UNIT 3 HOUSEKEEPING OPERATIONS

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3.0 LEARNING OUTCOMES

After reading this Unit, you will be able to:

- understand operational subsystems of a library;
- explain activities and tasks involved in various housekeeping operations;
- identify library housekeeping operations for more efficient functioning; and
- describe about the application of ICT in housekeeping operations.

3.1 INTRODUCTION

Library automation refers to the implementation of information and communications technologies (ICT) in the libraries and information centres for replacing manual library operations. Library automation helps libraries in the optimal utilisation of resources, increased operational efficiencies and network access to systems and resources on the Web, resource sharing, better quality library services and improved user experience in using libraries and library services. Library automation covers several different areas of library work. These include (i) housekeeping operations, (ii) information retrieval (iii) digital asset management, (iv) networking libraries, (v) Internet and Web based services, (vi) electronic library resources on CD-ROM and on the Web, (vii) digitisation operations, (viii) remote access to libraries and library resources and (ix) office automation.
The performance of a library largely depends upon the organisation of its housekeeping functions and their operations. The basic housekeeping functions common to all types of libraries are acquisitions including serials control, cataloguing, circulation and maintenance. Their operations are highly labour intensive routine clerical activities performed by human beings. With the advent of Information and Communication Technologies (ICT) automation of housekeeping operations has become the first priority of most of the libraries. This is mainly because automation of housekeeping operations helps libraries to minimise human efforts and repetitive tasks, redefine library work flows, prepare staff to multitask library operations and make staff more productive in library work. Automation of library housekeeping operations is considered especially a critical area from which future benefits will emerge.

3.2 LIBRARY HOUSEKEEPING OPERATIONS

The basic housekeeping functions of a library irrespective of its type or size may be grouped as acquisitions, processing, use and maintenance (Fig. 3.1). Their operations follow some definite work flows/routines and therefore are amenable to computerisation. It means a computer or a group of computers can perform routine clerical chores quickly and cheaply.

![Fig. 3.1 Housekeeping Operations in a Library](chart).

The functions and activities of one division are different from that of the other divisions but are closely related and therefore combined efforts lead towards the better library services.

We may view libraries as complex systems which include subsystems and components. The main two subsystems are operational subsystem and administrative subsystem. Library housekeeping operations form part of the operational subsystem. As per the analytical study of ASLIB (The Association for Information Management, UK), the operational subsystem may be divided into four further subdivisions namely Acquisition, Processing, Use and Maintenance. Within each division there are a number of procedures and within each procedure there are activities. The housekeeping operations as related to the handling of monographic materials in a library system are described in Table 3.1.

3.2.1 Acquisition

Acquisition of documents is one of the basic functions associated with any library. A library must acquire and provide all the relevant documents to its users within its budgetary limitations. An acquisition subsystem performs four basic operations. They are selection, ordering, receiving and accessioning of documents. Let us try and understand as to how these operations are performed in a library.
Selection

Selection of documents for library users is a very responsible job and should be based on definite principles and accepted norms. For a given library the book budget is limited and it should be spent judiciously to provide services to an optimum number of library users. Therefore, book selection becomes necessary. There are a number of tools (such as bibliographies, publisher’s catalogues, etc.) which will be useful to library staff in the selection process. Requests from library users and suggestions from library authority are also considered for selection purposes. Such selections of documents need the approval of the competent authority, before they are ordered for purchase in the library.

Table 3.1: Housekeeping Operations Related to Handling of Monographic Materials in a Library

<table>
<thead>
<tr>
<th>Systems</th>
<th>Subsystems</th>
<th>Operational Subsystems</th>
<th>Procedures</th>
<th>Activities (Common to all Procedures)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library System</td>
<td>Operational Subsystem</td>
<td>Acquisition</td>
<td>Select Order Receive Accession</td>
<td>Initiate (Commence a procedure)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Processing</td>
<td>Classify Catalogue Label Shelve</td>
<td>Authorise (To approve a procedure)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use</td>
<td>Locate List Lend/Issue/Reserve (Inter Library Loan) Photocopy</td>
<td>Activate (To implement a procedure through appropriate action)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maintenance</td>
<td>Bind Replace Discard</td>
<td>Record (To record what action has been taken)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Report (To notify staff or user about the action)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cancel (To stop a procedure or undoing an action)</td>
</tr>
</tbody>
</table>

Ordering

This procedure starts with pre-order searching, especially to avoid duplicate orders. In the next stage, purchase orders are generated and placed either directly to the respective publishers or to the list of vendors duly approved by the competent authority. Additionally, generation of reminders for overdue items and cancellation of orders also comes under the purview of ordering procedure.

Receiving

Documents and invoices or bills usually arrive together. Bills are checked with the order
list before processing for payment. Newly arrived books are tallied with the bills and the order list to check whether the books received are as per the order and the author, title, edition, imprints and price are correct before accessioning. It is essential to ensure that books are not defective in any way before accessioning.

Accessioning

A stock register is maintained by libraries in which all the documents purchased or received in exchange or as gift are recorded. Each document is provided with a consecutive serial number. The register is called Accession Register and the serial number to each document is referred to as Accession Number of the document. Accession register is one of the important records of the library. All the above mentioned procedures and related activities of the acquisition subsystem can be mechanised through 'library management software'. In such a system these basic activities are linked with the files of publishers, suppliers, budget and fund accounting, currency, etc. These files are maintained in computer-readable form and are utilised appropriately.

3.2.2 Processing

The processing procedure is the pivot around which all the housekeeping operations revolve in a library. Processing helps in the transformation of a library collection into serviceable resources. The procedures under this subdivision are classification, cataloguing, labelling and shelving.

Classification of Documents

Classification is grouping similar objects together. This principle is used to organise documents in libraries according to their subject content. It forms the foundation of librarianship. The following are the important classification schemes (aka systems), which are used in different libraries of the world: Dewey Decimal Classification (DDC), Universal Decimal Classification (UDC), Library of Congress Classification (LC), Colon Classification (CC) and Subject Classification (SC), etc. The purposes for classifying documents are:

- to help a user to find a document whose call number (i.e., class number + book number) s/he knows. The class number represents the subject of a book while the book number individualises it among books on the same subject.
- to find out all the documents on a given subject.

Classification is a mental process and demands intellectual exercises from a classifier. As a result, automatic synthesis of class numbers requires the application of Artificial Intelligence (AI) techniques in the development of software. In India, some research work on this topic has already been carried out at DRTC, Bangalore for building class numbers (based on Colon Classification) automatically through a software (called Vasya), written in PROLOG (PROgramming in LOGic) – a non-procedural programming language. The electronic version of Dewey (Electronic Dewey) is available on CD-ROM.

Cataloguing

A library’s first task is to assemble a collection of documents and then it must catalogue that collection. Cataloguing is the prime method of providing access to the collection of a library. The current practices for cataloguing resources in Indian libraries may be tabulated as shown in Table 3.2.
Table 3.2: Current Practices in Cataloguing Resources

<table>
<thead>
<tr>
<th>Group</th>
<th>Cataloguing Procedure</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manual Cataloguing</td>
<td>Card Catalogue</td>
</tr>
</tbody>
</table>
| 2     | Computerised Cataloguing | Machine readable catalogue  
|       |                       | OPAC (Online Public Access Catalogue) |
| 3     | Hybrid Model  
(Use of computer to produce printed catalogue cards and manual filing) | Printed Catalogue Card  
Machine readable catalogue  
OPAC (Online Public Access Catalogue) |

All these cataloguing procedures start with technical reading of the document to be catalogued by studying title, sub-title, alternate title, author, editor, edition, reprint, imprint, dedication, preface, table of contents, collation, series, bibliographies, etc. In case of manual cataloguing, the cataloguer makes separate cards for author, title, subject, cross-references and analytical entries by following any standard catalogue code (such as AACR-2, CCC, etc.) and file them as per the rules laid down by the library. Computerised cataloguing begins with entering bibliographical data of a book in a pre-designed worksheet. The worksheet or datasheet is very similar to a data entry form and is based on any standard bibliographic record format (such as MARC 21, CCF, UNIMARC, etc.). Finally bibliographical data recorded in the worksheets are entered into the computer to produce a machine-readable catalogue file and OPAC. Computer-based cataloguing supports importing of bibliographical records for the library resources either from centralised cataloguing service agency or from other libraries. Computer-based cataloguing also supports exporting of bibliographical data of its own collection to other library systems. This facility reduces unit cost of cataloguing and ensures standardisation in cataloguing. The recent trend of cataloguing is to utilise Z39.50 protocol to download bibliographical data from other libraries and to provide global access to its own collection through Web OPAC.

Labelling

It is the work of pasting various labels on different parts of a document. The following labels are generally pasted in books:

**Spine label:** This is done to make call number (a combination of class number and book number) properly visible to the users when the book is shelved. The size of the label is in the range of 1.25"×1.25".

**Ownership slip/mark:** These are generally pasted on the inner side of the front cover at left hand top most corner. Ownership marks are put at various parts of a document by rubber stamps. The size of slip is 3"×2.5".

**Date slip:** It is pasted on the top most portion of the front or back flyleaf of each book. The size of date slip is 5"×3".

**Book pocket:** On the bottom of the inner right side of the front or back cardboard cover a book pocket is pasted.

**Book card:** One printed/hand-written book card of size 5"×3" is put in the book pocket of each book.
In a computerised environment, various labels are printed by using library management software. In case of barcode based computerised circulation, accession numbers of documents are converted into barcodes and printouts of barcodes are pasted on the inner back cover of the documents.

**Shelving**

Shelving is the arrangement of documents on the shelves to fulfil the fourth law of library science – Save time of the reader. Generally books are arranged on the shelves in a classified order as per the call number. Bound volumes of periodicals are generally shelved alphabetically by title and then by volume numbers.

### 3.2.3 Circulation

Most libraries lend books and other library materials to be read elsewhere by users. This is convenient for the users; this increases the use made of library collections and reduces the demand on reading space within library building. This function requires some sort of record keeping of what has been lent and to whom. The reasons for keeping loan records are:

- to minimise the loss of library materials; and
- to help library staff to answer users’ queries about the location of items not on the shelves.

A variety of systems for record keeping of loans have come into being based on needs. These are known as circulation systems. These involve some common jobs for successful implementation such as enrolment of members, issue and return of library documents, reservation of documents, renewal of documents, maintenance of documents and records, maintenance of statistics, inter-library loan, issuing of gate pass, etc.

In a computer based circulation system, the machine-readable file consists of records for all items on loan from the library updated periodically with new records. This file is called “transaction file” and it takes required data from other two files – “document file” and “borrower file”.

Modern library management software support barcode based circulation system. In such a system, a barcode reader scans barcode for accession number of a document and the barcode in turn acts as a pointer to the document file. It helps to minimise labour and error in data entry operation. The concept of RFID (Radio Frequency Identification) based circulation system is emerging rapidly in developed countries. It comprises three components: a tag, a reader and an antenna. The tag contains important bibliographical data. The reader decodes the information stored on the chip after receiving it through the antenna and sends data to the central server to communicate library automation system. RFID technology supports patron self-checkout machines and has the ability to conduct inventory counts without removing a single book from the shelves. As a whole, RFID improves library workflow, staff productivity and customer service.

### 3.2.4 Serials Control

Serials in general and periodicals in particular are essential for research and development (R&D) activities. These are the primary means of communication for the exchange of scientific information. The periodicals or journals subscribed by libraries can be grouped into the following categories:

- Indexing/Abstracting periodicals
Periodicals containing news items
Periodicals containing full-text research articles and technical papers

Acquisition of serials/periodicals in a library is different from book ordering system. In contrast to books, the libraries regularly subscribe periodicals against advance payment. The modes of subscription of periodicals in a library are as follows:

- through local vendors/subscription agents
- through foreign vendors/subscription agents
- direct from the publishers
- as gift or complementary
- through membership
- in exchange

The fundamental tasks of any serials control system, manual or mechanised, can be listed as below:

1) Selection of serials
2) Selection of subscription mode
3) Formulation of terms of procurement
4) Selection of vendors
5) Order
6) Advance payment
7) Receiving and registration of serials issues in kardex
8) Sending reminders in case of issues not received
9) Adjustment of advance payment for missing issues
10) Preparation of list of subscribed journals, new arrivals and serials holdings for consultation by users
11) Binding and accessioning of back volumes of serials.

In an automated system all these tasks are performed by library management software efficiently. It reduces workload of library staff. Computer based serials control systems may be predictive or non-predictive. Predictive systems predict the arrival of individual journal issues and can generate reminders in case of non-received issues. Prediction means the ability to inform that a named issue of a named journal will arrive in the library within a stated time interval. Modern library management software supports predictive mode of serials control with the facilities of online acquisition and access of journals through World Wide Web (WWW).

3.2.5 Maintenance

If we don’t take proper care to organise and administer the library documents regularly, these documents would become unserviceable resources immediately. The workflow of the maintenance division/section includes following tasks:
Shelf Rectification: It is to shelve misplaced documents in proper locations

Bind: It is to preserve library resources for future and present use

Replace: It is to replace a lost document by the library

Discard/Withdrawn: It is to weed out out-dated and torn and soiled documents from the library for making enough space for usable stock

The integrated library automation environment requires information on lost, damaged, missing and withdrawn documents as well as documents sent for binding. These datasets are to be entered to generate and display appropriate messages for the library users and staff against specific tasks in different modules. This is also required to generate reports on lost books, missing books, books sent for binding, etc. for the library administration.

Self Check Exercise

Note: i) Write your answers in the space given below.

ii) Check your answers with the answers given at the end of this Unit.

1) Describe library housekeeping operations.

2) Explain procedures and activities related to library housekeeping.

3) Identify procedures related to processing of library documents.

3.3 TASK ANALYSIS OF HOUSEKEEPING OPERATIONS

In considering libraries from the general organisational perspective, the analysis of housekeeping system is useful for planning automation of a library. It is a prerequisite to
the design and use of any library management software and to communicate with software vendors and programmers. A close analysis of the operations involved in library housekeeping provides us three hierarchical levels – procedures, activities and tasks.

3.3.1 Procedures and Activities

The eighteen procedures listed in the previous section (see section 3.2) are common to libraries of all types. The design and use of an automated library housekeeping system requires the analysis of all these procedures into their atomic structure. It will help to understand and implement mechanised housekeeping operations in an automated environment. The procedures under each and every operational subsystem have been analysed by P.A. Thomas (1975) in terms of six possible activities – initiate, authorise, activate, record, report and cancel. All of these activities may not be involved in every procedure. There are one or more of six possible activities against each procedure. The six common activities are defined as:

- **Initiate**: That which makes it apparent that a procedure should be commenced.
- **Authorize**: In some cases, the decision to carry out a certain procedure must be approved before any further action is taken.
- **Activate**: When a procedure is known to be necessary and in some cases approved, it is usually implemented by taking appropriate actions.
- **Record**: The function that states or records what action has been taken.
- **Report**: To notify library staff or users that action has been taken.
- **Cancel**: To stop a procedure, in particular the aspect of revoking or undoing an action.

3.3.2 Tasks

The third level in the hierarchy is concerned with ‘tasks’ within an activity under each procedure. Task means a related group of operations carried out to perform a particular kind of job. In an automated library system a task is the collective functions of the elements for the accomplishment of the module at the next higher level. Tasks within each activity, just as the activities themselves, may not all be necessary to each procedure. Most of the works in the operational subsystems of a library include making or using discrete records with bibliographic and administrative information referring to one particular document. In this context, ASLIB defined a set of fifteen tasks for the basic procedures. These are – pass, receive, discard, place, remove, search, duplicate, attach, separate, move, sort. Such tasks are supported by other four element tasks namely read, verify, enter and decide.

The analysis of tasks to perform activities within procedures may be done through a set of five primary questions:

- What information is needed for the activity?
- Where from is the information obtained?
When is it required?
Who requires it?
How is it used?

These five questions should be asked to carry out possible activities under each procedure. It provides depth to the framework provided by the procedural model. An example of this approach may be shown in the context of five possible activities of book order procedure in acquisition subsystem.

Example

Table 3.3: Current Practices in Cataloguing Resources

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>LIBRARY SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBSYSTEM</td>
<td>ACQUISITION SUBSYSTEM</td>
</tr>
<tr>
<td>PROCEDURES</td>
<td>ORDER</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>INITIATE</th>
<th>AUTHORISE</th>
<th>ACTIVATE</th>
<th>RECORD</th>
<th>CANCEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>What Information?</td>
<td>Author, Title, Subtitle, Edition, Place, Publishers, Date, ISBN, etc.</td>
<td>Signature of approval</td>
<td>Library/Branch Library, Date of order, Order number, Name of vendor and bibliographical details, etc.</td>
<td>Administrative data, Bibliographic data</td>
<td>Order number, and date. Vendor, Book details</td>
</tr>
<tr>
<td>Where from?</td>
<td>Bibliographies, Index, Requisition, Suggestions</td>
<td>Competent authority</td>
<td>Book selection tools, MIS</td>
<td>Order form/Order letter</td>
<td>Order file/Computer database</td>
</tr>
<tr>
<td>When?</td>
<td>After select procedures</td>
<td>Before activation</td>
<td>After authorisation</td>
<td>After activation</td>
<td>After activation</td>
</tr>
<tr>
<td>How?</td>
<td>Receiving copy of bibliographic slip, Suggestion slip</td>
<td>Enter signature</td>
<td>Enter data/Information on order form/Computer database and generate order</td>
<td>Filling the copy of order form/Saving in computer</td>
<td>Deletion from Database</td>
</tr>
</tbody>
</table>

Self Check Exercise

Note:  i) Write your answers in the space given below.
ii) Check your answers with the answers given at the end of this Unit.

4) Define procedural model of library housekeeping.

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5) Explain the common activities in library housekeeping.

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3.4 ICT AND HOUSEKEEPING OPERATIONS

The human society is undergoing a sea change due to phenomenal growth of information and its management through the application of high degree of ICT for computerisation along with electronic transformation of information. The development and convergence of computer and communication technologies, which are jointly termed as Information and Communication Technologies (ICT) has affected almost all aspects of human life. Libraries are no exceptions. ICT is meant for better information management and communication, which is also the prime objective of a library.

3.4.1 ICT: What and Why

ICT encompasses any combination of hardware and software that facilitates the acquisition, creation, modification, retrieval, storage and transmission of information using electronic media. ICT includes both computing and communication technology that combines hardware, software, connectivity, telecommunications and human-computer interface. The features of ICT are very helpful for automating a library system in general and housekeeping operations in particular. The advantages of the ICT application in libraries may be enumerated as:

- a tool to solve the problem of information explosion and growing user demands;
- quicker, cheaper and accurate data processing;
- sharing and transferring data between different systems and media;
- availability of Distributed Information System (Internet);
- increased capacity of data storage and data transmission;
- decreased cost and size of equipment;
- increased reliability of hardware and software to perform repetitive jobs; and
- introduction of GUI based user friendly software with online help.

3.4.2 Application of ICT in Housekeeping

The rapid development in utility of hardware, software and connectivity along with the reduced costs paved the path for integrated library automation systems. Current library automation software (also known as Library Management Software (LMSs)) are integrated systems of a set of related modules responsible for the management of different operational subsystems. These LMSs are based on relational database architecture. In such systems files are interlinked so that deletion, addition and other changes in one file automatically activate changes in related files. Library management software supports two broad groups of library works – housekeeping operations and information retrieval. These are accessible through Local Area Network (LAN) or Wide Area Network (WAN) and also over Internet. Modern library automation systems are WWW compatible and accessible through Internet, Intranet and Extranet for information retrieval as well as data entry activities.

The LMSs presently follow a modular approach for the housekeeping operations. Generally, the whole package is divided into modules for each operational subsystem. Modules are divided into sub-modules and each sub-module supports various facilities to carry out tasks related to the procedures.

<table>
<thead>
<tr>
<th>Library Automation Package</th>
<th>Modules</th>
<th>Sub - Modules</th>
<th>Facilities</th>
</tr>
</thead>
</table>

For example, the SOUL package (a library automation software developed by
Library Automation

INFLIBNET, Ahmedabad) includes six modules of which four are for operational subsystems. The other two, namely administration and OPAC are meant for setting up various administrative parameters and searching and retrieving the library resources respectively. Another example may be cited from KOHA – an open source library management software, developed by Horowhenua Library Trust (Katipo team), New Zealand and running at the trust’s sites in Levin, Foxton and Shannon. It includes one common module for acquisition and cataloguing and other five modules are related with circulation, OPAC, administration, etc. The main menu of SOUL (Software for University Libraries) and KOHA are given in the form of screen snapshots. Almost all the library management software available in India and aboard follow the modular approach. This modular arrangement of the library automation package is user friendly and acts as an integrated solution tool for the library management.

Fig. 3.2: Main Interface of SOUL

Source: http://www.inflibnet.ac.in/soul/download.php

Fig. 3.3: Main Interface of KOHA

Source: http://sourceforge.net/projects/kohalivedcd-lite/
3.4.3 Prerequisites of ICT Application in Housekeeping

Library automation is a complex process and should be planned astutely. The complete process of library automation may be divided into following steps:

- Software selection
- Hardware selection
- Site preparation
- General training
- Customisation
- Defining procedures for
  - Bibliographical data entry
  - Administrative data entry
  - Financial data entry
- Commissioning

It is quite obvious that implementation of the above steps in library automation requires background study or analysis of the library system. It is a precondition to utilise library automation package for effective results. A library will not be able to take full advantage of automation until and unless its manual functions are perfect and justified. Therefore, the procedures and tasks followed in different sections should be analysed in terms of:

- Special features of the library system
- Local variations (their validity and usefulness)
- Limitations of the existing system
- Nature and objective of library
- Total number of collection
- Per year acquisition and procedures followed for acquisition
- Per year subscription of serials
- Number of users and their categories
- Per day transactions (issue/return/reservation)
- Availability of multilingual documents
- Need of information services (CAS/SDI, etc.)
- Future plan (in terms of networking and consortia)
- Available manpower (computer literate staff)

Self Check Exercise

Note: i) Write your answers in the space given below.
   ii) Check your answers with the answers given at the end of this Unit.

6) Enumerate advantages of ICT application in library housekeeping.
Library Automation

7) Identify modules in KOHA and SOUL.

8) List the factors to be considered for library automation.

9) What is the need of system analysis in library automation?

3.5 SUMMARY

Library housekeeping operations are a group of activities that enable the performance of the day-to-day functions in a library. These are behind the scene activities and basically routine chores. The analysis of library system identifies subsystems that are responsible for separate groups of related activities – namely acquisition, processing, circulation, serials control and maintenance. Each subsystem includes some common procedures irrespective of the type or size of the library. ASLIB study of library system enumerated a total of eighteen procedures related to various subsystems of a library. The said study also reveals that there are one or more of six possible activities associated with each procedure. Libraries vary from each other in terms of objective, nature, size and services but most of the libraries of the world share some common procedures, activities and tasks for the performance of housekeeping operations. The responsibilities of acquisition division are to select, order, receive and accessioning of library resources. The job of the processing division includes classification, cataloguing, labeling and shelving of library resources for their optimum utilisation. Circulation division keeps track of the loan records of documents and maintenance involves the work of binding, shelf rectification, etc. Some of these routine chores may be mechanised by using a vast array of ICT tools. It saves the drudgery of the repetitive works performed by library personnel. Application of ICT in library housekeeping ensures efficient user services, more productive use of library staff, easy and timely maintenance of document records and administrative data.
and better management of library and information services. The application of ICT in library automation requires judicious selection of software, hardware and analysis of existing library methods and practices for the best possible use of the automation software.

3.6 ANSWERS TO SELF CHECK EXERCISES

1) Library housekeeping operations are basic functions of any library. The works related to housekeeping come under the operational subsystem of a library and include acquiring, processing and preserving of library documents. The circulation of documents and maintenance of library stack is other important works of library housekeeping. These works are done through various divisions/sections of a library namely acquisition, processing, circulation, serials control and maintenance. These are basically routine and recurring works. Mechanisation of such works may be done through the application of ICT tools e.g., computer hardware and software.

2) Library is a complex system and consists of various subsystems and components. Systems analysis is the methodological study of any system and by utilising this technique ASLIB identified a set of eighteen procedures related with different subsystems. The same study also identified six common activities for all the eighteen procedures. These are – initiate, authorise, activate, record, report and cancel. All of these activities may not be applicable for each procedure. These procedures and activities are common to each type or size of library.

3) Processing of documents is one of the very important functions in any library. It converts source documents into library resources. Processing requires technical skills. The technical processing section of a library performs the works related to the intellectual organisation of documents. The procedures of the processing subsystem are classification, cataloguing, labeling and shelving.

4) The procedural model of library housekeeping involves three hierarchical levels - Procedure, Activities and Tasks. Each library system may be divided into some operational subsystems depending on the nature and objective of the library. The operational subsystems include eighteen common procedures (as identified by ASLIB). Each procedure consists of six possible activities and activities are carried out by a set of fifteen tasks. This procedural model may be applied to any library, as the model is independent of nature, objective, size and number of users and staff of the library.

5) Common activities associated with each procedure of a library system are: Initiate (To commence a procedure), Authorise (To approve a procedure), Activate (To implement a procedure through appropriate action), Record (To record what action has been taken), Report (To notify staff or user about the action taken), Cancel (To stop a procedure or undoing an action). One or more of these six possible activities are applied against each procedure.

6) Libraries use ICT as a tool for two purposes – housekeeping operations and information retrieval. Computer hardware and software are used for processing bibliographical and administrative data and communication devices along with transmission media are used for transmitting processed data, i.e., information. As library housekeeping operations are based on some definite routine chores, these are amenable for computerisation. Computerised housekeeping operations ensures better library management, efficient user services, easy maintenance of records, export and import of bibliographic data and seamless accessibility of library
resources from anywhere at any time. It also makes more productive use of library staff.

7) Software for University Libraries (SOUL), developed by INFLIBNET (an Inter University Consortium of University Grants Commission, India) is a library automation software package that includes six modules in its main menu. These modules are Acquisition, Catalogue, Circulation, Serials Control, OPAC and Administration. KOHA also includes six modules namely Catalogue Search (OPAC), Member Search, Acquisition (along with Catalogue module), Accounts and Reports, Parameters (as Administration module) and Circulation.

8) Library automation is a complex job and the following factors should be taken into account before commissioning the automated setup: objectives of the library, analysis of existing system, number of users and staff, number of books, bound volumes of periodicals and other documents, number of currently subscribed journals, circulation workload, available financial and human resources and future plan of the library.

9) Systems analysis is a powerful technique for the analysis of an organisation and its work. Analysis of an existing system is necessary for designing a better one. A library cannot fully utilise an automated setup without following well-defined methods of library works. Systems analysis techniques help a library to identify gaps and overlaps in the existing procedures, activities and tasks followed by the library.

3.7 KEYWORDS

**Integrated Library System**: A principle of library automation that supports reuse of data entered in one module by other modules to eliminate data redundancy.

**Internet**: Internet is a worldwide network of networks. It is a unique conglomeration of smaller networks and other connected machines spanning the entire globe.

**Intranet**: The network that uses Internet technologies (TCP/IP and others) for local connectivity and is available only to the members of the network.

**KOHA**: The only open source library management software available for downloading from Internet at no cost. It uses some companion software and those software are also freeware.

**LAN**: A digital communication system capable of interconnecting a large number of computers, terminals and other peripheral devices within a limited geographical area.

**Library Automation**: Library automation is the mechanisation of housekeeping operations and information handling mainly by using computer and communication technologies.

**Library Classification**: It is the systematic organisation of library
resources as per their thought content or subjects. Each document is allotted a class number on the basis of its subject by following a classification scheme.

**Library Housekeeping**

A group of basic routine operations related to acquiring, preparing and preserving the library documents for their maximum use.

**Library Management**

A tool in the support of effective user Software services, stock management and in general, management of services offered by libraries. In the context of library automation such systems are digital version of knowledge and skill of library management.

**OPAC**

Online Public Access Catalogue (OPAC), as the name suggests, is a catalogue of all the library resources. It is an interface between the user and machine readable form of library resources in an automated environment.

**SOUL**

SOUL stands for Software for University Libraries. It is a library automation software package developed by INFLIBNET (Information and Library Network), Ahemdabad.

**Systems Analysis**

A powerful technique for the analysis of an organisation and its work.

**WAN**

A computer networking system that operates nationwide or worldwide by utilising telephone line, microwave and satellite links. It is also used to interconnect LANs.

### 3.8 REFERENCES AND FURTHER READING


