Features of Koha LMS

Koha is a Free and Open Source Integrated Library Management System (ILMS) which includes Acquisition, Cataloguing, Circulation, and Serials control & Online Public Access Catalogue (OPAC) with many other advanced features. Koha supports international library standards and protocols, which ensures interoperability between Koha and other software & tools in library services. It supports bibliographic data standards (MARC 21 Format for Bibliographic Data, UNIMARC), authority data standards (MARC 21 Format for Authority Data), the bibliographic data model (FRBRized editions), distributed cataloguing (Z39.50 client & server), protocols to support RFID integration, and seamlessly compliant with Unicode, Web 2.0, REST, ILS-DI etc. The software is fully customisable and includes all modules generally expected in any standard fourth-generation library management system.

Following are the highlights of Koha:

Free Software: Koha uses the Free Software General Public License (GPL). The GNU General Public License is a widely used Free Software license that offers end-users the four freedoms to run, study, share, and modify the software. Koha depends on Free/Open Source components for installation. Koha software uses the PERL programming language. Koha depends on other Open Sources software components like the MariaDB database, Apache web server, and Zebra search engine. Koha follows community-based software development and no vendor lock-in. Koha is a community-owned project, and the development is fast. Always expect new changes in technical matters, features and functions.

Comprehensive ILS: Koha is suitable to implement in any library. Koha is an enterprise-class ILS with complete functionality, including primary and advanced options. Koha includes modules for acquisitions, circulation, cataloguing, serials management, authorities, reports, label printing, notices, offline circulation for unavailable Internet access, and much more. Koha will work for consortia of all sizes, multi-branch and single-branch libraries. The Developer's community enhances the existing features and adds new ones to the Koha software.

Library Standards: Koha complies with library standards and protocols such as MARC 21, UNIMARC, z39.50, SRU/SW, SIP2, and SIP/NCIP. Standards and protocols support existing workflow and ensure interoperability between Koha and other systems and services. Migration from other ILS to Koha is easy with the availability of standards and protocols.

Enhanced Searching: A detailed bibliographic search is possible with Koha ILS. Search in Koha is powered by the Zebra search engine. Zebra is a high-performance, general-purpose structured text indexing and retrieval engine. It reads structured records in various input formats, including XML and MARC. Koha users can try Elasticsearch with Koha. Elasticsearch will replace the Zebra search engine soon. Elasticsearch offers more speed and functionality than its counterparts and is considered an innovative search engine suitable to match the latest requirements.

Multilingual: Koha supports web interfaces in different languages. In addition, Koha can handle bibliographic details in Indian languages. Regional language searching is also available.

Platform Independent: Koha has a web-based interface with XHTML, CSS, and Javascript support. It makes the system platform-independent and easy to deploy in local and cloud servers.

Koha Manual

Version 22.05

Contents

Introduction to Koha

Learning objectives

Explains the concept of Free/Open Source software.
Trace the evolution of Koha ILS.
Give an overview of Koha in India.

Introduction

Evolution of Free and Open Source software movements made history in software development and distribution. Software developers and users could benefit from the free availability of software and source code. Software for all segments of society; both personal and enterprise use, has been developed by the Free and Open Source software community. Libraries are also beneficiaries of Free and Open Source software. Free/Open Source Integrated Library Systems, digital libraries, reference management tools, and content management systems are more popular among library professionals.

Evolution of Koha

Free Software is those which are available free with source code. Free does not mean free of cost, it denotes '**Freedom**'. According to the Free Software Foundation, "*Free software" means software that respects users' freedom and community. The users have the freedom to run, copy, distribute, study, change, and improve the software. With these freedoms, the users (both individually and collectively) control the program and what it does for them*". The two terms, "Free" and "Open Source" is used synonymously for the free distribution of software. Free and Open Source software movements are two ideological groups working for freedom in software development and distribution. In the article "Why Open Source Misses the Point of Free Software," Richard Stallman explains: "The two terms describe almost the same category of software, but they stand for views based on fundamentally different values. Open source is a development methodology; Free software is a social movement". Both groups strongly believe in community participation in software development and the Free availability of source code.

Koha Open Source library management system is a new entrant into the library automation marketplace in India. The initial development of Koha started on September 6, 1999, by Catipo Communications, following a request from Horowhenua Library Trust, New Zealand. Horowhenua

Library Trust implemented Koha on January 1, 2000. The Trust released Koha under the most popular and flexible GNU General Public License to get support from the global community and to ensure the future development of the software. In 2000, Koha deployed in St. Joseph's College, Devagiri, in Kerala state, India, and is considered as the first Koha installation in India.

> Koha is a Māori term for a gift. Māori people, the indigenous population of New Zealand. Many library professionals think that the term Koha is an acronym (e.g. *ASCII*, *NASA*) and used to write KOHA. Koha is a term with meaning, not an acronym. So don't write KOHA.

Proprietary library automation software had full dominance in the Indian market. Libraries have no control over the proprietary library software and data. By purchasing a proprietary automation system, libraries do not get ownership of the software. Library only gets the privilege to use the software till the end of the service period. Often the software vendors do not give provision to export data of books, users, and circulation. In certain instances, libraries have to make an additional payment to terminate the existing software service and get back the data if they like to switch over to a new one.

Koha in India

The adoption rate of Open Source library management systems in India is comparatively slow due to a variety of reasons ranging from lack of awareness among library professionals to low computer literacy skills. Compared to other Free/Open Source library management systems, Koha is relatively more popular in India due to its active user community. Many prestigious library automation projects in India have adopted Koha due to its capability to handle Indian languages. Delhi Public Library started using Koha in 2007. The Library has a collection of over one million books. During the initial stages, a significant portion of the records from the CDS/ISIS database was exported to Koha. A good number of libraries with national importance migrated to Koha and attracted attention among other libraries. IIMs, IITs, ICAR, and Central and State Universities are the pioneers who adopted Koha in India. It leads to more Koha adoption among other libraries in India.

Koha installation and support

Koha makes use of Free/Open Source components like MySQL/MariaDB database management system, Apache web server, Perl programming language, and Linux operating system; either Debian/Ubuntu. There is no need to invest an additional amount for preparing a technical platform for Koha installation. The majority of proprietary library management systems need compatible commercial applications to run the System. In such a situation, libraries have to spend more amount on buying database applications (e.g. MS SQL, Oracle Database), Operating Systems (e.g. Windows), and anti-virus programs to protect the system.

The majority of library professionals in India are not familiar with the use of Linux Operating systems. Installation and maintenance of Koha are difficult for library professionals because of the Linux-based installation procedures. Koha support using community resources is convenient for libraries with IT experts. Detailed user manuals, installation procedures, data migration assistance, active discussion forums, and blogs that are beneficial for libraries would help to maintain Koha with in-house support. Support from commercial Koha service providers is very helpful in data migration from legacy software, customization, development, online hosting, and maintenance.

Conclusion

Koha has now become a mature library automation software due to its strong community support. Any type of library can adopt Koha without any hesitation. Free and Open Source software is going through constant changes and taking new features and functions day by day. Koha releases frequent updates with bug fixes and security enhancement. Library professionals should keep in touch with new software developments for the efficient management of Koha for the day-to-day activities in the library.

Exercise

1. Visit Koha's home page https://koha-community.org/, and get familiar with information organized there.
2. Visit the online catalog of Delhi Public Library, http://delhipubliclibrary.in. Search and find records in Indian languages.

For further reading

History of Koha

https://koha-community.org/about/history/

V, Vimal Kumar. and Jasimudeen S. "Adoption and User Perceptions of Koha Library Management System in India". Annals of Library and Information Studies (ALIS) 59.4 (2012): 223-30. NISCAIR.

Stallman, Richard. "Why open source" misses the point of free software." (2007)
https://www.gnu.org/philosophy/open-source-misses-the-point.html.en

Installation of Koha

Learning objectives

How to choose the suitable Linux operating system for Koha.
Know about the selection of hardware for Koha installation.
Understand about Koha installation.

Introduction

Most of the Free/Open Source software for enterprises is developed to run on the Linux operating systems. Koha is a Free Software and developers recommend it to install on Debian/Ubuntu Linux. Koha has a web interface and depends on other tools like MySQL/MariaDB database server, Zebra search engine, and Apache webserver. The server denotes a computer where the application software is installed and running. Koha source code is written using the Perl programming language. A server computer enables/offers software services to its users through a local network/Internet. Users in the network can access the software services from the server computer through client computers. If Koha is installed in a desktop/ workstation/ server computer and made available in the campus network, we can call it a Koha server.

Suitable Linux distribution for Koha

Hundreds of Linux-based operating systems is available with a variety of features. Varieties of Linux operating systems are known as distributions or distro (e.g. Arch Linux, Debian, Ubuntu, Fedora, etc.). All of the Linux distributions are built on the Linux kernel. The look and feel of Linux distributions vary depending on the desktop interfaces (e.g. GNOME, KDE, XFCE). Koha software development is based on Debian Linux. Developers of Koha strongly recommend Debian for Koha installation. A Linux beginner can use Debian (www.debian.org) based user-friendly Linux operating systems like Ubuntu (https://ubuntu.com/). A stable version of Ubuntu is recommended for Koha installation. The stable version of Ubuntu is released every two years and they offer extended support for up to five years. You can find the "LTS" shortcode with every long-term support version number (e.g. 18.04 LTS, 20.04 LTS). Interim releases of Ubuntu (e.g. 19.10) have only nine months of life and are not suitable for Koha installation. Koha does not work with the RedHat family of Linux distributions. Debian/Ubuntu and RedHat Linux distributions have lot of differences in architecture.

Ubuntu releases both desktop and server editions every six months. Ubuntu desktop edition is available with a graphical interface like GNOME. The server edition of Ubuntu is available with text mode (only commands will work). Ubuntu LTS (Long Term Support) version is released every two years in April month. Ubuntu LTS edition has five years of life. It means that an LTS edition will get updates for a minimum of five years.

Hardware selection for Koha

Library professionals needs to acquire basic knowledge of hardware selection for the installation of Koha. For hardware selection, consider budget, the number of records, the number of users, and the transactions to be handled by Koha. Here are the suitable hardware requirements for various library environments.

Desktop PC: The majority of libraries in India choose a desktop computer for Koha installation. Library professionals switch off the PC before closing the library and the next day they will switch on the PC to work with Koha. Libraries having budget constraints, lack of higher hardware resources, and power backup would like to follow this method regardless of the number of records and transactions with Koha. Such libraries can't offer 24x7 OPAC services with Koha on a desktop PC.

Ubuntu Linux is available in different flavors; Xubuntu, Lubuntu, Kubuntu, etc. Ubuntu flavors are using the same Ubuntu base and software repositories. They keep differences in user interfaces (GUI), artwork and default programs. Ubuntu uses a graphical interface called GNOME, Kubuntu uses KDE as GUI, Xubuntu uses XFCE and Lubuntu uses LXQt. XFCE and LXDE desktops are known for fast performance due to their lightweight architecture.

Libraries with a small collection (e.g. up to 25000 books) can consider a desktop with an i5 processor and a minimum of 8 GB RAM. Intel Core is a line of middle to high-end central processing units (CPU) for computers from Intel Corporation. Core processors include the Intel Core i3, Intel Core i5, Intel Core i7, and Intel Core i9 for desktop and laptop computers. Each processor is available with multiple speeds. Processor speed is measured in gigahertz (GHz), the speed at which the processor operates. For example, the Core i5 processor is available in various speed rates, starting from 1.90 GHz to 3.80 GHz. Also available with various cache sizes, 3 MB, 4 MB, or 6 MB. Intel Core processors are also available for the server and workstation are known as Xeon processors. The price and performance of the same core processors change based on the number of cores, clock speed, and cache size. So specifically mention the speed and generation of

the processor while preparing the purchase suggestion—for example, Intel Core i5 Processor 8th generation 3.20 GHz, 6 MB cache. A processor's onboard cache is used to speed up access to data and instructions between the CPU and RAM. Cache size is also an essential factor to determine the performance of the computer.

Buy a desktop computer without preloaded Windows. It increases the cost of the computer. So it is better to buy a computer without any Operating System. While placing the order, specify the computer with the FreeDOS operating system. FreeDOS is a Free operating system. Use Debian/Ubuntu Linux with a lightweight desktop for the optimum performance of hardware. Ubuntu/Debian has heavyweight desktops (e.g. GNOME, KDE), and such desktops consume a sizeable processing power of your computer. Either choose Debian Linux with XFCE desktop or Xubuntu/Lubuntu for Koha installation. Opt SSD (Solid State Drives) over traditional HDD as storage for fast performance. Desktop computers are not built for 24x7 service and are not suitable to make Koha available on the Internet.

Workstation PC: A workstation computer is better than a desktop computer in terms of performance and durability. Libraries want heavy-duty desktop machines that can opt for workstation computers. It can handle library tasks with a large number of records, users, transactions, and multiple library branches. Popular computer manufacturers produce a workstation PC with different brand names. For example, Dell Precision, Lenovo Thinkstation, and HP Z belong to the workstation category.

Server computer: Libraries with excellent IT infrastructure can choose a server-class computer for Koha installation. Server computers built for 24x7 hours continuous working and can offer seamless Koha service. It is observed that libraries with a small collection buy heavy-duty server computers and switch them on and off in the evening when the library closes. This practice affects the performance and reduces the lifespan of the server computer. Desktop/workstation computers are enough to serve the purpose of such libraries.

Server class computers are available with various specifications. Libraries with small-size collections can choose entry-level server computers for Koha installation. For example, HP Proliant ML series tower server computers cost below Rs. 80000. Servers can be classified as tower, rack, and blade based on their physical shape. Towers server built in a box chassis. Entry-level users can choose a tower server and convenient to manage in small enterprises.

Cloud computing: Cloud computing services are becoming more convenient for all types of libraries. Libraries can be relieved from hardware maintenance if they choose cloud hosting. Libraries can hire cloud services from service providers like Amazon, Google, and Microsoft. It can also choose virtual servers with Debian/Ubuntu operating systems from the cloud for Koha installation.

Ubuntu project maintains a list of the certified computer hardware suitable to run Ubuntu Linux. The site retains lists of devices compatible with Ubuntu Linux. Users can find ideal servers, workstations, and desktops to install Koha from the Ubuntu Certified Hardware list (https://certification.ubuntu.com).

Installation of Koha

Koha Wiki (https://wiki.koha-community.org) gives detailed directions to install Koha on Debian and Ubuntu. Check the Wiki and make sure which versions of Debian and Ubuntu are required for the installation of the current versions of Koha. Koha releases a major version every six months, in May and November. For example, Koha version 19.05 was released in May 2019. Koha project releases monthly updates containing security updates and bug fixes. Koha provides a **Stable** and **Old Stable** branch for users. The latest release is called the **Stable** branch. Old Stable is one version behind the current stable release. The Old Stable release is preferred for the installation because of the more number of updates since its release. Koha version 19.05.10 means it has been updated ten times since its release. Each monthly update of Koha contains bug fixes and security updates. Koha Wiki updates frequently and adds timely changes to installation instructions. So one can strictly follow Koha Wiki for the installation.

Perl is a general-purpose, high-level programming language used for a variety of applications including web development, programming, GUI development, and more. Larry Wall created Perl.

Koha Live DVD

The Koha Live DVD is a useful tool for learning and training purposes. Most of the Koha Live DVD is packed with Debian/Ubuntu operating systems and a recent version of Koha. Live DVDs can be used either in live mode or can be installed on a computer permanently. Live DVD is not advisable to be installed for production purposes. For learning purposes, the live method is helpful. Koha Live DVD can be booted into the computer; the user can try Linux and Koha. The live mode gives the experience of a real-life Linux installation and Koha. It does not get installed permanently on computer storage. Data entered by the user in live mode do not get permanently saved into the computer storage, and it vanishes after the reboot. Koha Live DVDs are available for download. Here is the link to a popular Koha Live DVD; https://sourceforge.net/projects/kohalivedvd/. Koha Live DVD is easy to use and helpful for students and library professionals who would like to learn Koha.

Conclusion

Installation of Linux is a complicated process for library professionals. A Linux and Koha expert can manage the installation process very well. It will be good to consult an expert or any Koha service provider for the installation. Library professionals who are curious to learn the installation process, are advised not to try it on the computer on which Koha is running for the library. It is better to try the installation on another computer.

Exercise
1. Visit Koha Wiki and go through the installation steps for Debian, https://wiki.koha-community.org/wiki/Debian
2. Visit https://www.debian.org/CD/ and download Debian with XFCE desktop and burn on a CD.
3. Visit the Lubuntu website https://lubuntu.net/downloads/ and download the current LTS version. Write on a DVD.
4. Install Debian and Lubuntu on a PC.

For further reading

Which Intel Core CPU is the best? How do I decide between a Core i3, i5, i7 or i9?
https://www.pcworld.idg.com.au/article/633263/which-intel-core-cpu-best-how-do-decide-between-core-i3-i5-i7-i9/

How to Buy the Right CPU: A Guide for 2020
https://www.tomshardware.com/reviews/cpu-buying-guide,5643.html

Ubuntu Certified hardware
https://certification.ubuntu.com

Debian Linux
https://www.debian.org/

Lubuntu Linux
https://lubuntu.net/

Xubuntu Linux
https://xubuntu.org/

Koha on Debian
https://wiki.koha-community.org/wiki/Koha_on_Debian

Koha on Ubuntu packages
https://wiki.koha-community.org/wiki/Koha_on_ubuntu_-_packages

Koha administration

Learning objective

Learn the initial settings of Koha.

Introduction

After the installation of Koha, the user needs to configure the software to get ready for work. Post-installation configuration loads sample data and it makes the job easy. Koha users can create sample item types, user categories, notices, slips, and the like. Tuning Koha software to suit the requirements of the library is a prerequisite to starting with Koha.

Prepare Koha for use

Koha has a web-based interface (it looks like a website). Users have to access Koha using a web browser (e.g. Mozilla Firefox, Google Chrome).

Koha staff client login

Koha offers two interfaces; **Staff Client** and **OPAC** (Online Public Access Catalogue). The Librarian has to login into the staff client to manage activities like cataloguing, circulation, reports etc. If you

are using a computer where Koha is installed, enter the local address (http://127.0.1.1:8080) of the Koha staff client in the address bar of the browser. Bookmark the Koha staff client and OPAC addresses on the browser toolbar to avoid manually entering the URL every time. Enter the username and password to step inside the Koha staff client. The local address of the online catalogue (OPAC) is http://127.0.1.1.

Koha uses an Apache web server and uses two different ports for Staff Client and OPAC. Port number 8080 is assigned to Staff Client and port number 80 for OPAC by default. Use the port numbers with localhost, private and other addresses. For example, http://192.168.1.2:8080 for staff clients. No need to add Apache default port number 80 with OPAC URL, e.g. http://192.168.1.2.

Koha administration

After the installation of Koha, we need to create initial settings. Then only, Koha will be ready for the day-to-day operations. The creation of library branches, item types, patron categories, circulation, and fine rules are the basic parameters to work with Koha.

Visit **Koha > Administration**

Koha administration page

Create a new library

Koha facilitates the management of single/multiple library branches. Multiple branches are convenient for Universities and Colleges with more than one library branches (central and department libraries). To create a new library, open
Koha Administration > Basic parameters > Libraries > New library

Enter the library code first. Coin a short term for your library branch code. Remember to limit the branch code to ten characters or less. For example, **MGUL** for **Mahatma Gandhi University Library**. Don't use special characters and put space between branch code. The software uses the branch code as a unique identifier to recognize the particular library branch. We can't simply change the library code, once you enter bibliographic and patron details.

Next, give the name of your library. Koha users can edit the library's name at any time. The Library name will appear in many places like the OPAC and also on the staff client along with bibliographic details.

Enter the other details of the library branch. It is helpful to individualize the library branches.

Click on the submit button to save the library branch details.

Create item types

Create item types to organize library collection based on the physical characteristics or nature of the content (e.g., book, patent, report, thesis, reference, etc.). Koha is preloaded with some commonly used item types. After the installation, the user can add popular item types with the help of the web installer. Here we will learn how to add new item types;

Koha > Administration > Basic parameters > Item types

Enter a shortcode for the new item type. Coin a code that reflects the name of the item type; e.g. **REP** for **Reports**, **BBK** for **Book Bank**. The Koha software recognizes the item type using that shortcode.

Enter a description for the item type. Choose an ideal icon for the newly created item type from available galleries.

Do not use item types to represent subjects. Koha offers different ways to represent subjects or keywords for documents. **Collection Code** at
Koha Administration > Authorised Values useful for organising the documents based on the collection.

Other important options:

Hide in OPAC: Hide the item types from OPAC search.

Note for loan: Restrict item from circulation.

Add patron categories

The term '**Patron**' in Koha denotes library users (e.g., Teachers, Students, Research scholars, etc.). Visit **Administration > Patron Categories** to create new patron categories. Library can categorise patrons based on the programme they joined, e.g. UG, PG, etc.

Category code: Enter a shortcode for the patron category they represent.
Description: Description of the patron category.
Enrollment period: Duration of the membership in months.

Don't enter values in both **In months** and **Until date** fields in the '**Enrollment period**'

section.

Koha uses certain terms popular in other countries. See the terms used by Koha

and the equivalent term put in the brackets. **Check Out** (Issue), **Check-in** (Return), **Hold** (Reservation), **Barcode** (Accession number), **Label** (Barcode sticker), **Patron** (Library user).

Age required: Minimum age required to join the library.

Upper age limit: The maximum age for the patron category.

Enrollment fee: A membership fee is required to pay at the time of admission.

Overdue notice required: Select **Yes** to enable messaging facility (SMS, Email) to library users.

Lost items in staff client: Whether to display lost items in the staff client.

Hold fee: Fee for Hold (reserve) books as per library rule.

Category type: Select a suitable category (e.g. Adult for UG students).

Choose the various contexts in which notifications from Koha are sent to users. Choose to receive their notices either as a single email or digest by checking the boxes. '**Digest only**' mode delivers the similar nature notices, generated on the same day, into one email instead of multiple emails for each alert. For example, information on all overdue to a person on the same day in one email. This feature helps to avoid receiving emails from libraries in the spam box.

> Koha depends on a third party MTA (Mail Transfer Agent) to send mail to users. A lot of Free and Open Source MTA is available. e.g. Exim, Sendmail and Postfix. Need to install any MTA and add an email account to enable the mail system. Koha generates notices, and the MTA sends the mails to users. Libraries can use Gmail accounts with an MTA to send email notices from Koha. Gmail allows sending a limited number of email from a free account. Check whether the daily email quota exceeds the permitted numbers. Hire a paidyour version of Gmail account if the number of emails from Koha exceeds the free limit.

Optimise Koha to send emails

We need to tune Koha to send emails. Visit the following places and optimise the settings.

Enable email messaging in Koha

Apply the following command in a Terminal.

```
sudo koha-email-enable library
```

Enabled Enhanced Messaging preferences

Visit **Koha Administration > Global System Preferences > Patrons > Enhancedmessagingpreferences > Allow**.

Enable overdue Notice/Status triggers

Visit **Tools > Overdue Notice/status triggers**.

Customize email notices

Visit **Tools > Notices&Slips**

> Koha can send notices via SMS. We need to hire an SMS service with a Perl driver. Perl driver connects SMS service to Koha. In India, Unicel offers SMS services with Perl driver. 'eSMS' is another SMS service suitable for Koha but limited to government-funded libraries in Kerala state, India.

Circulation and fine rules

Rules for the circulation of library items among library users can be defined here.
Koha > Administration > Patrons and circulation > Circulation and fines rules

Here we are going to create a circulation rule for Faculty members to borrow books.

See the description of each option.
1. **Select a library**: Create a rule either for all libraries or for individual libraries.
2. **Patron category**: Select the Patron category applicable.
3. **Item Type**: Select the Item Type to circulate.
4. **Current checkout allowed**: Enter the maximum number of books borrowed by users.
5. **Load period**: Maximum number of days the user can hold the document for reading.
6. **Unit**: Select the unit of time (Days/hours).

1. **Fine amount:** Overdue charge for items as per library rule.
2. **Fine charging interval:** Intervals to consider for charging and calculating the fine amount.

1. **Renewals allowed (count)**: This shows how many times the patron can renew the item.
2. **Renewal period**: The number of days patrons can hold the items after the renewal.
3. **Holds allowed (total)**: The maximum number of books a patron can reserve.

Save the circulation and fine rule after entering the values. The rule can be edited if any changes need to be made.

Edit mode appears on the bottom of circulation and fine rules option. Modify the rule and save.

Conclusion

Post-installation configuration of Koha is a significant process. Write down in advance the codes used for library branches, patron categories, and item types. Keep a systematic schema and use a specific number of alphabets (3 or 4) in codes for the Koha administration section. The user can start the routine library works with Koha after finishing the basic parameters.

Exercise

1. Create a library branch in Koha with details.
2. Create two item types (e.g. Ph.D. Theses, Reports) for your library.
3. Create two patron categories; for UG and PG students.
4. Create circulation fine rules for UG and PG students.

For further reading

KISS your Koha patron categories
http://blog.l2c2.co.in/index.php/2020/04/02/kiss-your-koha-patron-categories/

Configure email with MTA
http://kohageek.blogspot.com/search/label/MTA

Sending email alerts via GMAIL : a marriage of convenience or is it???
http://blog.l2c2.co.in/index.php/tag/gmail/

Cataloguing

Learning objectives

Give an introduction to the cataloguing process with Koha.
Introduce how to create, edit and delete catalogue records.

Introduction

The Cataloguing module of Koha helps to build a catalogue of library collections: books, periodicals, reports, theses, dissertations, etc. Koha supports both UNIMARC and MARC 21 formats for the description of the library collection. We need to specify one format at the time of the post-installation configuration. Libraries can enter bibliographic details in both English and other languages. Koha supports Indian regional languages due to UNICODE support. Library professionals can enter the bibliographic information either manually or can copy the catalogue from other sources (e.g. Library of Congress). The cataloguing module of Koha is very comprehensive in terms of description and display of bibliographic information.

Creation of Biblio and Items

The Koha cataloguing process includes two segments, the creation of **Biblio** (Bibliographic details of records) and **Item** information. Bibliographic details usually include ISBN, call number, author, title, etc. Item information contains the price, date of purchase, accession number (barcode), etc.

There are different methods to populate catalogue details into Koha. Three prominent ways to enter the details to catalogue: add the details manually, import from MARC file, and import using the Z39.50 protocol.

> Z39.50 is an international standard, a client-server communications protocol for searching and retrieving information from a database over a TCP/IP computer network. Z39.50 is part of integrated library systems. Many libraries use Z39.50 to download bibliographic details from library automation software. Koha has added a few Z39.50 servers as default. Koha users can add more such servers to Koha. IRSpy website maintains a directory of Z39.50 servers all over the world, http://irspy.indexdata.com.

Here we are going to create a new catalogue record entering the details from scratch. Open the catalogue module,

Cataloguing > New record > Books, Booklets, Workbooks

Choose a framework ideal for cataloguing the document.

Enter the bibliographic details of the book.

Make use of the Repeatable feature to generate additional fields and subfields.

Use the **856$u** field to enter the URL (Uniform Resource Locator) associated with a document. The URL of the ebook, audiobook or supporting website can be entered here. The library users can access the digital objects along with the book from the online catalog.

Enter the Item Type of the book.
To manage the Item Types, visit **Koha > Administration > Item Types.**

Save the **Biblio** after entering the details. It leads to the **Item** information page. Where we will enter the details regarding the copy of the book.

d - Date acquired: Enter the date of purchase.
g - Cost, normal purchase price: Enter the price of the book.

o - Full call number: Enter the call number of the book. Add other information to book number to make the item unique (e.g. copy number, edition).

p - Accession Number (Barcode): Enter barcode (Accession number).

y - Koha item type: Select item type for copies of the book.

Click on **Add item** to save the item.

Search the online catalogue and find the book and see the item information.

> Koha item type option in **Item information** is helpful to divide multiple copies of the book to various item types. For example, when we add five copies of a book to the catalogue, cataloguer can assign item type **Book** for four copies and **Reference** to one copy.

Open the online catalogue in a new tab of the browser and search for the record we have saved. See the Biblio and Item information on the online catalogue interface.

Add another copy of the book

Often libraries buy copies of the books that are already available in the library, probably due to the demand from the user community. Sometimes we get new edition (in case of subject/textbooks) of the existing book, then we have to create a new record. If the editions and other details are the same, then we can add copies to the existing record. In such a context, we have to find and select the available record with items and add additional copies to the existing Biblio.

Search for the book either using the Barcode (Accession Number) or using other details like author and title.

It displays the bibliographic details of the book with item information.
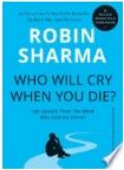Click **Edit > Edit items** to add a new copy of the book.

Enter the item information of the second copy of the book. Remember to enter the call number with the copy number (158.1 SHA, W;1 for the second copy of the book).

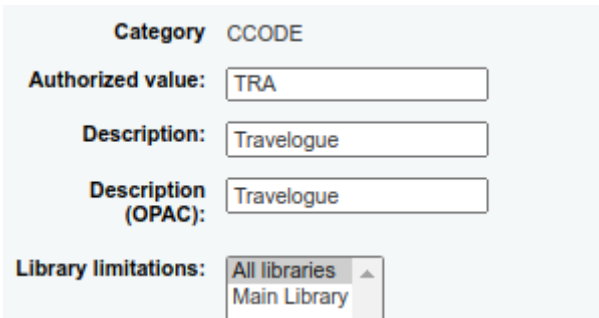Search the online catalogue and find the book and see the item information.

Two copies of the same book will be visible on the OPAC.

Use of Authorised values with cataloguing

Collection management is easy and very convenient with **Authorized values**. Libraries need to generate a collection wise report of records. For example, an engineering college requires a collection wise (Mechanical, Civil, Computer, etc.) list of books. Such reports have to be submitted to accreditation agencies (e.g. AICTE, MCI) every year. In the same way, libraries can create various collections like biography, autobiography, and travelogue. If we add the collections to the Authorised values in advance, the cataloguer can add each record into various collections. To create new values to **Collection Code**, visit

Administration > Basic parameters > Authorized values > CCODE
Click on the Add button against the **CCODE** to add a new value.

1. Enter a shortcode for the new collection.
2. Enter the description for the staff client.
3. Enter the description for OPAC.
4. Select the library branch code.
5. Save the new collection.

While adding Item information, a Collection Code can be selected.

Collection information is helpful for the library users to find the location of the book on the shelf. See the **Collection Code** on the online catalogue.

Enable a new field into Biblio

Koha users can enable or disable fields from the **Biblio** part. For example, **245$b** for **Remainder of title/Subtitle**. Imagine that **245$b** hidden in Biblio. Here are the steps to follow to enable the 245$b field and make it visible in Biblio.

Visit **Koha > Administration > MARC bibliographic framework**
Click on the **Actions** button against the desired Bibliographic framework. Select the **MARC structure**.
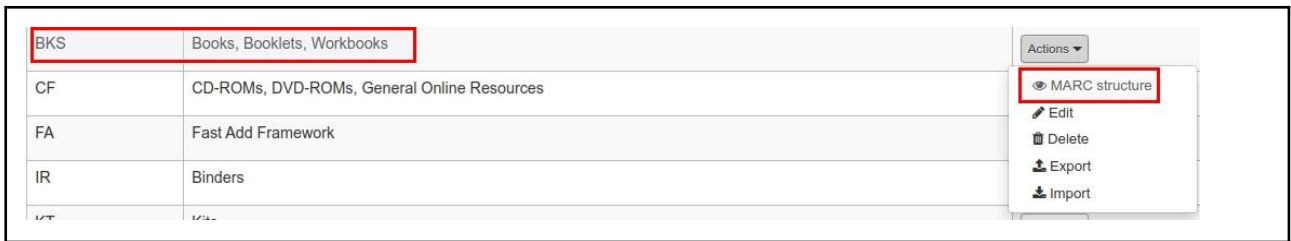
Search for the specific MARC field.

1. Click on the **Actions** button.
2. Click on **View subfields** to enter inside the details.

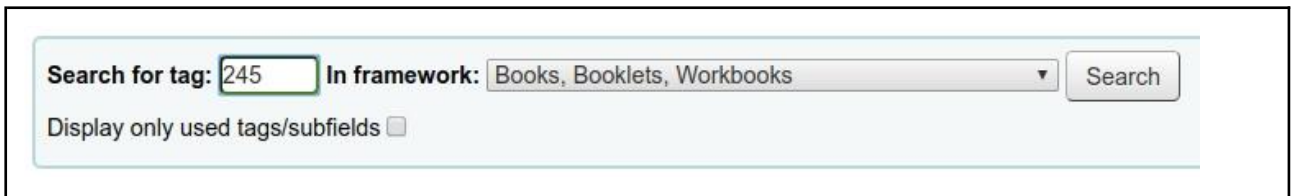| Subfield	Text	Constraints	Actions	
6	Linkage	subfield ignored	✏ Edit	🗑 Delete
8	Field link and sequence number	subfield ignored	✏ Edit	🗑 Delete
a	Title	Tab:0,	Koha field: biblio.title, Not repeatable, Mandatory,	✏ Edit	🗑 Delete
b	Remainder of title	subfield ignored	✏ Edit	🗑 Delete
c	Statement of responsibility, etc	subfield ignored	✏ Edit	🗑 Delete

Click on the **Edit** button against b Remainder of title.

Tag 245 Subfield constraints

| 6 | 8 | a | **b** | c | d | e | f | g | h | k | n | p | s | New |

Basic constraints

Subfield code: `b`

Text for librarian: `Remainder of title`

Text for OPAC: `Remainder of title`

Repeatable: ☐

Mandatory: ☐

Managed in tab: `0` ▼ (ignore means that the subfield does not display in the record editor)

Whole MARC tags are organized into ten tabs (0 to 10) on the MARC Bibliographic framework in Koha. Select the tab number from **Managed in tab** list to display the field on a particular tab. Select **Ignore** option to hide the field.

Open the Biblio and select the specific MARC Bibliographic Framework. See the field (245$b) that appeared on the Biblio.

245 ? ☐☐ - TITLE STATEMENT ✏✖

≡ a — Title — `Who Will Cry When You Die?`

≡ b — Remainder of title — `Life Lessons From The Monk Who Sold His Ferrari`

Edit a catalogue record

Librarians need to edit the details of books due to various reasons; e.g. to correct the errors, to add the missing information.
Search the document details, open the record, and edit the details.

Enter search keywords:

bc:4534

Submit

Check out   Check in   Renew   Search patrons   **Search the catalog**

Use the search operator **bc:** to search and retrieve the correct record using the the accession number. Example, **bc:2210** will retrieve the document with 2210 accession number.

You can also search and find the record using either accession number/title/author details.

Enter search keywords:

Robin Sharma

Submit

Check out   Check in   Renew   Search patrons   **Search the catalog**

+ New ▾   ✏ Edit ▾   ⬇ Save ▾   Add to ▾   🖨 Print   ☐ Place hold

Who Will Cr   m The Monk Who Sold His Ferrari

By: Sharma,

Material type:

Publisher: Mum

Description: 25

ISBN: 9788179

Subject(s): Con

DDC classificat

Online resource

MARC Preview

Holdings   s (0)

Edit record ①

Edit items ②

Edit items in batch

Delete items in a batch

Attach item

Upload image

Edit as new (duplicate)

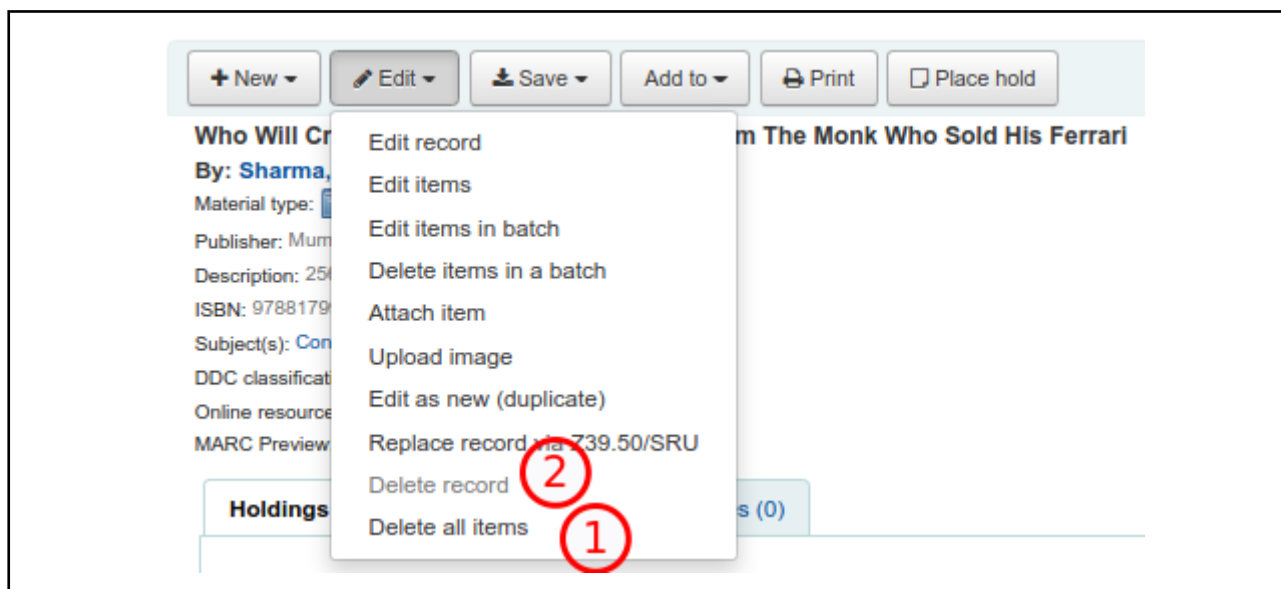Replace record via Z39.50/SRU

Delete record

Delete all items

---

1. Select **Edit > Edit record** for edit the **Biblio** details.
2. Select **Edit > Edit items** to edit the **Item** information.

Delete catalogue record

Search and find the record. First, delete the Items, and next delete the record.

Koha allows deleting a Biblio only after deleting all the items with the record.

Batch item modification

This feature is useful for library professionals to change a particular aspect in an Item in bulk mode. For example, an item type of a batch of records can be changed into another one in one stretch. This feature is available at **Koha > Tools > Batch item modification**.

1. Enter the barcodes of the items, otherwise enter a text file containing barcodes.
2. Click on the **Continue** button.

The screen moves to the item edit page. Make changes in item information.
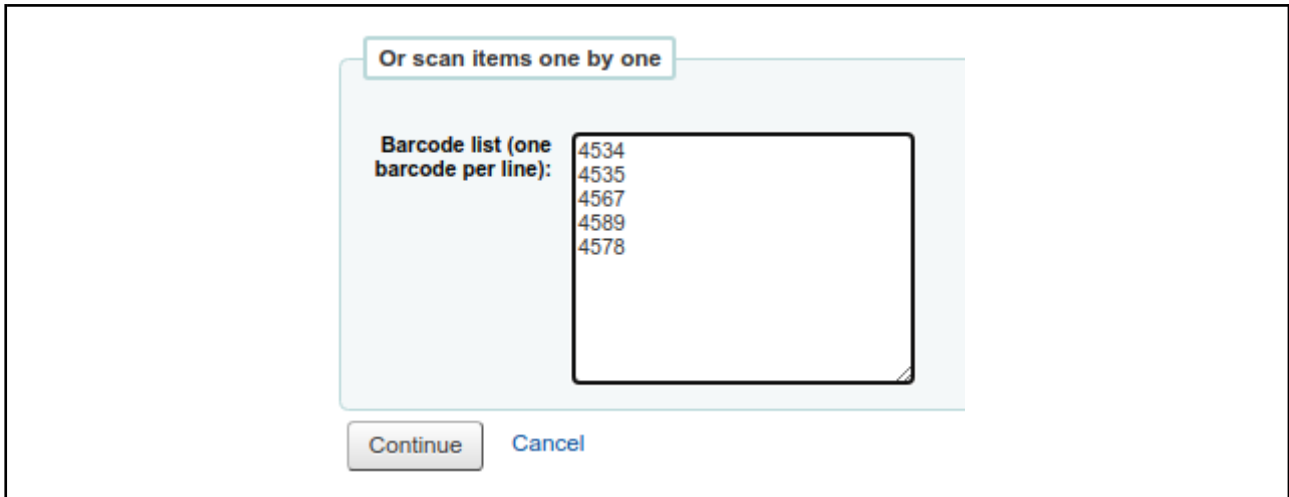

Save the item information. The changes take effects in all of the records in the batch. Search the records in Staff Client or OPAC to see the changes.

Batch item deletion

This feature allows you to delete a group of items. Visit **Koha > Tools > Batch item deletion**.

The next screen will list out the items to delete. Select the items fully or partially to delete.

Label creation

Label Creator assists to generate barcodes, and spine labels. Here we are going to learn to create barcodes suitable to print on on a self-adhesive paper containing 65 labels in an A4 sheet (NovaJet paper), which can be used for Inkjet or laser printing.

Open, **Tools > Label creator**. We need to create a Template and Layout to define the barcode on paper.

Create a new template

The template defines the paper and barcode measures. Open **Tools > Label creator > New > Label Template**. See the measures of 65 stickers on A4 adhesive paper.

Create a new layout

A layout is used to define the fields (e.g. barcode, call number) that want to appear on your labels. Use the below format to prepare a layout for a label with an accession number and call number. Open **Tools > Label creator > New > Layout**.

Layout name: The name of Layout.
Choose the barcode type: Barcode encoding type.
Choose layout type: Select the combination of information to display on the label.

Choose the bibliographic elements to be included on the label. Choose **List Fields** to enter the MARC fields of the bibliographic information (e.g. 952o or Item Call Number).

Choose font type and size.

Create a new label batch

Add a few record details to generate labels. Open **Tools > Label creator > New > Label batch**.

Either add the barcodes of the records into the box or search and find the records by clicking on **Add item(s)** button.

Various search options are available to find and select the records to generate labels.

Select and add the records.

Biblio number of the records added to the box. Click on **Add items(s)** to the next step.

Click on **Export full batc**h to select all the records.

Choose the Template and Layout.

Download the label sheet by clicking on **Download as PDF**.

Open the saved PDF file. Print the labels.

The same way, make changes in Layout and prepare spine label.

> Koha users can make use of other label creators. gLabels is Free software and distributed under the terms of the GNU General Public License (GPL). It supports various peel-off papers. Koha users can print labels with ordinary laser/inkjet printers. Apply the command on the terminal to install gLabels,
> `sudo apt install glabels`

Inventory (Stocktaking)

Inventory feature assists the libraries in stock taking. After the inventory process is over, the library gets a picture of missing books. Here are the steps to initiate stocktaking with Koha.

Prepare text file of barcodes

Prepare a text file of barcodes (accession number) either using barcode scanner visiting shelves. Otherwise, prepare the text file with barcodes manually. If you have collected the barcodes in other formats like a spreadsheet, copy them into the text file.

Inventory process

Visit the Tools > Inventory and upload the text file.

Enable necessary filtering options.
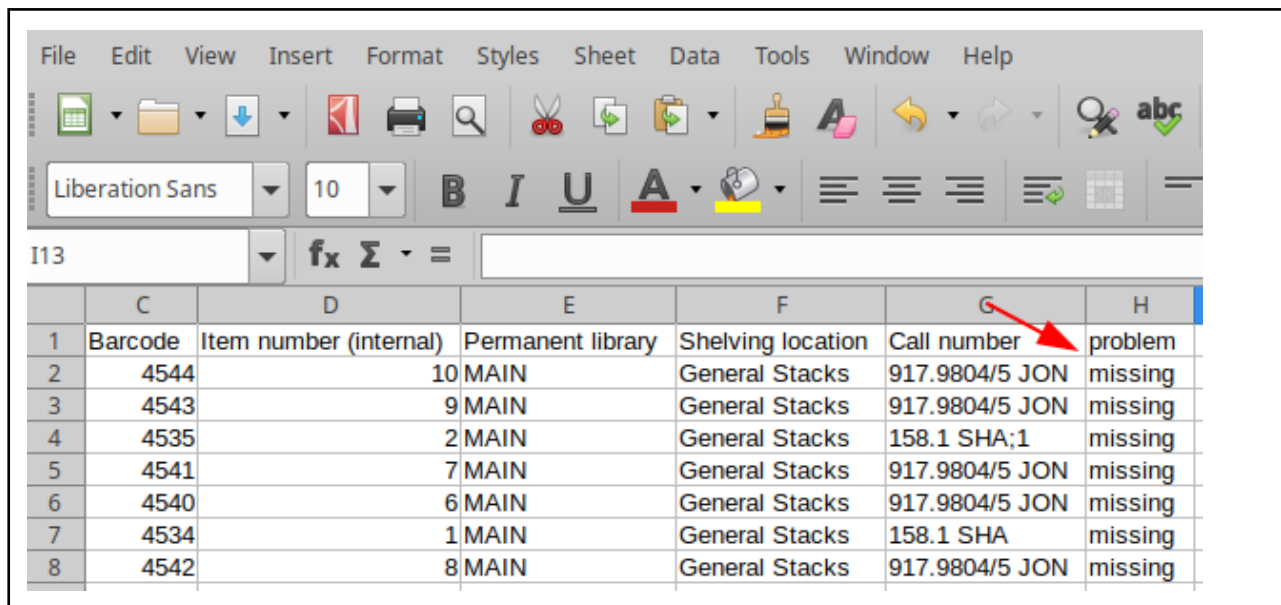
Check **Export to CSV file** box to generate the result in a CSV file. Click on **Submit** button to start the inventory process with Koha. The CSV file will be downloaded to the computer.

Open the CSV file. Inventory report with missing documents information available in the CSV file.

Conclusion

A cataloguer can describe a document in detail with the available MARC 21/UNIMARC format. Koha displays 999 MARC tags with the cataloguing module. Display of the whole MARC tags on the bibliographic framework may create confusion among cataloguers. The Koha users can customise the bibliographic framework by retaining the commonly used fields (e.g. ISBN, Author, Title, Place, Publisher, year) for the ease of cataloguing. Keep uniformity in bibliographic details for the generation of error-free bibliographic information and maximize the visibility of library collection among the user community.

Exercise

1. Create catalogue records of two books (your favourite books) and create three copies of the same.
2. Delete a catalogue record including all items and record.

For further reading

MARC standards
http://www.loc.gov/marc/
Z39.50A Primer on the Protocol: A Primer on the Protocol
https://www.niso.org/sites/default/files/2017-08/Z3950_primer.pdf

Patron management

Learning objectives

Creation of library and staff users.
Cancel/close membership.

Introduction

The management of library users and staff is part of the Patron module with Koha. It includes the creation, modification, suspension, and deletion of patrons. Management of overdue notifications by email and SMS is also handled by the patron module.

Add a patron

Here the term **patron** denotes the library user. Following are the steps to create normal library users like students and teachers. We are going to create a patron category for Faculty Members. Make sure that you have created patron categories at **Koha Administration > Patron categories**.
To add a new patron, **Koha > Patrons > New patron.**

Select a patron category.

To add more salutations like Dr., Prof, visit,

Koha Administration > Global system preferences > Patrons > BorrowersTitles

Enter the contact details of the patron to get notifications via email or SMS.

Enter the library admission number or any other unique number in the **Card number** to identify the patron.

If the OPAC is available in the campus network or on the Internet, give a username and password for users to login.

Filed names in red-colored letters are mandatory to fill. Librarians can define the mandatory fields. Visit **Koha > Administration > Global system preferences > Patrons > BorrowerMandatoryField**
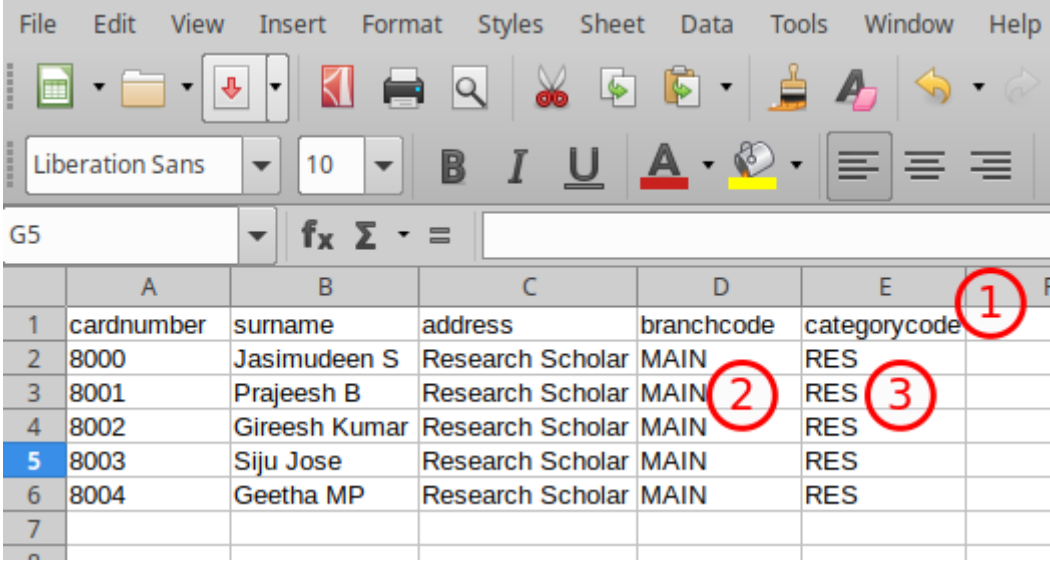
After entering the patron details, save it. An image of the library user can be uploaded to the profile after saving the patron details.

Import patrons bulk

Koha allows importing patron details from a CSV file. This time-saving feature is useful for schools, colleges, and schools where a large number of patrons join every year. Here are the steps to import patron details available in a spreadsheet file.

Prepare the patron list

Collect the details of patrons from the institution office. Often such information is maintained in a spreadsheet file. Decide which details to import (e.g. admission number, first name, surname, email, etc.). Copy the columns, which contains the desired patron details, into a new spreadsheet. The header of the spreadsheet contains the field names matching with the '**borrowers**' table in the Koha database. The table **borrowers** store patron information. Visit **Koha > Tools > Import patrons** to see all field names in the Koha database. Certain mandatory fields are also there. The mandatory fields are '**surname**', '**branchcode**', and '**categorycode**'. Very detailed instructions, to prepare the spreadsheet, are available at **Tools > Import patrons**. Here is a sample spreadsheet filled with patron details.

1. Field names should be the same as in the borrower's table in the Koha database. Field names are case sensitive. Don't put space between words.
2. Check the **Koha Administration > Libraries** and confirm the branch code.
3. Check the **Koha Administration > Patron categories** and confirm the category code.

If anything is wrong with the field names and mandatory fields in the spreadsheet, it will end up in the failure of patron import. Save the file into CSV format, **File > Save As.**
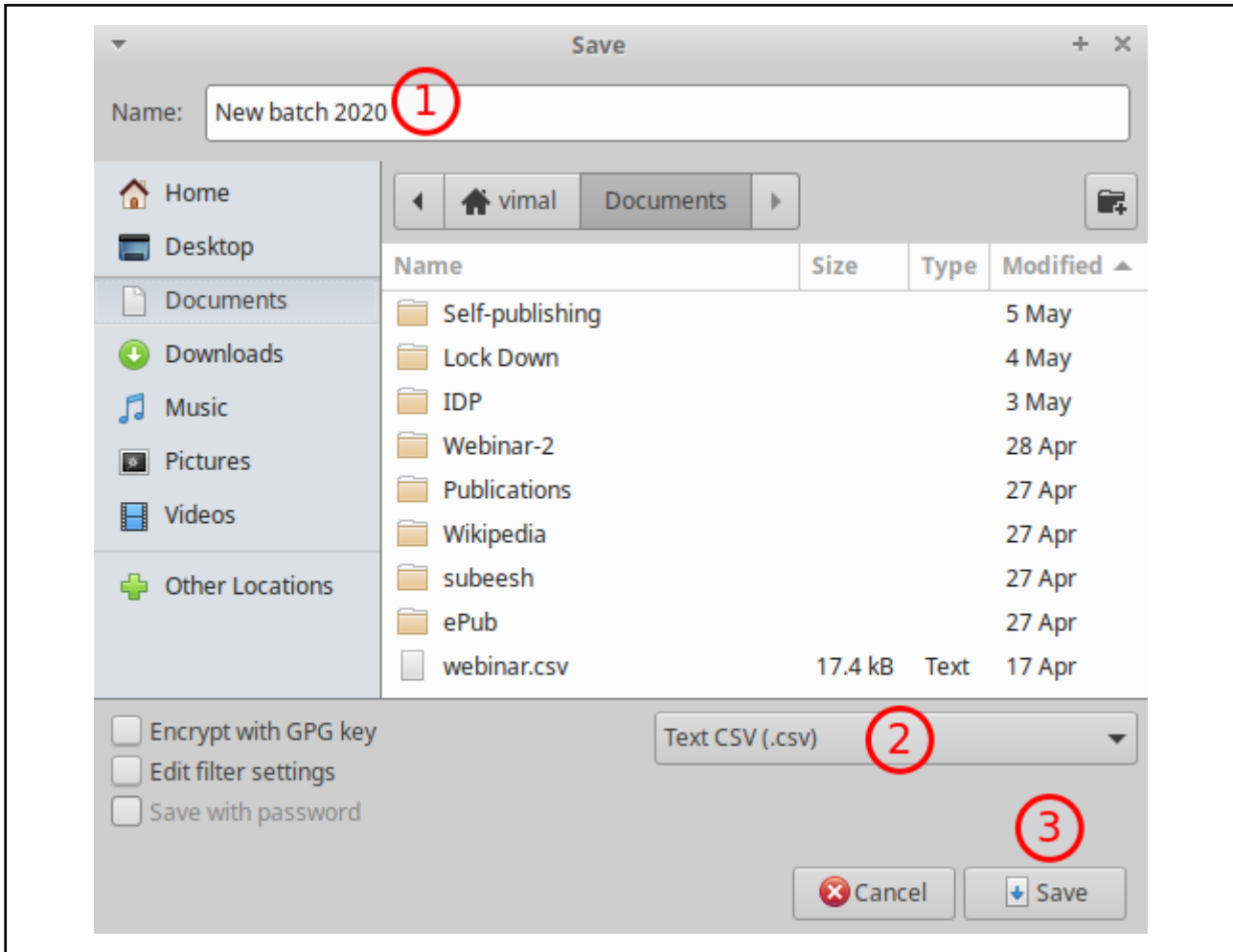
Upload the spreadsheet in CSV format into **Koha > Tools > Import patrons**.

First practice with a csv file with minimum fields. Later increase the number of fields and try to import. Field names are case sensitive. Strictly follow the field names as such in **Tools > Import patrons**.

Cancel/close library membership

The Librarian has to close the patron account after the expiry of the membership period. Options are available to add the reason to cancel membership. Librarian can enter a note about membership cancellation.

Search and find a patron account to close. Find **Patron restrictions** in the bottom of the profile page. Click on **Add manual restriction**.

Library membership of a student can be closed after the programme is over.

Comment: Add a note in the comment box. Give a reason for the cancellation of membership.

Expiration: For discharge of a student no need to enter anything in the **Expiration box**. Date to be filled for a short term suspension of library user (e.g. 6 months).

Add restriction: Click on the Add **restriction** button to save the changes.

The patron is not allowed to check out the books after the restriction is placed. The Librarian has the power to revoke the restriction.

Librarians can lift the restriction on users. The cancelled membership of a UG student can be revoked when he joins the PG course in the same college in the next academic year.

Add a staff patron

Adding staff patrons in Koha will help the library staff in various sections to get individual login power to perform routine tasks with various modules (e.g. Circulation, Acquisition, Cataloging, etc.).

Open the patron account. Make sure that the user name and password are created for the user.

Go to **More > Set permissions**

Select the modules to grant permission.

Check the desired modules. Selection of the **Catalogue** module is mandatory for staff login.

Conclusion

Patron module with Koha has robust features to manage user accounts. Staff patron management is convenient for libraries with many branches and sections. Umpteen options are available with the Patron module to manage users.

Exercise

1. Create the user account for two library users with username and passwords.
2. Create a staff patron with privileges on circulation, cataloguing, and reporting modules.
3. Close the membership of a patron.

Circulation module

Learning objectives

Understand the processes of check-in and check-out of books.
Know the processes of reservation of books.

Introduction

The check-in (issue), check-out (return), and reservation of books form the main processes in the circulation module. Remember to configure patron categories, patron notifications, notice templates, calendar, circulation, and fine rules for the well functioning of the Circulation Module.

> Visit **Koha > Koha Administration > Global system preferences > Circulation**
> Go through the various preferences regarding the Circulation module and configure it. Visit **Koha > Tools** and configure **Notices & Slips**, **Overdue notice/status triggers**, and **Calendar**.

Check-out (issue) of books

Circulation functions with Koha can be initiated from the universal box on the staff client. Otherwise, go to the circulation module by clicking the link from the Koha staff client home page.
Enter the patron card number/surname/first name to the **Check Out** option in a universal box. Libraries can make use of input devices like barcode/QR code/RFID readers to input accession numbers.

Next, enter the accession number of the book and press the **Check Out** button.

Check-in (return) books

Enter the barcode of the book into the **Check-in** box.

Give other barcodes to check-in.

Hold (Reservation) books

Reservation of books offers the facility for the users to hold the book that is either on shelves or checked out by other users. Here are the steps to reserve a book already issued to someone. First, search and find the book from the staff client to reserve.

Click on the **Place hold** button to proceed with the reservation process.

Enter the card number/name of the library user who wishes to reserve the book.

Click on the **Place hold** button to confirm the reservation.

A queue generates when more than one user places the hold. See the priority list of patrons waiting to receive the book.

Conclusion

Remember to edit the content in notices templates (**Tools > Notices**) to add library details (e.g. contact information) and customise the message part if necessary. Run Koha on trial mode to check the due date and calculate fine precisely.

Exercises

1. Practice Check out and Check-in for two patrons.
2. Hold (Reserve) one book for three patrons.

Reports module

Learning objective

Give an insight into how the reports module works.
Know how to create reports.

Introduction

Report module helps the librarian to generate various types of reports regarding books, patrons, and circulation, etc. Different types of reports are available for the convenience of the users: ready to use reports and custom reports. Ready to use report tools can run with a graphical interface and the librarian can generate a report without the knowledge of SQL query.

Different ways to generate reports

Koha offers various possibilities to create reports. Users can generate reports for various purposes including data from various modules. Different tables in the Koha database store data on patrons, documents, and circulation. The report module helps to combine information from different tables in the Koha database and display using reports.

1. The guided report assists to generate reports through the step by step process by picking data fields.

2. The user can generate reports from SQL queries either by writing down the query or borrowing from other places.
3. Saved reports are organised in **Use Saved**.
4. Some frequently used reports are available.

> Database schema website helps to familiarize with the structure of the Koha database. http://schema.koha-community.org. Familiarisation with the tables and fields will help to create SQL query for report generation.

Saved reports

Saved reports are listed inside, **Reports > Saved Reports** section. Users can run the saved reports at any time.

Click on the **Run** button to initiate a saved report.

Create a report from SQL

Libraries can create reports from scratch with the help of the SQL query. Structured Query Language is a standard Database language that is used to create, maintain and retrieve the data from the relational database. The SQL query is the engine that runs behind Koha reports. Reports interact with the Koha database using the SQL query to fetch and display the report.

Koha projects maintain a library of SQL queries for reports at https://wiki.koha-community.org/wiki/SQL_Reports_Library. The link to the Report Library can be located on the left side of the Koha report page.

Let's check how to create a report using SQL query borrowed from Koha SQL Report Library. Visit the Koha SQL Report Library website and find a report. Copy the SQL query from the Koha SQL Report library website.

All Checked Out Books

- **Developer:** Nicole C. Baratta, ByWater Solutions
- **Module:** Circulation
- **Purpose:** A report to show you all items that are currently checked out and who they're checked out to
- **Status:** Complete

```
SELECT c.date_due, p.surname, p.firstname,
       p.phone, p.email, b.title, b.author,
       i.itemcallnumber, i.barcode, i.location
FROM issues c
LEFT JOIN items i ON (c.itemnumber=i.itemnumber)
LEFT JOIN borrowers p ON (c.borrowernumber=p.borrowernumber)
LEFT JOIN biblio b ON (i.biblionumber=b.biblionumber)
ORDER BY c.date_due ASC
```

Return to Koha Staff Client. To create a new report from SQL Query, open **Koha > Reports > Create from SQL.**

1. Give a name for the report.
2. Select a category for the report.
3. Paste the SQL query into the SQL box.

Run the report and see the result.

The User can either view or download the report result. The report can be downloaded as either CSV or ODS. CSV format is suitable to open with applications like MS Excel and LibreOffice Calc (Open Source Spreadsheet application). ODS (Open Document Spreadsheet) files can only be opened using LibreOffice/OpenOffice.

Conclusion

Report module offers flexible ways to generate reports for both ordinary and expert Koha users. SQL Report Library website offers hundreds of ready to use SQL queries for report generation.

Exercises

1. Visit the Koha SQL Report Library website. Find and copy a few SQL queries of reports and create reports.

For further reading

Koha Database schema
http://schema.koha-community.org/

SQL Report Library
https://wiki.koha-community.org/wiki/SQL_Reports_Library

Serials management

Learning objectives

Know the process of creating a periodical subscription.
Know how to receive a periodical issue.
Describe the procedure to manage bound volumes.

Introduction

The Serials module assists in managing the subscription of journals, magazines, newspapers etc. This module is helpful to record and track periodicals. Library users can quickly know the availability of periodicals through an online catalogue.

Create a subscription

The library can start to create a subscription of periodicals with Koha when the first issue arrives.

Create a Biblio

First, we need to create a catalogue record of the periodical. Only need to create a **Biblio** of the record. Open cataloguing module and create a Biblio, **Koha > Cataloguing**.

Enter the details of the journal including ISSN, title, publisher etc. Save the **Biblio**. No need to save the **Item information**.

Adding a journal jacket to catalogue records will be more attractive and users can easily recognise each journal while searching OPAC. Journal cover pictures can be collected from the publisher website. Upload the journal cover to the Biblio.

Click on the **Images** tab. Upload the journal cover.

Add a vendor

If the library is subscribing to the periodicals through a vendor, create a vendor/supplier.
Koha > Acquisitions > New vendor.

Add subscription details

Start the subscription in Koha when the first issue of the journal arrives.
Enter into **Koha > Serials > New subscription.**

1. Search and find the vendor.
2. Search and find the Biblio of the journal.

○ Create an item record when receiving this serial

● Do not create an item record when receiving this serial

Decide whether we need to issue a barcode to each issue of the journal we received. Libraries that allow to check out old issues of periodicals for reading, can follow this practice.

Call number:	658
Library:	Main Library ▾
Public note:	
Nonpublic note:	
Patron notification:	None ▾
	Selecting a notice will allow patrons to subscribe to notifications when a new issue is received.
Location:	General Stacks ▾
Item type:	Periodicals ▾
Grace period:	30 day(s)
Number of issues to display to staff:	6
Number of issues to display to the public:	6

Call number: Item's call number of the journal.

Library: The name of the branch that subscribed to the journal.

Public note: Information on the OPAC for the patrons (e.g. Discontinuation of a particular volume)

Nonpublic note: Notes that are only visible to the librarians via the staff client (e.g. Payment details of subscription).

Patron notification: Notice sent to patrons on the arrival of new issues (Routing list).

Location: Shelving location of the journal.

Grace period: The number of days before an issue automatically moves from 'Expected' status to 'Late'.

The Staff and OPAC display options allow you to control how many issues appear by default on bibliographic records in the Staff Client and the OPAC.

First issue publication date: First issue of the journal after the subscription starts.

Frequency: Various frequencies of the journal (e.g. Weekly, monthly, quarterly etc.)

Subscription length: The number of issues or months in the subscription.

Subscription start date: The date on which the subscription begins.

Subscription end date: End date of the current subscription.

Numbering pattern: The numbering pattern is followed by the journal (e.g. Volume, Issue).

Locale: To display days, months, the season in regional language (e.g. Persian).

Click on the **Test prediction pattern** to get an idea of the issue numbering of the journal.
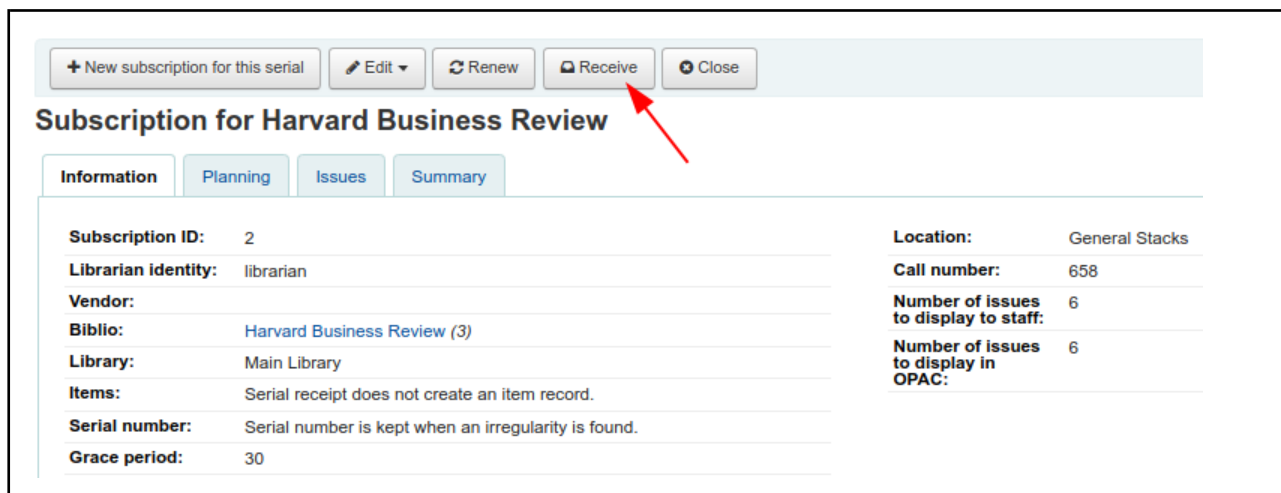
Click on the **Save subscription** button.

Receive the first issue of the journal

The subscription process in Koha starts after receiving the first issue of the journal.

Change the status from **Expected** to **Arrived**. You can enter the speciality of the issue on the **Note**s section (e.g. Branding special issue).
The current issue of the journal is received and waiting for the next issue.
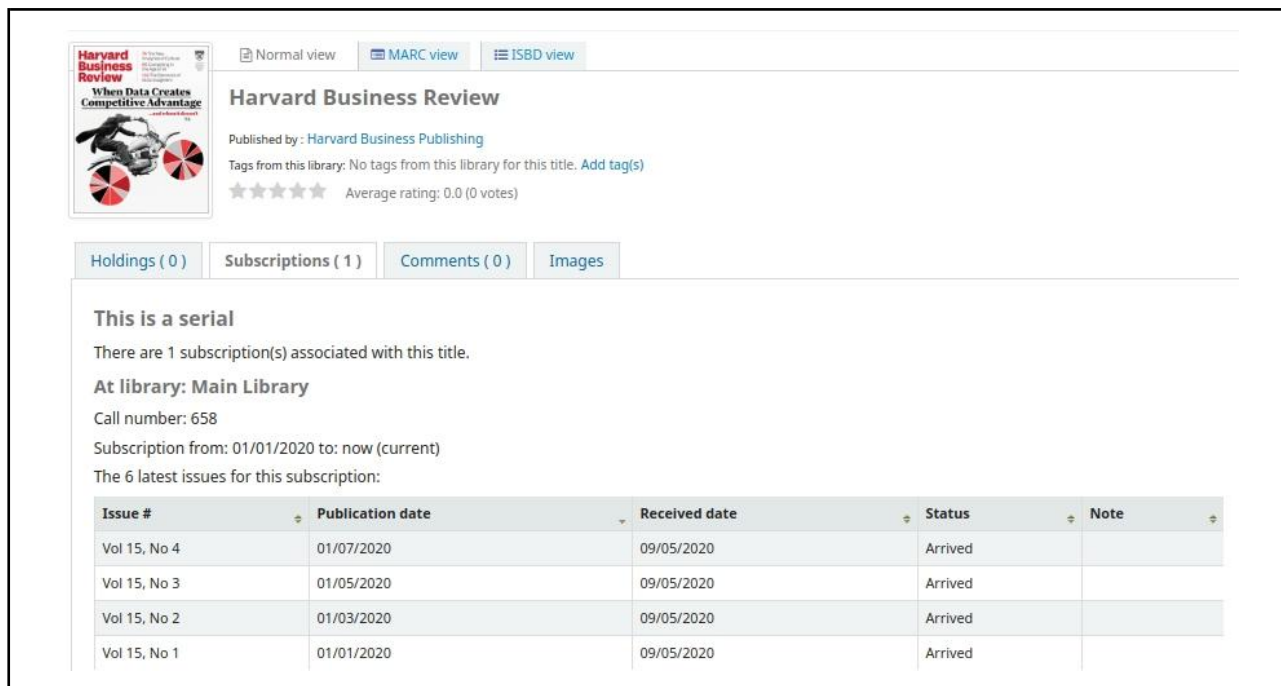
Search and find the journal at OPAC. See the bibliographic and holding details of the journal.

Manage bound volumes

Koha can handle bound volumes of periodicals. Users can understand the availability of bound volumes of periodicals along with the latest and previous issues.

First, create an item type for bound volume.
Administration > Item types > New item type.

Next, find the Biblio of the journal to attach bound volume details.

Create an item for the journal bound volume, **Edit > Edit items**.
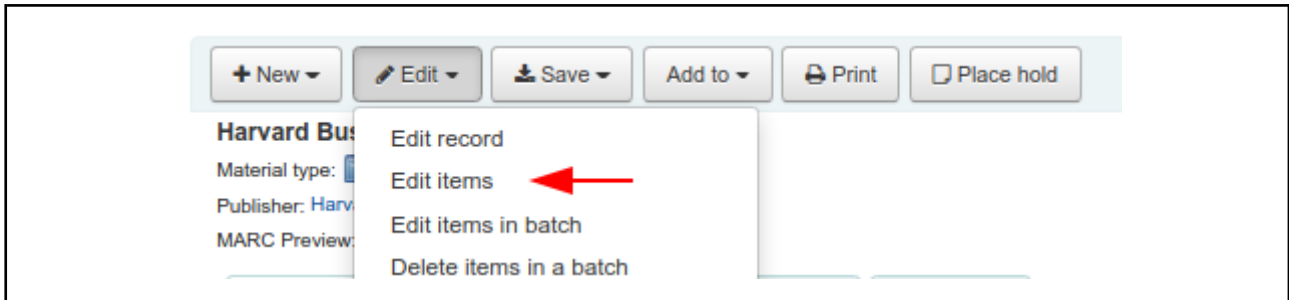
Enter the details regarding the bound volume.

1. Enter the volume and issues contained in the bound volume.
2. The accession number of the bound volume.
3. Add the item.

See the bound volume details of the periodical at online catalogue.

Information of the bound volume appears at the **Holdings** tab.

Conclusion

Management of periodicals is considered as one of the responsible tasks in libraries and Koha can handle it very well. Periodicals module can manage the subscription through both vendors and publishers. The libraries can manage the bound volumes of periodicals with the help of the serials module.

Exercise

1. Create a subscription of two journals with two different frequencies (Monthly, Weekly).

Acquisitions module

Structure

Learning objectives
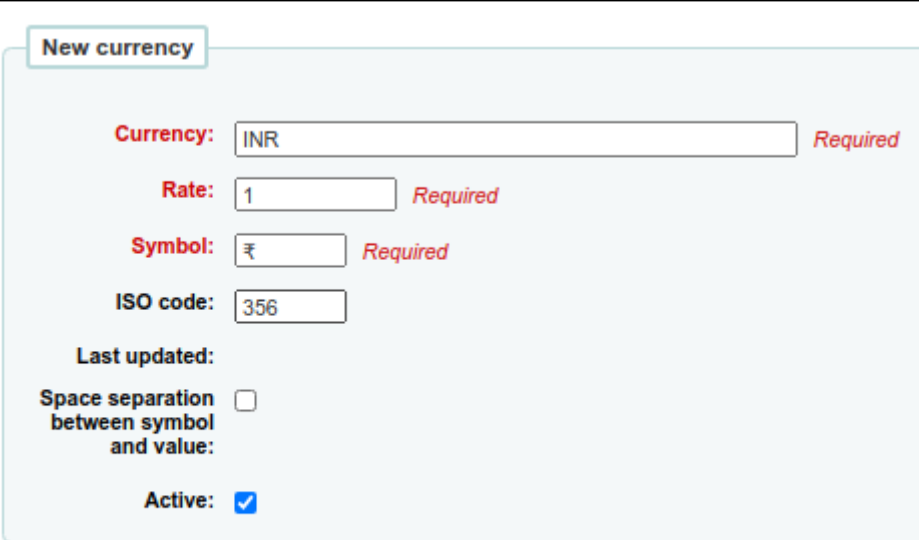
To get familiar with the acquisition process in Koha.

Introduction

Procurement of books goes through various stages. It requires systematic monitoring to avoid unnecessary delay. Acquisition module mechanises the procedures from receiving purchase suggestions to fast delivery of documents to the library users. Acquisition module can handle budget, vendors, ordering, and receiving of documents.

Define currency

Define an active/default currency for transactions to start the Acquisition module with Koha. Indian libraries follow transactions in Indian Rupees (INR). To define active currency go to **Administration > Acquisition parameters > Currencies and exchange rates > New currency**.
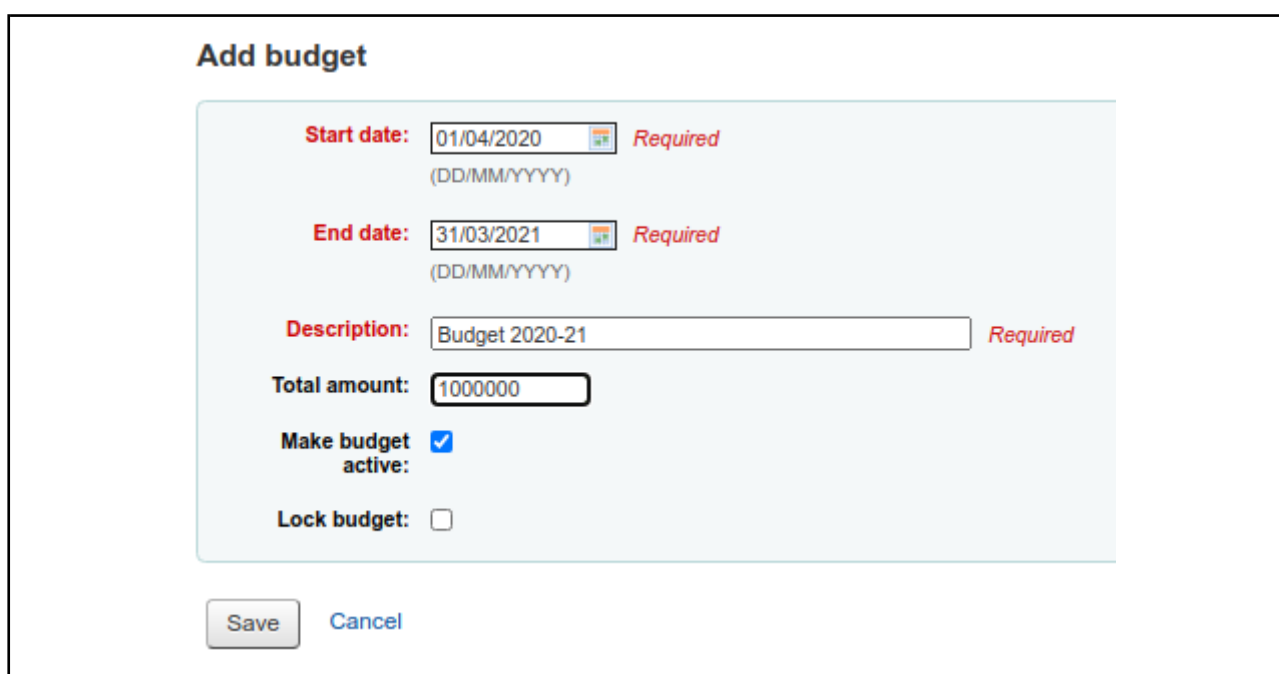
Enter the standard currency code, base rate, symbol, and ISO code. Don't forget to check on the **Active** box. Put the currency symbol by using the keyboard or copy from any website.

Define budget

Often libraries receive an allocation of money to meet the expenses from the parent institution. Libraries meet the expenses including salary, purchases, etc. from the budget allocation.

To create a new budget, go to **Administration > Acquisition parameters > Currencies and exchange rates > Budgets administration > New budget.**

Start date & End date: Define the period of the budget based on the nature of financial allocation (e.g. financial year, academic year).
Description: Give a meaningful description for the budget which should reflect nature and period of time.
Total amount: Total amount should not contain special characters like a comma.

Not allowed to create **Funds** after locking the budget.

Create fund

Libraries need to create funds in the budget for the purchase of library resources (books, e-resources). Libraries can create various funds based on the nature of the items and their purchase. Let's create a fund for book purchase.

Open the **Actions** button and click on **Add fund**.

Fund code: Give a **Fund code**.

Fund name: Description of the fund and it should reflects the nature of the fund.

Amount: Allott an amount to the fund.

Warning at (%): Alert to inform fund scarcity.

Owner: Select an **Owner** for the fund.
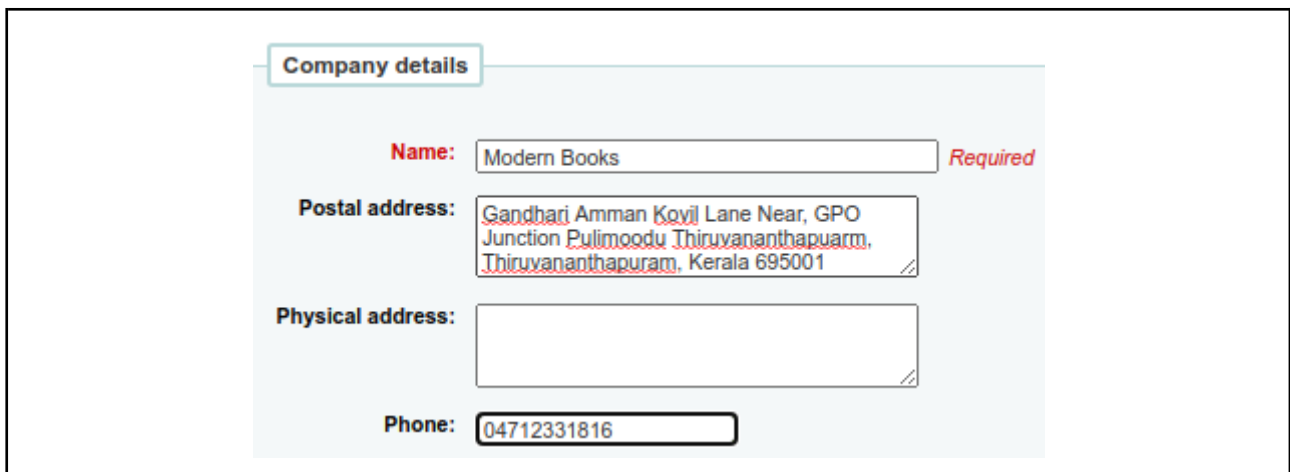
Library: Select the library.

Restrict access to: Restrict who can order from this fund by choosing either the '**owne**r', '**owner and users**' or '**owner, users, and library**'.

Create vendor

Libraries assign vendors (booksellers) to procure books and other resources. Order for books is placed through vendors.

To create a vendor, **Acquisitions > New vendor**

Enter details of the bookseller with contact information.

Make the vendor **Active**.

Enter other details like discount rate and delivery time.

Place orders

Academic community places suggestions to purchase books. Library sorts out the titles and places the order to booksellers. Enter into the Acquisitions module, search and find out a vendor.

Placing an order for books is the same as picking items to basket in a shop. First, we have to create a basket to enter the details of books to place an order. Click on the New **basket** button against the vendor name.

Enter details of the basket.

Give a meaningful name to the basket.

Select, when we want to create an item and assign an accession number. The default option is that item creation at the time of **cataloguing the record**.

Order from a new (empty) record

Library staff has to add the details of the book into the basket.

It is possible to add details of books you wish to purchase from various ways. Here we are going to enter the details of a book from scratch.

Start going to enter the details of the book from scratch.

Enter the bibliographical details of the book.

Enter quantity, price, and discount of the book. Save the book details.

Click on the **Add to basket** button on the basket summary screen to enter other books details to purchase.

See the summary of items in the basket after saving the book details.

Close the basket after entering all the details of books to purchase.

When closing the basket, add the basket to a group for easy printing and retrieval. Check the box to **Attach this basket to a new basket group** added to the group list. It is possible to export a statement of the order in PDF format.

We can get the order statement either in PDF or CSV format.

The library can send the order statement to the vendor.
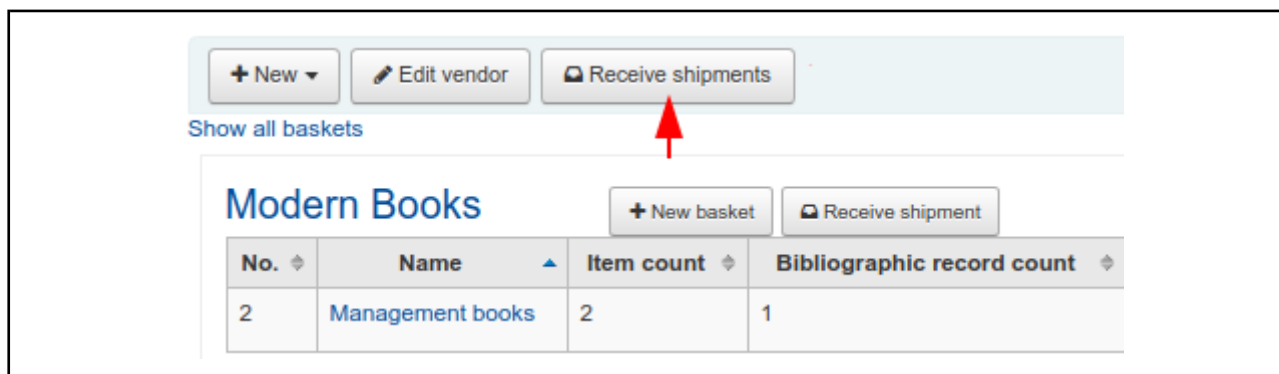
Order no. 1. Basket no. 1.
Billing at Main Library and delivery at Main Library

Document	Qty	RRP tax exc.	RRP tax inc.	Discount	Discount price	Tax rate	Total tax exc.	Total tax inc.
Who Says Elephants Can't Dance?: Inside IBM's Historic Turnaround Gerstner, Louis V. ISBN: 978-0060523800 published by Harper Business	1	983.00	983.00	20.00%	196.60	0.00%	786.40	786.40
Jack: Straight from the Gut Jack Welch ISBN: 978-0755311286 published by Headline Book Publishing	1	341.00	341.00	20.00%	68.20	0.00%	272.80	272.80

Receiving orders

The books receiving process can be started when they arrive from vendors. First, identify the vendor who has sent the books. Then go to the Acquisitions module and search the vendor.

Click on the **Receive shipment** button and start the receiving process of books.

Enter the **Vendor invoice** number and date.

Receive the books by clicking on the **Receive** button on the right side.

The next page displays the quantity ordered and received. The librarian can make any changes in price.

After receiving the books, the library can start the cataloguing process.

The title of the book with a link leads to the cataloguing module. Enter the complete bibliographic details, item information and finish the process.

Here is the status of the fund after receiving the orders. The fund status indicates the total amount spent and the remaining fund.

Conclusion

Acquisition module of Koha offers both traditional and latest ways to manage the procurement of books. Libraries can receive purchase suggestions from various sources and place orders. Budget and fund management are very flexible and give a precise picture of the fund.

Exercise

1. Create a budget and fund for book purchasing.
2. Create a vendor and place an order for two books.
3. Receive the orders and catalogue the books.

Koha OPAC

Learning objectives

Introduce the features of OPAC.
Give an overview of OPAC settings.
Guide to do OPAC minimal customisations.

Introduction

Koha OPAC (Online Public Access Catalogue) is the interface for library users and the public. Users primarily make use of OPAC search to know the availability of documents in the library. Besides, Koha OPAC can be converted as a library portal and publish information for user's attention. Koha OPAC provides enough room for customisation of the user interface.

Open OPAC interface
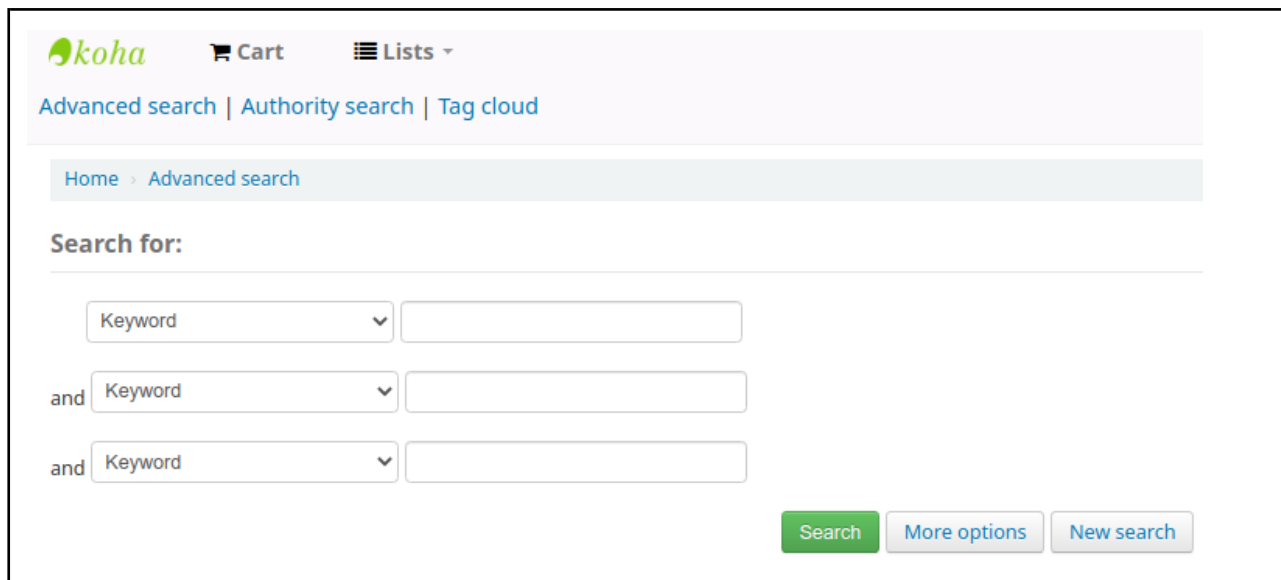
Koha OPAC interface is available in another port. The default port number is 80. If Koha is installed on the computer you are working on, then open the localhost, http://127.0.1.1 using a browser. If Koha is installed on a computer in the network or cloud, enter the IP address (e.g. 192.168.1.1) or URL of the OPAC (e.g. mgucat.mgu.ac.in).

Searching

A box for a simple search on the OPAC home page.
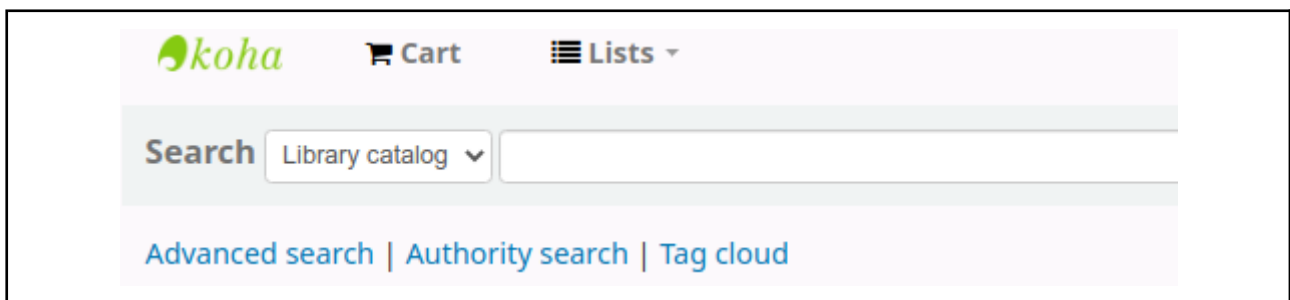
Koha OPAC also provides an advanced search. Users can open the advanced search page from the link below the simple search box.

The advanced search offers more options for a comprehensive result. Search filters are also available for a precise result. Users can filter the result based on library branches, items types, collection, authors, etc.

OPAC configuration

Configurations related to the OPAC can be found at **Koha Administration > Global System Preferences > OPAC**.

Prominent configurations

Here a few prominent configurations are introduced. Use the search and find feature in the browser to locate the configuration. Press **Ctrl + F** buttons to open the search box in the browser. Copy and paste the name of the configuration in the search box. Action buttons or text boxes can be found against each OPAC preference. Users can enable or disable each preference by clicking on the button. Save the preference after making the changes.

Name of the preference	Description
GoogleIndicTransliteration	GoogleIndicTransliteration on the OPAC. Helpful to search using regional languages.
LibraryName	Enter the library name in the box. Which displays the library name on the browser tab.
OpacFavicon	Make use of this preference to display the institution logo on the browser tab.
OpacMaintenance	Provision to disable OPAC at the time of maintenance.

OpacMaintenanceNotice	To give a maintenance notice to display.
OPACUserCSS	CSS (Cascading Style Sheets) is a style sheet language useful to beautify the OPAC interface. Koha users can apply CSS here to make the OPAC beautiful.
OPACUserJS	JavaScript can apply for OPAC modification. Koha project maintains a website to store readymade JQuery statements. Users can copy the queries from the JQuery library website to enable new features. JQuery Library URL, https://wiki.koha-community.org/wiki/JQuery_Library
opacuserlogin	Enable or Disable user login from OPAC from here.
suggestion	Enable to receive purchase suggestions from library users through OPAC.
OpacRenewalAllowed	Enable or disable the facility to renew books on the OPAC.
OpacPasswordChange	This option allows changing user passwords on the OPAC.
OpacAllowPublicListCreation	Permit users to create public lists on OPAC.
AnonSuggestions	Whether allow making purchase suggestions by users without logging in.

Customise OPAC regions

Koha OPAC can be customised in two ways; either by using the options in system preferences or using scripts like CSS. Users without knowledge on scripting, can manage the customisation using system preferences. Let's check the options for OPAC customisation at system preferences.
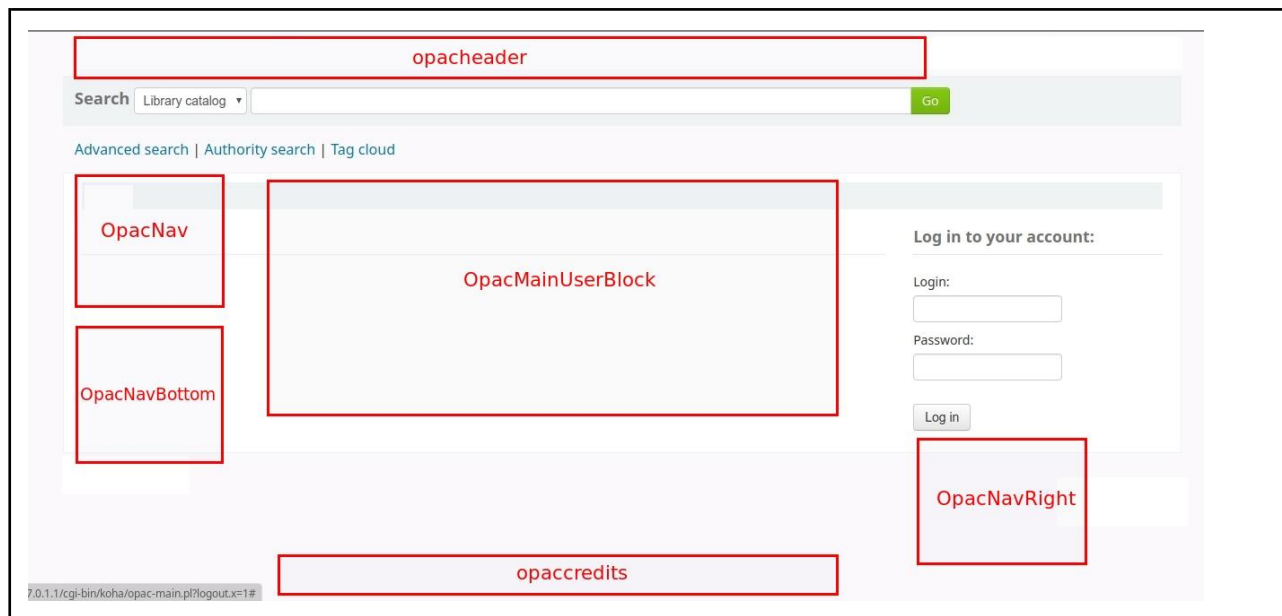
OPAC home editable blocks.

System preferences related to content in OPAC editable blocks.

Name of the preference	Description
opacheader	Display library name either as text or image on OPAC heading space.
OpacNav	The left-hand column of the main page. This space is suitable to add links to other websites using HTML.
OpacNavBottom	Another space below the OpacNAV.
OpacMainUserBlock	OpacMainUserBlock is the largest block on OPAC. It's customisable space. Library staff can add text and images using HTML.
opaccredits	Space at the footer.
OpacNavRight	Enter HTML that will appear below the login box on the right.
QuoteOfTheDay	Display random quotes on the OPAC home page.

Quote of the day in OPAC

Quote of the day feature in OPAC helps to display random quotes on the OPAC home page.

Enable the **QuoteOfTheDay** feature from System Preferences.

Add some quotes, **Tools > Edit quotes for QOTD feature**

Open OPAC interface and refresh the page to make visible the quotes on OPAC page.

Create web pages in Koha

Users can publish pages on Koha OPAC. Then OPAC can act as a library portal.
Very detailed documentation is available at Koha Wiki:
 https://wiki.koha-community.org/wiki/Koha_as_a_CMS
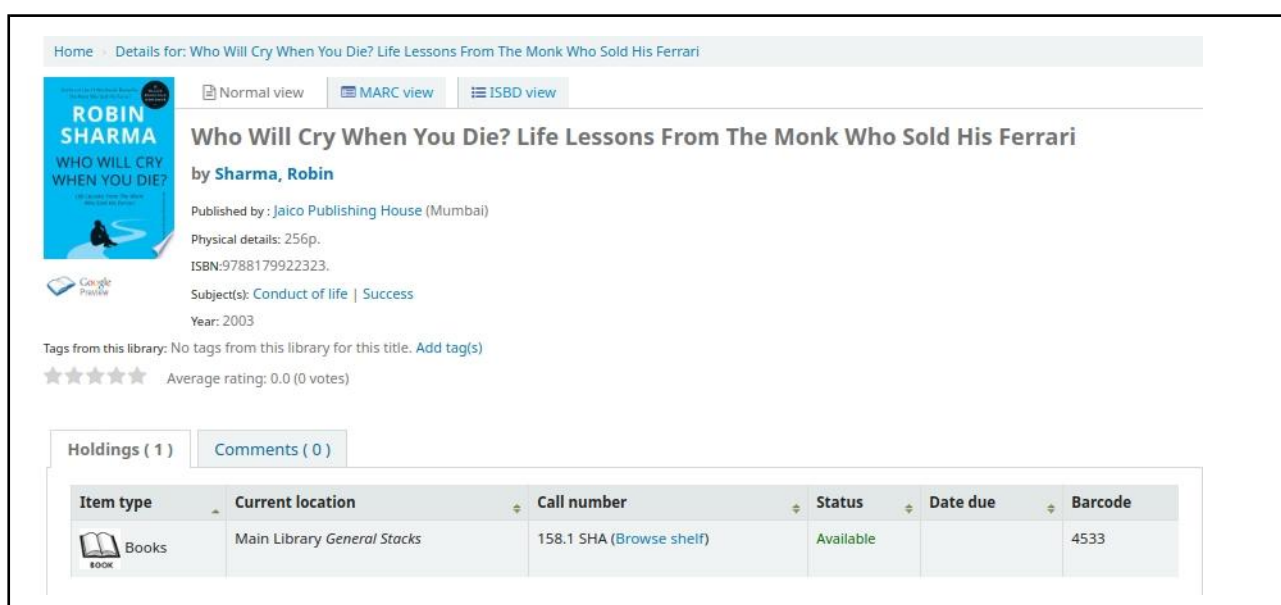
Enhanced content

Enhanced content is useful to connect with other sources. Users can find prominent service providers like Amazon, Google, LibraryThing, etc. in the list at system preferences. Such services are primarily used to display book jackets along with record details.
Visit the option at **Koha Administration > Global system preferences > Enhanced content**.

Enable one service at a time. Otherwise, multiple book jackets will be displayed on OPAC.

Display of book jacket using Google Books

Use JQuery with OPAC

JQuery is an easy method to use JavaScript on websites. Koha makes use of JQuery to customize the look and feel of staff client and OPAC interfaces. Koha users can borrow readymade JQuery snippets from the Koha JQuery Library website. Here is an example of the application of JQuery on OPAC.

Application: Remove the "No cover image" message on the OPAC.
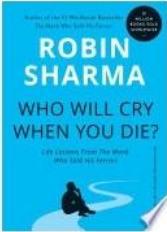
"No cover image" along with Google book cover.

Solution: Visit the Koha JQuery Library website: https://wiki.koha-community.org/wiki/JQuery_Library and find the script.

Copy the highlighted JQuery and paste it into,
Koha Administration › System preferences > OPAC > OPACUserJS
Save the preference. Check the change in OPAC.

Place a banner on OPAC header

A beautiful banner on the header of Koha OPAC can beautify the home page.

Create a banner for Koha OPAC.
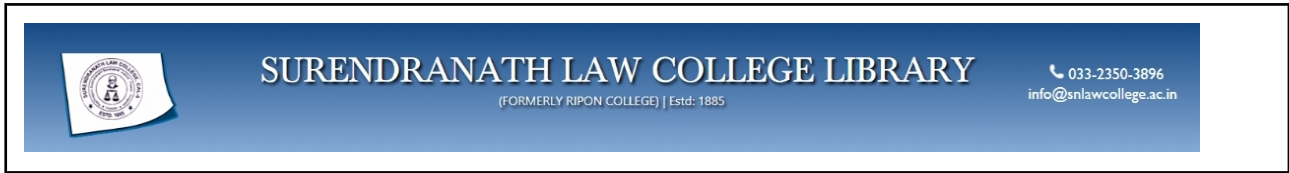
To put the image in **/usr/share/koha/opac/htdoc**s folder, apply the following command in a terminal.

```
sudo mv header.jpg /usr/share/koha/opac/htdocs
```

Open Koha and go to **System Preferences > OPAC > opacheader**
Apply the HTML code to display header image,

```
<img src="header.jpg" style="width:100%;height:100%;">
```

Save the changes. Open OPAC page and refresh the page to see the header.

Conclusion

Koha offers comprehensive features with OPAC. It can act as an interface for searching and can be converted as a library portal. Libraries can connect with third-party services like Amazon and Google to display book jackets and reviews, along with records. Koha users need to be familiar with HTML tags, CSS, and related tools to manage the OPAC customisation well.

Exercises

1. Visit the Koha JQuery Library website and find and apply useful queries to your Koha installation.
1.

Essential Debian/Ubuntu commands

Learning objectives

Get an understanding of the basic Debian/Ubuntu commands.
Build the capacity to install/remove a new package using APT commands.
Describe how to maintain the Debian/Ubuntu update.

Introduction

The knowledge of basic Linux commands will be an added advantage for library professionals working with Open Source software on Debian/Ubuntu. APT is a package management system used by Debian and Ubuntu. APT commands are helpful to maintain the Debian/Ubuntu operating system for the update, upgrade, install and uninstall software packages. An understanding of Debian/Ubuntu Linux operations is essential for the effective management of Koha.

How to apply Linux commands

The tool used to apply commands on a Linux operating system is called **Terminal**. Whatever may be the Linux, you can open **Terminal** in application launcher,
Applications > System Tools. The Terminal can also be opened using the short key, by pressing **Ctrl + Alt + T** buttons together.

Linux command Terminal

There are specific rules to be followed when using Linux commands. Otherwise, the Linux operating system will refuse to execute the commands. Beginners may find it a bit difficult when dealing with Linux commands in the initial stages. The lines of instructions for Linux must be case-sensitive. Whether the commands are in lower or upper case, they must be entered as such. Otherwise, the command will be misinterpreted and exit without implementation. Linux commands

can have multiple parts. Space should be placed between each part. The Linux operating system refuses to apply commands without proper syntax. Beginners of Linux should be careful to follow syntax while applying commands. Type the command on the terminal and press the **Enter** button to apply the command. If the command is applied correctly, the result will be displayed on the Terminal screen or jump to the next prompt. If the command is not valid, either error message or message suggestions will be displayed.

Some basic commands

Here are some basic commands to manage Debian/Ubuntu Linux. The below mentioned commands will help the library professionals to familiarise the application of Linux commands. The user has to apply the commands from the Terminal tool.

Know the Debian/Ubuntu version
It is important to know the version of Debian/Ubuntu Linux installed on your computer. Apply the following command,

```
lsb_release -a
```

Know the system information
This command displays details of the computer specifications.

```
lscpu
```

Know the current user
The following command will display the name of the current user who logged in.

```
whoami
```

To know the current working directory
The command will display the current location of the working directory.

```
pwd
```

To check the current system date and time correct

The user can validate the date and time by using the command.

```
date
```

Clear the screen

Working with commands makes the terminal screen shabby. It clears the screen filled with commands.

```
clear
```

To know the IP address of your computer

An Internet Protocol address (IP address) is a numerical name system assigned to each computer connected to a network that uses the Internet Protocol for communication. This system facilitates the easy identification of a computer in a network. The IP address is the same as a unique identification number (e.g. admission number) followed by a College to identify each student.

```
ip a
```

Identifying the IP address of the computer is helpful for libraries to make available Koha staff client and Online catalogue in campus network/Internet.

Sudo command

The administrator account in Linux is called **Root User**. The **Root User** has the ultimate power to do important tasks on Linux. By default, the root account password is locked in Ubuntu. This means that you cannot log in as root directly. Users are allowed to use the **sudo** command to become the root user. The sudo command stands for "**Super User DO**". The Debian/Ubuntu users have to apply commands with the **sudo** as a prefix. For example,

```
sudo apt update
```

Password will be asked whenever you apply the command with sudo. Type the password of the account created at the time of Ubuntu installation. The * symbol is symbolically displayed when a password enters on the Windows operating system. While typing a password in a Linux terminal, nothing will be seen on the screen. Type the password in the blank space and press the **Enter button**. The command will start running and display the result.

> Once a command with sudo applies, it won't ask for the password for 15 minutes. After 15 minutes; the system will ask for the password again.

APT command

APT is a command-line tool for software package management with Debian and Ubuntu. APT stands for **Advanced Packaging Tool** (APT). It handles updating, installation, and upgrading of software packages.

Update the Package Index

Ubuntu software repositories are available all over the world where a collection of software packages are stored. Ubuntu software repositories are available in India too. Ubuntu users in India receive updates from the repositories for Indian users. The software repositories in the nearby places help the users to download the updates faster. Addresses of the software repositories are stored on the computer where Ubuntu is installed. For example, the new version/update of LibreOffice Software first appears in the software repository. The Ubuntu user needs to fetch the latest version packages from the software repository.

Type the following command to update the package index on your computer with the latest package information available in the repository. While using update commands, the user should make it sure that the computer has Internet access.

```
sudo apt update
```

Upgrade packages

Use the following command to download and install the latest version of the software and associated packages that are currently installed.

```
sudo apt upgrade
```

Install a specific package

The installation of packages using the apt tool is quite simple. For example, to install the Bluefish Editor, type the following,

```
sudo apt install bluefish
```

Install multiple packages

The user can install more than one package from the same command. For example, the following command will install packages '**bluefish**' and '**mousepad**'.

```
sudo apt install bluefish mousepad
```

Uninstall a package
Type the following command to remove the package installed in the computer,

```
sudo apt remove bluefish
```

Completely remove packages
To remove software packages including their configuration files, use the **purge** command as shown below.

```
sudo apt purge filezilla
```

Clean up disk space
The **clean** command is helpful to free up the disk space by cleaning downloaded .deb files from the local repository (/var/cache/apt/archives).

```
sudo apt clean
```

Apply autoremove command to clean up unwanted packages from the system.

```
sudo apt autoremove
```

The autoremove command will remove the unnecessary dependency packages to remain in the computer after the uninstallation of application software.

Install the software from the Debian package

There is also a way to install software that is not in the Ubuntu software repository. Software such as **Google Chrome** and **Anydesk** is not available in the Ubuntu software repository. The package file should be downloaded from the website. Select the package suitable for the architecture of the computer; 64-bit/32bit. Latest computers support 64-bit. Architecture type is always mentioned on the package file. Download the package file suitable for 64-bit architecture. Open the File Manager and move the package file from the Download folder to the Home folder. The extension of the Debian package is **.deb** and is similar to the **.exe** extension with the Windows application installer.
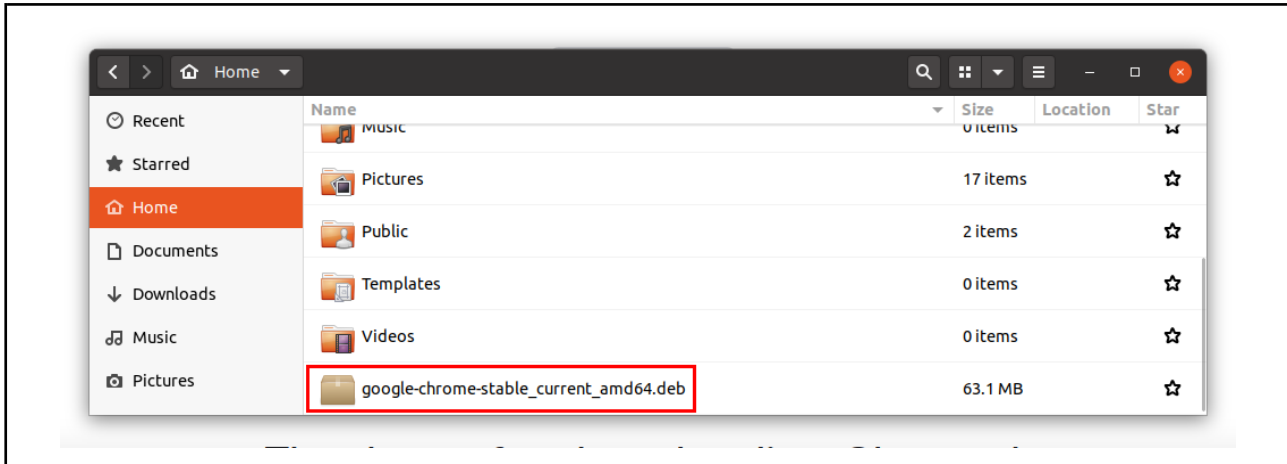
Apply the following command to install the Debian package of Google Chrome browser.

```
sudo dpkg -i google-chrome-stable_current_amd64.deb
```

The package **google-chrome-stable_current_amd64.deb** is lengthy and has a chance to get an error while typing. If the package name given is not correct, the installation attempt will fail. There is an easy way to enter the package name correctly. Press the Tab button after typing the first few lines of the package name (e.g. **sudo dpkg -i goo**), it will autofill the rest of the name. Another method to get the full file name is to put the * symbol after the few letters.

```
sudo dpkg -i google*
```

In some cases, the installation of a Debian package may fail due to the lack of additional software packages. In such a situation, apply the following command to download the missing packages to finish the installation.

```
sudo apt install -f
```

The software icon will appear along with the other applications after the installation. Open the application software by pressing the mouse on the icon.

Open a text file using Terminal

On many occasions, Linux users need to open files and make changes to it. First, make sure which text editor application is available on your computer. Text editor applications can be found at **Applications > Accessories**. Linux-based operating systems are using different applications for the default text editor. For example, GNOME uses **Gedit**. Install a new text editor, if you are not sure about the name of the default text editor. The **mousepad** is a lightweight text editor. To install Mousepad, apply the following command:

```
sudo apt install mousepad
```

Open a text file using Mousepad

First, find the location of the file to open. For example, apply the following command to open the **syslog** file located at **/var/log**. We use the **Mousepad** text editor to open the file.

```
sudo mousepad /var/log/syslog
```

Syslog file contains the running history of each movement in Linux.

MySQL commands

Koha makes use of MySQL/MariaDB as the database. MariaDB is a community-developed project derived from the MySQL database management system. MariaDB is a Free database management system licensed under the GNU General Public License.

Here are the few basic commands to be familiar with MySQL/MariaDB operations. Apply the following commands in a terminal.

Enter into MySQL

```
sudo mysql -u root -p
```

First, it will ask for the Debian/Ubuntu password, and after that, it will ask for MySQL/MariaDB Root user command.

Create a database

```
create database micky;
```

Show databases

```
show databases;
```

These commands will list out all databases.

Delete database

```
drop database micky;
```

Enter into a database

If you are working on a Koha Live DVD, try the following commands. The default name of the Koha database is **koha_library**. Try the commands in a test machine using Koha Live DVD. Don't try these commands on a Koha production system. It will badly affect the running instance of Koha.

```
use koha_library;
```

Display tables

```
show tables;
```

Show table structure

```
describe biblio;
```

This command will display the structure of the table called Biblio.

Show the content inside the table

```
SELECT * FROM biblio;
```

Exit from the MySQL/MariaDB console

```
exit
```

Conclusion

The apt commands are beneficial for the library professionals and system administrators to maintain Koha on Debian/Ubuntu. No need to learn by heart all the Linux commands. Search and

find commands with the help of Google when it is required. The more you use commands, the more familiar they become.

Exercise

1. Install Filezilla application using the apt command.
2. Visit anydesk.com website and download the .deb file. Install the package using dpkg command.

For further reading

About MariaDB server
https://mariadb.org/about

The Debian GNU/Linux FAQ
https://www.debian.org/doc/manuals/debian-faq/index.en.html

25 Useful Basic Commands of APT-GET and APT-CACHE for Package Management
https://www.tecmint.com/useful-basic-commands-of-apt-get-and-apt-cache-for-package-management/

How To Check Your IP Address in Ubuntu
https://itsfoss.com/check-ip-address-ubuntu/

Maintenance of Koha

Learning objectives

Get an understanding of updating to the latest version of Koha.
Learn how to manage database backup securely.
Learn to restore a database backup to a new Koha installation.

Introduction

Timely maintenance of Debian/Ubuntu and Koha is essential for the good health of Debian/Ubuntu and Koha. Regular updating of Linux and Koha are required to keep the system up to date. Backing up the Koha database is part of data security. If a crisis occurs, the process of restoring database backup to a new Koha installation is a life saving task.

Update Koha

Koha releases a new version every six months (May and November) with a bundle of new features. The current version is called **Stable** and the previous version is called **Old Stable**. Major releases of Koha receive monthly updates. Debian and Ubuntu also release updates frequently. Debian/Ubuntu update and upgrade commands are enough to upgrade Koha to the latest releases. Apply the following command in a terminal,

```
sudo apt update
sudo apt upgrade
```

Clean the packages after the upgrade process over.,

```
sudo apt-get clean
```

Information regarding the installation and other technical details available at **Koha > About** page. We can find many tabs in this page. **Server information** tab gives information about the Koha version and the Linux platform Koha running. Warnings about Koha display at **System Information** tab.

Take Koha database backup

Koha stores all information regarding documents, patrons, circulation, and other things stored in the database. To a certain extent, taking the backup of the database and keeping it in another storage place is enough to secure the data. Here are the steps to grab the database backup of Koha. Apply the following command in a terminal,

```
sudo    mysqldump    -ukoha_library    -p    koha_library    |    xz    >
koha_library.sql.xz
```

Above mentioned is a single line command. Enter the Linux password first, then enter the password of the Koha database. The database backup will be generated and compressed into XZ format. Keep the database backup in other storage devices like flash (e.g. pen drive) or cloud storage.

Koha users can schedule the process for regular backup. Scheduling of backup is possible with a tool called Cron with Linux based operating systems. Cron helps to plan and schedule the tasks on a specific time as a one time task/repetitive basis. For example, the backup can be scheduled at 8 pm every day. Do a search in the web for cron in Linux and get familiar on how to apply.

Restore database backup to Koha

Assume that the existing Koha installation is collapsed (Don't let that happen) and the database backup is safe with you. Install Koha again. Follow the steps to restore the database backup to a new installation.

Remove the existing database in the new Koha installation.

```
sudo mysql -uroot -p
```

[Enter the Linux password and enter MySQL Root password]

Delete the existing database and create a blank one.

```
drop database koha_library;
create database koha_library;
quit;
```

Copy your database backup from your pen drive to the home folder. If the file is in compressed format, extract the backup file. The extension of the MySQL backup file will be .sql. Then restore the old backup to the new Koha installation.

Database Restoration

Apply the following commands in a Terminal one by one.

```
sudo mysql -uroot -p koha_library < koha_library.sql
exit
```

Upgrade Database Schema

The database schema of old Koha should be upgraded to match with the new version. Apply following commands in a terminal one by one.

```
sudo service memcached restart
sudo koha-upgrade-schema library
```

Rebuild the Zebra Index

Koha uses a third party search engine called Zebra for search and retrieval of records. Apply the following command in a terminal to refresh the search index.

```
sudo koha-rebuild-zebra -v -f library
```

After rebuilding the Zebra Index, Koha becomes ready to use.

Upgrade/migration from a very old version of Koha

Libraries stick on with old versions of Koha facing difficulties while trying to upgrade to the new version. Upgrading from very old versions to the latest version may result in data loss. Koha stops the official support for older versions after a specific period. New versions of Koha introduce a lot of improvements and new features. Changes in database structure are required to accommodate new features. For example, Koha version 3.18 was released in 2014, and it has 168 tables. Version 19.05, released in 2019, has 204 tables. Koha developers strongly recommend for the regular upgradation to recent versions. The database structure is also subject to changes during the upgrade process.

Direct upgradation from old versions (e.g. versions before version 3.18) to the latest version probably ends in data loss. Restoration of an old version of Koha is a challenging task. Data migration from a running instance of an old version of Koha is comparatively easy. Porting of bibliographic records to MARC format, patron details, and circulation details to CSV is possible. Then it can be imported into a new version of Koha. Following steps can follow to export essential data:

❖ Note down all configurations with Koha including branch code, item types codes, authorized values, circulation, and rules. Take screenshots of all configurations.

❖ Export bibliographic details (MARC format) into MARC. Export patron and circulation details into CSV format using reports.

❖ Install a new version of Koha. Create branch code, Patron categories, Authorised values, circulation match with the old version of Koha.

❖ Import MARC file, patron, and circulation details.

How to seek help from the Koha community?

Koha users rely on community members to clear doubts, errors, and problem-solving. Email discussion forums and social media groups are available for users to interact with Koha experts. Include a detailed description of the error/problem in the message in simple words. If possible, add a screenshot that describes the error with the message. Mention the database server details, version of Koha, and Linux-based operating system. Visit the **About Koha** > **Server information** tab to get the version details of Koha, database server, and Linux. A detailed message helps the Koha community members to get the exact picture of the problem, and the high chance of getting a reply with a solution.

Conclusion

Library professionals should be familiar with the maintenance activities of Koha like upgrading when a new release arrives, regular backup of the database, and restore the database when a crisis happens. Upgrading from a very old version to a new one is a challenging task. Seek the assistance of an expert to recover the data from the old database and migrate to the latest version.

Exercise

1. Visit the koha-community.org website and find the latest and previous Koha version release announcement. Go through release notes.

For further reading

Koha backup
http://kohageek.blogspot.com/search/label/backup
CronHowto
https://help.ubuntu.com/community/CronHowto

Move old Koha database to new installation
http://kohageek.blogspot.com/search/label/Restore

Understanding Zebra indexing
https://wiki.koha-community.org/wiki/Understanding_Zebra_indexing

Get updates on Koha

Learning objectives

Introduce various resources to keep in touch with Koha developments.

Introduction

Koha is a community-owned project, and the development is fast. Always expect new changes in technical matters, features, and functions. Koha users need to keep in touch with the developments. Then only successful Koha management is possible.

Helpful resources

Following resources are helpful to learn new things and get updates on Koha:

Koha Home page

The home page of the Koha ILS project is http://koha-community.org. Koha home page is a comprehensive information portal. User can find the following resources at the Koha home page:

Koha documentation: It contains complete Koha user manuals in various languages. User manual covers all Koha modules with screenshots. Previous FAQs merged with the user manual. URL: https://koha-community.org/documentation.

Koha Community Newsletter: The monthly newsletter discusses the latest developments, news, tips, coming, and past events.

Release notes: It lists out all features and changes available with the latest versions of Koha.

Following are the other places where Koha users get valuable information.

Bugzilla

Koha users can report bugs (software errors) and suggest new features.
URL: https://bugs.koha-community.org

Koha Wiki

Installation manuals and other tutorials available with Koha Wiki.
URL: https://wiki.koha-community.org

Koha DB schema

Koha database schema is made available to the public and is helpful to know the database structure, table, and field names. The information on database structure is useful at the time of report making.
URL: http://schema.koha-community.org.

Vimeo channel

Videos, tutorials, and other information from Koha users.
URL: https://vimeo.com/channels/kohails

Koha newbie guide

This newbie guide was created by B.W. Johnson. Little bit old one, but useful to get an overview of the Koha workflow for beginners.
URL: http://staff.washington.edu/rmjost/Kohanewbieguide.pdf

Koha Demo

Koha home page listed out demo instances for learners.
URL: https://koha-community.org/demo/

Koha mailing lists

Koha projects maintain different email lists for various purposes. The general mailing list is an excellent platform to interact with developers and users together. Users can put queries and receive answers from users and experts. Archives of the email discussion forums act as a useful reference source.
URL: https://koha-community.org/support/koha-mailing-lists/

Koha Users

There is an active Facebook group for Koha available. Answer the questions regarding Koha, to join the group.
URL: https://www.facebook.com/groups/475420505905835/

Koha Library System Project

The official Facebook group of Koha users.
URL: https://www.facebook.com/groups/475420505905835/

Koha Education

ByWater Solutions, a Koha service provider, offers Koha learning materials.
URL: https://bywatersolutions.com/education

Blog@L2C2 Technologies

A blog started by L2C2 Technologies and Indranil Das Gupta. Indranil Das Gupta is a pioneer of Koha from India.
URL: http://blog.l2c2.co.in

Catalyst Blog

A blog discusses both Open Source and Koha things. Catalyst is an Open Source software service provider from New Zealand.
URL: https://www.catalyst.net.nz/about-us/blog

Koha Geek

Koha tutorials, tips and tricks discussed in this blog.
URL: http://kohageek.blogspot.in

Librarian 2.0

A blog maintained by Mahesh P Pandallur, a young library professional from Kerala, India. His blog is useful for Koha users to learn and try new things.
URL: http://libtechnophile.blogspot.com

An online manual of Open Source tools

A website that contains Koha learning materials. The website is maintained by D.P. Tripathi, Assistant Librarian, Biju Patnaik Central Library, National Institute of Technology Rourkela, Odisha.
URL: http://www.dptripathi.in/manual

Know Gate

Find various Koha tutorials and technical documents developed by NISCAIR.
URL: http://knowgate.niscair.res.in/blogs

Koha paid support

Libraries that need paid support can use the listing available at Koha official website. Users can find commercial vendors in their country.
URL: https://koha-community.org/support/paid-support

Conclusion

The resources mentioned in this unit are helpful to keep in touch with the developments in the Koha ILS project. Latest updates are essential to maintain Koha well in the workplace. Participating

in the community discussions and involving in Koha social media groups are useful to update the knowledge level.

UNITY SERVICES
Mundazhiyil, Vazhappally West PO
Changanacherry, Kottayam-686 103
Mob: 8547833736,
Email: subeeshgopinathan1990gmail.com
An SSI Unit (UDYAM-KL-07-0008008)

To
The Principal,
St.Joseph's College of Engineering and Technology,
Palai.

LIBRARY AUTOMATION WORK PROPOSAL

Sl.No.	Item	Description	Amount
1.	Koha ILS	Installation and configuration Daily automatic backup of Koha database to cloud storage Training to staff	
2	Data migration	Bibliographic data migration in CSV format to Koha: merging unique Biblio records, adding bulk punctuation marks and custom fields from the available data + classification number, fast subject heading if ISBNs are available. User data migration.	40000
3	Support	Two years of offline and online support (Since the bill date)	
	Grand Total **(Forty Thousand Only)**		40000 40000

Changanassery
15 September 2022

Subeesh Gopinathan
Proprietor
Unity Services,
Changanacherry
Mob: 8547833736
Email: subeeshgopinathan1990@gmail.com
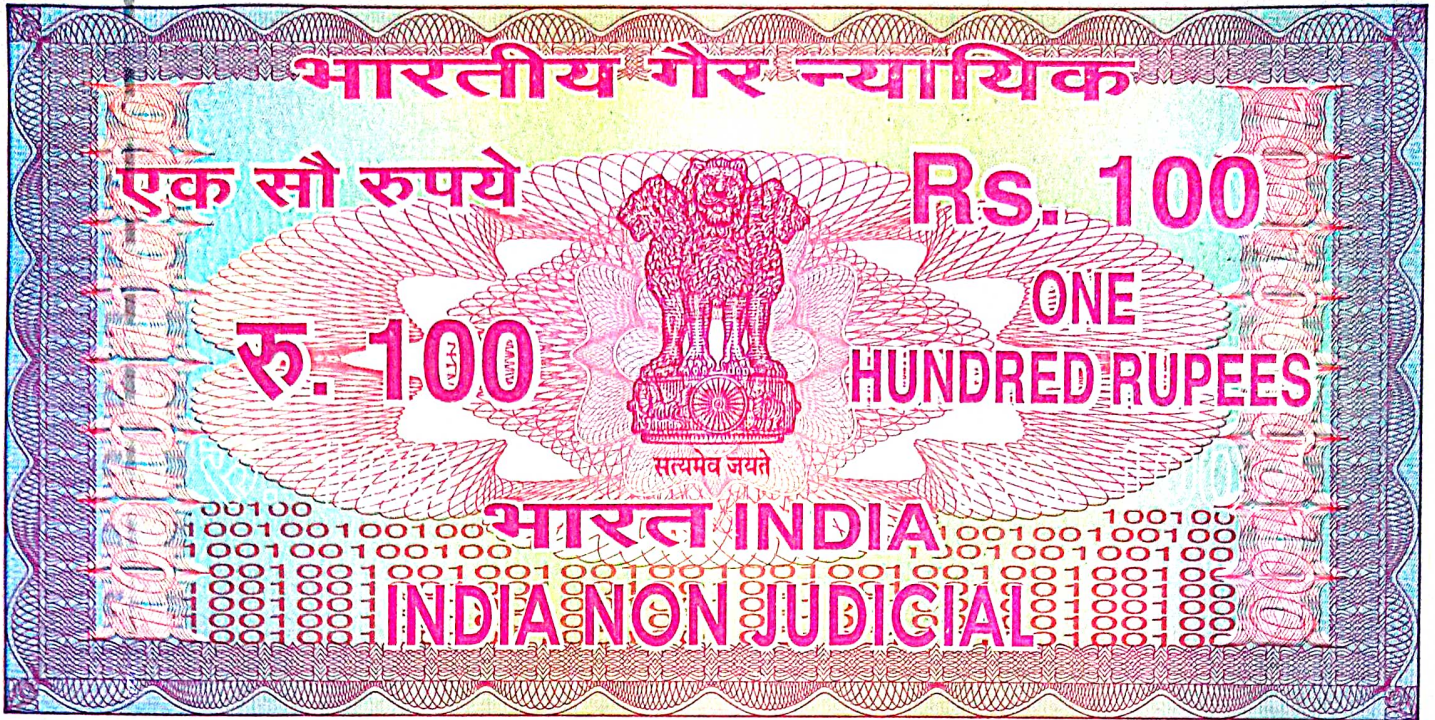
Memorandum of Understanding

1. This Memorandum of Understanding (MOU) is made on this date, the *7th December 2022* between St. Joseph's College of Engineering and Technology, Palai, having its office at Choondacherry P.O, Palai, Kottayam 686 579, (hereinafter referred to as **party-1**) and M/s Unity Services, represented by its proprietor, Subeesh Gopinathan, having its office at Mundazhiyil, Vazhappally West P O, Changanassery-686103 Mob: 8547833736 (herein after referred to as **party-2**).

2. **Party-2** is a firm dealing in customizing the needs of wide range of libraries specially focused on Library Automation Software Viz. Koha ILS (Koha Integrated Library Management System).

3. All communication shall be through-mail only.

4. The purpose of this MOU is to implement Koha ILS by mutually agreed terms and conditions.

5. Responsibility of Party-2 will be as follows:

a) To impart training to Staff both online and offline with respect to Koha ILS Software and to install and configure daily automatic backup of Koha database to the server of Party-1.

1

No. 9299 28/04/2022, Rs.100/-

പ്രിൻസിപ്പൽ സെന്റ് ജോസഫ് എൻജിനീയറിംഗ് കോളേജ് പാലാ.

MEENACHIL VENDOR
SHILPA K. SURESH

SUB TREAS.
28 APR 2022
MEENACHIL
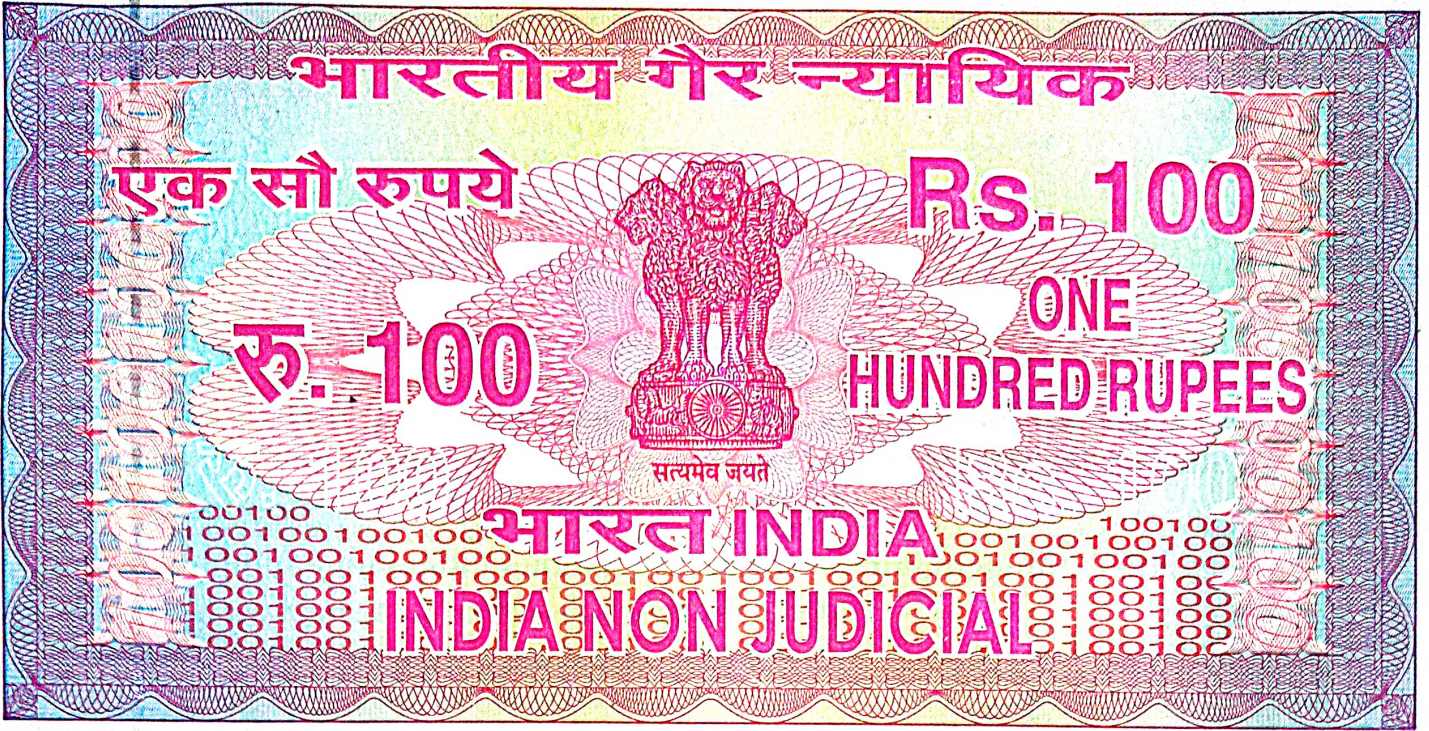
b) To implement Data Migration as per the details provided in the Offer letter dt. 15-09-2022 by the Paty-2 to Party-1, a copy of which forms integral part of this MoU.

c) To provide 2 Years' on line and offline support from the date of payment by the Party-2 to Party-1.

Payment Mode

a) **Payment Terms:** It is mutually agreed by both the Parties that theParty-1 shall pay the Party-2 an amount of Rs. 40,000/- (Rupees Forty Thousand only) after the successful implementation of the program and training to the staff, subject to the details provided in the Offer letter referred above.

b) **The Party-**2 shall raise an invoice on Party-1 for the amount referred above after the completion of the project as specified and the Party-1 shall pay such amount to the bank account of Party-2.

12.   Duration of MOU

a) This MOU shall be for a period of **Two Years** from the date of payment as referred above.

13.   Arbitration.

a) Any dispute arising with regard to any aspect of this Agreement shall be settled through mutual consultations and agreements by the parties to the Agreement.

2

No. 9296 28/04/2022, Rs.100/-

പ്രിൻസിപ്പൽ സെൻറ് ജോസഫ് എൻജിനീയറിംഗ് കോളേജ് പാലാ.

SUB TREASURY

2 8 APR 2022

MEENACHI

MEENACHIL VENDOR
SHILPA K. SURESH

b) **Clause of disclosure:** The party-1 and party-2 shall ensure that the data, processes and systems developed as part of this Library Automation Process shall not be disclosed to any other parties other than statutory authorities, if required. If done so by any of the parties, they will be liable for legal actions as per the provisions of the law.

IN WITNESS WHEREOF the parties hereto have executed this agreement on 07/12/2022 in the presence of witnesses who have put their signatures to this MOU.

For St. Joseph's College of Engineering and Technology,Palai,

Name: Dr. V P Devassia
Designation: Principal

Witness

1. Justine Thomas

2. Cenhl Jose

For Unity Services, Changanassery

Name: Subeesh Gopinathan
Designation: Proprietor

Witness

1. Fr. Geethu Mathew

2. Dr. Rahul Shajan

3

Circulation   Patrons   Search   ▾   🛒 Cart   More ▾

Centil | St Josephs College of Engineering and Technology ▾   Help

koha

Enter patron card number or partial name:

[   ]   Submit

Check out   Check in   Renew   Search patrons   Search the catalog

Home

News

LIBRARY STATISTICS		
Branch	Unique titles	Total Copies
MAIN	35042	62758

Quick Reports

- Accession Register
- Daily Issue
- Daily Return
- Books Due Tomorrow
- Today's Transaction
- Patrons With Most Checkouts

Posted on 04/11/2022 Edit | Delete | New

⇄ **Circulation**

▣ **Patrons**

🔍 **Advanced search**

🔍 **Item search**

▤ **Lists**

🔗 **Authorities**

🏷 **Cataloging**

📰 **Serials**

🎁 **Acquisitions**

◔ **Reports**

🔧 **Tools**

⚙ **Koha administration**

◗ **About Koha**

Circulation

Enter patron card number or partial name:

Submit

Check out Check in Renew Search the catalog

Home › Circulation

Circulation

Circulation

- ⬆ Check out
- ⬇ Check in
- ↻ Renew
- 🏠 Set library
- ➕ Fast cataloging
- 📍 Pending on-site checkouts

Holds

- ☰ Holds queue
- 🗨 Holds to pull
- 📅 Holds awaiting pickup
- 📈 Hold ratios

Transfers

- ⇄ Transfer
- ➦ Transfers to send
- ➥ Transfers to receive

Overdues

- 🕑 Overdues
- 🕑 Overdues with fines

Offline circulation

Upload offline circulation file (.koc)

Pending offline circulation actions

🖥 Get desktop application

🦊 Get Firefox add-on

Not secure | libadmin.koha.sjcetpalai.ac.in/cgi-bin/koha/catalogue/search.pl?idx=ti&q=digital+logic

Incognito

S SJCET PALAI | M Manorama Online :... | G Google | eLive Campus | Logi... | G Gmail | Library and Informa... | YouTube | etlab login | Login | Derwent Inn... | Koha staff interface

Circulation | Patrons | Search ▾ | 🛒 Cart | More ▾

Centil | St Josephs College of Engineering and Technology ▾ | Help

Koha

Enter search keywords:

| Title ▾ | digital logic | Submit |

Check out | Check in | Renew | **Search the catalog**

Home › Catalog › Search for 'ti,wrdl: digital logic'

Refine your search

Availability
Limit to currently available items

Authors
Arivazhagan, S.
Balabanian, Norman
Brown, Stephen
Carlson, Bradley
Comer, David J
Show more

Collections
Applied Electronics and Instrumentation Engineering
Computer Science and Engineering
Electrical and Electronics Engineering
Electronics and Communication Engineering
Master of Computer Applications

Item types
Books
Ebook
Reference

Locations
B-Tech
B-Tech (KTU)
MCA (KTU)
MCA (MGU)

Topics

Search results

77 result(s) found for 'ti,wrdl: digital logic'.

Edit this search

✔ Select all | ✖ Clear all | Unhighlight | 🛒 Add to cart | ≣ Add to list ▾ | 🖶 Place hold | 🔍 Z39.50/SRU search | ✎ Edit ▾ | Sort ▾

| **1** | 2 | 3 | 4 | Next › | Last » |

	Results	Location
	1. Advanced Digital Logic Design by Lee, Sunggu. Material type: 📄 Text; Format: print ; Literary form: Not fiction Publication details: New Delhi Cengage Learning ISBN: 9788131518489 Holds (0) | Add to cart | Edit record | Edit items	1 item, 1 available: 📖 St Josephs College of Engineering and Technology B-Tech (KTU) • 623.043 LEE/A **(1)** Books
	2. Digital Circuits And Logic Design by Lee, Samuel C. Material type: 📄 Text; Format: print ; Literary form: Not fiction Publication details: Phi Learning Holds (0) | Add to cart | Edit record | Edit items	1 item, 1 available: 📖 St Josephs College of Engineering and Technology B-Tech • 621.395 LEE/D **(1)** Books
	3. Digital Electronics And Logic Design by Itl Education. Material type: 📄 Text; Format: print ; Literary form: Not fiction Publication details: New Delhi Itl 2013	1 item, 1 available: 📖 St Josephs College of Engineering and Technology B-Tech (KTU) • 623.043 ITL/D **(1)** Books

Amazon cover image

No cover image available

No cover image available

Submit

Check out Check in Renew Search the catalog

Reports

Guided reports

⚑ Create guided report

➕ Create from SQL

☰ Use saved

Search by keyword:

[ ] Search

Reports dictionary

- View dictionary

Statistics wizards

- Acquisitions
- Patrons
- Catalog
- Circulation
- Serials
- Cash register
- Holds

Report plugins

- Report plugins

Top lists

- Patrons with the most checkouts
- Most-circulated items

Inactive

- Patrons who haven't checked out
- Items with no checkouts

Other

- Items lost
- Orders by fund
- Catalog by item type
- Average loan time
- Koha database schema
- Koha reports library

Koha administration

Share content with Mana KB?

You haven't decided if you want to activate Mana Knowledge Base. Change your Mana KB settings.

Global system preferences

Manage global system preferences like MARC flavor, date format, administrator email, and templates.

[   ] Search

Hint:

Configure these parameters in the order they appear.

Basic parameters

Libraries

Define libraries

Library groups

Define hierarchical library groups

Item types

Define item types used for circulation rules

Authorized values

Define categories and authorized values for them

Patrons and circulation

Patron categories

Define patron categories

Circulation and fines rules

Define circulation and fines rules for combinations of libraries, patron categories, and item types

Catalog

MARC bibliographic framework

Create and manage Bibliographic frameworks that define the characteristics of your MARC Records (field and subfield definitions) as well as templates for the MARC editor

Koha to MARC mapping

Define the mapping between the Koha transactional database (SQL) and the MARC Bibliographic records

MARC Bibliographic framework test

Checks the MARC structure. If you change your MARC Bibliographic framework it's recommended that you run this tool to test for errors in your definition

Authority types

Create and manage Authorities frameworks that define the characteristics of your MARC Records (field and subfield definitions)

Classification configuration

Define classification sources (i.e. call number schemes) used by your collection. Also define filing rules used for sorting call numbers and splitting rules for splitting them

Record matching rules

Manage rules for automatically matching MARC records during record imports

Record overlay rules

Managed rules for automatic overlay of MARC fields during record imports and updates

OAI sets configuration

Manage OAI Sets

Item search fields

Manage custom fields for item search

Not secure | libadmin.koha.sjcetpalai.ac.in/cgi-bin/koha/tools/tools-home.pl

SJCET PALAI Manorama Online :... Google eLive Campus | Logi... Gmail Library and Informa... YouTube etlab login Login | Derwent Inn... Koha staff interface

| Circulation | Patrons | Search | | 🛒 Cart | More ▾ |

Centil | St Josephs College of Engineering and Technology ▾   Help

![koha]

Enter search keywords:

Keyword ▾   [   ] Submit

Check out   Check in   Renew   **Search the catalog**

Home › Tools

Tools

Patrons and circulation

Patron lists
Manage lists of patrons

Patron clubs
Manage patron clubs

Comments
Moderate patron comments

Import patrons
Import patron data

Notices and slips
Define notices (print and email notification messages for overdues, etc.)

Overdue notice/status triggers
Set notice/status triggers for overdue items

Patron card creator
Create printable patron cards

Batch patron deletion and anonymization
Batch delete patrons and delete patron circulation history

Batch patron modification
Modify patrons in batch

Batch extend due dates
Modify the due date checkouts in batch

Tags
Moderate patron tags

Upload patron images
Upload patron images in a batch or one at a time

Catalog

Batch item deletion
Delete a batch of items

Batch item modification
Modify items in a batch

Batch record deletion
Delete a batch of bibliographic or authority records

Batch record modification
Modify a batch of bibliographic or authority records

Automatic item modifications by age
Define rules to modify items by age

Export data
Export bibliographic, holdings, and authority records

Inventory
Perform inventory of your catalog

Label creator
Create printable labels and barcodes from catalog data

Barcode image generator
Configure and create barcodes of various types to be output as an image

Quick spine label creator
Enter a barcode to generate a printable spine label. For use with dedicated label printers

Rotating collections
Manage rotating collections

MARC modification templates

Additional tools

Calendar
Define days when the library is closed

CSV profiles
Manage CSV export profiles

Log viewer
Browse the system logs

News
Write news for the OPAC and staff interfaces

HTML customizations
Write HTML customizations

Task scheduler
Schedule tasks to run

Quote editor
Manage 'Quote of the day' quotes

Upload
Upload any type of file, manage uploads

Access files
Access files stored on the server, like log files or reports

Patron details for Mr Justine Thom... ×   Manorama Online : Breaking Nev ×   eLive Campus | Login | SJCET ×   +

Not secure | libadmin.koha.sjcetpalai.ac.in/cgi-bin/koha/members/moremember.pl?borrowernumber=10

Incognito

S SJCET PALAI   Manorama Online :...   Google   eLive Campus | Logi...   Gmail   Library and Informa...   YouTube   etlab login   Login | Derwent Inn...   Koha staff interface

koha

Circulation   Patrons   Search   ▾   🛒 Cart   More ▾

Centil | St Josephs College of Engineering and Technology ▾   Help

Enter patron card number or partial name:

[-] [+]   Search

Search patrons

Home › Patrons › Patron details for Mr Justine Thomas (02LID001)

Mr Justine Thomas (02LID001)

Kizhakkethottam Poonjar Po Kerala
Kottayam 686581
686581
9447694464
librarian@sjcetpalai.ac.in
Born: 14/05/1975 (47 years)
No city stored.
Category: Library Staff (LIB)
Home library: St Josephs College of
Engineering and Technology
Borrowernumber: 10
Updated on 09/01/2023 12:13

Check out

Details

Accounting

Routing lists

| ✎ Edit | 🔒 Change password | 🗐 Duplicate | 🖶 Print ▾ | 🔍 Search to hold | 💬 Add message | More ▾ |

Mr Justine Thomas (02LID001)

Contact information   ✎ Edit

Kizhakkethottam Poonjar Po Kerala Kottayam 686581
686581

Primary phone:	9447694464
Primary email:	librarian@sjcetpalai.ac.in
Date of birth:	14/05/1975 (47 years)
Gender:	Male
Show checkouts to guarantor	No
Show fines to guarantor	No

Patron messaging preferences   ✎ Edit

	Days in advance	Email	Digests only ⓘ
Item due	-	☑	☑
Advance notice	2 ▾	☑	☑
Hold filled	-	☑	-
Item check in		☑	

Library use   ✎ Edit

Card number:	02LID001
Borrowernumber:	10
Category:	Library Staff (LIB)
Registration date:	14/05/1975
Expiration date:	31/03/2052
Library:	St Josephs College of Engineering and Technology
Sort field 1:	Library
Sort field 2:	Librarian Grade I
Username:	Justine
Password:	*******
Password expires:	Never

Alternate address   ✚ Add

Alternative contact   ✚ Add

Add MARC record › Cataloging › ✕ | Manorama Online : Breaking New ✕ | eLive Campus | Login | SJCET ✕ | +

Not secure | libadmin.koha.sjcetpalai.ac.in/cgi-bin/koha/cataloguing/addbiblio.pl?frameworkcode=

SJCET PALAI | Manorama Online :... | Google | eLive Campus | Logi... | Gmail | Library and Informa... | YouTube | etlab login | Login | Derwent Inn... | Koha staff interface »

Circulation   Patrons   Search   🛒 Cart   More ▾

Centil | St Josephs College of Engineering and Technology ▾   Help

Home › Cataloging › **Add MARC record**

Add MARC record

💾 Save ▾   🔍 Z39.50/SRU search   ⟳ Link authorities automatically   ⚙ Settings ▾   Cancel

| **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |

000 001 003 005 006 007 008 010 015 016 020 022 024 027 028 035 037 040 041 045 047 048 050 074 082 086

Section 0

000 ? - LEADER 🗙
≡ 00   fixed length control field   [_____]   *Required* ⊡

001 ? - CONTROL NUMBER 🗙
≡ 00   control field   [_____]

003 ? - CONTROL NUMBER IDENTIFIER 🗙
≡ 00   control field   [_____]   *Required* ⊡

005 ? - DATE AND TIME OF LATEST TRANSACTION 🗙
≡ 00   control field   [_____]   *Required* ⊡

≡ **006** ? - FIXED-LENGTH DATA ELEMENTS--ADDITIONAL MATERIAL CHARACTERISTICS--GENERAL INFORMATION 🗗 🗙

≡ **007** ? - PHYSICAL DESCRIPTION FIXED FIELD--GENERAL INFORMATION 🗗 🗙
≡ 00   fixed length control field   [_____]   ⊡

008 ? - FIXED-LENGTH DATA ELEMENTS--GENERAL INFORMATION 🗙

FO/Koha/SJCET /60/22-23   24-11-2022

M/S UNITY SERVICES

Mundazhiyil, Vazhappally West P O

Changanassery, Kottayam-686103.

Dear Sirs,

Sub: Implementation of Library Automation Software

Ref: Your Proposal Dt. 15-09-20\22

Further to the above proposal cited, kindly recall the mutual discussion you had with our College authorities on 03-11-2022 regarding the implementation of   Koha ILS Software.

As agreed upon in the above meeting, you are requested to sign an MoU with our College as per the clauses in your proposal and commence the implementation of the Software at the earliest.

Thanking You,

Yours faithfully,

(PRINCIPAL)