Library Automation with SOUL 3.0: A Software for University Libraries

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ABSTRACT

The selection of suitable application software is a critical decision for librarians. Many commercial library software packages are available in the Indian market, but choosing the right one can be challenging. In response to this need, many university libraries in India have suggested that INFLIBNET develop software specifically for academic libraries. INFLIBNET has heeded this advice and has developed SOUL 3.0, state-of-the-art integrated library management software compliant with international standards. Today, SOUL is used by over 4,000+ libraries in India, making it the most popular library software in the country.

KEYWORDS: SOUL 3.0, Library Automation, Library Software, INFLIBNET.

INTRODUCTION

The 21st century has seen a massive increase in the amount of information available, both in print and digital formats. This has put a strain on libraries, which are struggling to keep up with the demand for materials and services. The use of computers in library operations has helped to address some of these challenges. Computers can be used to automate tasks such as cataloging, circulation, and reference, freeing up librarians to focus on more complex and creative work. Computers can also be used to provide access to electronic resources, such as e-books and journals.

LIBRARY AUTOMATION

According to the Encyclopedia of Library and Information Science, "automation is the technology concerned with the design and development of process and system that minimize the necessity of human intervention in operation". According to Webster's Third New International Dictionary of English Languages, automation is, "the technique of making an apparatus, a process or a system operates automatically". In other words, it is the equipment that picks,

presents, and records input data or internally created data while mathematically manipulating information storage. The term "library automation" refers to the computerization of housekeeping tasks in libraries.

Library automation is the use of computers and other technologies to automate the tasks and processes of a library. It can be used to automate a wide variety of tasks, such as:

- Cataloging: Creating and maintaining bibliographic records of library materials.
- Circulation: Borrowing, returning, and renewing of library materials.
- Serials control: Managing periodical subscriptions.
- OPAC (Online Public Access Catalogue): Providing users with access to library catalogs and databases.
- Web OPAC: Providing users with access to library catalogs and databases through the web.
- RFID (Radio Frequency Identification): Using RFID technology to track library materials.
- Self-check-in/check-out: Enabling users to check in and check out library materials themselves.
- Statistical reports: Generating statistical reports on library usage.

WHY LIBRARY AUTOMATION

Automation is important in libraries for several reasons, including:

- **Increased efficiency:** Automation can help libraries to streamline their operations and improve efficiency. For example, automated circulation systems can help to speed up the checkout and check-in process, while automated cataloging systems can help to reduce the time it takes to create and maintain bibliographic records.

- **Improved accuracy:** Automation can help to reduce errors in library records. For example, automated circulation systems can help to prevent books from being checked out by multiple people at the same time, while automated cataloging systems can help to ensure that bibliographic records are complete and accurate.

- **Increased accessibility:** Automation can make library resources more accessible to users, both in terms of physical access and online access. For example, automated self-check-in/check-out systems can make it easier for users to borrow and return library materials, while online catalogs and databases can make it easier for users to find the information they need.

- **Reduced costs:** Automation can help libraries to reduce costs by eliminating the need for manual tasks. For example, automated circulation systems can help to reduce the need for staff to check out and check in books, while automated cataloging systems can help to reduce the need for staff to create and maintain bibliographic records.

- **Improved user service:** Automation can help libraries provide better user service by freeing up librarians to focus on more complex and creative work. For example, automated self-check-in/check-out systems can help to reduce the wait times for users, while online catalogs and databases can help users find the information they need more quickly and easily.

AN OVERVIEW OF SOUL SOFTWARE

The INFLIBNET Centre created and developed the cutting-edge integrated library management software known as Software for University Libraries (SOUL) based on the needs of college and university libraries. It is software that is simple to use and was created for client-server systems. The program complies with global norms for networking,

circulation protocols, and bibliographic formats. The software was created to automate all housekeeping tasks at the library after a thorough analysis, discussions, and deliberations with the senior professionals of the nation. The software is appropriate for all sizes and types of libraries, including school libraries, in addition to academic libraries. SOUL 1.0, the first release of the software, was made available at CALIBER 2000. The software SOUL 2.0 was published in January 2009, and SOUL 3.0, the most recent version, was released in February 2021. The latest versions of MS-SQL and MySQL (or any other popular RDBMS) are supported by the database for the new SOUL version. International standards like the MARC 21 bibliographic format, the Universal Character Sets based on Unicode for multilingual bibliographic records, and the NCIP 2.0 and SIP 2 based protocols for electronic surveillance and control are all supported by SOUL 2.0. (https://soul.inflibnet.ac.in/about.php)

THE MAIN FEATURE OF SOUL

1. UNICODE-based support for multiple languages, including Indian and international languages;

2. adheres to international standards like AACR-2, MARCXML, and MARC21;

3. Adherence to NCIP 2.0 RFID protocol, especially for self-check-out and self-check-in as well as electronic surveillance;

4. A user-friendly interface with a client-server architecture that doesn't require substantial training;

5. Supports many RDBMSs, including My SQL, MS-SQL, and others, for bibliographic databases (for SOUL 2.0 only);

6. Supports cataloging of practically any sort of media, including e-books, e-journals, and electronic resources;

7. assists in linking to full-text articles and other digital items and supports the needs of digital libraries;

8. Encourage online copy cataloguing from bibliographic databases that accept MARC21;

9. Offers pre-built templates for data entry of various document kinds. Additionally, users can alter their data entry templates for various kinds of papers;

10. Gives users the option to generate reports in the format and style of their choice, along with their own template and query parameters;

11. Supports the practical needs of the libraries on a fundamental level, including stock verification, a book bank, strict maintenance procedures, transaction level enhanced security, etc.;

12. Allows users to send reports through email and store them in various formats such as Word, PDF, Excel, MARCXML, and so on.

13. A highly adaptable and user-friendly OPAC with simple and advanced search options. Users of the OPAC can export their search results into PDF, MS Excel, and MARCXML formats.

14. Supports authority files for personal name, corporate body, subject headings, and series name;

15. Supports data interchange via the ISO-2709 standard;

16. Provides a straightforward budgeting system and a single point of contact for all important circulation functions.

17. Strong regional support for upkeep via regional coordinators. Strong online and offline help by e-mail, chat, and a dedicated phone line during business hours.(https://soul.inflibnet.ac.in/features.php)
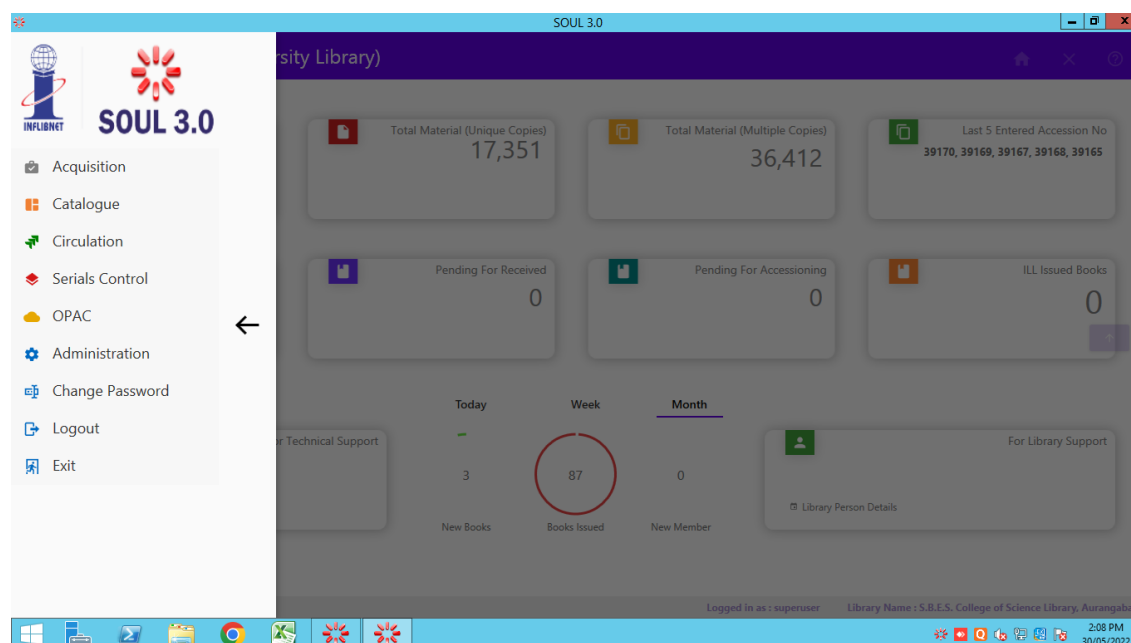
Figure 01 - SOUL 3.0

SOUL 3.0 MODULES

1. Acquisition Modules

The Library acquires resources based on recommendations given by college/library committee/students who utilize the library. The LIS staff must enter the suggestions/recommendations they have received into the system, along with the name of the individual who has requested them. This allows the librarian to notify the requester as soon as the requested item is added to the library or gains popularity.

Functionalities of Acquisition Module:

- Request
- Free item
- Choose for Approval
- Approval Procedure
- Immediate Approval
- Statement of Approval

The SOUL Acquisition module provides a way for the library to record orders placed with vendors and manage purchase budgets.These functionalities within the Acquisition Module help streamline and track the process of acquiring materials for the library's collection, ensuring proper oversight, accountability, and efficient management of budgets and acquisitions.The Acquisition module in SOUL provides libraries with a streamlined workflow to record and manage their procurement processes. This module allows libraries to keep track of orders placed with vendors and effectively manage their purchase budgets.

2. Catalogue Module

The Cataloguing module is indeed one of the most important modules in a Library Management System (LMS) when it comes to retrieving information. In SOUL 3.0, users can enter bibliographic details such as Title, Author, Publisher, Edition, ISBN, etc. in MARC21 format. Once this information is saved, a record is generated. SOUL 3.0

is also compliant with international standards like AACR-2 and MARCXML, ensuring compatibility and interoperability with other library systems. Users can conveniently add records using online copy cataloguing, which allows them to import cataloguing information from external sources like library networks or online databases.The Catalogue module empowers users to add both bibliographic and authority records in the library catalog. This means that various types of materials like books, serials, sound recordings, moving images, cartographic materials, computer files, CDs/DVDs, e-resources, and more can be included in the library's database. This comprehensive cataloging capability enhances the accessibility and discoverability of library resources for patrons.

Functionalities of Catalogue Module

The Catalogue Module offers various functionalities, including

- **Cataloguing:** This is the process of creating and maintaining bibliographic records for library materials. The Catalogue Module in SOUL 3.0 allows librarians to create records in MARC 21 format, which is the international standard for bibliographic data. The module also supports copy cataloging, which allows librarians to create new records by copying the information from an existing record.

- **Import/Export:** This allows librarians to import and export bibliographic records in MARC 21 format. This can be useful for transferring records from another library system or for creating backups of the library's collection.

- **User Services:** This provides users with access to current awareness services and bibliographic services. Current awareness services provide users with information about new library materials, while bibliographic services allow users to search for library materials by title, author, subject, etc.

- **Reports:** This allows librarians to generate reports on the library's collection. These reports can be used to track the growth of the collection, identify gaps in the collection, and make decisions about collection development.

3. Circulation Module

We may use the Circulation module to create/edit/search/delete the users records, renew membership, and establish relationships between the user and resources by creating transaction records (Issue/Return/Renew), Reserve the item(s), issue the item on ILL, Book bank transaction facility and get several routine reports and some management reports. The module deals with all operations related to library members i.e. creation, deletion, and modification of members. Apart from these users may copy an existing membership record and update it with a new membership code. Users can search membership records by using the option search member by using different searching parameters such as code, name, department,designation, entry date, category and if the user wants to delete any member there are two options to delete the membership record, either single member or Group member deletion.

Functionalities of Circulation Module

- Material transaction process
- Book Bank system
- Team issue/return
- Member login/logout facility
- Stock verification
- Inter-Library Loan (ILL)

Membership renewal can be also done using this module. Member barcode and member card is also generated in this module. After completion of the academic course user can issue no-dues to the students/members in bulk as well as individually.

4. Serials Control module

The serial control module of Soul 3.0 provides streamlined access to the users from Title entry to schedule generation and receiving orders. It offers easy creation and maintenance of an Article indexing database and thereby helps in providing the services according to the user's needs.

The Serials Control module is divided into the following sub-modules.

- Titles(Serials)
- Suggestions
- Subscription
- Payment
- Check-in
- Commercial Binding
- In-House Binding

All the serial titles (mainly those that are subscribed to by the Library), in all the formats (like print, electronic, CD-ROMs, online, etc.) are entered into the database in MARC21 format. (Shaik &Mohsin, 2018)

5. Online Public Access Catalogue (OPAC)

Soul 3.0's comprehensive Online Public Access Catalogue (OPAC) is one of its key draws. The OPAC includes a basic and advanced search function with the minimum information for each item including author, title, corporate body, conference name, subject headings, keywords, class number, series name, accession number, or combination of any two or more information on the item.

Major Functions provided in the OPAC module are:

Simple, Boolean, Advanced Boolean Searches, as well as Records Displaying and Downloading in MS Excel, PDF, or MARCXML, are all available. Additionally, Search assistance is available for items that are currently going through the acquisition process.

6. Administration Module

A few more features have been added to the administration module of SOUL 2.0 in addition to those that were present in the administration module of SOUL 1.0, taking into account feedback from the various SOUL users and the needs of the library staff. To accommodate the new functionality, the module was split into three significant sub-modules. User Management, System Parameters and Masters are the three sub-modules in question.

The Administration module provides the following:

- User grouping in accordance with policy.
- System access rights for transactions.
- Security at the transaction level for users.
- A number of configuration options, including labels, e-mail settings, and other aspects of the software usage
- Modules make use of common master databases.

System Specification (SOUL 3.0)

Hardware Specifications: RAM, minimum 2 GB for 32-bit and 4 GB for 64-bit, with 8 GB suggested for server systems, processor speed, 1.8 GHz or higher.

Storage, 10 GB at the least storage facility, Screen Resolution: 1366x768 at a minimum. Windows 10 or the latest is required, as is Windows Server 2012/2016/2019.

CONCLUSION

SOUL, developed by INFLIBNET, is a software dedicated to modernizing academic libraries in India. It is based on international standards and has been developed after thorough study and discussion with senior library professionals in the country. One of its advantages is its affordability compared to other software options. It also offers free updating and modification, along with strong support services. Soul supports RFID technology and provides a copy cataloging facility. Additionally, it has Unicode-based multilingual support and a self-generate barcode feature. Overall, SOUL seems to be a comprehensive and user-friendly solution for academic library management.

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