases use of library resources. Computers are not only used as a tool for processing the data, but also for data storage and accessing.

Automating a college library is the process which restructures its functions and reinvents its services. By keeping a database as the basis, automation converge new technologies of information storage and retrieval with traditional housekeeping operations. An automated college library can serve the teaching and learning community more effectively. A reduction in the time needed for routine operations can be utilized to give customized services to the users. The process of library automation has a short history in our country. It needs proper planning and active implementation in initiating the automation of its library to cope with the ever changing needs of the students and staff. The modernization of the library media centre helps the students to become skilled information users and lifelong learners

2. What is Library Automation?

Library automation is the use of automatic and semi-automatic data processing machines to perform such traditional library work consisting of acquisitions, technical processing, serials control, circulation and reference services all entail time consuming manual work. Though these activities are essential to proper functioning of a library, they consume professional staff time

that might otherwise go towards user services and library development. Library computerization is now gaining importance necessitating the establishment of profession-wide standards. Comprehensive studies of library computer systems world over include discussions of machine-managed acquisitions, cataloguing, serials control, circulation and bibliographic service modules. The literature in this area highlights major aspects of computer's role in the library environment. Similar to several aspects of library management, the demand for more and faster information services and the decline in library resources are compelling librarians to appreciate the role of computers within their operations. In general, librarians are looking to maximize the benefits of automation by spreading computer use to as many aspects of library activities as possible by taking advantage of developments in computer hardware and software and telecommunications.

3. Definition

According to Webster's dictionary "automation is the technique of making an apparatus, a process or a system operate automatically". In other words it is the machinery that mathematically manipulates information storing, select, presents and records input data or internally generated data. Automation word is used for automatic technical process. In libraries automation refers to the process of automation in house functions such as circulation, cataloguing acquisition, serial controls etc. Automation is a technique to make a system automated means self-active. For this electronic machines are used to automate the libraries. Thus library automation means the application of machines to perform the different routines, repetitive and clerical jobs involved in functions and services of the libraries. Library Automation is the general term for information and communication technologies (ICT) that are used to replace manual systems in the library.

4. History

Punched cards were invented by Hollerith in 1880 and used in tabulating the US census data. The library at the University of Texas was perhaps the first to use punched cards in 1936 for circulation control. The Library of Congress used the unit record machines for the production of catalogues in 1950. Many libraries in the US followed the system for automating their activities.

Library automation entered into its second era in 1960s with the advent of computers. The notable ventures were MEDLARS, MARC, etc. Until the early 1990s, "automating the library" involved generally the same features as those in place since the advent of machine readable cataloguing record in the late 1960s. Libraries created integrated text based systems using micro/mini computers in which traditional library housekeeping operations were computerized using the library's database as the foundation.

In the last decade, library automation has undergone a transformation that reflects changing definitions of library service in general and access to resources in particular. The introduction of global networking such as internet, cheap availability of technology and new media technologies made information more accessible. Today's integrated library systems not only provide modules which automate traditional library functions but also capable of connecting through the local systems into systems of other information or knowledge suppliers, databases and internet.

5. Areas of Library Automation

As a first step in a planning process, it is desirable to formulate a model for computerization listing all itemized and prioritized information systems being maintained on a manual basis by the library. For this exercise it is necessary to break down these procedures into their constituent parts. When further subdividing these activities, each item is to be considered of its functional elements. The systems and subsystems listed below are only indicative and may vary with differing library system environments. These are:

Acquisitions

- Selection Ordering
- Claiming/cancellation
- Receiving/invoice processing Extended procurements
- Gift tracking Fund Control
- Maintains information about all library related funds Ability to group funds (nesting)
- Track fund allocations and adjustments Fund encumbrance
- Fund expenditure
- Cash Balance Free Balance
- Automatic updating of fiscal information through recording of specific transactions
- Track year-to-date expenditures Create Purchase Orders

Technical Services

Cataloguing

Books Serials

Special Collections

Circulation

Charge/Renewal Discharge

Loan Periods

Processing schedules Holds

Messages Blocks

Notices

Transaction Recording Devices for off-line processing Member control

Inventory Control

Serials Control

Receipt (check-in) Claiming

Bindery control Replacements

Monographic serials Invoice processing

Reference Services

Desk services User tools

Bibliographic utilization Reprography

Inter-library communications General Administration

Grants Administratiuon Library Publications

Bindery

Periodical Citation Searching

OPAC

Bibliographic Database that enable search with multiple approaches viz author, title, subject, keyword, publisher, ISBN and so on that can be accessible by the end user both Intranet and Internet.

6. Need for library automation:

As the Information and communication technology has been widely in the all sectors and particularly in education are institutions. Process of automating libraries for remote operations become inventible by automating the work process particularly creating databases for the resources and users by incorporating all relevant parameters.

This enable the libraries to have standard database for integrated library management system for all routine library operations to be rendered consistently.

Following are considered as important factors for Library Automation

- ❖ Information explosion.
- ❖ Increase in the collection of libraries.
- ❖ Inability of users to explore the unlimited literature and information of their interest.
- ❖ Advances in the computer and communication technology.
- ❖ Wastage of user / staff time in locating the information.
- ❖ Provide wide access to resources within the libraries and elsewhere. Better access.
- ❖ Quality in service.
- ❖ Cooperative efforts (Resource Sharing),

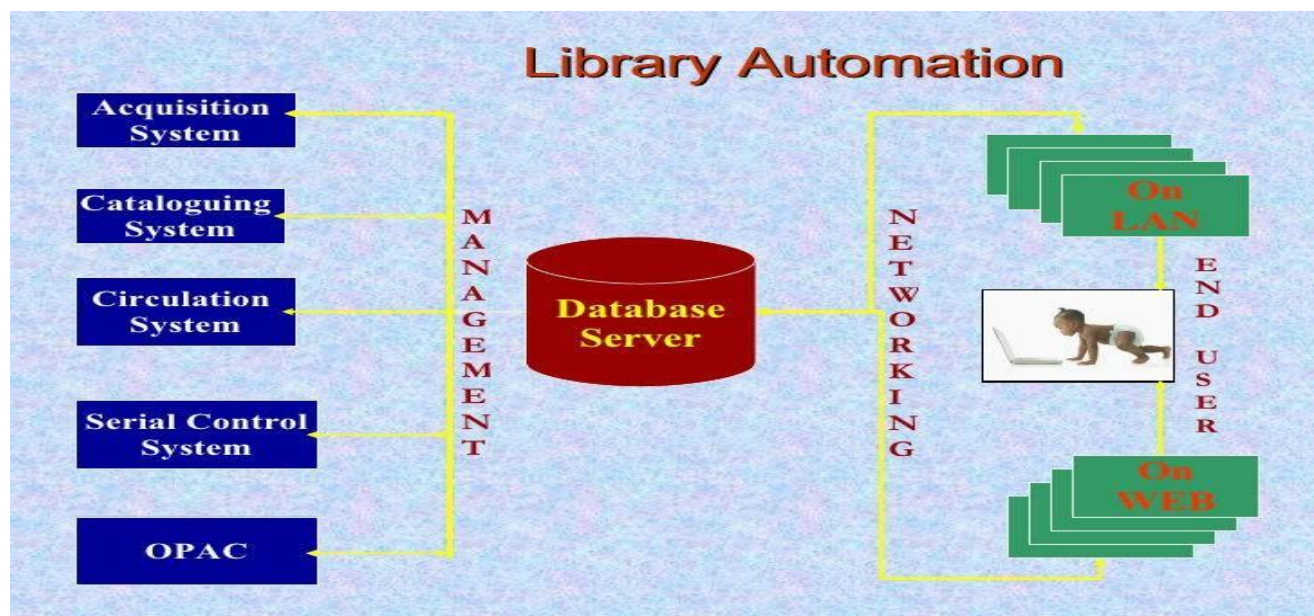
7. Advantages of Library Automation

- ❖ Improve the quality, speed and effectiveness of services.
- ❖ Relieve professional staff from clerical work.
- ❖ Improve access to remote users.
- ❖ Facilitate wider dissemination of information products and services.
- ❖ Resource-sharing among other library networks(Union Catalogues).
- ❖ Enable rapid communication with other libraries.
- ❖ Improve the management of physical and financial resources.

8. MODULES:

- ❖ Acquisition
- ❖ Cataloguing
- ❖ Circulation
- ❖ Serial Control
- ❖ Administration
- ❖ OPAC
- ❖ User Services –SDI, CAS

9. Structure of Automated Library



10. Library Automation Software:

There are number of commercial library automation packages are available today viz. but even the basic cost of these is beyond the reach of many small libraries. Now we can go for Library Automation with Freeware and open source software with latest technologies and good features.

10.1. Commercial Software's

- SOUL LIBSYS
- AUTOLIB
- EASY LIBSOFT NIRMALS
- VTLS SLIM++
- LIBRARIAN LIBSUIT
- ROVAN LMS etc...

10.2. Free and Open Source

Open Source Software (OSS) is computer software that is available in source code form for which the source code and certain other rights normally reserved for copyright holders are provided under a software license that permits users to study, change, and improve the software. Open Source licenses often meet the requirements of the Open Source Definition. Some open source software is available within the public domain. Open Source Software is very often

developed in public, collaborative manner. Open Source Software is the most prominent example of open source development and often compared to user-generated content. The term open source software originated as part of a marketing campaign for free software. A report by Standish (2008) Group states that adoption of open source software models has resulted in savings of about \$60 billion per year to consumers.

Open Source Software for Library Automation

- KOHA
- WINISIS
- EVERGREEN
- OPEN BIBLIO

11. STATEMENT OF THE PROBLEM

Implementation of Open Source Integrated Library Software is difficult for library professionals because of its complex installation procedure. Most of the Open Source software are suitable for libraries work only with Linux operating system. Installation of Open Source Library Management System in Linux operating system is noted to say that the installation of the software is a user-friendly. Windows-based software's. Installations of Koha in libraries need either the help of an expert or the library professionals should acquire expertise in Linux operating system. To have an effective control over the Library Management or the School, this study **Design and Implementation of library Automation Using KOHA (OSS) at JNV, Boudh** was carried out.

12. Objectives

1. To implement Koha at JNV, BOUDH library, the following are the objectives aimed.
2. To develop and update database of books and other resources of JNV, Boudh.
3. To implement automated Library system using KOHA Open Source Software. To carry out automation of housekeeping functions very effectively.
4. To provide various search options like author, title, keyword, publisher, publication and year etc.
5. To know the availability of books and other status of the resources by all the stakeholders.
6. To connect the library OPAC in web environment for wider reach. To have entire control over the library operations.

13. Plan of work

The various functions and routines of project section of JNV, Boudh Library operations have been studied and observed. Accordingly the following steps were followed to create an automated library system.

- ❖ The researcher has physically collected all books Data for JNV, Boudh

- ❖ The bibliographic details were collected in a data entry sheet browsing the Books.
- ❖ The researcher has prepared 650 of data entry sheets (every sheet entries 10 records each) with relevant (Acc No, Title, Author, Edition, Volume, Publisher, Place, ISBN, Price, Copies) information to create database.
- ❖ The data were entered in to the system using Micro Soft Excel.
- ❖ The data has been edited after verifying for wrong entries and spelling and grammatical error were rectified.
- ❖ The researcher has classified the titles of the books with DDC number for classified approach to search.
- ❖ Indexing has been made to enable the search with the titles, author, subject, keyword, publisher, publication and year.
- ❖ The database is integrated with library database by using the Koha MARC edit software.
- ❖ Studying the different modules of Koha software.
- ❖ Preparation of Koha installation

14. SCOPE

Implement a powerful and flexible integrated library system, supporting the academic, research and administrative needs of students, faculty and staff. Improve the quality, speed and effectiveness of library service. Convert data from the existing library systems into standard format, as for example: MARC 21; that will preserve and insure its continued development and preservation, as well as the ability to migrate data to new generations of library system. Import data generated by the central student and personnel management information databases. This will enable the library with data to use as a basis for assigning user rights, hence improve the "library user" tracking activities. Provide barrier-free, timely access to the information resource of the university college library as well as gateways to national & international resources. Limited to JNV,Boudh Library resources and serve with the records of regular full term Teacher and students JNV,Boudh.

15.About JNV Boudh:

Jawahar Navodaya Vidyalaya,Boudh,has been serving the society meritoriously since two decades. It is fully residential co-educational institution established under the NPE 1986 by MHRD to provide quality modern education to the talented children of rural area including strong component of culture .The JNV, Boudh library has more than 4000 text-books and reference book and 20 nors journals and magazine for students and teacher. The library has been support the educational for the user. The Vidyalaya has a computerized library system.The VidyalayaLibrary is well maintained and well stocked.Our Vidyalaya Library has huge collections of books on various subjects.In the library there are different types of books,magazines and newspapers availables for

reading. The students benefit a lot from the vidyalaya library. They can increase their knowledge by reading different books on various topics. Thus a good library is an asset to a school as it is a storehouse of information.

16. Design and Implementation of Library Automation Using Koha (Open Source Software) at Jawahar Navodaya Vidyalaya, Boudh

Koha is the first Open Source Integrated Library Management System (ILMS) which includes Acquisition, Cataloguing, Circulation, Serial Control & Online Public Access Catalogue with many more advanced features. Koha supports International library standards and protocols which ensures interoperability between Koha & any other library management system. It supports technologies and international standards such as MARC 21, RFID, z39.50, web 2.0 etc. The software is fully customizable and includes all modules expected in any standard library management system.

Salient Features:

- Supports International Standards & Protocol such as MARC 21, z39.50 etc.
- Supports Import/Export data compatible to MARC
- Multilingual & Strong Web OPAC
- Comprehensive advance search
- Flexibility to customize online public access catalogue according to your library needs
- OPAC can be used as Content Management System
- Printing functions for barcode labels, patron cards and reports
- Virtual Book Shelf & Course Reserve
- Supports copy cataloguing
- Provision to have branch libraries and Items transfers
- Budget & Fund Management
- Customizable Data Entry Sheet (In different framework) & supports import/export MARC framework
- No platform dependency. It can run on Linux, Windows etc.
- It uses MySQL as backend RDBMS and Apache Web server (Open Source Software)
- Support Multiple Instances (One can create more than 1 library with different database)

KOHA Modules

1. Acquisition
2. Cataloguing
3. OPAC (Online Public Access Catalogue)
4. Circulation
5. Serial Control

6. Management or Report
7. System maintenance Facilities or System Parameters.

Now, some explanation of the above points:

1. Acquisition: – Activities related to obtaining various library materials by purchase, exchange, or gift, including pre-order bibliographic searching, ordering and receiving materials, processing invoices, and the maintenance of the necessary records related to acquisitions.

The following requirements are under the acquisition: -

- **Selection of items:** What kind of books, CD, DVD etc want to a staff buy for a library For books it could be hardcopy, softcopy or original copy.
- **Duplicate checking:** A staff can find duplicate checking from this option.
- **Selection of vendor:** A staff of a library can choose a vendor to purchase a book. Various vendor lists are included here, so that, staff or purchase officer of the library can choose his/her favourite and eligible vendor from the list.
- **Ordering:** After choosing the vendor, ordering is done by the Library authority.
- **Receipting:** From this option staff of a library can check if a book has arrived in library on time from vendor or not.
- **Claiming:** If vendor is unable to supply books on time, library can claim on that vendor.
- **Fund control:** A fixed amount of money is assigned for particular department. And, with the "Fund Control" feature of ILS, this becomes very easy to control in library database.
- **Report:** These features create reports on books, journals, CDs, DVDs etc.

2.Cataloguing: -Record creation: Record about books, CD, DVD etc in database in standard format say MARC 21 format.

- **Duplicate checking:** A staff can find duplicate checking from this option. That means, one can compare two books whether they are same or not.
- **Record editing:** A staff can edit information of the library materials.
- **Authority files:** The computerized list of subjects, series, and name headings used in the online catalogue.

- **Cataloguing copies:** When a staff stores the materials record in database there error could be occurred in data entry like call number of the book or edition number. This type of errors can lower by using this feature.
- **Keyword:** In an electronic index or database, keywords can be combined together using the Boolean operators like AND, OR, and NOT.
- **Import and Export data:** Reports on which materials are imported from other library or exported to another one.

3.OPAC (Online Public Access Catalogue): -

An OPAC (Online Public Access Catalog) is the electronic card cataloging system to look up library resources, such as books, cds or others.

- **Normal search:** Book search by keyword, title, author etc.
- **Advanced search/Modify search/New search:** Exact search means by author name or by book title.
- **Status inquiry:** Information of a particular book for borrows. If it is not available then no one can borrow this book only can hold this book.
- **Print provision:** After issuing a book patron can print issued copy from the soft-ware.
- **Prompts and help messages:** Actually this option help a patron to gather know-ledge about software how the library operation works in particular software.
- **Personal account:** A member of the particular institution can save his/her information in database in a with this software.
- **Online access:** Any one can see or access software over Internet or Intranet.

4.Circulation: -

- **Patrons and items files:** Record about all the patron and materials of a library. Setting parameters (Issue, return etc): A single uniquely numbered or dated part of a periodical or newspaper.
- **Fine and overdue notice:** Material, which is not returned to the library by its due date, is considered overdue.
- **Hold and recalls:** A hold guarantees that when a book is returned to the circulation desk it will be saved for another user.

- **Reservations:** From this option we can know about a particular book which is available or reserve by someone in library.
- **Renewal:** An extension of the loan period for charged library materials. As long as no one else requests the book, renewals are unlimited. Renewals may be handled in person at a circulation desk, by phone, or through the online catalogue.
- **Short-term loans:** If any book holds by more than one person the only book borrow for one week only.

5.Serial control: -

Serials include journals, periodicals, magazines, almanacs, annual reports, numbered monographs, and other materials. This term is sometimes used interchangeably with "periodical." Ordering, Receipting, Collecting, Claiming and Binding are included here. I talked about these before but only binding. Here, Binding means, any library staff can bind the journal in a library to access easily.

Management: -

Information: Information about the total library operation. If staffs need any information he/she can gather various information with this option.

System maintenance facilities: -

- **User interface:** In software there is common interface for all users but some interface may vary based on user.
- **Security of records and files:** A library promise to all users that they keep their password, information and profile safe and secure.
- **Customization:** We can customize each and every field in open source software such as KOHA.

Koha System Architecture

Koha is based on client-server architecture.

- **Network Server:** koha can be installed on a server running Linux, Unix, Mac. The recommended operating system is stable version of Debian Linux, although Koha can run on any modern operating system.
- **Client Workstations:** Koha requires only a web browser on the workstation (a graphical browser, or even a text browser for the OPAC). Koha thus functions on PCs running Windows, PCs running Linux, Macs, or even UNIX workstations.
- Koha runs over any TCP-IP network.

- Koha accommodates low-bandwidth connections. It is completely usable on ordinary telephone line connections. This is more true of the librarian interface than of the public interface (OPAC).

Technical Requirements

- **Server operating system:** Linux,
- **Web server:** Apache.
- **Programming language:** Perl.
- **Database:** MySQL.
- **Integrated Library software:** Koha 3.0

Installation of Koha on Ubuntu/Lubuntu 14.04 LTS:

Before starting the Installation of Koha, it is assumed that you have successfully installed either Ubuntu or Lubuntu in your system. Once you finish the Installation of Linux system (Lubuntu/Ubuntu), ensure your system is connected with Internet preferably having static IP address.

Step 1: Open the Terminal:

To open the terminal, either you can search the Terminal or you can press CTRL+ALT+T together which will open terminal.

Step 2: Login with Root Privilege:

Once your terminal is ready, you need to login with root privilege and for that run this command in terminal.

sudo su (Hit Enter) It will ask password. Enter the password carefully as it will not be visible.

(Enter Password)

Step 3: Update the Ubuntu/Lubuntu:

In order to proceed with Installation of *koha*, you need to update the system with the following command.

Run this command in terminal:

apt-get update

Step 4: Installation of Editor:

You may have to change the configuration at many steps so keep any editor installed in your system. Some of the famous editors are NANO, GEDIT, LEAFPAD.

To install just run this command:

apt-get install gedit

NOTE: But remember if you are installing GEDIT. This will not work in the Server Edition of Linux OS.

Step 5: Add Koha community repository to the System:

Now, you need to add the *koha channel* into Ubuntu/Lubuntu.

Run the following command one after another in terminal

wget -O- http://debian.koha-community.org/koha/gpg.asc | sudo apt-key add -

echo deb http://debian.koha-community.org/koha stable main | sudo tee /etc/apt/sources.list.d/koha.list

After adding the channel successfully, update the system again with the following command:

apt-get update

Step 6: Installation of Koha:

Once your system is updated, run the following command to install the latest release of *koha*.

apt-get install koha-common

This command will enable the system to start downloading the *koha* with required files and packages.

During downloading and installing, it may ask you provide some input. Proceed with default values.

Step 7: Important Notes:

After downloading the required *koha* packages, you may get the following error on the screen (terminal).

libapache2-mpm-itk

```
apache2-mpm-itk  
koha-common
```

Step 8: Resolve the Issues and Proceed:

To resolve the issues, proceed with the following commands in terminal:

```
sudo a2dismod mpm_event  
sudo a2enmod mpm_prefork  
sudo service apache2 restart  
sudo apt-get install -f
```

Step 9: Important Configuration on *koha* Server:

Koha Library Management System has two interfaces:

- a. Koha Staff Interface which allows the Library Staff to carry out the library work in the system.
- b. Koha Online Public Access Catalogue which works as a mirror to display the bibliographical details of the items entered in the system. Generally, Online Public Access Catalogue is for library users to know about details of the items and their personal checkout history as well.

In this you have to configure two different ports for Koha Interface and Koha OPAC:

In order to change the port, open the (koha-sites.conf) file with any editor.

```
sudo gedit /etc/koha/koha-sites.conf
```

Generally, I use two ports 8000 for OPAC and 8001 for Interface. The reason I do this because, I want to keep the port 80 free so that I can run any other application without any difficulty.

When the file is open I change the port

8000 - Koha OPAC (OPACPORT)

8001 - Koha Interface (INTRAPORT)

Fine the lines in file and make the changes accordingly.

```
INTRAPORT="8001"
```

```
OPACPORT="8000"
```

Step 10: Installation of MySQL Database:

To store the information, we require a database where we can store the information and use the same accordingly. This database will also enable to take the backup for future use.

Run the following command in terminal to install the MySQL database.

sudo apt-get install mysql-server

While installing, system may ask you to provide the password for root user of MySQL. Enter the password and keep the password safely as you will require this when you have to connect the MySQL database for any purpose mostly taking the backup.

Step 11: Create the Koha Instance:

To stand in safer side and avoid error before you create Koha Instance, run the following commands in order one after another.

sudo a2enmod rewrite
sudo a2enmod cgi

Restart the Apache Server:

Run this command to restart the Apache Server.

sudo service apache2 stop

sudo service apache2 start

OR

sudo service apache2 restart

Step 12: Create Instance with the name 'library':

To create the same, run this command:

sudo koha-create --create-db library

Step 13: Adding ports:

The ports which you have opted to run the Koha Interface and Koha OPAC, the same ports you will have to configure in Apache Server also.

To make changes, open the following file with any editor.

sudo gedit /etc/apache2/ports.conf

Find the line Listen 80 in the file. You can use (**CTRL+F**) command to locate the words in the file.

Listen 8000

Listen 8001

Now, Restart Apache Web Server,

sudo service apache2 restart

Enable modules and sites

sudo a2dissite 000-default

sudo a2enmod deflate

sudo a2ensite library

Now, Restart Apache Web Server,

sudo service apache2 restart

Generate the Master Password for Koha Web Installer:

Run this command to get the password:

Step 14: Start web installation of Koha

The username to log in with will be **koha_library** and the password can be located in the file **/etc/koha/sites/library/koha-conf.xml**

Apply the following command in terminal to see the koha login password,

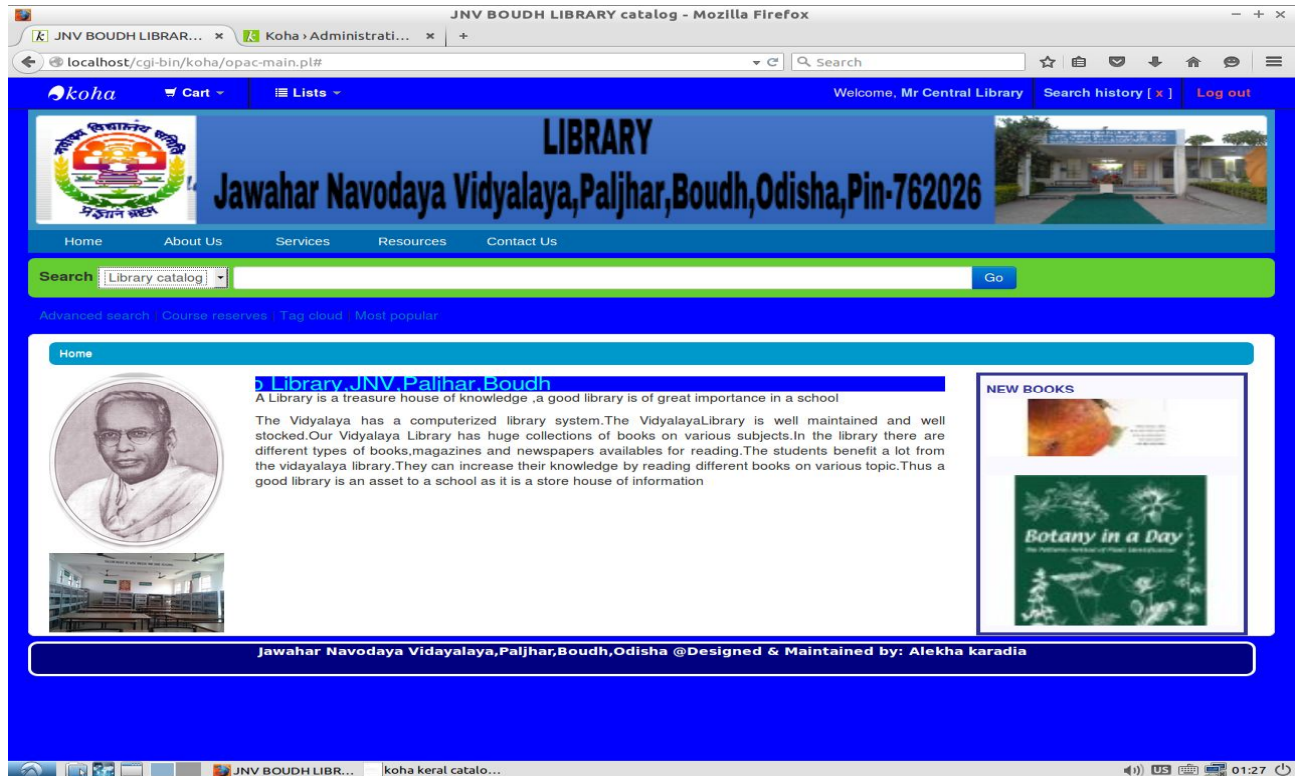
sudo xmlstarlet sel -t -v 'yazgfs/config/pass' /etc/koha/sites/library/koha-conf.xml

Step 15: Start Koha and finish the Installation with Web Installer:

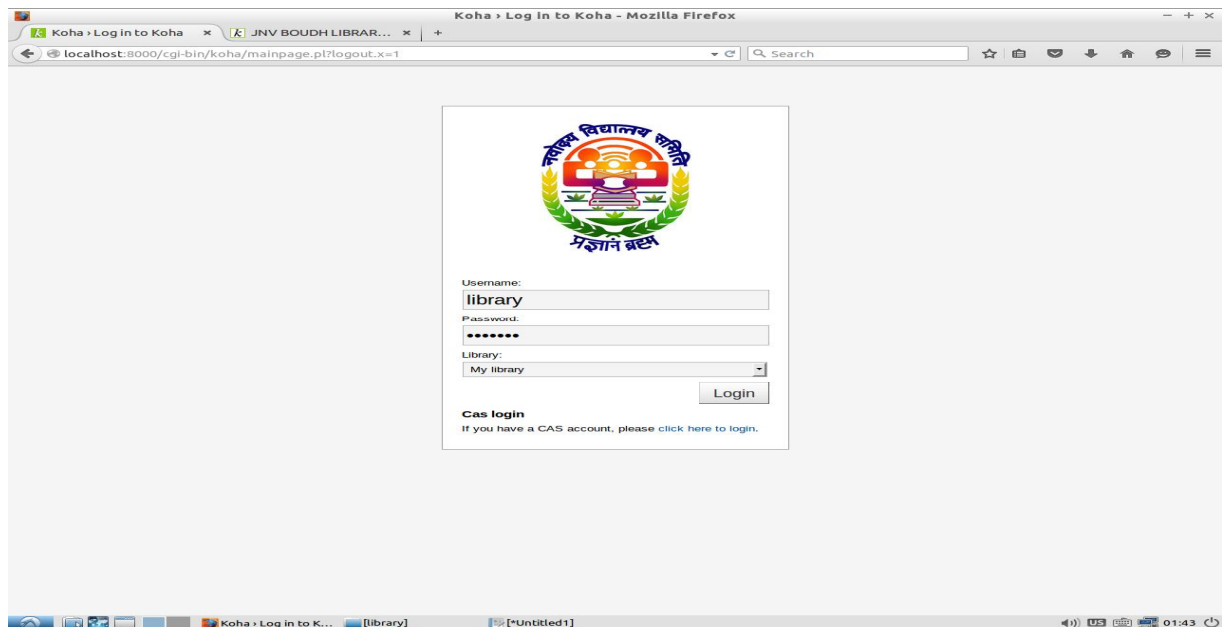
Open following links,

<http://127.0.1.1:8001> or <http://localhost:8001> (Koha Stff client)

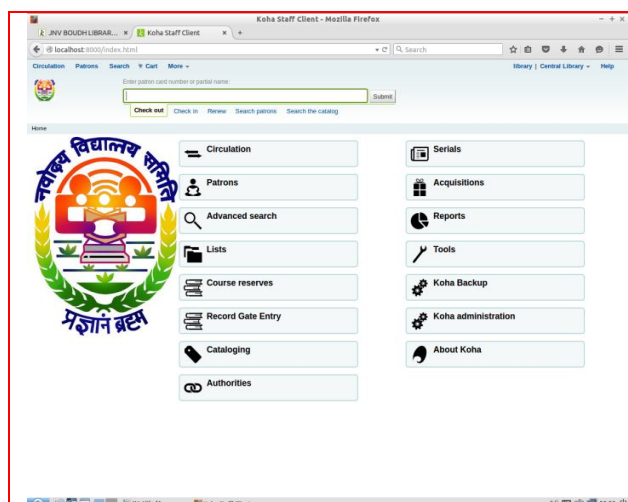
<http://127.0.1.1:8000> or <http://localhost:8000> (Koha Online Public Access Catalogue)



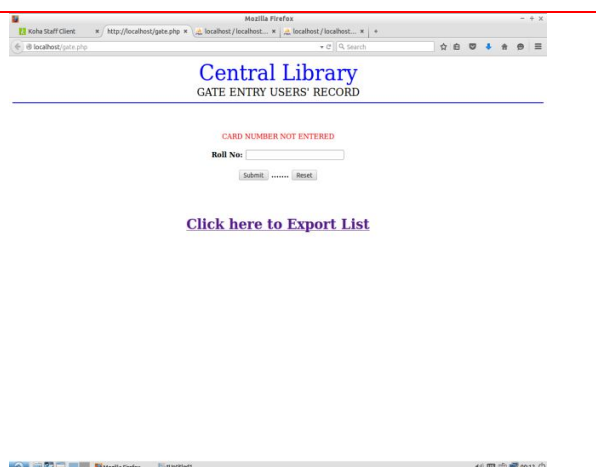
Library OPAC



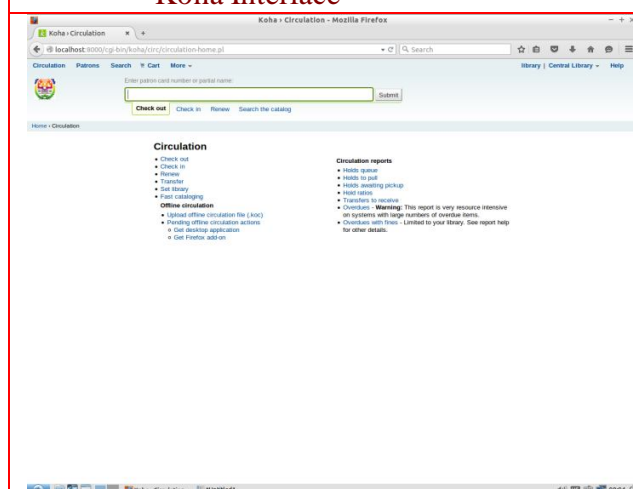
Koha Stff client



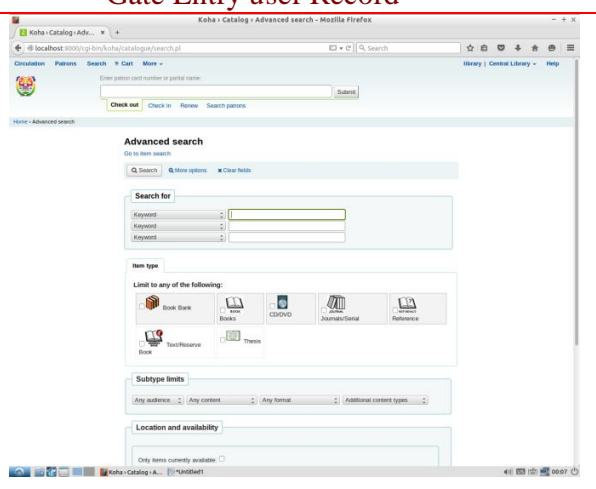
Koha Interface



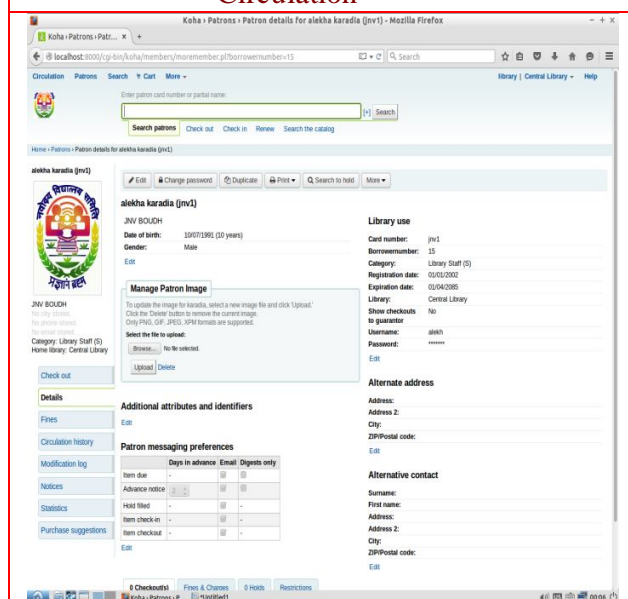
Gate Entry user Record



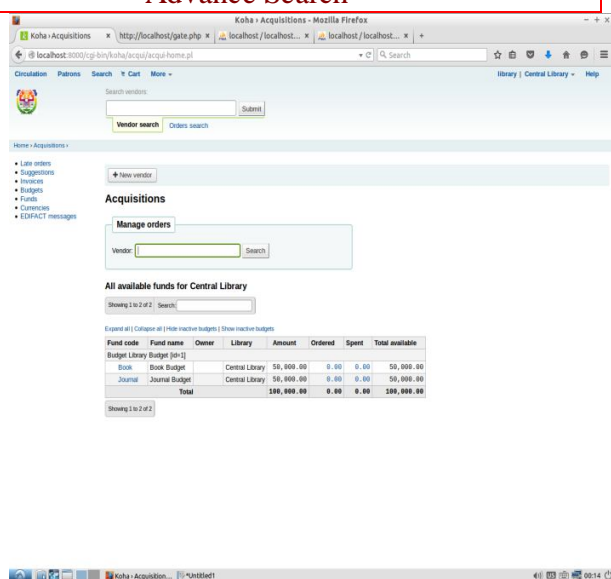
Circulation



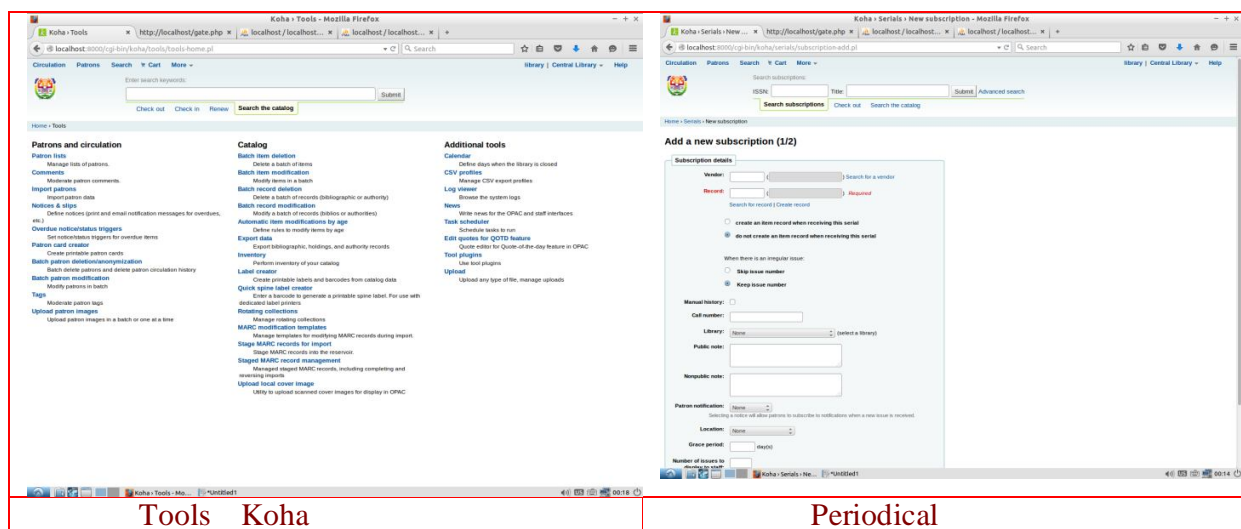
Advance Search



User Card



Acquisition



CONCLUSION:

In this research work, a sincere attempt has been made towards finding out ways and means for automating activities in the JNV,Boudh Library. This project had the basic objective of designing a bibliographic data base for a JNV,Boudh Library with which the automation of circulation routines is carried out. From this point of view it may be concluded that Koha is a useful package for the creation of a database and for information retrieval. This set of programmed for the automation of circulation section is tested with the database created from the collection of JNV,Boudh Library. With that test sample the programme for each function of the circulation section is tested with the available computer system. Koha is integrated software system with all the required models for small to very large libraries. It is found that this automation projects will serve as a model for any library. Being an open source, any Library wanted to go for automation for their library housekeeping operations can make use of this software. This project further enabled the students and faculty of the school to access the bibliographic data and can made transactions every from their home and remote places through internet. Implementation of also enabled library Professionals working in the school library, to make award of library automation, particularly with advance features of integrated open source software KOHA and to participate in the school library networks and other library networks for sharing and accessing the data.

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