



## Study on Circulation Module of Koha & SOUL2.0

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**ABSTRACT:** The present paper is a study of two widely used ILM (Integrated Library Management) software i.e. SOUL2.0 and Koha. Different features of circulation module available in both software packages i.e. SOUL2.0 and Koha are discussed here. Through comparative study, it aims to find out strengths and weaknesses of the two software so far as circulation module is concerned. It is an experimental study and researcher gets findings by practicing both software in own PC (Personal Computer). It is found that the variations of practice of different modules in both software. A proper channel is to be evolved so that the users as well as management are able to get guidance for streamlining the library activities in proper perspective. The study also finds that more features related to circulation module are integrated to Koha LMS as compared to SOUL2.0.

**Keywords:** Circulation, Library management software, Koha, SOUL2.0.

### I. INTRODUCTION

In the present hi-tech society like other institution, libraries must be automated for providing easy and effective services to the user community. According to Singh and Singh (2015) [7] "Library automation enhances the operations and services of the library. It shows automation can improve the library's relevance to the academic community". In this automation (Library) concept LMS (Library Management Software) is playing an important role. Library management software (LMS) has been developed to handle basic housekeeping functions of a library. Housekeeping operations of a library include acquisition of documents, technical processing like cataloging, circulation, serials control, inter library loan etc. Circulation module of an LMS generally deals with activities like membership management, issue and return of the books/documents, reservation of books, fine processing, etc. One of the important challenges of the librarians while working in an automated library is to provide impactful services to the users. In circulation section also various processes like- membership entry, transaction process, book reservation, fine calculation etc. must be convenient for the staff as well as user of the library. During the study, researcher finds that not any inclusive study has done on circulation module of two LMS i.e. Koha & SOUL2.0 till date. The present study is based on the experimental observation of the researchers on circulation module of the two software. The study includes all features of circulation module available in the two, software, comparison of two software on circulation module, analysis etc. Depending on the study user will be benefitted by earning knowledge on uses of circulation module of two software and developer can also updated functioning of circulation module of the two software if necessary, for the benefit of the user.

OSS (open source software) is preferred by most of the library around the globe and in India also recently public libraries and college libraries are adopting globally competitive library software like Koha in their respective libraries.

According to Abdussalam and Saliu (2014) [1] "Koha was initially developed in New Zealand by Katipo Communications Ltd and first deployed in January of 2000 for Horowhenua Library Trust. It is a full-featured open source integrated library software (ILS). Koha is currently maintained by a team of software providers and library technology staff from world over". For installation of Koha, needs OS Linux (Fedora, Ubuntu etc). For web server "Apache" is required. Koha stored data in MYSQL database and uses Perl language. Acquisition, cataloguing, circulation, serial control, report, administration are the basic modules available in Koha.

The Information and Library Network (INFLIBNET) has designed and developed an integrated library management software for library automation which is known as a SOUL. SOUL is proprietary software and it is designed with client server architecture. Having the name as Software for University Libraries this software is not only suitable for university libraries but also for all type and size of libraries including college and school libraries too. The first version of this software was released under CALIBER 2000. The database of the SOUL 1.0 is designed on MS-SQL and is compatible with MS SQL Server 7.0 or higher. The latest version of the software i.e. SOUL 2.0 was released in 2008. The database for new version of SOUL is designed for latest versions of MS-SQL and MySQL (or any other popular RDBMS).

### II. OBJECTIVES

The main aim of the study is to identify various functions available in circulation module of both Koha and SOUL2.0 software and make a comparison between them. Following are the main objectives of the study-

— To know about the circulation module of Koha and SOUL2.0.

— To make a comparative study of various features related to circulation operation of Koha and SOUL2.0.

### III. COVERAGE

The purpose of the study is to analyze different prospects related to circulation module of SOUL & Koha. During the study, SOUL version 2.0 and Koha version 3.14 is taken for analyze which are used in offline mode only. In the study, the researcher uses particular versions of both software for the experiment. This will help to bring out and identify specific issues or problems which helped in the study main.

### IV. LITERATURE SEARCH

Chattopadhyay and Mukhopadhyay (2016) [2] "Circulation systems are designed to capture and manipulate three kinds of datasets i.e. information about the borrower (Name, Address, Category and Membership No), information about the borrowed documents (Bibliographic information, item information i.e. reference copy, number of available copies, status of the document i.e. Lost, Damaged, Hold etc.) and information about the rules for loan (fixing Issue date, Return date, etc.)". Deka and Ahmed (2017) [4] in their paper stated that circulation is the desk for transaction of library resources. With a table, the authors have pointed out available features of circulation module of

both the software. According to them, with some extra ordinary facility Koha is more user friendly than SOUL in case of circulation module. Vimal Kumar and Jasimudeen (2012) [8] stated that "Koha's circulation process is time saving and it helps to complete the circulation transactions with ease. Circulation module options are attached to the universal task bar and library staff can easily switch to check in or check out of library resources during other works".

### V. CIRCULATION MODULE OF KOHA AND SOUL2.0

Koha circulation module has lots of functions for multiple operations. "Circulation functions can be accessed in several different ways" Circulation—Koha Manual 17.05 documentation (2020) [3]. Except issue and returns here some other activities like transfer of books from one library to another library, create new library, fast cataloging of newly added documents, offline circulation, circulation report generation etc. can be done. The whole features of circulation module of Koha are divided into 3 categories:

- Circulation
- Offline circulation and
- Circulation reports

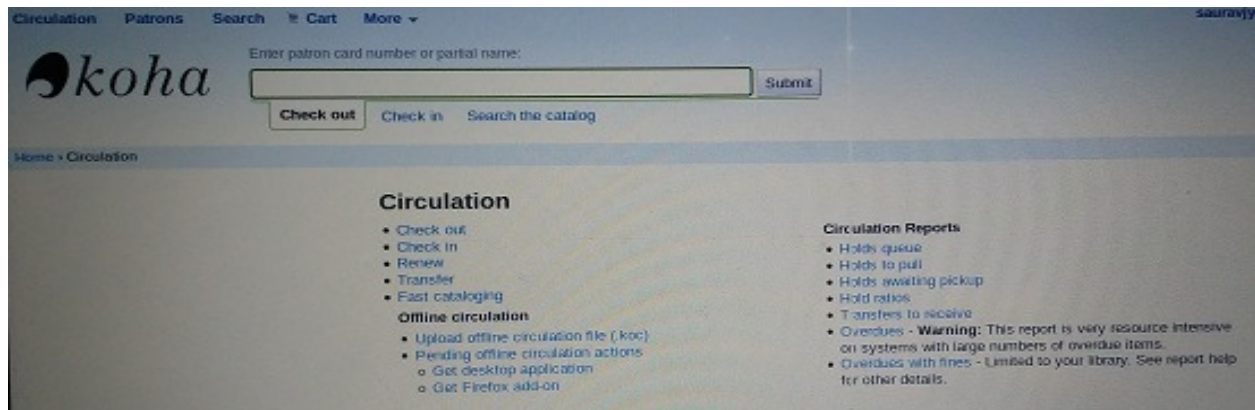


Fig. 1. Circulation module of Koha.

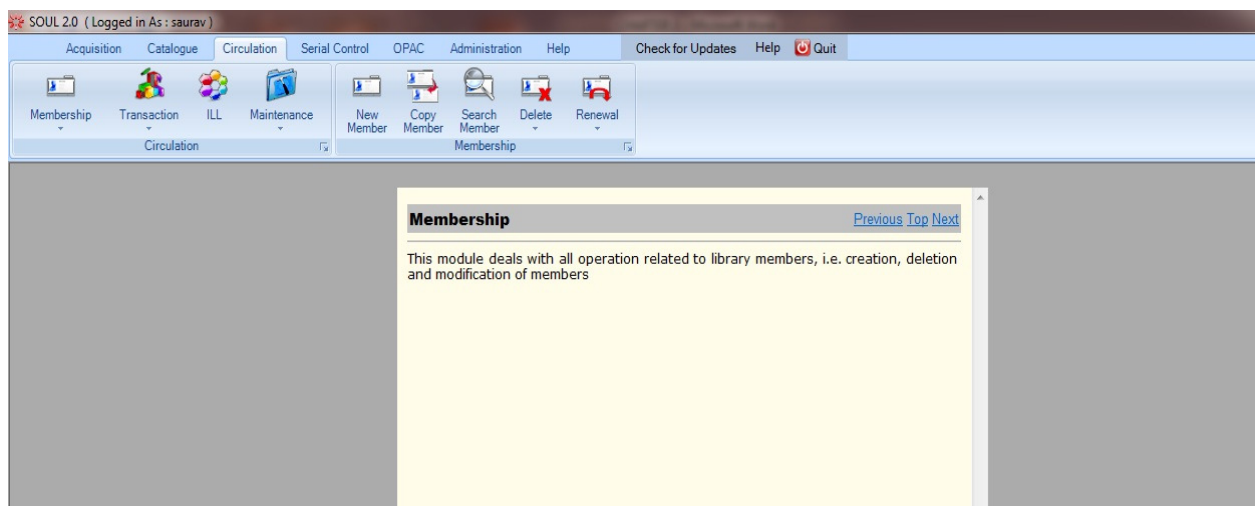


Fig. 2. Circulation module of SOUL2.0.

"Circulation module takes care of all possible functions of circulation. Sufficient care has been taken in designing this module starting from membership management, maintenance and status of library items, transaction, ILL, overdue charges, renewals &

reminders, search status and report generation according to the status of the items. The circulation module is fully compliant with the NISO Circulation and Interchange Protocol (NCIP) version 2.0 for electronic surveillance and RFID based transaction of the items"-

SOUL2.0 Modules (2020) [6]. Four (4) different sub-modules are available in circulation module of SOUL2.0

- Membership
- Transaction
- ILL
- Maintenance

#### A. Membership Process

**(i) Membership Entry:** Membership entry/registration is the primary task for circulation of books/documents in a library. New member can be registered through circulation module in SOUL2.0 but in Koha membership can be done in administration module. Koha administrator creates patron category and accordingly will be entered. It will be benefitted for the library but according to Chattopadhyay S. and Mukhopadhyay, C. (2016) [2] when list of patron category becomes very long it may become difficult to handle. In SOUL2.0 member can be added through “New Member” module. Personal information, contact information, picture,

guarantor information (optional) can be added here. Before that, some important information like – Institute details, Department, Course/designation etc. need to submit. The member code is generated automatically after pressing “save” button. For member ID we have to enter a unique ID and all transaction can be done by using member ID also. Member ID can't be generated automatically in SOUL2.0.

**(ii) Patron/Member Customization:** Though patron creation facility is not a part of circulation module of Koha, but details of existing patron can be edited in this module. As multiple functions can be operated from a single platform in Koha, membership customization can also be done through circulation module. At the time of check out of library items to a patron, customization of membership details of that particular patron can be done. Group patron deletion or renewal is not available in this module. Again, ‘No due certificate’ cannot be issued through circulation module of Koha.

Fig. 3. Membership entry form of SOUL2.0.

Fig. 4. Customization of patron in Koha.

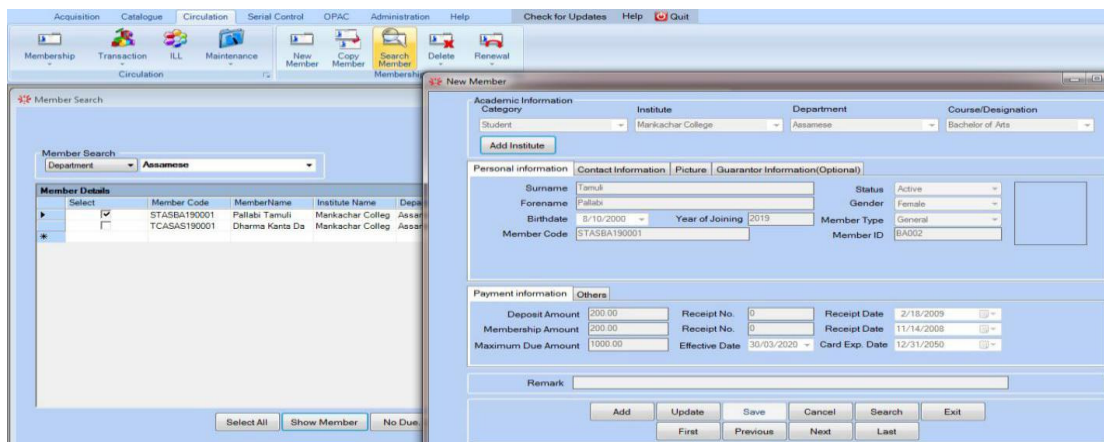


Fig. 5. Membership customization in SOUL2.0

To customize existing member in SOUL 2.0, click 'Search Member' option of Membership sub-module and follow the below mentioned procedure-

Circulation=> Membership=> Search Member=> (select member)=> Show Member=> Update

At the time of updating of membership some fields cannot be edited-

- Academic information category
- Institute
- Department
- Course/Designation and
- Member code

In SOUL2.0 membership can be renewed or deleted by group or individually in 'Delete' and 'Renewal' options respectively.

When a user wants to change his/her course, department in SOUL 2.0, through "copy member" field, a new member code can be generated for that particular member by replacing old one. First, do copy the old system generated member code of the user and change

all academic information, give a new member code, fill up all details of that user as shown in Fig. 6.

### B. Transaction Features

**(i) Check In and Check Out Process of Koha and SOUL2.0:** In Koha, transaction facilities are included in circulation module. By entering patron card number or partial name in check out search box, the check out page of that particular patron will appear. After that by entering barcode no. of the book, check out can be done. All details of item(s) issued to particular user can be seen by clicking "Show Checkouts" button. Due date, fine, location of the item, renew etc. information are available in that page. Automatic renewal facility is available in Koha. In Koha, check in/ return can be done in two ways. Firstly, in check out details, there is a "Check in" button and we can select an item for check in or we can return all items. Again secondly, at the 'Check in' page of circulation module put the barcode of returned item for check in and click "Submit" button.

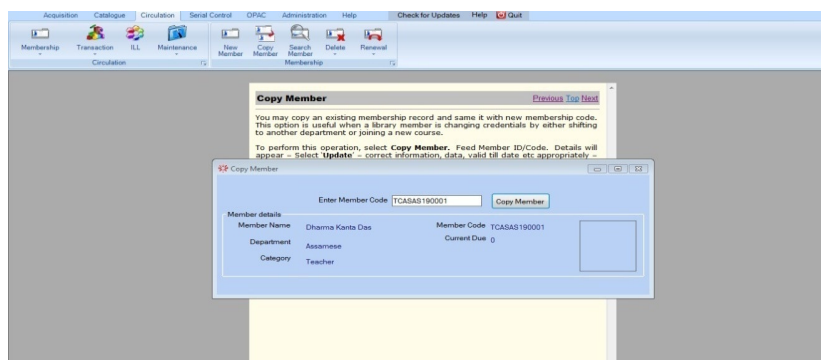


Fig. 6. Copy and edit membership in SOUL2.0.

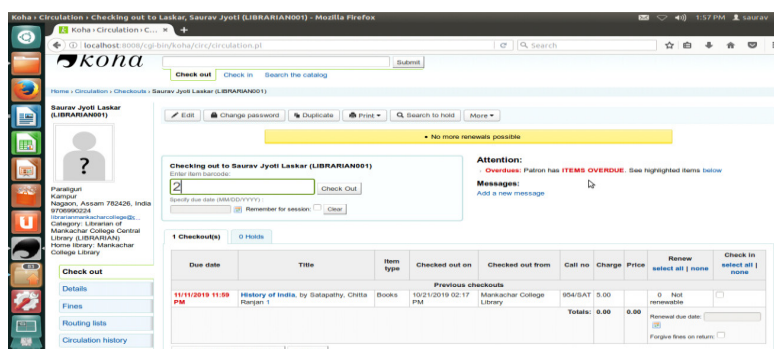


Fig. 7. Check out books to patrons in Koha.

In SOUL2.0, issue and return can be done through transaction menu. To issue an item, member code and accession no. of particular book is required and by clicking "Issue" button in the right side of transaction menu or pressing F3 in computer keyboard, an item can be issued. Details of item issued by that particular member will be displayed in issue section of bottom of

the transaction menu. Again, after putting member code, details of issued items by that particular member are appeared in below and we can select the item which user wants to return and after clicking "Return" button or pressing F4 in keyboard the selected item can be check in. Renew facility is also available in SOUL2.0 also.

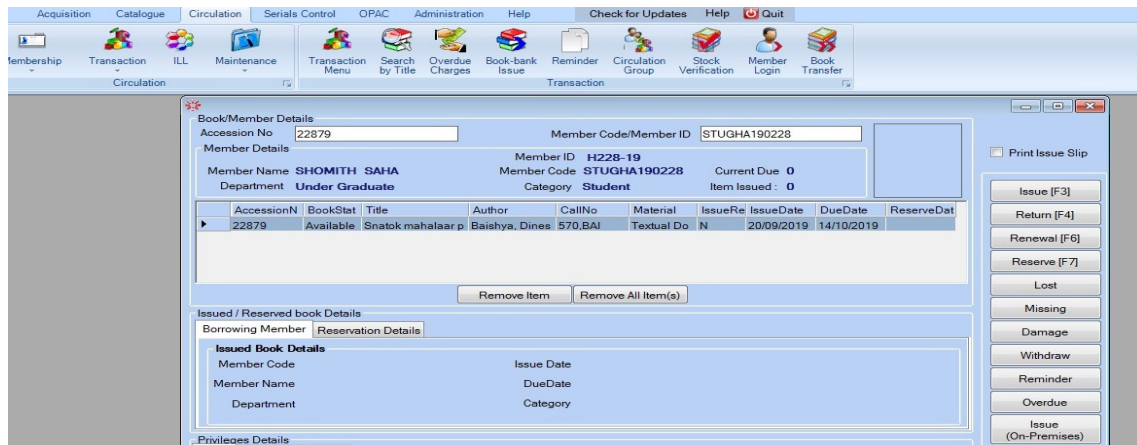


Fig. 8. Transaction menu of SOUL2.0.

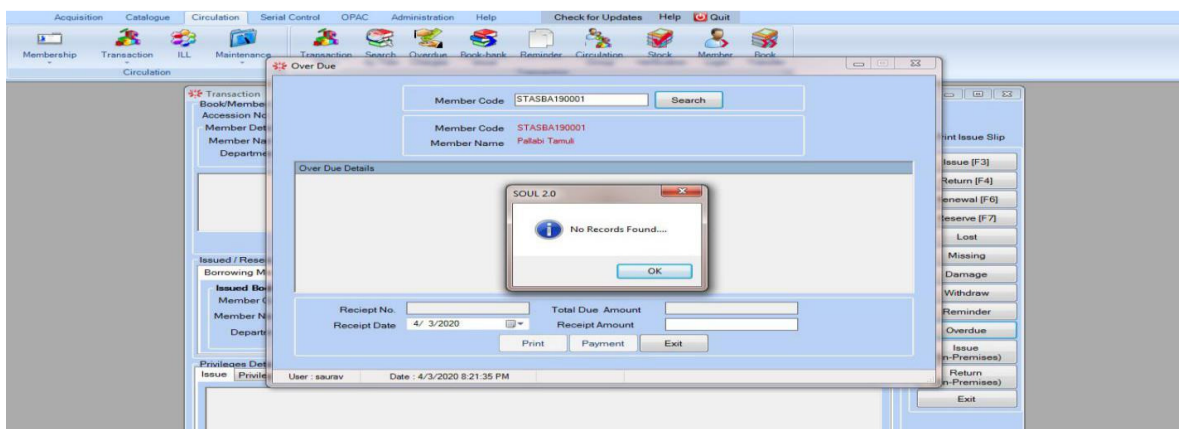


Fig. 9. Overdue charges menu of SOUL2.0.

(ii) **Overdue/Fine.** In Koha, check out will be disabled if a patron has reached the maximum fine amount, or tends to cross the maximum borrowing capacity of documents to be issued.

In SOUL 2.0, overdue charges report can be generated in 'Overdue Charges' menu. This can be displayed in two (2) ways-

Circulation=> Transaction=> Transaction Menu=> Overdue

Or

Circulation=> Transaction=> Overdue Charges

In the 'Overdue Charges' menu, by entering member code, we can search whether the member has overdue against item(s) or not. Payment can be done if any member has overdue charges and payment receipt can be generated after payment of overdue amount.

(iii) **Hold or Reservation Facility:** In Koha, to hold an item to user there is another option available in the check out page, i.e. "Search to hold". Through that features an item can be hold for a user for a specific period so that in later user can issue that hold item.

In SOUL2.0 reservation of an item can be done in transaction menu. After entering accession no. and

member code, particular item can reserved by clicking "Reserve" button or pressing F7 in keyboard.

(iv) **Book Transfer:** Sometimes the parent library wants to transfer a group of items to its branch library. When it is done, we can see the new location of transferred items in catalogue. In circulation module of Koha, there is a separate 'Transfer' option through which holding location in catalogue can be changed. Set the name of the branch where we are sending the items, select the library from drop down menu and enter the accession number / barcode number of the document, finally submit. After log in the branch library, the transfer item can be received in circulation module-

Circulation=> Circulation Report=> Transfer to receive  
In SOUL2.0 also there is an option i.e., "Book transfer" to change location of item from one library to another. Here, we have to select source library, destination library, then enter the transfer date and accession no. By clicking, "Transfer" the item(s) can be transferred to branch library and similarly by clicking 'Receive' the item(s) can be received from the main library.

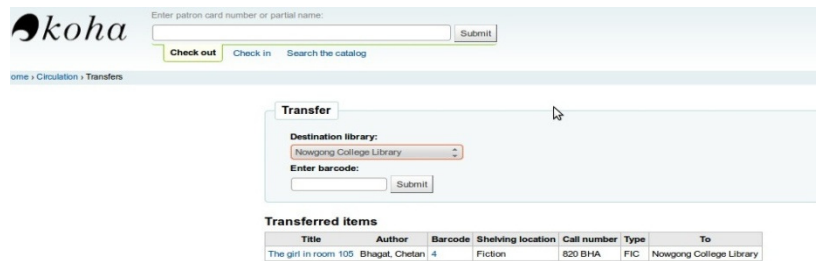


Fig. 10. Item transfer feature in Koha.

(v) **Stock Verification:** Stock verification is very important to verify the library resources. Considering the large collection available in the libraries, the process has been designed. In Koha, stock verification is not a part of circulation module. But the option available in Tools module (Tools=> Catalog=> Inventory/Stocktaking).

In SOUL2.0 stock verification can be done in circulation module.

Firstly, by entering accession no. manually with shelving location, library stock can be verified. Secondly, import accession no. directly in .csv format which contains

accession number of documents whose availability has been verified.

(vi) **Book Bank Features:** This option will allow issuing library material to any category/type of member for the whole academic year – such transactions are treated as Book Bank Issue. SOUL2.0 has this feature in circulation module (Circulation=> Transaction=> Book-bank issue). In Koha, book bank feature is not part of circulation module. But a 'book bank' bibliographic framework can be added in administration module of Koha and items can be added through this framework and service can be provided to the poor category students/users.

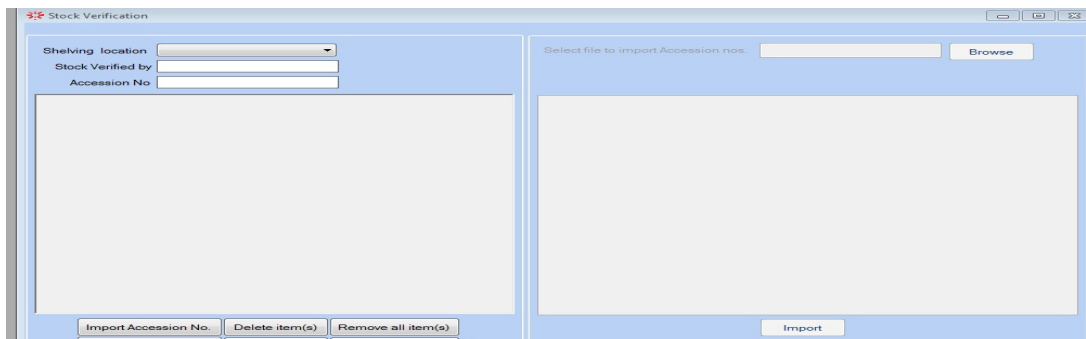


Fig. 11. Stock Verification page in SOUL2.0.

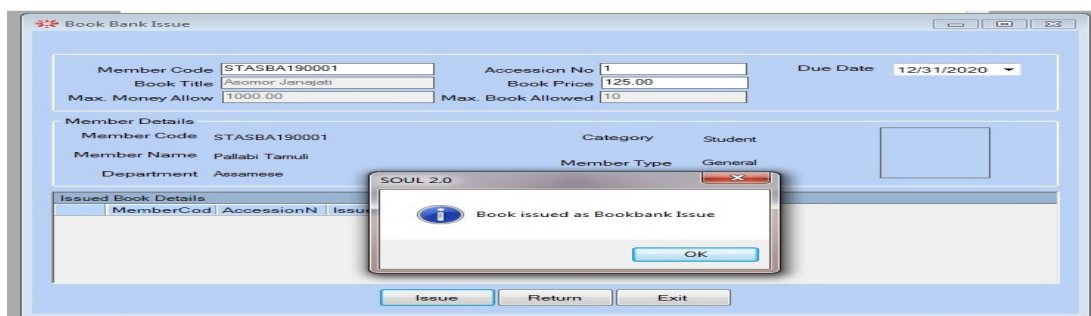


Fig. 12. Book bank facility in SOUL2.0.

(vii) **Inter Library Loan Service:** ILL is one of the effective services of any library. Circulation work can be practiced between two libraries through ILL. Pruett and Choi (2013) [4] mentioned that the inter library loan function is missing from Koha. They further recommended that libraries using Koha may choose other software and services to fulfill inter library loan. Through ILL two member libraries can share their resources effectively. ILL facility is not available in circulation module of Koha. A generic ILL module was added to Koha inversion 17.11.0. A generic framework can be created for implementing different ILL work flows

and protocols in Koha. This implementation will take the form of different 'back ends'.

In SOUL 2.0 two types of ILL facilities available-

- (a) Borrowing Book
- (b) Lending Book

Steps involved in borrowing books from other library-

- Fill up details in "Request" field.
- Send request letter to ILL member library.
- Receive ILL item from ILL member library.
- Provide arrival information to user.
- Issued ILL item to the library user.
- Send reminder letter to the user to return ILL item.
- Return ILL item to the ILL member library.

- Generate ILL reports
- Steps involved in book lending to other library-
- Receive request from member library
- Search the requested item and issue if available

- Send issue report and send reminder for overdue items to the member library through mail.
- Receive the returned items and prepare the report of landed books.

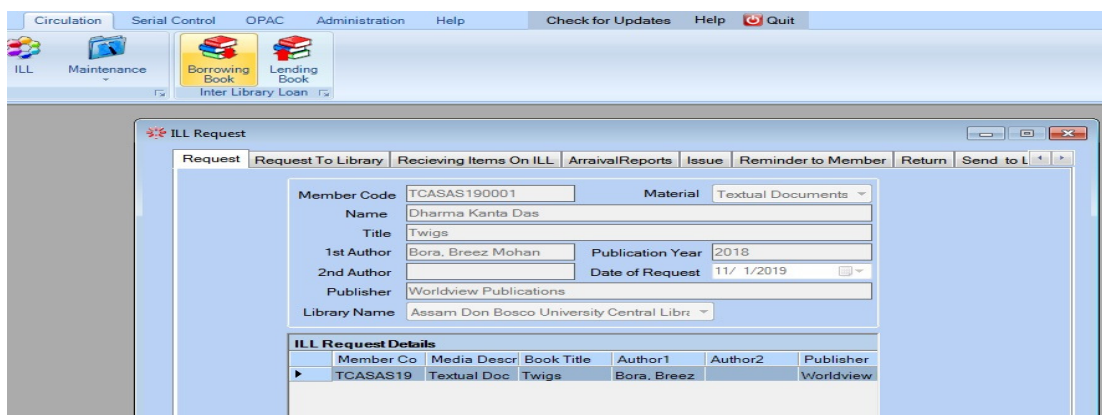


Fig.13. ILL page in SOUL2.0.

## VI. ADDITIONAL FEATURES IN KOHA & SOUL2.0

### A. Offline Circulation

Offline circulation is a unique feature available in circulation module of Koha. Through this feature circulation can be done from client machine without server network. There is an application which can be used to check in/out the record through off-line circulation interface. In SOUL2.0, no offline circulation facility is available.

### B. Fast Cataloging

It is another advanced feature available in Koha LMS. Sometimes, library staffs are facing some emergency situation as they have to issue a book to user which is not cataloged till that date. In that time, 'Fast cataloging' will help the library staff. It is nothing but a bibliographic framework where important and mandatory MARC tags are available in a single page. SOUL 2.0 has no fast cataloging facility in its circulation module.

### C. Print Slip

In Koha, after checking out an item to patron, issue slip can be generated & printed through "print quick slip" & "Print slip" option. This option is available in "Check Out" menu.

In SOUL2.0, the option "Print issue slip" available in "Transaction" menu and from that issued item slip can be generated.

### D. No Due Certificate

At the time of expiry of membership, the no due certificate is issued to member for library clearance. In SOUL2.0, this feature is available in the 'Membership' sub-module of Circulation module. This option can be used in two (2) ways-

Circulation=> Membership (drop down menu)=> No Due Certificate

Or

Circulation=> Membership=> Search Member=> No Due Certificate

This facility is not available in Circulation module of Koha.

### E. Member Card Creation

Member card can be generated in circulation module of SOUL2.0. This feature is available in the drop down menu of 'Membership' sub-module. With the available format designed in administration module membership card can be prepared by entering required information. This feature is not a part of circulation module of Koha, but it is available in other module of that software.

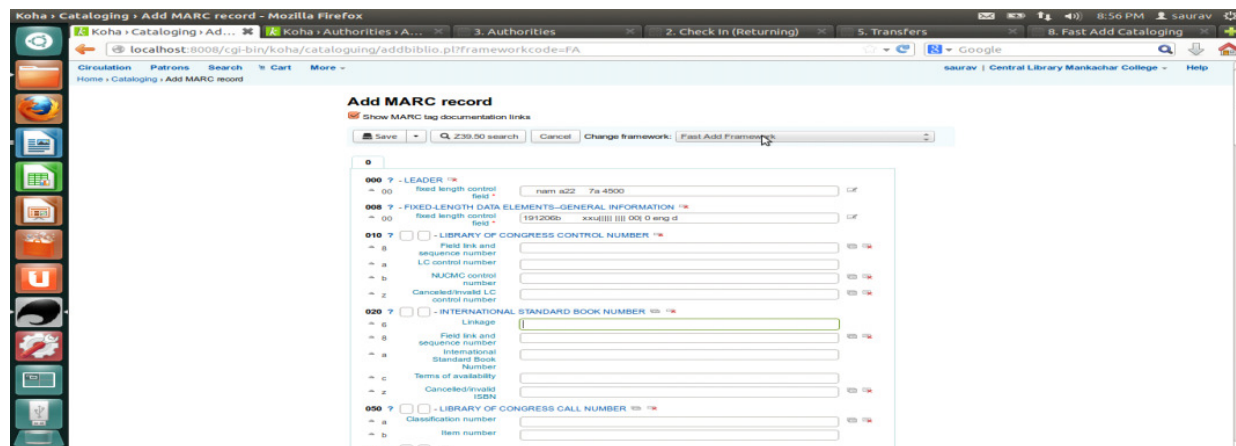


Fig. 14. Fast cataloging framework in Koha.

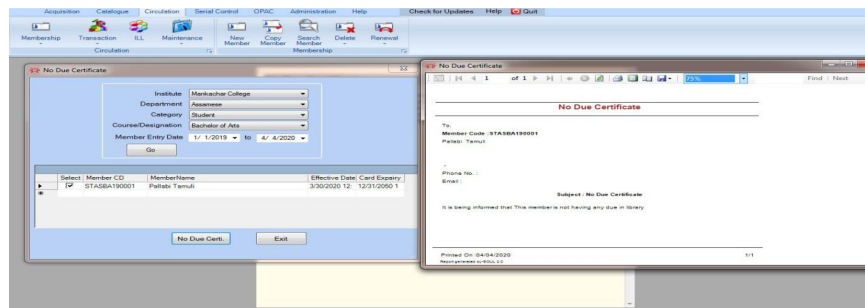


Fig. 15. No due certificate feature in SOUL2.0.

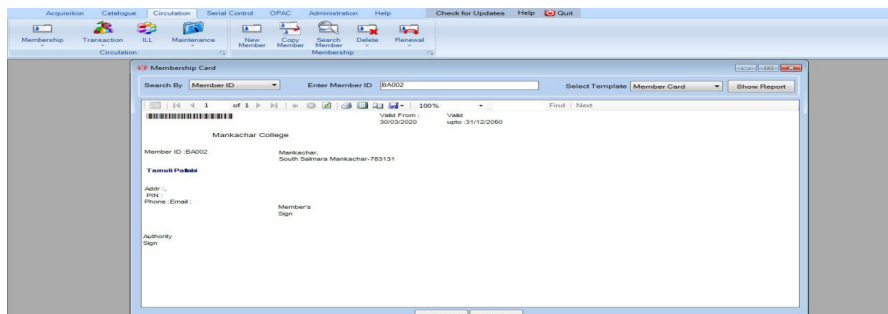


Fig. 16. Membership card generation in SOUL2.0.

## VII. COMPARISON OF FEATURES OF CIRCULATION MODULE OF KOHA & SOUL 2.0

Some basic features related to circulation module of SOUL2.0 & Koha identified by the researchers are discussed above, which are mentioned in the Table 1: From the Table 1, it is observed that among seventeen (17) features, circulation module of Koha has ten (10) features but sixteen (16) features are available in other

modules of Koha. On the other hand, circulation module of SOUL 2.0 has fourteen (14) features among those seventeen (17) important features related to circulation operations and three (3) important features are not available in the whole software. So, Koha has maximum numbers of features which are part of circulation process as compared to SOUL 2.0.

Table 1: Various features related to circulation operation of Koha and SOUL2.0.

S.No.	Features	Koha		SOUL2.0	
		Available in the software	Whether available in circulation interface	Available in the software	Whether available in circulation interface
1.	Patron Registration or entry	√	X	√	√
2.	Patron Customization	√	√	√	√
3.	Renewal/ Delete Membership	√	√	√	√
4.	No due certificate	X	X	√	√
5.	Member card creation	√	X	√	√
6.	Issue/ Return/Renewal of books	√	√	√	√
7.	Reservation of items	√	√	√	√
8.	Item damage/lost status	√	X	√	√
9.	Fine Calculation	√	√	√	√
10.	Transfer library (branch) items	√	√	√	√
11.	Offline Circulation	√	√	X	X
12.	Circulation Report Generation	√	√	√	√
13.	Slip generation/ Print	√	√	√	√
14.	Book Bank	√	X	√	√
15.	Stock Verification	√	X	X	X
16.	Inter Library Loan	√	X	√	√
17.	Fast Cataloguing	√	√	X	X

## VIII. CONCLUSION

Integrated Library Management Software are designed in a specific way so that they can operate library housekeeping functions smoothly. Numbers of libraries using ILM software are increasing day-by-day. We can say that, in case of fully automated library, ILM software is the soul of the library.

During transaction at circulation section of a library, user directly interacts with library staff. The present discussion is made through in hand practice and observation of circulation module of both software packages. The analysis helps to know more details about Koha and SOUL2.0. Koha is considered as first and best ILM (Integrated Library Management) software from open source platform. Koha is user-friendly and



cost effective which makes more challenge to the commercial software like SOUL2.0. Again, Koha is updating its version by time to time, but SOUL was not updated from 2009 when SOUL2.0 was released in that year. From the study, it is observed that Koha is more user-friendly than SOUL2.0 in case of search facilities. SOUL2.0 has all circulation related features in the circulation module, while some important features are not merged in circulation module of Koha. Koha has some unique features like fast cataloging, offline circulation which are not available in SOUL2.0 so far as circulation module is concerned. Again, 'book bank' facility is available in form of sub-module of circulation module in SOUL2.0 and 'stock verification' facility is merged in that module also. Whether Koha has 'Inventory/Stocktaking' facility for stock verification in 'Tools' module and 'book bank' facility is not available in circulation module but by creating book bank framework in 'Administration' module this facility can also be provided.

Because of cost concern, availability of more (in number) & user friendly features people prefers Koha than SOUL2.0. This analysis has fulfilled the aims & objectives of the study of the researcher.

#### IX. FUTURE SCOPE

Everything is dynamic specially in the field of information technology including the facilities extended by different software packages. The software packages we have studied namely Koha & SOUL are also regularly updated their functioning. This invites regular study and researcher on the use of the packages to go along with the development. It is a continuous process which needs attention by the researcher regularly.

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