LIBRARY AUTOMATION

M.L.I.Sc., Semester – II, Paper-I

Lesson Writers

Prof. K.C.Das
PG Department of Library
 & Information Science
Utkal University
Vani Vihar
Bhubaneswar
Odisha

Mr. Kunwar Singh
PG Department of Library
& Information Science
Utkal University
Vani Vihar
Bhubaneswar
Odisha

Editor
Prof. K.C.Das

PG Department of Library & Information Science
Utkal University, Vani Vihar
Bhubaneswar, Odisha

Director
Dr. NAGARAJU BATTU

MBA., MHRM., LLM., M.Sc. (Psy).,MA (Soc)., M.Ed., M.Phil., Ph.D

CENTRE FOR DISTANCE EDUCATION
ACHARAYA NAGARJUNA UNIVERSITY
NAGARJUNA NAGAR – 522 510

M.L.I.Sc.,

First Edition: 2022

No. of Copies:

This book is exclusively prepared for the use of students of M.L.I.Sc., Centre for Distance Education, Acharya Nagarjuna University and this book is meant for limited circulation only.

FOREWORD

Since its establishment in 1976, Acharya Nagarjuna University has been forging ahead in the path of progress and dynamism, offering a variety of courses and research contributions. I am extremely happy that by gaining 'A' grade from the NAAC in the year 2016, Acharya Nagarjuna University is offering educational opportunities at the UG, PG levels apart from research degrees to students from over 443 affiliated colleges spread over the two districts of Guntur and Prakasam.

The University has also started the Centre for Distance Education in 2003-04 with the aim of taking higher education to the door step of all the sectors of the society. The centre will be a great help to those who cannot join in colleges, those who cannot afford the exorbitant fees as regular students, and even to housewives desirous of pursuing higher studies. Acharya Nagarjuna University has started offering B.A., and B.Com courses at the Degree level and M.A., M.Com., M.Sc., M.B.A., and L.L.M., courses at the PG level from the academic year 2003-2004 onwards.

To facilitate easier understanding by students studying through the distance mode, these self-instruction materials have been prepared by eminent and experienced teachers. The lessons have been drafted with great care and expertise in the stipulated time by these teachers. Constructive ideas and scholarly suggestions are welcome from students and teachers involved respectively. Such ideas will be incorporated for the greater efficacy of this distance mode of education. For clarification of doubts and feedback, weekly classes and contact classes will be arranged at the UG and PG levels respectively.

It is my aim that students getting higher education through the Centre for Distance Education should improve their qualification, have better employment opportunities and in turn be part of country's progress. It is my fond desire that in the years to come, the Centre for Distance Education will go from strength to strength in the form of new courses and by catering to larger number of people. My congratulations to all the Directors, Academic Coordinators, Editors and Lesson- writers of the Centre who have helped in these endeavors.

Prof. P. Raja Sekhar
Vice-Chancellor (FAC)
Acharya Nagarjuna University

LIBRARY AUTOMATION

Syllabus

Objectives:
1. To acquaint the students with the planning and management of automated library systems
2. To impart practical training in the use of DBMS
3. To give practical training in the use of Data Base Mangement
4. To impart practical training in the use of Internet and Library software.

UNIT 1
Planning and implementation of Library Automation
Library Automation _ need and purpose

UNIT 2
Housekeeping Operations : Acquisition – Cataloguing – circulation - Serial control

UNIT 3
Library Software : types : Inhose, commercial and open source –
Overyview of LIBSYS, NewGenlib, Koha, SOUL

UNIT 4
Database Management Systems
Detailed study of CDS?ISIS

UNIT 5
Selection of Software packages - criteria

Books for study and reference:
1. Agarwal, Vibhuti. Library Networking: Challenges & Opportunities. Delhi, Rajat Pub., 2000
2. Arunima Baruah ed. Library Database Management. Delhi, Gyan Books, 2002
3. Bradley, Phil. World Wide Web: How to Design and construct Web pages. 2 nd edition London, Europa Publications Ltd., 2000
4. Elemesri and S. Navathe. Fundamentals of Database System. Delhi, Dorling Kindersley, 2008
5. Faruqi, KK and Alam, M. Library Information systems and E- Journal Archiving. New Delhi, Authors Press, 2005.
6. Garkoti, G.K. Concise Encyclopaedia of Library and Information Technology.Delhi, Ess Ess, 2001
7. Haravu, L.J. Library Automation – design, principles and practice. New Delhi, Allied, 2004.
8. Kashyap, Madan Mohan. Computer based library systems designing techniques. New Delhi, Sterling, 1999
9. Kumar, P.S.G. Information Technology: Applications (Theory & Practice (paper XI and XIV of UGC Model Curriculum). Delhi, B.R.Pub., 2004
10. Mahender Pratap Singh. Use of Information Technology in Library and Information Science. Delhi, Abhijeet Pub, 2004
11. Mishra, R.C. Information Warfare & Cyber Security. Author Press, 2003

12. Palmer, Martin. Making the RFID most useful in libraries. London, Facet, 2009

13. Sashikala Subbarao V. Library Management through Automation and Networking. Bombay, Allied pub, 1999.

14. 32. Singh, Shanker.,Ed. World Wide Web Handbook for Librarians. Delhi, Ess Ess, 2000

15. Somasekhara Rao and others. Eds. Advances in Library and Information Science (Festschrift in honour of Dr Sai Ramesh). Visakhapatnam, Sai Pub., 2008

16. William Stallings. Operating Systems. Delhi, Dorling Kindersley (India), 2009

17. Balasubramanium, P. E-Learning for library professionals. New Delhi: Regal pub., 2013.

LIBRARY AUTOMATION

CONTENTS

<div align="center">

LESSON – 1

PLANNING AND IMPLEMENTATION OF LIBRARY AUTOMATION

</div>

OBJECTIVE

After reading this chapter, students will be able to understand:
- Basic fundamental concepts of Library Automation
- Planning and Implementation of Library Automation

STRUCTURE

1.1 INTRODUCTION

Planning for an automated system, no matter how big or small, should be part of an overall long-range plan for the library. Automation should always be used as a means to achieve overall better patron service. Careful planning for technology will assure that your automation project is "sustainable", i.e. enhances the organization's ability to meet its service mission without disrupting the organizational stability of the institution.

1.2   PRESENT SCENARIO OF LIBRARY AUTOMATION

The present scenario of library worldwide is
- ❖ Vastly expanded storage of indexes, statistical data bases, and document databases within the library;
- ❖ Full-text storage of documents, complete with full-text keyword searching and on-demand printing;
- ❖ Access by users to library databases from home or office, with direct downloading of information and text on demand;
- ❖ The ability to access remote databases across the country and the world, and to download information and text on demand;
- ❖ Storage of pictorial and graphic material; and,
- ❖ Availability of "intelligent systems" providing transparent, one-step searching and access to various library in-house and remote databases.

These capabilities and far more have become reality. Accordingly, today's integrated system must not only provide access to the traditional cataloging, circulation, public catalog (OPAC) and acquisitions modules, but must be capable of connecting through the local system into the systems of other vendors, remote bibliographic databases, CD-ROM drives on a local area network (LAN), and the Internet. Users are expecting that their library systems be capable of, among other things:

- ➢ Providing seamless integration between system gateway and OPAC modules;
- ➢ Providing access for external users on the Internet to the library's OPAC;
- ➢ Monitoring the usage of remote databases that have been accessed through the gateway;and,
- ➢ Accessing the Internet using a variety of graphical interfaces (IRTPLA, 2004).

1.3   NEED FOR PLANNING OF LIBRARY AUTOMATION

Planning and evaluation are vital for organisations. Planning is a process of deciding in advance where we want to get to (our goal) and how we will get there. Evaluation enables us to assess how well we are doing and to learn from this. This guide is written for non-profit organisations that playa developmental or service role. Planning and evaluation are particularly important for these organisations because they exist to make a significant contribution to society:

- • Planning helps us to decide what that contribution should be and how to achieve it.

- • Evaluation enables us to judge whether we have had the impact we planned, contributed to changing the situation we wanted to change and whether or not we achieved our goal.

1.4 IMPORTANCE/ NEED FOR PLANNING

The importance / need of the planning should be clear to you. The importance of planning function can be outlined as follows:
- i.   **Provides Direction:** Planning provides a clear sense of direction to the activities of the library as an organization and to do the job of managers and as others do. It strengthens confidence in understanding where the organization is heading and what for, how best to make the organization move along the chosen path, and when should they take what measures to achieve the goals of the organization.

ii. **Provides opportunity to analyze alternative courses of action:** Another source of importance of planning is that it permits librarian as a manager to examine and analyze alternative course of action with a better understanding of their likely consequences. If librarian have an enhanced awareness of the possible future effects of alternative coursesof action, for making a decision or for taking any action, they will be able to exercise judgment and proceed cautiously to choose the most feasible and favourable course of action.

iii. **Reduces uncertainties:** Planning forces managers to shake off their inertia and insular outlook; it induces them to look beyond those noses, beyond today and tomorrow, and beyond immediate concerns. It encourages them to probe and cut through complexities and uncertainties of the environment and to gain control over the elements of change.

iv. **Minimizes impulsive and arbitrary decisions:** Planning tends to minimize the incidence of impulsive and arbitrary decisions and ad hoc actions; it obviates exclusive dependence on the mercies of luck and chance elements; it reduces the probability of major errors and failures in managerial actions. It injects a measure of discipline in managerial thinking and organizational action. It improves the capability of the organization to assume calculated risks. It increases the freedom and flexibility of manager'swithin well-defined limits.

v. **King-pin function:** As stated earlier, planning is a prime managerial function which provides the basis for the other managerial functions. The organizational structure of task and authority roles is built around organizational plans. The functions of motivation, supervision, leadershipand communication are addressed to implementation of plans and achivement of organizational objectives. Managerial control is meaningless without managerial planning. Thus, planning is the king-pin function around which other functions are designed.

vi. **Resource Allocation:** Planning is means of judicious allocation of strategic and scarce resources of the organization in the best possible manner for achieving strategic goals of the organization. The strategic resources include funds, highly competent executives, technological talent, good contacts with government, exclusive dealer network and so on. If the organization enjoys a distinct advantage in possession of such resources, a careful planning is essential to allocate them into those lines which would strengthen the overall competitive position of the organization.

vii. **Resource use efficiency:** For an ongoing organization, planning contributes towards a more efficient functioning of the various work units. There is better utilization of the organization's existing assets, resources and capabilities. It prompts managers to close gaps, to plug loopholes, to rectify deficiencies, to reduce wastage and leakages of funds, materials, human efforts and skills so as to bring about an overall improvement in resource use efficiency.

viii. **Adaptive responses:** Planning tends to improve the ability of the organization to effectively adapt and adjust its activities and directions in response to the changes taking place in the external environment. An adaptive behavior on the part of the organization is essential for its survival as an independent entity. For a business organization, for example, adaptive behavior is critical in technology, markets, and products and so on.

ix. **Anticipative action:** While adaptation is a behavior in reaction and response to some changes in the outside world, it is not enough in some situations. In recognition of this fact, planning stimulates management to act, to take hold initiatives, to anticipate crises and threats and toward them off, to perceive and seize opportunities ahead of other competitions, and to gain a competitive lead over others. For the purpose, some enterprises establish environmental scanning mechanism as part of their planning systems. Thereby such enterprises are able to direct and control change, instead of being directed and controlled by the pervasive external forces of change.

    x. Integration: Planning is an important process to bring about effective integration of the diverse decisions and activities of the managers not only at a point of time but also over a period of time. It is by reference to the framework provided by planning that librarian makes major decisions on organizational activities, in an internally consistent manner.

    Even though this question seems to be very fundamental it is essential to emphasize this aspect, as the library automation is yet to take off in majority of the Indian libraries. Secondly, while justifying need for library automation more than cost-effectiveness the benefits derived by the library users become the major consideration. To appreciate the advantages it becomes necessary to highlight the different levels of library automation.

Following are considered as important factors for Library Automation

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

    Out of all libraries an academic library has a difficult task of defining its mission and operating objectives. The automation program will have to mange a wide range of literature associated with numerous departments and educational programs of the academic institution. Furthermore, in an academic library the collections will be diverse unlike a special research library where the collection is relatively homogeneous. The user group will also range widely, including faculty, staff, students, scholars, administrators and the general public. The position of an academic library funded largely by the government further complicates the process of identifying and prioritizing objectives. As difficult as the task might at first appear, it is nevertheless essential to the process of establishing automated systems of any type. In addition the overall health of one's library operation will benefit from a modicum of intellectual rigor in this area.

1.5 FEATURES OF PLANNING

1. It helps us to identify our goals clearly. It makes us decide clearly and concretely what we need to do to have the effect on society that we want.
2. It helps us make sure that we all understand our goal and what we need to do to reach it by involving everyone in the planning process.
3. It makes us all work in a goal-oriented way rather than in a loose or ad-hoc way where we just respond to issues and crises with no clear plan or goal.
4. Planning help us to see in advance those things that can help us achieve our goal and those things that can prevent us from achieving our goal and work out what to do about them.
5. Planning helps us to be accountable for what we do.
6. Planning helps us decide how best to use our resources (people, time, money, information, equipment) so that they make the most significant contribution to achieving our goal.
7. Planning lays the basis for us to assess and evaluate our achievements effectively.

1.6 CHALLENGES OF PLANNING

The following are specific challenges that most development or service organisations face that make careful planning and how we do our planning very important:

➢ Complex goals for changing society, which are difficult to specify and measure exactly, or have different meanings for different stakeholders. If your goals are very broad and complex, as they often are with development work, it is often difficult to say in advance exactly what the desired future situation must look like. It is also difficult to say in advance what will definitely be needed to achieve it. Goals such as "gender equity", "sustainable community development" or even "effective and affordable health care" are examples.

➢ Different or conflicting values and expectations among the different groups involved. For example, the community you serve may be expecting you to provide resources when your organization is geared to assist communities to access the resources themselves. Or, if the goal is gender equity, for some this may mean more equal access to services for women but for others it may mean more equal power for women in society and it may be seen as threatening existing privilege or custom by still others.

➢ Many different stakeholders that may have different needs, interests and concerns and therefore believe they have different priorities. For example, a civic organization serving both established households and informal settlements may find the views of these groups are different about what should be prioritized.

➢ Difficulties in measuring achievements. It is often difficult to find completely objective ways of measuring what has been achieved. It is often more important to look at "how well" rather than "how many" things were achieved. For example, we may be able to show that we have run 20 training courses but it is much more difficult to show that people are "empowered" or have the required "capacity" as a result. This means different people may have different views on what it means to achieve these goals effectively.

➢ Non-profit organizations often need to give as much attention to choosing the best way (or the means) of achieving goals as to the goals (ends) themselves. These organizations often have goals that involve a positive change in society that benefits and empowers their target group in sustainable ways. This often means building capacity and commitment through involving target communities. It means giving attention to including groups that are not already powerful and articulate, and ensuring, by the way we do the work, that these groups have the capacity and power to take the work forward in sustainable ways.

➢ The connection between the effectiveness of our services and the resources we get is weak or non-existent. If a business is producing things no one wants, we can usually expect that it will not make money and will eventually close down. The connection between resources to continue the work and how well we do it is far less clear with most other organizations. Because the purpose of non-profit organizations is to have a positive impact on society by assisting those in need, the direct users of their services often cannot afford to pay for them. Non-profit organizations usually get most of the money and other resources they need for their work from donors, government or volunteers, not from the direct users of the service. "Doing well" for development organizations does not guarantee an income and cannot be measured by income. Therefore, It is harder for development organisations to assess how

well they are doing. However, non-profit organizations will still have to make the best possible use of scarce resources even though they do not face competition and the same pressures to reduce the costs that for-profit organisations face. The success of our work often depends on other organisations or people. Non-profit organisations often can't achieve effective results on their own. For example, NGOs doingeducation work rely on the learners being committed to the learning; civics rely on the community for support and commitment and on government to create an enablingenvironment for civic action; health educators rely on their target audience to act on their advice and on government programmes to support their work. Most non-profit organisationsrely on donors in some way or another for resources. Many non-profit organisations also rely on the work of other non-profit organisations.

1.7 STEPS FOR PLANNING

Step 1: Identify critical positions

Critical positions are the focus of succession planning efforts. Without these roles, the department or agency would be unable to effectively meet its business objectives. Workforce projection data or demographic analysis is essential in identifying risk areas. A risk assessment may also be conducted and compared to current and future vacancies to identify critical positions within your organization.

Step 2: Identify competencies

A clear understanding of capabilities needed for successful performance in key areas and critical positions is essential for guiding learning and development plans, setting clear performance expectations, and for assessing performance. By completing the process of competency or position profiling within your organization, current and future employees gain an understanding of the key responsibilities of the position including the qualifications and behavioural and technical competencies required to perform them successfully.

Step 3: Identify succession management strategies

Now that critical positions have been identified and have been profiled for competencies, the next step is to choose from a menu of several human resource strategies, including developing internal talent pools, on boarding and recruitment to address succession planning.

Step 4: Document and implement succession plans

Once strategies have been identified, the next step is to document the strategies in an action plan. The Succession Planning: Action Plan provides a mechanism for clearly defining timelines and roles and responsibilities.

Step 5: Evaluate Effectiveness

To ensure that the department or agency's succession planning efforts are successful, it is important to systematically monitor workforce data, evaluate activities and make necessary adjustments.

1.8 HOW TO PLAN – THERE ARE 8 BASIC PLANNING STEPS

This section outlines a basic planning process that may be used for many different kinds of planning – developing strategy, or programme and project planning. Section 3 above has outlinedan approach, based on the Logical Framework Approach, which can help you ensure that

your planning process is effective. This section uses this approach to suggest useful basic steps for planning and to provide advice on how to achieve each step effectively. The previous section should also help you adapt the basic planning steps to different kinds of planning (developing organisational strategy, programme plans or project plans).

More detailed advice on all steps is available if you click on the overall heading. You can also access advice on any specific step by clicking on the heading for that step. If the approach or some of the terms used are not clear, you might need to go back and look at some of the detailed guidelines linked to the approach explained in Section 3 above.

The basic planning steps

The following are the basic steps that are useful in almost any kind of planning process. This process should be used as part of the cycle of planning that enables ongoing learning and improvement. (See how to use the planning cycle for ongoing learning and improvement above.)

Each step is explained in more detail below:

Click on the heading of this section to get the complete guide for how to use the basic planning steps. This is based on the approach outlined in the previous section. If you only want further advice on a particular step, ideas on how to tackle each of the steps are available if you click on the heading for each of the steps.

These steps can be adapted to use for specific planning purposes. Your decision about what kind of planning process you need will tell you how much time you must set aside, who should be involved, how and at what point. (See the guidelines on how to plan strategically for some ideas on different kinds of planning.)

Step 1 - Preparing to plan – ensuring commitment

It is important to prepare well for any planning process. As we noted in the detailed guidelines on the approach to planning in the section above, planning should not be seen as something you do before you start on the real work, but as part of " the real work" itself. It takes up time, energy and other resources. It plays a crucial role in laying the basis for effective ongoing thinking, action and achievement. We also noted that involvement and participation are of vital importance to effective planning processes. We need to prepare effectively for planning to ensure we get the kind of involvement and participation we need. We must actively build commitment to the planning process so that people are willing to give the time, energy and resources necessary for effective planning. One of the mistakes many non-profit organisations make is to underestimate the amount of time and commitment necessary for effective planning. This commitment will need to come from staff and all other stakeholders whose participation we decide is necessary to enable successful implementation and results.

The kinds of issues you need to discuss and decide here are:

- What kind of planning do we need to do?
- How much time should we give to each step?
- How much time and other resources will we need for the whole planning process?
- Do we need more information on past experience, achievements or the situation we are hoping to influence before we start the planning and, if so, who will get it, how will they get it, where and from whom?

- Who are our key stakeholders (don't forget the staff of your own organisation)?

- How important is their involvement to the successful implementation of our plans? How important is it that each main stakeholder group understands and agrees to the planning decisions?

- How important and/or influential is each main stakeholder group? Whose needs, interests and concerns should be prioritised in the planning process?

- How useful or essential would their involvement be at each step in the planning process?

- What kind of involvement will be adequate for each key stakeholder in each step of the process?

- How will we get the commitment to the planning process we need from each key stakeholder?

- How should each stakeholder be prepared so that they can participate effectively? What information will they need beforehand?

- Do we need a planning committee or group to ensure the process runs smoothly?

- When will the planning begin and what target dates should we set for the completion of each step?

- Who will facilitate each session? Who will keep and circulate a record of our discussions?

- How soon after each step must the record be circulated?

- What other tasks need to be done, by whom and by when (organising venues, food, transport etc)?

- What other resources will we need (flip charts, overhead projectors, kokis, pens and paper, inputs, presstick, admin support for contacting people and circulating records of discussions etc)?

Once you have made these decisions, built a commitment to participate and prepared everyone who must participate to do so effectively, you are ready to start the actual planning process.

Click on the heading for more information and ideas on how to prepare to plan and analyse stakeholder involvement. Also click on Planning and evaluation must be participative (above) for ideas on how to ensure the right amount of involvement in the planning process. Also click on how to plan systematically (above) for ideas and an example of what a systematic plan involves – this will help you understand what is involved in the planning steps and the kinds of issues you will need to consider. Click on how to plan strategically for an explanation of different kinds of planning (organisational strategy, programme and project planning).

Step 2 – Analyse the situation and needs

This step involves collecting and analysing information you will need to decide on a goal and a purpose that is:
- Relevant to your target community;
- Realistic in terms of what is possible and likely to make a difference; and
- The most effective and appropriate contribution given the current situation you want tochange.

You will need enough information to enable you to answer the following questions through carefulanalysis:

- What are the major problems faced by our target community?
- Which of these is the key or central problem or issue?

- What are the causes and effects of this problem?
- Can we realistically hope to make a significant contribution to addressing this problem?
- How does this problem or issue affect our primary stakeholders? How do they see it? Whatare their concerns and interests in relation to the problem or issue?
- Do key stakeholders stand to gain or lose from our taking up this problem or issue? Howdoes this affect our work and planning?
- What experience have we had so far that is relevant to this problem or issue and what canwe learn from it?
- What can our organisation realistically expect to achieve? What resources and capacityare available to us inside and outside our organisation? What does this mean for our planning?

This step in the planning process lays the basis for the rest of the planning process. The process of building a deeper understanding of the problem, the situation, and your organisation is important for both the staff of your organisation and your target community. It lays the basis for shared understanding, more effective decisions and a commitment to strategic action. You will draw on the thinking done at this step as the basis for your decisions in all the later steps. In the next steps, you will make important decisions when you choose:

1. *Your goal* – a clear statement of the long term change you would like to see. This is usually not something you can achieve alone, but is an important change that will improve the lives of your target community. This is the long-term goal your organisation decides it must contribute to bringing about. Clarifying this broad goal helps to keep the rest of your planning focused on what will make a real contribution to change, even if it is only a part of a bigger and longer-term change.

2. *Your purpose* – your organisation's contribution to the goal – this should be a clear statement of what your organisation commits itself to achieve. This must be something that will make an important contribution to the achievement of the goal. But, it must also be something your organisation can realistically achieve on its own.

3. *Your objectives* – specific statements of what has to be achieved [results] by your organisation to reach the organisation's purpose.

4. *Your activities* – clear decisions about who will do what and by when in order to achieve each objective.

Each of these decisions builds on your earlier decisions, but all of them depend on how well you have done the analysis. The analysis helps you ensure that your goal, purpose, objectives and activities are relevant, useful and realistic.

The next step is to decide on a goal and purpose that is relevant to the needs of your target group but also realistic in the context. The needs analysis will assist you to ensure that this decision about the future situation you wish to bring about is based on a deeper understanding of the problem and its causes and effects.

Click on the heading for more information and ideas on how to analyse the situation and needs. This includes advice on what a target community is; how to collect relevant and reliable information; analyse problems; analyse stakeholders in relation to the problem; and analyse your organisation.

Step 3 – Priorities and select the Goal and Purpose

Deciding on a goal is important because this tells you what change in people's lives you hope to contribute to bringing about. A goal is a clear statement of the future situation you would like to come about. Goals are usually longer-term aims that your organisation cannot hope to bring about alone but will make a significant contribution to helping bring about. They tell us why we do what we do. Goals are also the final basis on which you evaluate what you have achieved. When you are developing a strategy for your organisation, this is a very important strategic decision. It is the vision of what you would like to see that will guide everything else you do. All further programme or project planning must be relevant to helping bring this about.

Once we know what your goal is, you need to decide on the purpose of your organisation – why do we exist and what contribution will we make to achieving the goal? The purpose is a clear and concrete statement of what you undertake to achieve. The purpose should be something you can realistically achieve as a result of your work. Agreeing a purpose is making a clear commitment to achieving this result.

[If you are developing an organisational strategy, the purpose explains why your organisation exists, its mission. In programme or project plans, the purpose must state what that programme or project will achieve. This should be based on the overall strategic goal and purpose of the organisation as a whole as agreed in the organisation's strategy.]

In this step you will use your needs analysis to decide:

➢ What is the future situation you will contribute to bringing about? What is the most relevant goal? What is the most clear and concrete way of stating this goal?

➢ What you can achieve (as an organisation, programme or project) that will make the most significant and useful contribution to achieving the goal you have agreed on? What is the most relevant but also most realistic purpose (for our organisation, programme or project)?

➢ What external conditions will need to exist for you to achieve your goal and purpose? How important are these to your success. Can you influence them, and if so how (you will need to include this in your later planning)? If they are important, unlikely to come about but you can't influence them, does this mean the goal and purpose are unrealistic?

It is important to remember that you are making choices when you decide on a goal and purpose. These choices need to be strategic (carefully selected from the alternatives as the most useful) as they will affect all of your further planning. They also need to be as clear as possible so that they are a record of agreement that can guide your further decisions and actions and be used as a basis for assessing what you are achieving. In the next step you will be deciding on clear specific objectives that will enable you to achieve your goal.

Click the heading for more information and advice on how to choose and write a clear goal and purpose. If you need more information on the difference between a goal and a purpose, the meaning of external conditions or on the planning framework we are using, click on the heading Planning must be systematic above. If you need more information on the difference between organisational strategy, programme and project plans and how you can link them, click on Planning must be strategic above.

Step 4 – Develop Clear Specific Objectives

Objectives are concrete results you need to achieve in order to reach the purpose. Objectives should be as clear and specific as possible. They should state the result you aim to achieve, not what you will do to achieve it. This helps you to focus on what the effect of your work should be, notonly on your activities. It also allows you to evaluate what were achieved in terms of changes in thereal world, not just what you did. Objectives should be more specific and concrete than your purpose and should be relevant to achieving your purpose.

In this step you will use your needs analysis and your agreed goal and purpose to decide:

❖ What specific results are needed to achieve your purpose? The needs analysis included an analysis of the causes and effects of the problem – do the causes you identified give you an idea of what must change in order to achieve your purpose? What objectives will wehave to achieve to achieve the purpose?

❖ Is it possible to make your objectives more specific by stating by when they should be achieved, who should benefit, how many or much must be achieved and how well?

❖ Can you realistically achieve these results? If not, can you improve your capacity to achieve them by, for example, building alliances and improving your organisational capacity? Do you need to set objectives to take account of these things? (If you can't improve your capacity to achieve the results that are necessary to achieve the purpose, you will need togo back and make the purpose more realistic.)

❖ What external conditions will need to exist for you to achieve your objectives effectively? How likely are they to happen? Can you do anything to influence the situation so that these conditions exist? (You will need to include these things as either objectives or as part of your plans for implementing your strategy.) If they are important and unlikely to exist, but you can't influence them, are your objectives realistic?

Once you have clear, specific and agreed objectives, you are ready to begin planning the actions you will take to achieve them. The goal, purpose and objectives are the foundations of this process. You will need to decide on the best strategy for achieving each objective.

Click the heading for more information and advice on how to develop clear, specific objectives.

Step 5 – Identify Alternative Strategies and Select the Most Effective Strategy

This step involves trying to find the best way of achieving your objectives. Strategy is the choice we make about the best approach to getting something done. This is a very important step. It enables us to avoid just assuming that there is a right way of getting something done and forcesus to look at alternatives that we may not have considered properly before. This is very importantif you want to find new and more effective ways of doing things. Just doing things the way you always do them, may not be strategic. You won't know unless you deliberately think of other optionsand test them out with open minds. The biggest mistakes and waste in development work are made by organisations that do not keep testing their thinking to come up with better and more relevant strategies.

In this step, you will use the deeper understanding of the problem and stakeholder needs developed in

your needs analysis to decide:

✓ What are the alternative ways you could use to achieve each objective?

✓ What criteria will you use to assess each strategy (e.g. relevance, realistic etc) in order to choose the most effective and realistic alternative?

✓ Based on these criteria, what is the most effective strategy for achieving each objective?

✓ What external conditions will need to exist for you to effectively implement each strategy? How important are they to your strategy succeeding? How likely are they to happen? Can you do anything to influence the situation so that these conditions exist? (You will need to include these things as part of your strategy.) If they are important and unlikely to exist, but you can't influence them, is your strategy realistic?

✓ What resources will be needed? Is this realistic?

Once you have agreed realistic and effective strategies for achieving each of your objectives, you are ready to start planning to implement them by developing activity plans.

Click on the heading for more information and advice on how to identify and alternative strategiesand select the most effective strategy for achieving your objectives.

Step 6 – Plan implementation

This step involves detailed planning about how you will implement the strategies you have decided on.

You will use the decisions about the most effective strategy to achieve each objective to decide:

- What major activities will be needed to implement each strategy?
- Who will be responsible?
- By when should activities by completed? What deadlines should be set?
- What specific resources will be needed for the activities required to achieve each strategy?

You are now ready to finalise your plan by planning for evaluation. The plans you make in the next step about when you will evaluate, who will be involved and how you will collect the information you need, should then be added to the implementation plan you have just drawn up as part of the activities.

Click on the heading for more information and advice on how to plan for implementation. Thisincludes a form you can use to summarise your implementation plans.

Step 7 – Plan for evaluation

This step involves planning how you will evaluate your progress and what has been successfully achieved. This needs to be done at the planning stage so that it can guide implementation by ensuring a clear record of agreements about what successful achievement means. It helps to clarify the plans by making sure that everyone understands what you intend to achieve in the same way. It also ensures you have a clear and agreed basis for assessing what was actually achieved and your progress along the way. If you have followed the systematic approach to

planning outlined in the earlier section, you will already have a very useful basis for monitoring your progress and evaluating your achievements.

In this step you will use your needs analysis and overall plan to finally decide:

- What criteria or indicators you will use to evaluate progress and achievements in relation to your goal, purpose and specific objectives ;
- When you will monitor progress and evaluate achievements;
- Where and from whom you will get the information you need;
- Who should be involved in monitoring progress and evaluating achievements; and
- How you will collect the information you will need.

Once you have made these decisions, you have completed the planning process. Now, all that is needed is to summarise your plan in a neat, clear, easy-to-use form so that it is a useful record and guide for all those who will play a part in implementing it successfully.

Click on the heading for more information on how to plan for evaluation. This includes ideas on how to use criteria and indicators of successful achievement.

Step 8 - Summarize your plan

It is useful to summarise your plan as you go along and to keep circulating it to everyone along with a summary of the discussion after you complete each step. This will mean you have a clear record of your decisions at each step, which you can use in the next step.

If you have done this all the way along and are using the Logical Framework Approach outlined in the section on how to plan systematically, you should have a useful record of your discussions that you can use to:

- Check your thinking and whether it all makes sense;
- Keep a clear record of decisions;
- Guide implementation;
- Monitor external conditions and make adjustments if your assumptions do not prove to be accurate;
- Explain your planning to donors or others whose assistance and support you decide to request;
- Evaluate progress and achievements; and Check your previous thinking, when you start the next planning process, and improve it based on the learning you have done in the implementation and evaluation phases.

1.9   SUCCESS STEPS FOR PLANNING

Succession planning is one of the most critical functions of an organization. This is the process that identifies the critical and core roles of an organization and identifies and assesses the suitable candidates for the same.

The succession planning process ramps up potential candidates with appropriate skills and experiences in an effort to train them to handle future responsibilities in their respective roles. Succession planning is applicable for all critical roles in the organization. The upper management

of each practice or department is responsible of coming up with a suitable succession plan for each core position under his or her department.

Steps of Succession Planning

There are four main important steps in planning for succession.

Step 1: Recruitment and staffing

This is one of the key steps of the succession planning. Hiring the right and skilled employees is the key to growing human resources in the organization. Sometimes, some companies require a paradigm shift in order to retain in the business.

In such cases, the organization requires to let go or redefine the roles and responsibilities of the portion of existing staff. Then, the organization hires the new blood in order to acquire the required skills and expertise.

When it comes to succession planning, organization should always hire people who will have the potential to go up the corporate leader.

Step 2: Training and development

All the organizational training can come under two categories; skills training and management trainings.

> ➢ Skills training: Employees are trained to enhance their skills, so their day-to-day workbecomes easy.

> ➢ Management training: A selected set of employees undergoes training where they aretrained to take over management responsibilities.

Step 3: Compensation and performance management

     Based on their performance, the employees who have the potential to become leaders in the organization should be appropriately compensated.

These employees should be considered for fast track promotions and special compensation benefits.

Step 4: Talent management

Talent management is one of the key factors that contribute for succession planning. The right candidate will have the required level of skills in order to execute responsibilities of the newrole.

The upper management and mentors of the staff member should always make sure that the employee is constantly enhancing his / her skills by accepting challenging responsibilities.

1.10   TYPICAL ACTIVITIES IN SUCCESS PLANNING OF AUTOMATION

Succession planning has many activities involved. Some of these activities are sequential and others can be performed in parallel to others.

Following are the core activities involved in succession planning.

- Identification of the critical roles for the growth of the library. There are many tools such as Pareto charts in case if you need any assistance in prioritizing the roles.

- Identification of gaps in the succession planning process. In this step, the process of succession planning is analyzed for its strength. If there are weaknesses and gaps, they will be methodologically addressed.

- In this step, the possible candidates for the potential role will be identified. This will be done by analyzing their past performances as well and for some other characteristics such as age.

- All short listed employees for potential roles will be then educated about their career path. The employees should understand that they are being trained and their skills are being developed in order to fill critical roles in the organization.

- When it comes to training and developing people, they should be developed for the positions that exist in the company as well as the positions (roles) that will be introduced in the future.

- Have a clear understanding of the timeline required for filling key roles. For this, an understanding of when key roles will be vacant is necessary.

- Conduct regular meetings on the succession plans of the organization.

- Review past succession that took place based on the succession plan and review success.

If there are issues, make necessary changes to the succession plan.

1.11   COMMON PROBLEMS ARISING FROM INEFFECTIVE PLANNING

These challenges often mean that the plans developed are not very useful and effective. The following are some of the common problems experienced:

- ☐ Employee in the library organization don't all understand the plans in the same way and different views on the most useful approach keep coming up while librarian is trying to implement – confusion and conflict can result as people pull in different directions or have different views on basic strategic issues.

- ☐ Different people have different perceptions of what successful achievement means – conflict, confusion and lack of accountability can result as differences emerge.

- ☐ It is not clearly agreed who should mainly benefit from work and whose needs, interests and concerns should be prioritized – this can mean that the interests of those who already have power and influence dominate instead of those whose power and influence over their own lives we hope to strengthen.

- ☐ Sometimes things change and the plans no longer seem relevant – we abandon the plans

and react in ad hoc and unstrategic ways to events or we stick to our plans and continue with what are now not very useful activities.

☐ The difficulties we experience, arising from the complexity of our goals and the number of other groups and circumstances that can affect our success, lead to demoralization and a sense of powerlessness to effect meaningful change.

☐ We are not able to say what we have achieved, only what we have done.

☐ Different understandings of why we adopted specific approaches and what we were intending to achieve mean that learning is limited – we can end up making excuses and blaming each other rather than using the lessons we have learned to improve our achievements.

☐ All these problems can lead to a waste of precious resources needed to improve the lives of people and to weakening the confidence others have in our organisation.

1.12 HOW TO ENSURE PLANNING IS USEFUL AND CONTRIBUTES TO EFFECTIVE RESULTS

There are six main issues that are important to remember about how planning is done. These will help you make sure your planning meets the challenges outlined above, avoids common problems and that your plans are useful and effective.

You can click on the heading of part 3 or on any of the sub-headings in this section if you want to read more about the topic. This includes examples, practical ideas and more advice and guidance. You will find an example of the approach using an organisation we have called Molayezo at the end of this guide.

1. ***Planning and evaluation must be participative:*** Everyone who must make a key contribution to the work of the organisation should be included. There are two key reasons for this. Firstly, it enables you to draw on different ideas and experience to make better decisions. Secondly, it allows you to build commitment to these decisions by including all those who will need to contribute to the successful implementation of the planning decisions. Participation will ensure that everyone fully understands the strategy and plans and are committed to achieving the decisions that have been made. You will need to identify and analyse all key stakeholders that can affect whether you achieve your purpose and decide whether and how they should be included.

Click on the heading for information on how to ensure the right amount of involvement in the planning process. Guidance on how to do a stakeholder analysis is available in the section on Preparing to plan.

2. ***Planning and evaluation must be systematic:*** You have to ensure you have thought through and agreed on all key issues before moving on to the next step. For example, you need to be clear about the results you intend to achieve before you start making decisions about what action you will take. Non-profit organisations exist to make a difference to society, not just to do things. Everything you do must be relevant to the results you intend to achieve. You may also sometimes need to move back to previous steps in the planning process, if the later planning suggests you need to rethink some earlier decisions. For example, you may realise that the action you would need to be able to take is not realistic. This may lead you to decide that you will have to alter your decisions about what results you can realistically expect to achieve. Effective planning seldom moves in one straight line but this does not mean it should not be systematic.

Click here for information on how to plan systematically including an introduction to the

Logical Framework Approach (LFA). The guidelines on how to achieve each of the basic planning steps outlined in the next section are based on this approach.

3. **All planning should be strategic:** This means that you should use your planning processesto find the best ways of making a difference and the best approach to doing this. All possiblealternatives should be examined, not just the ones we are comfortable with. Effective planning lays the basis for ongoing strategic thinking and action from everyone who will contribute to achieving your organisation's purpose. All decisions and action and all use ofresources need to make the most strategic contribution to achieving the purpose you haveagreed on.

   Click on the heading for information on how to plan strategically including how to link organisationalstrategy to programme and project planning systematically using the Logical Framework Approach (LFA).

4. **Planning must include agreements about how and when you will evaluate progress and achievements:** You will need to make decisions about what you will use to tell you ifyou are making progress or have achieved your purpose. You will also need to agree on where you will get the information and when you will evaluate, how and who should be involved.

   Click on the heading for information on how to plan for evaluation.

5. **Effective planning requires a major commitment from everyone in the organisation:** Planning can take time; it can seem messy and frustrating. But, studies show that one of the key factors in effective planning is how committed the organisation and the people areto the planning process. A further key factor here is that enough time should be given to planning effectively – it will save you time later.

6. **Planning and evaluation must be thought of as a cycle of learning and improvement, not a straight line from A to B:** We must continually evaluate what we are achieving anduse our learning to develop more effective ways of achieving our goals.

1.13   CONCLUSION

Every organization requires succession planning. By succession planning, organization's key roles are constantly maintained with talented people, so organizations can maintain its strength.When selecting people for key roles, their adherence to organization's mission and vision is important. This is how visionary leaders are sprung in organizations with commitment for the company's growth.

1.14   SELF ASSESSMENT QUESTIONS

1. Why planning of Library Automation is necessary?
2. Describe the planning of library automation step-by-steps.

1.15   REFERENCES

1. Pizer,I.H (2006). Automation—planning to implementation; the problems en route. Bull Med Libr Assoc. 1976 January; 64(1): 1–4.
2. www.clib.dauniv.ac.in/E-Lecture/Library%20Automation1.pdfý
3. www2.unescobkk.org/.../MODULE2%5CEIPICT_MOD2_ppt%5CEIPIC.
4. dspace.thapar.edu:8080/dspace/bitstream/.../53/.../Library+Automation.p...ýbyBChauhan - 2006

LESSON - 2
LIBRARY AUTOMATION

OBJECTIVE

After reading this chapter, students will be able to understand:

- ➢ Basic fundamental concepts of Library Automation
- ➢ Benefits of Library Automation
- ➢ Difficulties and risks in Library Automation
- ➢ Library Automation Steps

STRUCTURE

2.1   INTRODUCTION

The automation is economically feasible and technologically required in modem libraries to cope up with the requirements of new knowledge, the enormous increase in the collection of materials, problems of their acquisition, storage, processing, dissemination and transmission of information. The capabilities of computer associated peripheral media and its application in library activities and services led to a highly significant quantitative and qualitative improvement especially in online technology. Library automation refers to the use of computers to automate the typical procedures of libraries such as cataloging and circulation. The main purpose of library automationis to free the librarians and library staff and to allow them to contribute more meaningfully to spreadof knowledge and Information. While changing from traditional library services to automated library

services, new equipment and processes are introduced changing the work process or work activities in the library. It has changed the nature and the scope of library work. lntroduction of computer library systems cause technological organizational and sociological changes. The most important of these is sociological changes. lntroduction of new technology to library services changes the relationship between the library staff and their work. It must be planned for reducing the potential for resistance to change. The challenge to library managers is to manage and develop library human resources not to master the functionalities of automation

2.2 WHAT IS LIBRARY AUTOMATION?

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

Library automation can be defined simply as the use of computer and networking technologies in the library. According to 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".(Kent,1977). According to McGraw Hill Encyclopedia of Science and Technology, it defines automation as "a coined word having no precise generally accepted technical meaning but widely used to imply the concept, development, or use of highly automatic machinery or control systems". (McGraw, 1982)Library automation refers to use of computers, associated peripheral media such as magnetic tapes, disks, optical media etc.and utilization of computer based products and services in the performance of all type of library functions and operations.Library automation is the application of ICTs to library operations and services. The functions that may be automated are any or all of the following: acquisition, cataloging, public access (OPAC and Web-OPAC), indexing and abstracting, circulation, serials management, and reference.

2.3 LIBRARY COMPUTERIZATION

Computerization is the part of library automation. At present use of the computer technology for library housekeeping operation such as administrative work, acquisition, cataloguing, circulation, serial control, OPAC etc. known as library computerization.

2.4 DEVELOPMENT OF LIBRARY AUTOMATION

The word "automation" has been derived form Greek word "automose" means something, which has power of spontaneous motion or self-movement. The term "automation" was first introduced by D.S. Harder in 1936, who was then with General Motor Company in the U.S. He used the term automation to mean automatic handling of parts between progressive production processes.

➤ 1930s Punch card for circulation (IBM)
➤ 1950 Info & Docu. Center America
➤ 1961 Invention of IC by RoberNoyce (Intel) and Jack Kerby (Texas)
➤ 1961 KWIC H. P. Luhan IBM
➤ 1966 MARC-I and in 1968 it was converted in MARC-II by Henriette Avram
➤ 1965 Indian Science Abstract: author index by INSDOC
➤ 1970s Many library networks establish in India

2.5 SPECIAL FEATURES OF LIBRARY AUTOMATION

➢ It is an electronics based activity which is carried out by human beings
➢ It is helpful to providing library services
➢ Standardization in library work
➢ Accuracy in work
➢ Speedily communication of information
➢ Avoid duplication in the library work
➢ Trained staff
➢ Availability of information
➢ It is a time saving system
➢ User friendly system
➢ Networking

2.6 BASIC REQUIREMENTS FOR LIBRARY AUTOMATION

➢ Adequate collection
➢ Financial assistance
➢ Hardware
➢ Software
➢ Trained staff
➢ User training
➢ Maintenance & development

2.7 BENEFITS OF LIBRARY AUTOMATION

▪ Improved productivity/efficiency
▪ Better use of information resources through improved access
▪ Improved resource sharing through the virtual catalog or network
▪ Facilitates interlibrary loan
▪ Reduces duplication
▪ Avoids duplication of cataloguing effort
▪ Optimizes the use of human and otherresources
▪ Enhances the national and regional information infrastructure Easily searching of information
▪ Time saving
▪ Speedily communication
▪ Helpful in stock verification
▪ Easily working with the help of automation
▪ Helpful in resource sharing
▪ It motivate to library staff
▪ Development of human resource

2.8 BENEFITS TO STAFF

- Development of new patterns of communication among staff, especially between computer services and library staff
- Empowerment of the staff in making decisions
- Acquisition of new skills and knowledge

2.9 POTENTIAL DIFFICULTIES

- ❖ Fear of adverse impact on employment Apprehension that the technology could be too expensive
- ❖ The library staffs have to undergo extensive training. New knowledge and skills are needed.
- ❖ Lack of support from the management, may be owing to budget constraints
- ❖ The need to convert data into machine readable form
- ❖ Automation Costs
- ❖ Planning and consulting costs
- ❖ Purchase of the system, hardware, and software
- ❖ Purchase of network-specific hardware, software, and cabling
- ❖ Internet connection costs
- ❖ Conversion of manual records into machine-readable form
- ❖ Access, and subscriptions where appropriate, to external databases and systems Ongoing operating costs
- ❖ Maintenance of system hardware and software

2.10 RISKS IN AUTOMATION

The most common causes of failure:

- ✓ Loss of commitment
- ✓ Vendor viability
- ✓ Support of higher-level administratorsComputer center support
- ✓ Inadequate resources Organizational changesStaff attitudes
- ✓ Patron attitudes

2.11 MANAGEMENT OF LIBRARY HUMAN RESOURCES

A Successful library automation project depends on good management. Library management requires attention to a wide variety of strategies or techniques in embracing change caused by library automation. The most important is management and development of library human resources. How library managers deal with the major factors that need to be considered in this changing environment, will largely determine how successful that change will be. Some of the important strategies for managing human resources during automation change management are;

01. Establishing a shared motivating vision
02. Creating open communication and collaboration culture
03. Participative management
04. Appropriate staffing
05. Appropriate training and coaching for people involved

2.12   LIBRARY AUTOMATION STEPS

Planning is time-consuming, but it is usually cost-effective because time spent planning reduces the amount of time required for system implementation. Steps involved are:

Step 1: Describing existing library services and technology

- o   Identifying existing services and functions provided by the library
- o   Identifying existing technology being used in the library
- o   Collecting and organizing basic statistical data

Step 2: Assessing needs and setting priorities

- ☐   Who should be involved in planning?
- ☐   Needs assessment
- ☐   Identifying approaches to satisfy the needs
- ☐   Setting priorities
- ☐   Developing a preliminary budget

Step 3: Translating needs and priorities into specifications

- o   Designing specifications
- o   Preparing and distributing the Request for Proposal (RFP)

Step 4: Evaluating proposals and selecting a system

- ☐   Making the first cut
- ☐   Seeing system demonstrations
- ☐   Analyzing vendor responses
- ☐   Costs
- ☐   Obtaining responses from vendor's clients
- ☐   Making the final cut

Step 5: Putting your system into place

- o   Contract negotiations
- o   Hardware and software installation
- o   Training

Step 6: Retrospective conversion and bar coding*

- ☐   Use of electronic resources within the library (e.g. CD-ROMs)
- ☐   Accessing remote electronic resources (e.g. the Internet)
- ☐   Office automation (e.g. word-processing, spreadsheets, databases, etc.)
- ☐   Patron services (e.g. computer laboratory, multimedia center)

* Extracted from: Planning for automation: a how-to-do-it manual for librarians /John M. Cohn, Ann L. Kelsey, Keith Michael Fiels. 2nd ed. New York : Neal-Schuman Publishers, Inc., 1997

2.13 CONCLUSION

Benefits outweigh disadvantages. ICTs are here to stay and society is becoming an information society demanding the use of ICTs to improve access to information.

2.14 SELF ASSESSMENT QUESTIONS

1. Define Library automation and discuss its benefits.
2. Write about difficulties and risks in Library Automation
3. Write the steps of Library Automation

2.15 REFERENCES

1. Harinarayana, N.S. (1991). Concept of library automation. Herald of Library Science 30 (3-4): 176-177
2. Kumar, P.S.G. (1987). Computerization of Indian libraries. New Delhi: B.R. PublishingCorporation.
3. KuruppuArachchi, Ttheja and De Silva, Wrg (2007). Library automation: strategies for libraryhuman resource management. Journal of the Universiw Librarians. (Vol. 1 l), .p.2-13.
4. Pandey, S. K. ed. (1999) Encyclopedia of library automation systems and networks. Vol. 4:Organization of library automation. ANMOL Publications PVT. LTD., New Delhi.
5. Ritson, N. and Marsden A., (2001) Organizational Management. Viva Books, New Delhi.pp. 299-327.
6. Sykes, P-, (1991) Automation and non-professional staff: The neglected majority. LibraryManagement.12:3.
7. Thompson, V., (1990) Training staff for newly installed automated circulation systems. LibraryManagement.l 1:5 .
8. www2.unescobkk.org/elib/publications/. /EIPICT_MOD2_L1.pdfý

<div align="center">

LESSON -3
HOUSE KEEPING OPERATIONS: ACQUISITION SECTION

</div>

OBJECTIVE

After reading this Chapter, you will be able to:

> ➢ Understand the house keeping operations of library;
> ➢ About Acquisition Section

STRUCTURE

3.1 INTRODUCTION

Housekeeping operations of a library include all operations such as acquisition, cataloguing, circulation and serials control. As stated earlier, libraries should adopt the new sophisticated information technology tools to provide accurate and instant information and to cope up with the demands of new knowledge, the enormous increase in the collection of documents, their problems of storage, dissemination and retrieval of information. Today, the term 'Library Automation' is used to refer "the extensive use of mechanical, electronic or micro-electronic equipments to perform the functions and activities associated with the libraries, such as acquisition, serial control, cataloguing and circulation and also to library and information services and networking". Computers are used in libraries to assist in a number of library routines necessary for efficient day-to-day functioning what we call 'housekeeping activities'. They are also used for formatting and generation of indexes.

The computers are of great significance with the advancement of telecommunication and reprography technologies in the library automation – when computers interconnected by some of the modern communication vehicles, one can have information over vast distances in no time. The computers are being increasingly used in library and information services for information

processing and repackaging of information and on improving products and services of library and information centers. They offer a versatile tool for organization and retrieval of information.

3.2 ACQUISITION SECTION

Definitions

Acquisition is the process of locating and acquiring all types of library materials after they have been selected for a library's collection. Others have defined acquisitions as follows:

Acquisitions is "the process of identifying what the library ought to acquire, determining how and from whom it can be obtained, and actually getting it" (Magrill and Corbin 1989,

"Acquisition work involves locating and acquiring the items identified as appropriate for the Collection: (Evans 2000, 313)

"The term acquisitions refer to the process of obtaining library materials after they have been selected. ... Acquisitions includes all the tasks related to obtaining all kinds of library materials"(Heitshu 1991, 101-2).

"Acquisitions are the process of acquiring library materials. .. Acquisitions include all tasks related to obtaining all library materials" (Dietrich's and Schmidt 1999, 1).

Acquisition is one of the important functions of any library. The goal of the library which is to satisfy the users will depend on the acquisition system of the library i.e. the user of the library will be satisfied only if the library acquires reading materials based on the users' demands. Acquisition also results in effective and efficient collection development of the library and hence acquisition of reading materials is an important job and is also highly labour intensive. Therefore automation in this area is very much required. The Acquisition Section collects requests for books from the faculty, interacts and places orders with the selected suppliers, accessioned the procured books and transfers them to the Technical Processing Section for classification, cataloguing, indexing and database entry. In brief we can describe about the acquisition section as follows:

Acquisition Section is an important section, which acquires the books and the other reading materials. The standard of an Institution is evaluated by the acquisition section. The major duties involved in acquisition section of a library are:

- Personal examination of all requests for orders to determine whether the library already has them, and where and how to order them.
- Supervision and handling of all orders whether acquired by purchased, gift.
- Keeping accurate records of fund accounts in order to know the details of the fund allocations and other details of the book recording.
- Maintenance and use of bibliographic aids.
- Preparation of bills and payment.
- Informing individuals about the new arrivals.
- Ordering and acquiring of books, periodicals and other resources.

Acquisition and ordering systems in libraries cover the selection, ordering and accessioningof items into the library's collection. Computers are used:

- to send order slips and 'chasers' for unacknowledged or overdue orders to the booksellers.
- to produce lists of books on order
- to keep accounts of money spent
- to produce accession lists of recently acquired books.

The detailed input to an acquisition system covers

- new orders
- amendments to existing orders
- bookseller's reports
- acknowledgement of receipt of items in the library

Selection of new books can be done from commercially available services which disseminate information about forthcoming documents, or directly from MARC tapes or any local inputs.

Two files are maintained in a computer-based acquisition system. One is the main file containing records of all current orders. The second is a file with the names and addresses of booksellers used by the library. A code number for each bookseller links the two files, so that booksellers information is not repeated in the order file. The system prints out the orders addressingthe appropriate supplier printing of orders can also be done on special pre-printed stationery thatcan be sent directly to the book-seller.

By checking with the date of entering the order record into the file, 'chasers' can be sent to the booksellers, if no information regarding the order has been received within a predetermined time.

When the item is received in the library, the order record with the bibliographic details becomes the basis of the catalogue record. The edited record is merely added to the catalogue filein an integrated system.

Other processes that can be performed by a computerized acquisition system are:
- listing items on order, by author, department or subject;
- new accessions listing;
- notifying individuals who have recommended a particular book, about the receipt of that book;
- control of accounts;
- production of relevant statistics to help management decisions (Jha,20120.

3.3 OBJECTIVES OF ACQUISITION SECTION

(Kimber (1968) has given the major objectives of an automated acquisition system may be:

1. Elimination of maintenance of several manual files which consumes a lot time of the staff which intern eliminates may errors in reporting, control etc.

2. Improve accuracy in all facets of acquisition process.
3. More effective and efficient handling of claims and cancellations.
4. More accurate and timely financial data recording, accounting and reporting.
5. Eliminating of the need for manual processing of discount. Foreign exchange and other invoicedata.
6. Improved ability to track orders, receipts, invoice and claims.
7. Improved binding control including maintenance of binding data records, provision of bindingalerts, production of binding orders and tracking.
8. Integration of acquisition with cataloguing and serial control for more effective bibliographicholdings.
9. To provide necessary management information reports.
10. Improved services to the users through faster, timelier processing of orders andreceipts.

3.4 FUNCTIONS OF ACQUISITION SECTION

There are several distinct acquisition functions: selection, verification, vendor assignment, ordering, claims and cancellations, payments, accessioning, statistics, gifts and exchange. All these functions can be grouped into five major functions:

- Selection, ordering, accessioning, management information and gifts and exchange. According to Wilson and Tauber, the functions of the Acqusition section of a library are as follows :
- To develop procedures to meet the needs of the library.
- To handle personally or important correspondence or problems relating to ordering of books,serials, other non – book materials like map & charts, models, pamphlets, films and other materials.
- To consult with heads of other departments concerning book orders.
- To notify the faculty of the non – expenditure of book funds.
- To watch carefully auction, non-book and second dealers, catalogues for opportunities to purchaseitems on desiderate lists.
- To have materials filmed or otherwise reproduced when they are out of print or otherwise unavailablein the original.
- To interview publisher's representations, book dealers, collections, and others who are interested in building up the university's book collection
- To read and appraise books and other materials and make recommendations for their acquisition.
- To supervise the handling of all gifts and exchanges coming into the library and also
- Maintenance and use of bibliographic aids peculiar to acquisition work (ex:- dealer's catalogue,trade lists, etc.).
- Maintenance of order files, 'in process' files, desiderate lists, and other records essential toacquisition work.
- Preparation of bills for payment, Book-keeping and other financial activities assigned to thedepartment.
- Preparation of accession lists.
- Informing the individuals about the status of their recommendations.

- Following up on items not promptly received.

3.5 INFORMATION ABOUT NEW BOOKS

The Section receives catalogues and brochures from various national and international publishers. Such materials are displayed in the notice board opposite to the Circulation Counter. Interested users may also browse these catalogues in the Acquisition Section.

3.6 BOOK SELECTION

These are the steps for book selection:

Step 1: The faculty members must get to know about the books from such sources as Journal articles, conference proceedings, brochures sent to them by publishers, and the Web.

Step 2: They must send their requisitions to the Library in prescribed requisition forms and thelibrary decides the suppliers who are best suited to supply the books.

Step 3: Suppliers also show copies of their books to the faculty members and the faculty membersrecommend some of these books for procurement to the library.

Step 4: Certain books are received as gift from different national and international sources.

3.7 STEPS FOR REQUISITION FOR BOOKS

STEP 1: Separate requisition forms for general and textbooks are available in the download menuof specific automated libraries.

STEP 2: One may also access these forms from the library website.

STEP 3: Faculty members who wish to recommend new books may fill up and forward these requisition forms with the signatures of library representative and Head to the acquisition sectionfor further processing.

STEP 4: Students may also recommend for textbooks by filling up the requisition forms by the course faculty, Library Representative and Head or subject faculty and Dean and forward these tothe Section. The Section attends to phone and email queries from the users.

STEP 5: Apart from these, a register is kept in the Section to get feedback and for making generalenquirers.

3.8 BOOKS PROCURED

Textbooks prescribed for courses bought in multiple copies, General and Reference books and Conference Proceedings purchased in single copies books received as gift from different national and international sources.

3.9 CONCLUSION

Acquisitions module – automates the acquisition process that includes ordering, receiving, claiming materials from suppliers, return, cancellations, maintain statistics, and for some manage accounting activities. With ICT, acquisition of library materials may be done online. The acquisitions module enables the librarian to create records of items to be ordered and to print out order slips in cases where the order must be transacted by ordinary mail. Recent developments have provided electronic means of ordering items and paying for them. A lot of information is now available on the Web about online ordering of books and other materials. The module may also supply accounting information relating to acquisitions activities.

3.10 SELF ASSESSMENT QUESTIONS

1   What are the functions of Acquisition section in a library?
2   What are the steps for book requisition?

3.11 REFERENCES

1. greenstonesupport.iimk.ac.in/.../Introduction%20to%20integrated%20lib
2. Khanna, J.K. and Siwatch, Ajit S. "Managing technical services in libraries: special reference to automation, database, Internet and networks" – Delhi: Sanjay Publications, 2008.
3. Kimber, Richard.T. (1968). Automation in Libraries. Oxford: Pergamon Press. 64.Wilkinson,
4. pawankumarjha.tripod.com/dissertation/chapter1.html
5. Rama Devi V and Haritha, B (2010). Re– engineering Library Acquisition: A Case Study.7th Convention PLANNER – 2010.
6. Rama Devi V. Technology applications in Open University libraries with reference to acquisition and technical section: a case study "In International Conference on "Open and Distance education: Frontiers, Challenges and strategies, 23 – 25 August, 2007, Hyderabad, India.
7. Wilkinson, Frances C and Lind K. Lewis, "Complete guide to acquisitions management", London: Libraries Unlimited, 2003.

TECHNICAL SECTION: CATALOGUING & CLASSIFICATION

OBJECTIVE

After reading this Chapter, you will be able to:

➢ Understand the fundamentals of cataloguing section;
➢ Major activities of cataloguing section;
➢ Significance of Classification & Cataloguing in library;
➢ How to shelve, labeling & maintenance of library resources.

STRUCTURE

4.1   INTRODUCTION

Technical Processing Section plays a key role to function the library. This section is the soul of the library. It is where they process new materials. Upon Acquisition of the material they undergo processes before shelving or circulating the book. It makes a bridge between the acquisitions of documents to the Circulation. Technical Section undertakes two vital functions, viz.,

(a) Classification and

(b) Cataloguing

(a) **Classification** — Class numbers are given to the books according to a particular classification scheme viz. the Dewey decimal classification Scheme (DDC).

(b) **Cataloguing** — Books are catalogued according to a cataloguing Code viz. Anglo American Cataloguing Rules -II (AACR-II). For each book three entries are prepared.

The library catalogue is considered as a mirror of the library because it reflects the collection of the library i.e. whether the library possesses good, bad or satisfactory collection. It is consideredto be the base for most of the library activities such as acquisition, reference, inter library loan etc.In acquisition activity, the catalogue is referred to avoid duplication of reading materials. In reference and inter library loan activities, the catalogue is consulted to see reference and other documents which can be provided on loan or can be consulted to answer reference queries. Hence, the catalogue is considered as an important tool in the library. So, if automation of the catalogue is done, then it will be very much beneficial to the users and the staff wherein they can get the desired information with no time. Similarly if the catalogue is made available in a network environment through LAN, then users can have simultaneous access to the same database. So also the library staff will appreciate the automated system since it will eliminate their job of printing the cards, filing the cards, keeping the catalogue up-to-date, etc. The automated catalogue also conserves spaceas compared to the large catalogue cabinet, which occupies a lot of space in the library.

OPAC (Online Public Access Catalogue) is one of the existing aspects of library automation. OPAC is a catalogue, which is available for searching online. Such OPAC may be searched froma terminal within the library or at a terminal elsewhere in the organization remotely via national or international telecommunication networks. Today majority of the software which are used for automation in libraries provide a separate module of OPAC. With the latest developments in integrated systems the OPAC is connected to the circulation system so that the used can come to know whether the document he/she is looking for is currently available in the library or on loan. OPAC also promotes resource sharing program and bibliographic search can be done by author, title, accession number, ISBN, Keywords etc. Search in OPAC is by using Boolean logic or by truncation.

4.2 TECHNICAL PROCESSING

Every library technical processing section play a vital role to process the resources wherever procured by library. For the library's collections to be made accessible to library users it is important that the technical processing activities of the library are carried out efficiently and effectively. Acquisitions, Bibliographic Control, Classification, storage, preservation and disaster preparedness planning all come into play and contribute to the overall management of the library's collections. Decisions taken a technical processing department can have a major impact on whether the clientele find the library easy to use, so it is important that staff working in these departments keep user needs in mind when devising procedures for processing the collections.

4.3 MAJOR ACTIVITIES OF TECHNICAL SECTION

➢ Writing process slip for assigning call no. for the book received from the Acquisition section.

➢ Cataloguing of books following AACR-II.

➢ Checking the process slip with the Catalogue and SL cards.

➢ Assigning call no. for the book with the help of Classification Scheme (depends on library which scheme they are following) and the Authority file.

➢ Arranging the process slip for the preparation of New Arrival monthly bulletin.

➢ Pasting the Spine and Date labels in the book and noting the Call no.& Cop. No on the spine label and Accession no on the date label along with the Call no. and Cop.no.

➢ Arranging the library book along with other processed books to be displayed on each month.

➢ Merging the SL card in the cabinet alphabetically after noting the Call no on it.

➢ Preparing the list of the processed books during a month with bibliographical details, Accession no and location using Microsoft excel.

➢ Announcing this list on the Library Web Site at the beginning of the month.

➢ Sending the processed books for display on each month after entering the required details of the book in the OPAC.

➢ Shifting the earlier displayed books to the stack after keeping the reserved books on the reservation desk.

➢ Reminding Faculty members to collect the processed books which are not collected and to be issued on Permanent Loan or Department Loan.

4.4 CLASSIFICATION

Classification means putting together the like-entities and separating the unlike entities. The characteristics of entities are used as a basis for determining the likeness and unlikeness between them. A class consists of entities which are like in some respects and possessing certain qualities in common. This helps in distinguish them from another class of entities.

A library classification is a system of coding and organizing library materials (books, serials, audiovisual, computer files, maps, photographs, manuscripts, regalia, gramophone records, tape records, microfilm and so on) according to their subject. It provides formal access to documents in a library.

The library classification system provides a system for organizing the knowledge embodied in books, CD, web, etc. It supplies a notation (in case of DDC, it is Arabic numerals) to the document. The Dewey Decimal Classification (DDC) system is a general knowledge organization tool that is continuously revised to keep pace with the development of knowledge. It is the most widely used classification scheme in the world. Libraries in more than 135 countries use the DDC to organize their collection. It is also used over the web for organizing the web resources for the purpose of browsing.

4.5 CATALOGUING

In order to provide access to the holdings of a library, an index or list of the materials is always prepared and maintained systematically for the readers. It contains all the essential details about the documents with location mark, usually in numerical form, by which the documents can be located on the shelves of the library. This list or index or tool is basically called a library catalogue.

The cataloguing department decides on the appropriate form for identifying authorship of works in the collection, describes the item as a physical item or a virtual source, and assigns subject access points. In the cataloguing, on the process lip, headings for different types of entries to be prepared should be listed. The headings should be listed on the pattern of a tracing section. At this state, the cataloguer should pass on the volumes along with process slips to the typist to type out catalogue cards or to handwrite the card. So at the end, the product of cataloguing is just like a card or in modern sense an entry in the OPAC giving essential general information about

informational entity. This essential general information includes details about author, title, place of publication, name of publisher, year of publication, edition, editorship, pagination, illustration, etc. The individual cards which bear the class number or call number to enable the item to be located are arranged in some definite order. It may be noted that for each volume, an additional card called shelf list card shall be prepared.

In order to provide access to the holdings of a library, an index or list of the materials is always prepared and maintained systematically for the readers. It contains all the essential details about the documents with location mark, usually in numerical form, by which the documents can be located on the shelves of the library. This list or index or tool is basically called a library catalogue. There are several catalogue codes available it depends on library to library which code they will prefer. AACR-2 cataloguing code is widely used catalogue code.

4.6 LABELING

Labelling is the process of attaching new call number stickers to books. There are a few possible times that this is necessary.

1. The old call number label has fallen off or is not readable.
2. The current call number sticker is incorrect.
3. It is a new book and has not yet been given a call number sticker.

4.7 SHELVING AND DISPLAY

To proper shelving of books, there are few rules one has to follow:

1. Check call numbers around the items being shelved to verify the shelf is in order.
2. Items should be upright and shelves should be adjusted to the proper height for the items they house. If one or two items are too tall to stand upright, shelve them on their spines with the call number label facing out.
3. Items with call number labels that cannot be read should be given to the Stack Management Supervisor or placed on the labeling shelf behind Circulation.
4. Items should be brought out to the edges of the shelves to make even, neat rows (called blocking.)
5. Each shelf should have a bookend at the end of the row.
6. Watch for crowded shelves. If an item will not slide back into its place with a gentle push, the shelf is too full. The proper method to remove an item is to push in the volumes on either side of it, then carefully grasp the center of the spine and remove it (not by pulling from the top of the spine.)
7. Items with damage (mold, mildew, insect, or tears on/to covers, pages, etc.) should be given to a supervisor. Check for sufficient air space behind the items on the shelves to allow for proper circulation of air. Remove bits of paper, post-its and paper clips.
8. Any loose papers or library items left at the end of each shelf or on the floor should be picked up. If an area is kept tidy, users will tend to leave it that way.
9. Refer any problems or questions to a supervisor-do not guess!

4.8   MAINTENANCE

There are several factors which affect library documents directly or indirectly. Cataloguing section prime duty is to keep watching the condition of library resources. Secondly, maintenance of library resources one has to think about various hazards such as environmental, biological, chemical and temperature hazards. How to prevent them from these hazards?

4.9   SELF ASSESSMENT QUESTIONS

1. What do you mean by Technical Processing section?
2. What are the major activities of Cataloguing section?
3. Why new books are displayed?

4.10   REFERENCES

1. Saffady, William. (1988). Library Automation: an overview. Library Trends, 37, 269-281.
2. Hussain, Akhtar, &Raza, Masoom M. (2002). Online Public Access Catalogue: IASLIC Bulletin, 205.
3. Feather, Johnand and Sturges, Paul Routledge International Encyclopaedia of Information and Library Science.
4. http://www.cenlib.iitm.ac.in/docs/library/index.php?page=Technical_Processing
5. http://www.netugc.com/library-cataloguing
6. http://web.uflib.ufl.edu/msl/toolbox/stackmaint/HowtoSheve.htm

LESSON – 5

CIRCULATION AND STOCK VERIFICATION

OBJECTIVE

After reading this Chapter, you will be able to:

➢ Understand the role of circulation section;
➢ Functions of Circulation section;
➢ Use of stock verification;
➢ Criteria for weeding of library materials.

STRUCTURE

5.1   INTRODUCTION

Library circulation or library lending comprises the activities around the lending of library books and other material to users of a lending library. A circulation or lending department is one of the key departments of a library. The main public service point is the circulation desk or loans desk, usually found near the main entrance of a library. It provides lending services and facilities for return of loaned items. Renewal of materials and payment of fines are also handled at the circulation desk. Circulation staff may provide basic search and reference services, though more in-depth questions are usually referred to reference librarians at the library reference desk. The circulation desk is in most cases staffed by library aides instead of professional librarians.

The main component of a circulation control system is the transaction of documents i.e. issue and return of documents. This database contains bibliographic details of the documents which provide information on titles, authors and publishing details, which are used in notifying the users about the overdue. Circulation involves the charging and discharging of library materials, reservations, statistics, sending of reminders for the over-due material, etc.

5.2 FUNCTIONS CIRCULATION SECTION

Rao (1986) has given the following functions of an automated circulation control:

1. Provision of information on location of circulation items.
2. Identification of items on loan to a particular borrower or class of borrowers.
3. Recording of hold or personal reserves for items on loan but desired by another borrowers often with additional provision for notifying the library staff when the item is returned and printing a 'book available notice' for mailing to the persons who requested the item.
4. Printing recall notices for items on long term loan.
5. Renewal of loans.
6. Notification to library staff of overdue items and printing of overdue notices.
7. Notification to library staff of diligent borrowers (i.e. those with unpaid fines or overdue books) either at time of an attempted loan or at time a borrower is leaving the institution or on request forms the library.
8. Calculation of fines, printing fine notices, recording receipt of fines and sometimes printing of fine receipt.
9. Calculation and printing of statistics of various types.
10. Analysis of both summary statistics and statistics related to circulation of particular items for use in acquisition, planning of services and for other administration purpose.
11. Provision for printing due date slips, automatically generating orders for lost book or needed addition copies and printing mailing labels for remote borrowers.

The functions as stated in Wikipedia are as follows:

Functions of the circulation desk staff may include:

- Lending materials to library users
- Checking in materials returned
- Monitoring materials for damage and routing them to the appropriate staff for repair or replacement
- Troubleshooting circulation technology, i.e. library circulation software, scanners, printers, etc.
- Collecting statistics on library use, i.e. patron transactions, material checkouts, etc. creation of borrowers pockets, i.e. when using The Brown issuing system
- Charging and receipting overdue fines..

5.3 STOCK VERIFICATION

The term stock verification is also denoted by other terms as 'stock taking', 'stock checking', 'stock inspection', 'inventory taking', etc. The term stock verification refers to the process of checking as to what is in stock in relation to what there was. The emphasis is being put more on finding which items are missing than on how much the loss is calculated in rupees. In library context, it is the periodic verification of books and other reading materials of the library. It may be an insignificant aspect of librarianship as far as teachers, researchers and library experts are concerned. But in practice, stock verification is considered a sensitive, controversial and unwanted activity. Practicing

librarians are often worried over the process of library stock verification and its results and implications.

5.4 ADVANTAGES OF STOCK VERIFICATION

In spite of its limitations, it has some advantages mentioned as follows:

1. Periodic stock verification and writing off of resultant loss helps to reduce unnecessary escalation in the value of assets.
2. It helps in replacing relevant, useful and on demand documents with new copies wherever loss or mutilation occurred.
3. It helps in reviewing the precautionary measures already taken in preventing loss and mutilation.
4. Libraries can find deficiencies in the existing procedure of vigilance and maintenance of library.
5. It also provides an opportunity for its users to browse the entire collection after verification.

5.5   METHODS OF STOCK VERIFICATION

There are a number of methods followed for stock verification. One of the methods is to numerically count the number of documents and it practically does not serve any purpose except to know the number of documents lost. Another method is to physically check and tally documents on shelves with accession register. This method is not only cumbersome and time consuming but also requires the entire register to be kept while checking. It may also lead to spoiling the register with tick marks. However, with the advent of new ways of reproduction of accession register now the original register can still be saved. Another accession number based scheme which al so has the disadvantage of keeping the entire register (or its surrogate) is to have prewriting/typed/printed cards carrying accession numbers in blocks of 100 numbers while physically checking the documents on shelves. In both these methods the simultaneous working of number of batches depends on availability of number of copies of accession register or its surrogate and if more than one copy of accession register is used the results of checking needs to be consolidated from different copies/batches. All these not only make it cumbersome but also lead to waste of time and efforts.

The most popular and fairly reliable and quick manual method is to verify stock based on shelf list. This method requires an up-to-date shelf list. All these methods presuppose closing library for verification purpose. Yet another shelf list based method which does not require closing down the library but ensures reasonably economical, quick and dependable stock checking is to have two (book) card system s. In this method two different color book cards are prepared for each document and one of them is maintained as shelf list card and the other kept in book. At the time of stock verification these two book cards are exchanged. This method allows for simultaneous working of many batches as both shelf list and documents are arranged in the same sequence and also allows for rectifying errors of stock verification at a later date.

5.6 WEEDING

Weeding a library is like weeding a garden; one looks over everything and carefully selects those things which need to be removed. In a library, weeding is a shelf-by-shelf and book-by-book review and withdrawal of certain books in a library's collection.

5.7 WEEDING CRITERIA

There are few weeding criteria of library resources are given below:

- Format (available in other formats)
- Duplication
- Textbooks
- Currency (when relevant, varies by discipline)
- Physical condition of item
- Curriculum needs
- Core title (check standard lists, such as Books for College Libraries)
- New title available in collection (superseded volume)
- Circulation (use statistics, when available)
- Multiple copies available (with low circulation)
- Textbooks (generally not to be included in the collection)
- Publisher (well known in field and may include professional associations)
- Credibility of author, known experts in the field
- Critics' reviews of book
- Geographic/Special interest (National/local)
- Appropriate monograph level (undergraduate, graduate, professional, non-academic)

5.8 MATERIALS WE NEVER WEED

- Regional materials (history, literature, geography, economics, art, music, etc.)
- Authors on the faculty
- Classics in each field
- Core materials in each discipline
- Literary classics
- Primary sources
- Works deemed to be of historical value by the library professional staff

5.9 SELF ASSESSMENT QUESTIONS

1. What is the role of Circulation Section?
2. Explain weeding criteria of library materials.
3. What is stock verification?

5.10 REFERENCES

1. Dhiman, A. K. (2000). Stock Verification: Some Problems of Electronic Publications. DESlDOC Bulletin of Information Technology, Vol. 20, No. 6, pp. 3-5.
2. eprints.rclis.org/10917/1/J33_stockver.pdfý
3. http://www.tamug.edu/library/librarypolicies/weedingpolicy.html
4. Rao, Ravichandra I.K., (1986). Design and Development of Library Automation: function, file, requirement and procedure. In s. Parthasarathy (Ed), Computer Application to library Information Retrieval and networking, 20-28.
5. Sridhar,M.S.(1991). Library stock verification : a ritual and an occupational hazard.IASLIC Bulletin, 36(3) September 1991: 103-110.

LESSON – 6
SERIAL CONTROL

OBJECTIVE

After reading this Chapter, you will be able to:

- Understand the functions of serial control section in library;
- Work flow in serial control;
- Selection & procurement of Journals;
- Problems and Issues.

STRUCTURE

6.1 INTRODUCTION

Serials are published at regular intervals and the publication is intended to continue indefinitely. The following definition of a serial has been taken from the A.L.A. Glossary of Library Terms: "A publication issued in successive parts, usually at regular intervals, and, as a rule, intended to be continued indefinitely. Serials include periodicals, annuals (reports, yearbooks, etc.) and memoirs, proceedings, and transactions of societies." Besides scholarly journals and popular periodicals, serials include magazines and all other periodical publications as newsletters, newspapers, annual reports, proceedings of learned bodies, monograph series etc. The term serial control usually denotes two very distinct aspects: bibliographic control and processing control. Bibliographic control of serials involve preparation and maintenance of a central master list of all serial publications which includes full title, short title, variation form earlier titles, publishers, ISSN, frequency etc.

Serials processing control comprises of acquisition, claims controls, cataloguing, circulation, binding, weeding out etc. Serial control through the use of the computer is perhaps one

of the most complicated tasks of housekeeping. This is perhaps because of the literally unpredictable nature of serial publications.

Some of the functions of the serials control system that can be handled by the computer are:

i. Listing of serials holdings;

ii. *Accessioning of serials* (which includes relation, ordering, checking-in, renewal of subscription, studying notices when issues are not received.

(i) Listing of Serials holdings: is basically producing a catalogue of serials. However with serials, there are problems relating to change in title, periodicity etc. A listing system will depend on the bibliographic record for each serial being available in machine readable form. From a master file of such serials records, individual listing can be made based on title, subject, publishers/ suppliers etc. Union lists of serials holdings by librarians within a geographic region can also be produced by computer.

(ii) Accessioning of serials : must take into account receipt of issues, and periodicity of the serial, likely date or receipt in order to be able to send claims notices to suppliers for items not received, and to update the holding file. To predict the arrival of periodical parts. Each record must contain information about the publication pattern of the serial. This relates to the number of volumes per calendar year, number of parts per volume supplements, if any, the pattern of numbering parts, and the frequencies of publication. Algorithms can be written with reference to the real calendar which uses information on the details given above, to predict the arrival of each issue. Prediction cards called 'chaser' notices can be sent to the suppliers when an issue is overdue. Details of the suppliers and the price per volume are necessary for the system to handle subscription, renewals and accounting functions.

6.2   SERIALS: SELECTION AND PROCUREMENT

Organization for Serials Acquisitions - Who is responsible for the acquisition of serials in the library? In 49 percent of the libraries serials acquisitions are administered by a serials department, section or division. In some cases acquisition responsibility of such a department includes both current serials and back files; in other instances only current serials or only current periodicals, excluding annuals, transactions, etc. Some serials departments also acquire documents. While there is no one '%best" system for acquiring serials, the increasing importance of serials demands some standardization and specialization. In view of the increasing number of serials published, it would seem that more and more institutions will find it profitable to establish serials departments which would handle the acquisitions of serials.

6.2.1 Planning

The Serials librarian is responsible for selecting materials in all formats for the serials collection and for the selection and acquisition of electronic resources. Before ordering of serials proper planning is essential. Certain criteria should be followed. The major criterion for the addition of all materials to the Library's collection is the relevance of these materials to the educational programsof the University. Additional criteria to be considered include:

- Recommendation by faculty members
- Reputation of the author and the publisher
- Anticipated use
- Reviews in scholarly journals and other reputable publications
- Availability/non-availability of other library materials on the subject

-    Cost within the allocated budget
-    Accuracy and reliability of information and data
-    High representation of interdisciplinary content
-    General cultural and intellectual value

6.2.2   Selection

The responsibility for selection of serials is divided between librarians and faculty; in some instances suggestions from other users or students are considered. Serials in subject areas are selected by the faculty, librarian and in some libraries also by a team effort of both. In only a few instances were general serials selected by the faculty. Mostly, libraries reported selection of general serials was largely the responsibility of librarians. Among automated approaches to this task, R.R.Bowker offers machine-readable versions of its various printed guides to serial publications including Ulrich's International Periodicals Directory. The International Serials Data System (ISDS) and the International Centre for the Registration of Serials are charged with responsibility for the establishment and maintenance of a comprehensive machine-readable registry of bibliographic information about serials published through-out the world. In the United States, the Library of Congress has developed a MARC format for serial publications and participates in the CONSER program which creates and maintains a high-quality machine readable database of cataloging records.

6.2.3 Ordering

Once the serials are selected, the next step is selection of supplier or vendor. Keeping in view the reputation of the supplier, the vendors are selected and they are entrusted to supply the serials to library.

6.3   BEST PRACTICES - PERIODICALS

To decide what is the best practice for your situation when dealing with periodicals, you must firstmake the decision of what you are going to do with them.

• Do you plan to archive the copies so that students have a hard copy to use when doing researchor are you planning to discard them at the end of the year?

• Do you want to circulate all issues to anyone who wants to read them or do you plan to circulate the copies only on a limited basis such as teachers only?

With these questions in mind, realize that your decisions will have an impact on several areas of — Subscriptions, Cataloging, Policies, Preferences and Circulation. In all cases, using the Subscriptions module to track the receipt of all periodical issues provides a fast and effective way to manage your subscriptions records.

6.3.1 Treating Periodicals as Temporary Items

If you have an online magazine service such as EBSCO, you may not wish to keep the hard copies of your magazines, so cataloging would be wasted labor. In this case, checking periodical issues out using temporary barcodes makes perfect sense.

Set up a Temporary Items policy and use the Circulation policy to allow just certain patron groups to check out these items if you do not want to circulate your periodicals to everyone.

On the Misc tab for Circulation - Local preferences, set the Default Temporary Item

Policyto the Temporary Items policy.

Set your Temporary Barcode range on the Barcodes tab for Circulation - Global preferences. Print these barcodes and affix them to manila envelopes. These manila envelopes will be used to hold the periodical (or any other temporary item) that is being checked out.

To check a periodical out, place the periodical inside a manila envelope and scan the temporary barcodes, then fill out the fields on the Temporary Item window.

Make sure the patrons know that the items must be returned in the envelopes in order to clear them from their records.

6.3.2 Treating Periodicals as Part of the Permanent Collection
If you are planning to archive your periodical issues, you will need to decide whether you wish them to be done as separate items or copies under the title. For some titles such as Zoobooks that have a single topic for each issue, cataloging those periodical issues as individual items with the title of the issue as the title of the item is a viable alternative to cataloging them as copies of the periodical title and making each issue's topic part of a contents note. Cataloging most periodical issues as copies of a title is probably the preferable method to use since it causes less "catalog clutter" than having them as separate item titles in your database.

6.3.3 Establish a Periodicals medium type
Establish a Periodicals policy and use the Circulation policy feature to give checkout privileges to specific groups of patrons if you do not intend to circulate the periodicals to all patrons.

Set up your periodical subscription record in the Subscriptions module with Inventory on Receipt checked on the Item Info tab.

As an issue is received, use the E command in Circulation or click on the Receive Subscription button on the Subscription record in the Subscriptions module. Fill in the fields on the Add Subscription window for the first time you catalog the title or forthose that you wish to catalog as individual titles. To add a copy to an existing title, check the Add Copy to Existing Title button and select the title from the window that appears, click Save.

6.3.4   Quick Cataloging Trick
If you are going to catalog your periodicals, the following trick will allow you to do all your issues forthe year for all periodicals at once. This will enable you to print all barcode labels (and spine labels,if you want them) at one time.
1.   Go to Edit on the menu bar and select Preferences.

2.   Set the drop-down menu in the upper-left corner of the window to Display Settings and the second drop-down menu to Default Local.

3.   Turn on Auto save by clicking the box for Automatically Save when Closing/Deactivating a Window and turn off Auto lock by removing the check from the Database Management Windows Locked by Default. This will enable you to browse from one copy to the next easily and quickly when changing the volume.

4.   Catalog the item title first — maybe even go so far as to have the year as part of the title.

5.   Add the number of issues you expect to receive that year by adding the first copy (Add Copy

under Items on menu bar) and then duplicating that copy (Duplicate under Items on the menu bar) for the number of issues you will be receiving. Make certain that you select the Duplicate Copy option or you will be duplicating the title in error.

6. Modify the copy volume with the issue information (month, year; month, day, year; volume andissue #; etc) for each copy.

7. Print smart barcodes and have them on hand ready for when you receive the issues. This will mean that you are using full sheets of labels instead of just a few at a time which causes a great deal of waste.

8. Put the barcodes on all the copies you have received.

9. Bring up the On Order patron (barcode 5) and check out all the copies you haven't received yet.

10. When you have a new copy come in, slap on its barcode (it's already cataloged), and Bookdrop it.

11. Use the E command to make sending in missing issues claims easily.

6.4 PROBLEMS AND ISSUES

The acquisition of serials become intensified during the past ten years or so largely because of the increasing numbers published, rising subscription costs, and the generally heightened Complexities in handling and processing this form of publication. F Robert W. Orr wrote an article, "A Few Aspects of Acquiring Serials" in which he termed serials as "brash upstarts" in the area of graphic media.' If anything, in recent years they have become even more brash, since the need for rapid communication is greater than ever before. Although serials have now passed the three hundredth birthday anticipated by Orr, time has not been a mellowing factor- their growth, form, and costs have not been stabilized. Trends in the acquisition of serials and the consequent problems have undergone some changes in particulars; however, title proliferation and cost factors remain a common theme to both the past and the present.

6.5 SELF ASSESSMENT QUESTIONS

1. What is the major work of serial control section in library?
2. Describe the selection and procurement of Journals?

6.6 REFERENCES

1. Vyasamoorthy, P. (1987). Automation of Serial Control. CLIS Observer, 4, 116-121.
2. Thompson, Elizabeth H. A.L.A.Glossary of Library Terms; With a Selection of Term inRelated Fields. Chicago, ALA, 1943,p.124.
3. www.goalexandria.com/support/training/bp/periodicals.htmlý

LESSON – 7
LIBRARY SOFTWARE: LYBSYS

OBJECTIVE

After reading this Chapter, you will be able to:

- Understand the what is library software?;
- Types of software used in library;
- Difference between commercial and open source software;
- How to use library software successfully in library.
- Understand the LIBSYS software properly;
- Various versions ofLibsys software;
- Modules of Libsys software;
- Use of OPAC.

STRUCTURE

7.1   INTRODUCTION

Computers are being used in libraries to enhance the efficiency and effectiveness of their operation and services; they have also provided information management for taking effective decisions. Development and use of information technology (IT) enable the libraries not only to offer their user the appropriate information available within their libraries but also gain access to catalogues of other libraries, both local and outside of the library (Anil Singh, 2003). Library automation in India started in the late1970s in few specialized libraries has now reached most of the academic libraries. Today, there is a greater responsibility on the part of the library and information centers to provide the latest and timely information to their users to facilitate improving the quality of education. This cannot be achieved without each institution having an efficient library and information system at its command (Koneru, 2005). Library automation systems are elaborately designed, and crafted computer applications require considerable programming skills together with an extensive knowledge of the functional needs of libraries and standards that are applied in such systems. Software technologies used in library automation systems include database management systems, client- server architectures, search engine technology, and, increasingly, software used in web-based applications (Ravichandra Rao & Sainul, 1999).

7.2 TYPES OF SOFTWARE USED IN LIBRARY

The computer cannot do anything without some programme or instruction or software. Unlike the hardware, software cannot be touched but it instructs the computer what to do in a particular situation. Any type of computer programme designed to perform some kind of library activities is known as library software. It may be a simple programme to perform the job of acquisitionor cataloguing or integrated library management software that will perform the job of acquisition, cataloguing, circulation, serial control and others. It may also be digital library management softwarewhich will manage the digital resources of the library or some other types, say a Learning Management System or Content Management System, etc

There are different library software packages, and each of them has different functionability. The amalgamation of features adds a lot of difficulties in categorizing the library software packages. However for the purpose of our study, an attempt is made to categorize the library software packages into the following:

Based on Function Performed

a) Database Creation Software (e.g CDS/ISIS)
b) Library House Keeping / Management Software Packages (Libsys, OASIS, Sanjay, SLIM, SOUL)
c) Institutional Repository Software Packages (CDSWare, Dspace, E-prints, Fedora, Ganesha digital library, Greenstone)

Based on Source Code Availability

a) Proprietary software (SOUL)
b) Open Source Software Packages (Koha)

Based on Cost Factor

a) Completely Commercial (Libsys)
b) In-house Developed;
c) Shareware
d) Freeware (Gratis/Libre software)
e) Open Source Software

The following paragraphs will describe each and every aspect of the library software packages. Due attention is given to list the free software packages (open source and proprietary) that can be implemented without giving much stress on library finance. Sometimes a few commercial software packages that are also well proven also listed out to have a comparative study of the trend of available functionality in both categories.

7.3 IN-HOUSE/COMMERCIAL/OPEN SOURCE

In-house: In-House development means that a company has programmers on its staff and develops software internally. *Commercial:*"Commercial Software" is the model where the software developed by a commercial entity is typically licensed for a fee to a customer (either directly or through channels) in object, binary or executable code. The commercial entity often provides support, training, updates and other similar services needed by customers to efficiently

use that software. The source code of the software may be made available1to certain users of the software throughspecial licensing or other agreements, but is usually not distributed to the general public, and maynot be copied or modified except in a manner provided for in such agreements.

Open source: The growing popularity of open source has altered the software industry landscape in a dramatic wayin recent years. Few technical subject matters today are as passionately debated as that surrounding open source and commercial software two prominent models of software licensing.

Policy concerns surrounding commercial and open source software have also confounded Governments around the world. In particular, open source is often seen as a possible solution to some of the challenges presently faced in various countries, especially among developing nations. Such challenges include grappling with the piracy problem, desiring greater control over software that is acquired and dealing with broader policy perspectives on how best to develop a thriving domestic software industry. With a view to assist decision-makers discern the issues in this debate, let us examine the key considerations to be taken into account in making software policy decisions. In this first part of our four-part discussion, we will examine the nature of open source and commercial software development methodologies, the related licensing approaches and the underlying intellectual property foundation. In the second part, we will further review the characteristics of the two software models that are commonly debated to better understand the true nature of these models. In the third part, we will consider the issues that are of particular concern to Asian Governments and economies. In the fourth part, we will consider some approaches and strategies on software procurement and technology standards that Governments are contemplating to address some of the challenges presently faced by consumers and the industry.

"Open Source" is a software-licensing model where the source code of the software is typically made available royalty-free to the users of the software, under terms allowing redistribution,modification and addition, though often with certain restrictions. The support, training, updates and other services for the software may be provided by a range of entities, increasingly under commercial arrangements. Open source programs are often, though not exclusively, developed through a collaborative effort in which a number of persons contribute elements of the final software. Software companies are also contributing paid programmer time and programs developed in-house to theopen source community.

7.4   LIBSYS - INTRODUCTION

Libsys is the most popular library software in India having more than 1000 installations indifferent types of libraries. It has a contract with the British Council Divisions of south Asia, to provide automation and related services for its libraries.

Libsys is integrated library management software developed in C and C++.Although the software is based on its own bibliographic database, it is available for system using ORACLE and SQL server as back end RDBMS. Libsys provides full graphic user interface frond end for the windows client. It runs on a wide spectrum of Hardware and operating systems including UNIX, LINUX and having any version of Windows at the server side and having any version of Windowsat the client side. Thus in choosing operating platform, users find greater flexibility in comparisonto other software.

Libsys is built around its own centralized bibliographic database based on MARC format supporting various types of materials in print as well as non-print form. The cataloguing data entry also accepts data in standard machine readable formats such as USMARC, OCLC etc, thus

facilitating import and export of bibliographic data in both MARC and non-MARC formats.

7.4.1 TYPES OF LIBSYS SOFTWARE PACKAGES

There are various packages of Libsys software are given below:

LibSys4: A standard product with full-fledged functionalities as usually required in universities, large academic institutions, special libraries, public libraries, etc.

LSEase: A scaled down version of Libsys 4 this product has been developed to suit the requirements of school, college and corporate libraries. However, LSEase adequately meets the needs of a modern growing library.

LSPremia: Developed with all the functionality of Libsys 4, LSPremia is a fully web based solutionwhich also includes Unicode support, choice of a preferred RDBMS and a Digitization tool kit, all ofwhich are built into this comprehensive version. This product isideal for implementation in University Libraries having independent department libraries as well as for Corporate/Organizations having libraries in different Offices/Departments.

LibSysX: A virtual manager for multiple libraries at different locations. Offers a common Bibliogarphic Database for all types of documents and a unified OPAC. It facilitates Cooperative cataloguing andResource sharing.

LSDigital: A complete solution for managing digital resources, LSDigital provides for creating digital resources using any TWAIN compliant scanner. It also offers the option to import pre scanned images of the same resource.

Libsys: Supports three tier open system architecture, from host multi-user system and a Client-Server implementation, to a total web-based solution. Accordingly, there is a wide range of operating platforms to choose from.

LIBSYS7: A true realization of Lib 2.0, LIBSYS7 delivers unparallel satisfaction for both patrons and library staff. It gives end to end manageability of the library operations through its comprehensive modules. As a Web based solution, it provides platform independence. The interactive features inthe industry's most advanced OPAC makes LIBSYS7 most rewarding choice for all the Librarians. LIBSYS7 is a product aiming most convenient and pleasing library experience through its value added features.

7.5 LIBSYS MODULES

Libsys has five Modules as given

bellow:-Acquisition Module
Cataloguing Module
Circulation Module
Serial Control Module
System
Administration

Apart from above said modules, software also has OPAC.

Acquisition Module

In acquisition section main work to librarian can take many types of reposts as they required i.e. vender list with address, list of purchase orders, accession register, invoice register, order form, notices etc.
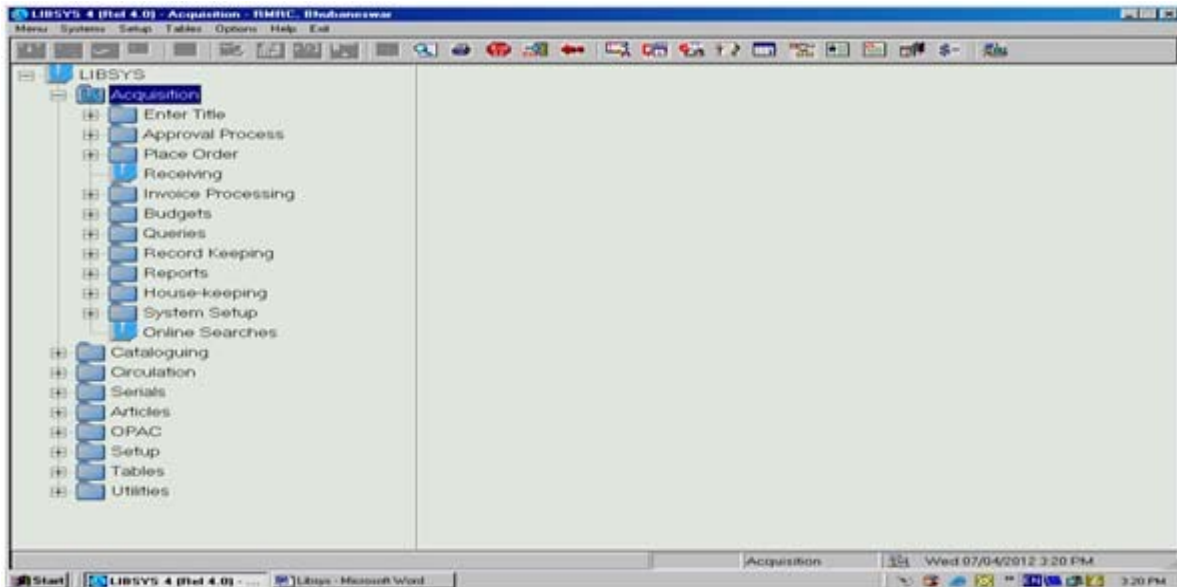

Figure.1 Acquisition Module

Cataloguing Module

Library can make many type of document as per their requirement like books, CDs, Photocopy Books, thesis, gifted books etc. library can provide Current awareness services and Selective documentation Information (SDI) service by e-mail to users. And can take report of total books by accession No.; by class No.; by subject; by document type; or by location etc. librarian can easily make bibliographic data for special books of as user required and make multimedia data for digital library.
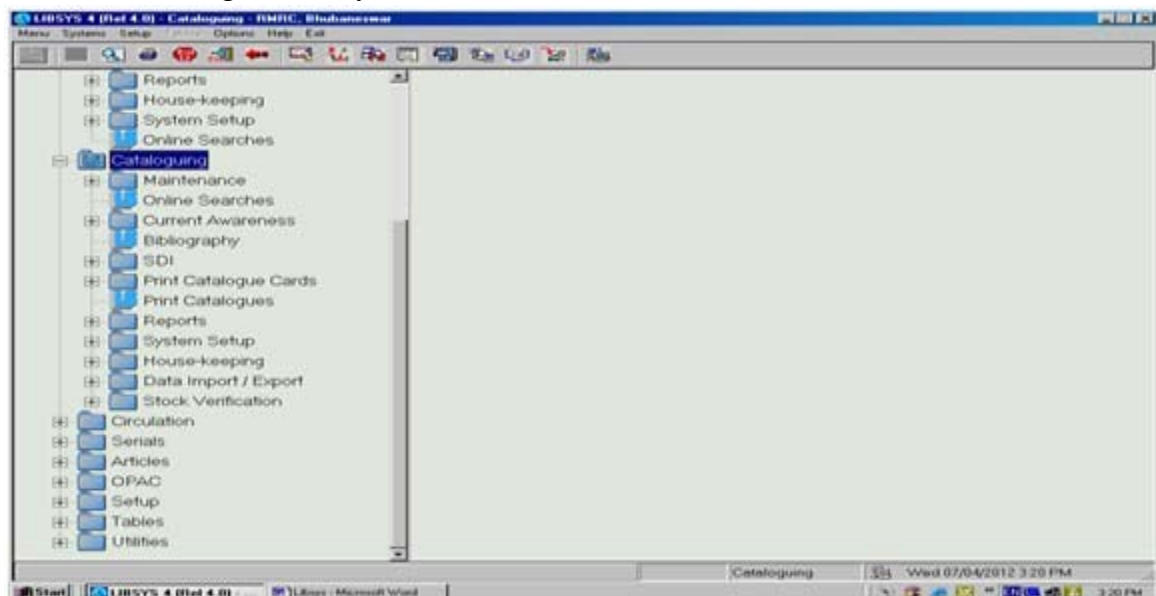

Figure.2 Cataloguing Module

Circulation Module

It is a most important section in any library automation program. Librarian can make many types of member categories and give them different authentication to different users. Librarian can make different overdue policies for difference users. Libsys provides Overnight Issue for users. The fine of overnight book counts per hour as librarian decides i.e. 1RS per Hour.
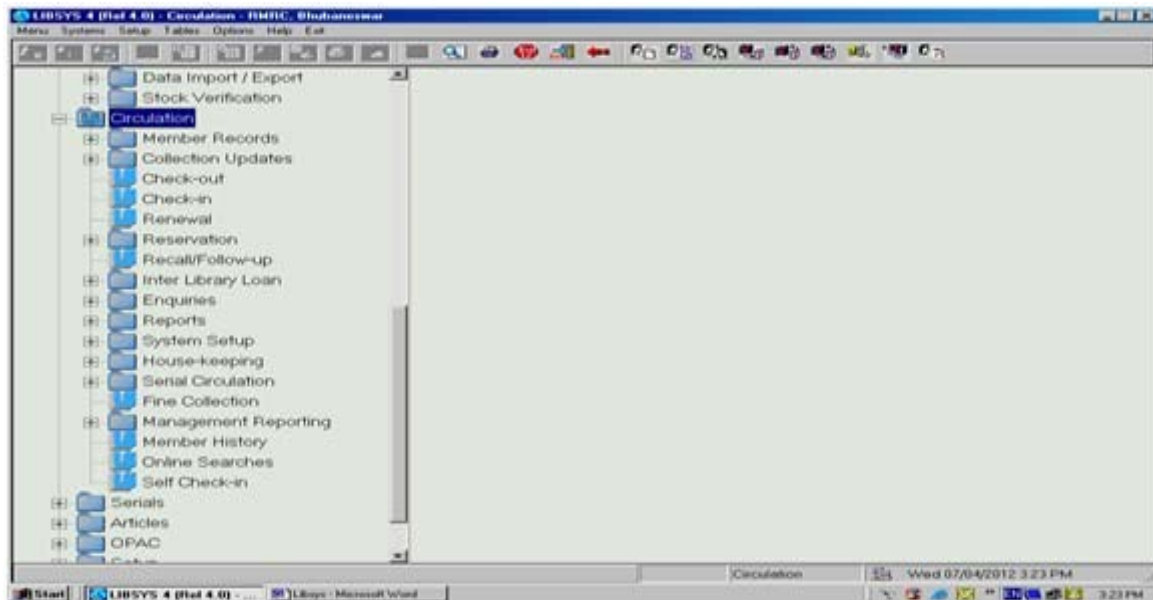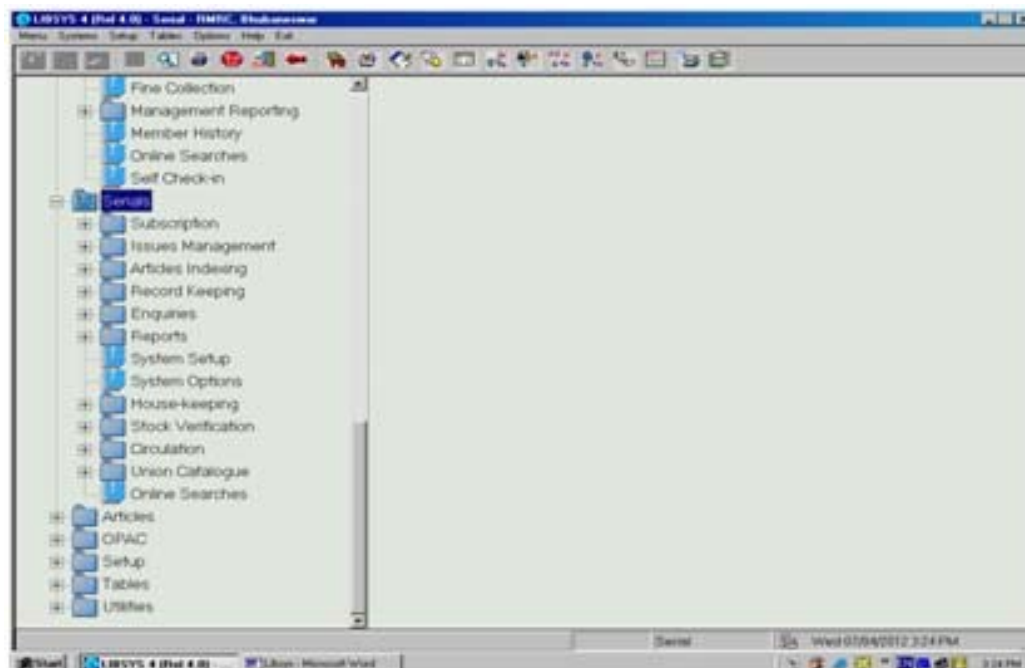

**Figure.3 Circulation Module**

Serial Control Module

System Administration Module

System Administration: it is a special and very important part of Libsys software. It manages the whole software and all modules. It contains system setup of all modules. Librarian can make policies of every module by operating the system setup. A miner mistake in system setup can disturb library database and show wrong results. It controls the working of all software modules. Only system administration has all rights to control the system setup through Administrator ID or Password. System administrator can make many other ID's and Passwords to operate or work on software for other staff with special policies.

OPAC

Web-OPAC is also similar with window OPAC in searching features i.e. simple search, advance search, additional search, brows and search with accession Number. After connecting to Internet it is called Web-OPAC. Web means to through internet access or web browser. User can access Web-OPAC anywhere in world by simple clicking of internet. For accessing of particular library Web-OPAC one should have their organization website address where OPAC is connected. There is no need to come in Library to access library catalogue called OPAC. Web OPAC saves the time of users.
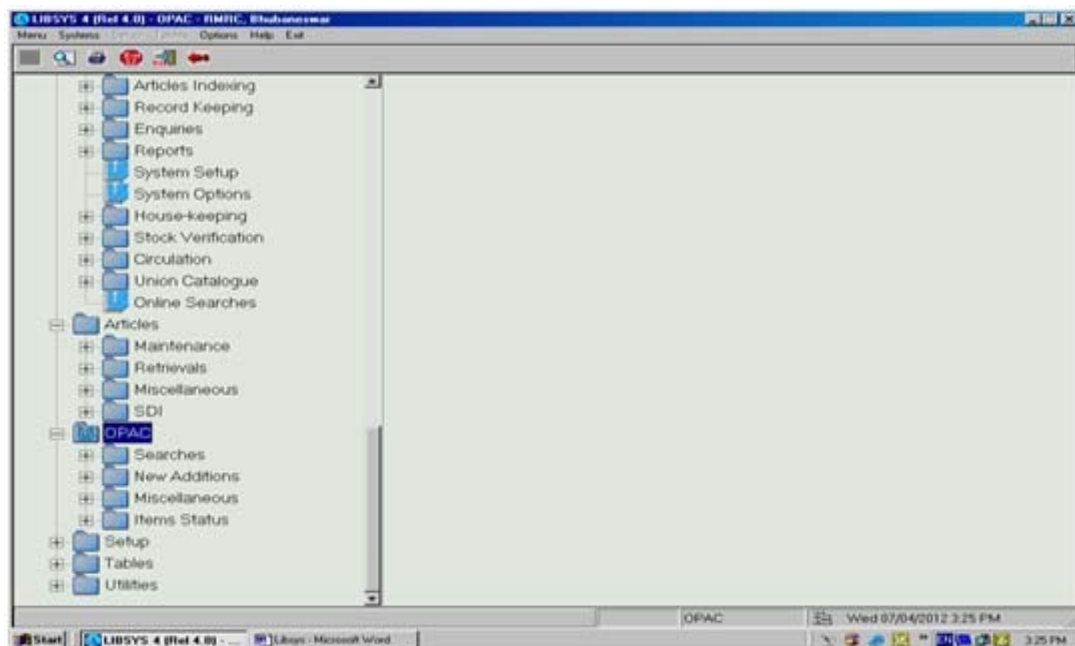
Some of the features of Web-OPAC are given below:
- Users can check the availability of book without going to library.
- If required book is borrowed by somebody then there is option to reserve the same book though online.
- Users can re-issue their browed book online, if there is not reservation against that book.
- Users can check their account status.
- Users can access audio-video database online.
- Users can send the purchase request online.
- Users can check the new arrivals of books in library online.
- At same time multi users can access Web-OPAC without any problem.

7.6   SELF ASSESSMENT QUESTIONS

1. What is the difference between commercial and open source software?
2. Explain types of software packages.
3. Write about Libsys Software.
4. Discuss various modules of Libsys Software. Self-Check Exercise
5. What is the difference between commercial and open source software?
6. Explain types of software packages.

7.7   REFERENCES

1. Arjun and Kumar, Dinesh (2012). Libsys: A Brand in Library Automation. International Journal of Professional Development. Vol.1, No.2, p.66-71.1.
2. Open Source and Commercial Software: An in-depth Analysis of the Issues by Business Software Alliance
3. http://www .wipo.int/edocs/mdocs/copyright/en/wipo_ip_cm_07/ wipo_ip_cm_07_www_82575.pdf

LESSON – 8
NEWGENLIB

OBJECTIVE

After reading this Chapter, you will be able to:

➢ Understand the NewGenLib library automation software;
➢ It was the first Indian open source software ;
➢ Features of NewGenLib software;
➢ Modules of NewGenLib.

STRUCTURE

8.1 **Introduction**

8.2 **Salient features**

8.3 **Modules of NewGenLib**

8.4 **Self Assessment Questions**

8.5 **References**

8.1 INTRODUCTION

NewGenLib is the open source integrative library management web based Library Automation and Information Retrieval System. It is integrated library automation system using the n-tier client-server architecture. It Leverages the World Wide Web to build library and information networks using international standards such as MARC -21, AACR-2R, Unicode 3.0, MARC-XML, and Dublin Core. The software has uses Java and J2EE based application server technologies, making it database and operating system independent. It has uses many open source components enabling the software to be affordable designed for use not only in single libraries but also in hierarchical aswell as distributed networks of libraries. It allows attachments of digital objects to meta data records.

There are many features like Unicode 3.0 and UTF-8 compliant with virtual key boards for multilingual input, query formulation and output. The functional modules include Acquisitions, Technical Processing, Circulation, Serials Management, Reports, Utilities, and Administration. The online public access catalogue (OPAC) is an integral part of the software offering and is a browser-basedapplication. Email and instant messaging integrated in the different modules of the software to ensure efficient communication between library and users, vendors. There have several versions: single -user, single library stand-alone; single library, multiple user LAN/Intranet; web version and multi-library, multiple users, web-based consortium/networking version. It easy upgrade path from one version to a higher version. It has support to the Open Access Initiative Protocol for Metadata Harvesting (OAI-PMH).

8.2 SALIENT FEATURES

The salient features of this software are as follow:

- Functional modules are completely web based. Uses Java Web Start Technology
- Compatibility - Complies with international metadata and interoperability standards: MARC-21, MARC-XML, z39. 50, SRU/W, OAI-PMH
- Uses chiefly open source components
- Scalable, manage able and efficient
- OS independent -Windows and Linux flavors available
- Z39.50 Client for federated searching
- Internationalized application (I18N)
- Unicode 3.0 complaint
- Arabic version available
- Easily extensible to support other languages
- Data entry, storage, retrieval in any (Unicode 3.0) language
- RFID integration
- Networking–Hierarchical and Distributed networks
- Automated email/instant messaging integrated into different functions of the Software
- Form letters are configurable and use XML-based Open Office templates
- Extensive use offset up parameters enabling easy configuration of the software
- To suit specific needs, e.g., in defining patron privileges
- Supports multi-user and multiple security levels
- Allows digital attachments to metadata

8.3 MODULES OF NEWGENLIB SOFTWARE

Acquisitions Module

It allows comprehensive support to acquisitions management. It Support for online requests by users. It allows modes of acquisition supported. There are various feature of this particular software are: like Firm orders, On-approval purchases, Standing orders, Solicited gifts, Unsolicited gifts, Acquisitions Subsystems provided Request processing, Approvals processing order data entry and processing' Receipts and invoice processing, Claims and cancellations, Budgeting and accounting, Management information reporting.
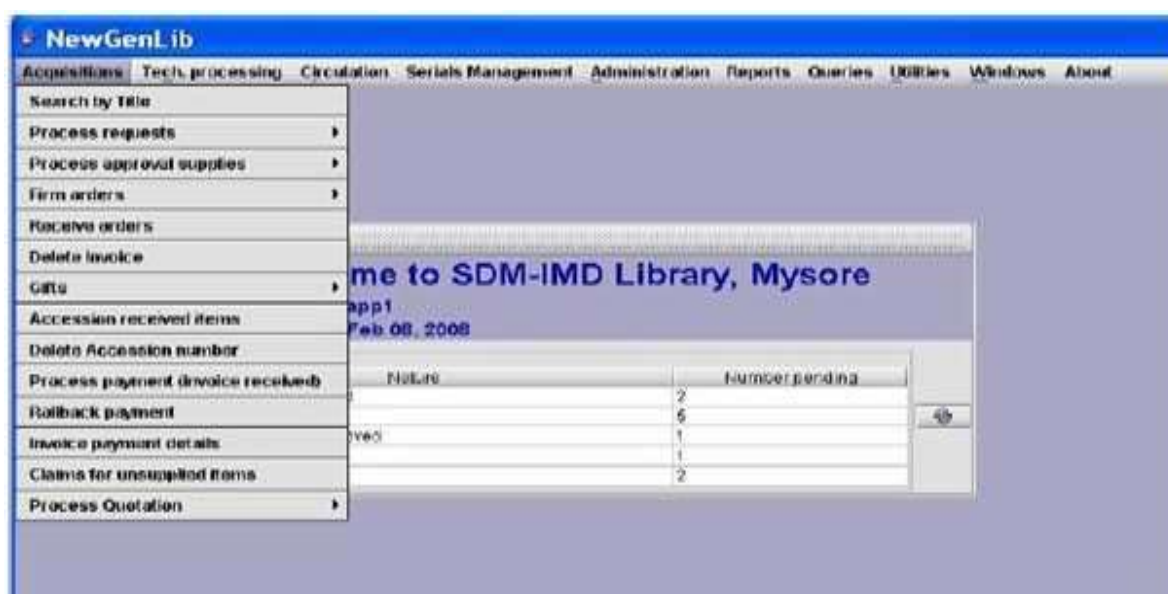
Figure.1 Acquisition Module

Cataloguing Module

Cataloging in NewGenLib is simple yet powerful. Let us see the capabilities of NewGenLib cataloging module.

-Simple to use and understand interface: NewGenLib cataloging screen is simple to understand and use. We have preloaded the system with frequently used templates for Books(Single and Multi-volume), Serials, Articles, Conference Publication, Theses and Dissertations, Technical Reports and Patents

-Create quality catalog records quickly: Using NewGenLib you can import catalog records in MARC Communication format. However not all library catalogs on the Internet allow you to do this, for this NewGenLib has developed means to import records from MARC Tagged format also. Apart from this you can use Z39.50 client to perform federated search and import the record

Cataloging module though simple in the front end is powerful in this processing. A few of them are mentioned below

-Flexibility for customization: You can customize the fields (MARC21 based) that must be indexed. You can customize the search indexes of OPAC and librarian's search interface

-Choose label names of your choice: You can change the labels of the cataloging screen and change them to suit your library's terminology

-Standards based: NewGenLib's database schema is based on global standards. Internally the data is handled in MARC21 standard (Bibliographic, Authority and Holdings data)

-Unicode based: Store data in any language. Works seamlessly with popular tools like Google IME.

-Digital library: Integrated digital library functionality is present and no additional configuration is required. With a click you can add records to Open Archives. Supports Dublin core and OAI-PMH standard

-Google previews and book covers are automatically fetched from Internet based on ISBN

-Supports many Classification schemes including DDC and UDC
-NewGenLib uses enterprise search engine Solr for Bibliographic and Authority data searches. This enables searching huge databases with lighting speeds.
-Quick utility tools: There are quick utility tools to merge catalog records, retrieve duplicates, update additional copies, edit catalog records and make a copy of the catalog record
-Catalog any material type using NewGenLib

Want to learn more
Learn more about cataloging module in detail by visiting technical processing tutorial in the NewGenLib Knowledge Bank http://verussolutions.biz/kb/catalogingTutorial

Circulation Module

It has Flexible Management of Circulation Control system. In these modules; it has various features like Library-configurable parameters to enable the setting of a wide range of circulation options: overdue charges, user privileges, etc., needed in different library environments, Rapid charging, discharging, renewal and reservation operations4Support for all barcode standards, RFID support, Built-in traps for delinquent users, reservations, etc. There are also author features like On-the-fly circulation for older items, not in database, Inter-library transactions supported, Binding management, Management Information Reports.

Figure.2 Circulation Module

Administration Module

Allows System Administrators to set up parameters specific to the library in various functional modules. Features of these modules are Acquisition parameters: Budget heads, allocations, vendors, and currency and conversion rates; approving authorities, etc. Other features of this module are Technical Processing: Authority files; Material types, Circulation: Patron data; Patron categories; Privileges; Serials Management: Subscription lists; publisher details; renewal Parameters; binding specifications.

Serial Management Module

It has integrated management of serials subscriptions, registration, cataloguing and binding. Various feature of this modules like Rapid registration of incoming serials using a Kardex-like interface, Batch and on-demand claiming for missing issues, Support for Union catalogues, Management Information reporting for better serials management, Serials management is

implemented in the following subsystems, Subscription request processing, Subscription orders, Registration, Cataloguing, Claims, Binding, and Subscription renewals.

Check out

There are several options to circulation system in Discharge or check-in New Gen Lib software. These are Charge or checkout, Reservation or Holds function, Binding functionality, Circulation history, Recall and Renewal.

OPAC

The Basic Search allows the patron to select a single field in which to search the database. Apply search limits have to some of the fields. Some fields permit the user to browse the existing Headings file to enable him to choose the correct heading to search. The screen shot below shows

➤ Patrons have browser-based access to the library's or the Library Systems' web- enabled catalogue database

➤ Basic and Advanced search options including phrase and Boolean retrieval and Display, print, download and formatting options for patrons as follows:

➤ Customized
- Text format (Brief)
- Text format (Full)
- MARC Tagged
- ISO 2709
- MARC XML
- Dublin core

➤ Patrons can request new additions, access their circulation data, make reservations and go to other web sites via the OPAC.

➤ Digital content (full text, Images, audio, video and web pages), 'attached' to catalogue records are seen by the patron and can be viewed and/or downloaded by the patron

The OPAC can integrate with the Institution's home page.
The screen shot below shows the opening page of the OPAC. If a library shares a common server with other libraries (as in an Application Service Provider web site), then the OPAC opening page shows all libraries/library networks that are accessible.

When a specific title record's hyperlink has clicked, this leads to a detailed results display page. The screen shot below shows the 'Text Full' Display page. The user can select other display options to display the record and/or save it in other formats.

Figure.3 OPAC

Some advanced functional features are:
- Android mobile and tablet capable
- Integration with Twitter helping send messages of transactions directly to users' - Twitter accounts.
- Flexibility of defining own search field in OPAC.
- Enhanced contents and interactive OPAC like Availability of Book jackets, Google preview, Comments/ Book review, Tagging, Favorite reading list, etc
- Zotero compliant OPAC
- RSS Feeds in OPAC
- Faceted Browsing (Refining search results)
- Suggestion for other books in the rack
- RFID supports
- Provision for frequently used predefined templates along with freedom of defining own customized data entry template s in Cataloguing
- Configurable SMS system - a proof of transaction.
- Integration with Gmail or paid mailbox account. This enables automatic sending of email to patrons during issue /return.
- Enhanced Report Module for generating in .csv format with a provision for wide customization.P
- Provision for integrating with Vufind SOPAC (Ex: OPAC of the Library of BangaloreUniversity).
- Catalogue can be harvested through Google site map, and thus the visibility of the library can be further improved (Wikipedia).

SELF ASSESSMENT QUESTIONS

1. Explain the various modules of NewGenLib.
2. Discuss the feature of NewGenLib.

REFERENCES

1. http://www.verussolutions.biz/web/node/18 Accessed on 01.07.2008)10
2. "The Free Software Definition." 12 February 2005. Free Software Foundation. 18 Jul 2006 <http://www.fsf.org/licensing/essays/free-sw.html>.
3. en.wikipedia.org/wiki/NewGenLibý

LESSON – 9
KOHA

OBJECTIVE

After reading this Chapter, you will be able to:

> Understand the Koha;
> Configuration of Koha;
> Features of Koha;
> Modules of Koha.

STRUCTURE

9.1   INTRODUCTION

Koha is a full featured Integrated Library System (ILS). There is no cost for the license, you have the freedom to modify the product to adapt it to your needs etc. Developed initially in New Zealand by Katipo Communications with Horowhenua Library Trust. It is currently maintained by a dedicated team of software providers and library technology staff from around the globe. That by adopting it, the customer becomes "joint owner" of the product. In particular, the customer can freely install new versions or not, and can take part in new developments by financing them or by carrying them out them self.

9.2   ORIGIN

Koha was released in 2000 and since then development and implementation have spread from New Zealand to all corners of the world. While more than 120 developers have contributed

directly to this open source project with code, there are countless others who have adapted Koha

for their own uses

9.3 FEATURES OF KOHA

A full featured modern integrated library software (ILS). Award winning and f free/Open-source Software. (No license fee). (No OS independent any operating system. Linux, UNIX, Mac. Web based. Web-based Interfaces. We can integrate with the website. Full MARC21 and UNIMARC support for professional cataloguing. Multilingual and multi-user support multi-Library-Standards-Compliant. Industrial standards & protocols.Z39.50 servers. Customizable web based Apache. Circulation system, Online reservation, Full catalogue, circulation, acquisitions, library stock management. Web based OPAC, public to search the catalogue. Major industry-standard database type (text, RDBMS), SQL, MYSQL. Industry-Serial management module. Print your barcode. Export and import records, ISO2709.

9.4 KOHA SYSTEM ARCHITECTURE

Koha is based on client-server architecture. Network Server: Kohacan be installed on a server running Linux, UNIX, Mac. The recommended operating system is stable version of Debian Linux, although Koha can run on any modern operating system. Client Workstations: Koha requires only a web browser onthe workstation (a graphical browser, or even a text browser for the OPAC). Koha thus functions on PCs running Windows, PCs running Linux, Macs, or even UNIX workstations. Koha runs over any TCP-IP network. Koha accommodates low-bandwidth connections. It is completely usable on ordinary telephone line connections. This is truer of the librarian interface than of the public interface (OPAC).

9.5 STANDARDS USED IN KOHA

The developers of the product have taken care to adhere strictly to international standards. Industry standards: Z39.50, UNIMARC, ISO2709 and MARC21.For technical standards:the OPAC is "valid XHTML", and respects the standards of accessibility. Web standards recommended by the World Wide Web Consortium.

9.6 REQUIREMENT OF KOHA

Koha version 2.2.9 Free (download from http://www.koha.org/Apache web server, 2.0.58 free (download from (http://www.apache.org)MySQL. Relational Database Management System (http://www.mysql.com) free-for-all modules 5.8.(http://www.cpan.org).free.Linux (RHEL 3.0, 4.0,5.0) or Any flavors of LINUX or WINDOWS Server.

Koha Server Software

- ➢ Server operating system: Linux, OpenBSD, FreeBSD, MacOS X, or any other Unix
- ➢ Web server: Apache
- ➢ Programming language: Perl
- ➢ Database: MySQL
- ➢ Integrated Library software: Koha 2.2.9

Koha Client Software

Koha requires a recent Internet browser.Mozilla is advised, but not obligatory. (Kohaworks with Internet Explorer.).Certain data validity checks are made on theclient machine, JavaScript must be enabled.The public interface (OPAC) conforms toXHTML1.0 standards: the utility is thus compatible with alternate browsers. In particular,the OPAC can be used by people needing specialassistive technology (Braille browsers,voice synthesis, text-based browsers, etc.).

9.7 SKILL REQUIREMENTS TO OPERATE SYSTEM

Koha interfaces are designed with usability in mind and are extremely user friendly. Staff and patrons with only basic computer skills have quickly learned to use the system efficiently. The cataloging module requires an understanding of cataloging practices such as MARC, Z30.50 retrieval tools, how to add 30. Holdings information, etc. etc. Administrators should know the operating system (Linux, etc.) for maintenance, some knowledge of cataloging in setting up the system preferences.

9.8 MODULES OF KOHA

- Acquisitions
- Cataloguing
- Circulations
- Serials
- Online Public Access Catalogue

Acquisition module

1. **Simple acquisition:** The simple acquisitions module makes it possible to acquire materialsand add them directly to the catalogue. It does not manage budgetary matters, the orders placed with the suppliers, etc.

2. **Full acquisitions:** The full acquisitions module makes it possible to manage: Budgets and book funds: Budget available, Committed, Spent Suppliers.Orders, via shopping baskets.

Cataloguing module

MARC Management: The cataloguing module is one of the principal strong points of Koha. Several "frameworks" can be defined to do different cataloguing for monographs, electronicresources,periodicals, etc. Export/Import: Importing records in ISO2709 format (the MARCreservoir) and through Z39.50 (client) for fast cataloguing.Copy records:One or more copy records can be attached toeach bibliographic record.Fast cataloguing:To accelerate cataloguing, Koha provides, Management of a MARC record reservoir, in ISO2709 format, AZ39.50 client that can access several Z39.50 serversMARC view and simple view:Catalogue data can bedisplayedin MARC format, in simplified form. Searching: searches can be performed on any MARC field.Advanced functions, search on one word, the beginning of the field, greater than, less than etc. are also available.

Circulation module

Borrowing a book from any branch (not just the branch where the borrower first registered) Returning an item at any branch Reserving an item for at any branch. Circulation rules can be defined very finely by the library: for each member category, item library: category and holding branch of the item, the duration of the loan and the maximum number of books loan able can be defined. Returning items ("checking-in") is extremely ("checking-easy: easy: Simply scan the barcodes of the items being returned.

Serial module

It is possible to register subscriptions with reviews, and to track the arrival of periodicals. Koha manages late issues, skipped issues, and claims with the suppliers. Koha manages complex classifications, allowing the librarian to work with eleven different publication periods (from daily newspapers to annual publications), with delayed publications, and with publications out of sequence.A state of the collection can be defined which will synthesize the missing publications, received publications etc.The state of the collection can be displayed differently in the OPAC and in the librarian interface.

Online Public Access Catalogue (OPAC)

Koha provides a full-functioned Online Public Access Catalogue (OPAC). OPAC users can carry out searches starting from ten fields (Keyword, Subject, Title, Class, Barcode, author, publisher etc.). As in the librarian interface, they can order the results according to several criteria. OPAC users who are logged-in members can place reservations logged-on library items. Bibilio basket: Logged-in members can select records from a basket: Logged-OPAC search and retrieve them by e-mail, either in human- human-readable form or in an ISO2709-format file. An ISO2709 file canbe ISO2709- file. ISO2709 processed using bibliographic software like End Note. OPAC users can submit suggestions for acquisition. Koha acquisition. Automatically informs the OPAC user (by e-mail) of the action taken on each suggestion.

9.9   REPORTS
a) Custom Reports

Koha's data is stored in a MySQL database which means that librarians can generate nearly any report they would like by either using the Guided ReportsWizard or writing their own SQL query.

i) Add Custom Report
ii) Guided Report Wizard

The guided report wizard will walk you through a six step process to generate a report.
Step 1: Choose the module you want to report on. This will determine what tables and fields are available for you to query.

Build A Report

Step 1 of 6: Choose a Module to Report on

Choose: Circulation

Circulation
Catalog
Patrons
Acquisitions
Accounts

Next >>

Step 2: Choose a report type. For now, Tabular is the only option available.

Build A Report

Step 2 of 6: Pick a Report Type

Choose: Tabular

<< Back   Next >>

Step 3: Choose the fields you want in your report. You can select multiple fields and add them all at once by using CTRL+Click on each item you want to add before clicking the Add button.

Step 3 of 6: Select Columns for Display

Note: Be careful selecting when selecting columns. If your choice is too broad it could result in a very large report that will either not complete, or slow your system down.

borrowers
  Borrower Number
  Card Number
  Surname
  Firstname
  Title
  borrowers.othernames
  Initials
  borrowers.streetnumber
  borrowers.streettype
  borrowers.address
  borrowers.address2
  City
  Zip/Post Code 2?
  borrowers.country
  borrowers.email
  Phone
  borrowers.mobile
  borrowers.fax

Surname
Firstname

Add

<< Delete

<< Back   Next >>

Step 4: Choose any limits you might want to apply to your report (such as item types or branches).If you don't want to apply any limits, simply click next instead of making an option.

Step 4 of 6: Select Criteria to Limit on

☐ Item-level Item Type	BK	
☐ Type	issue	
☐ Borrowers Category	EMP	
☐ Branch Code	FPL	
☐ Publication Date		
☐ Accession Date		

<< Back   Next >>

Step 5: Perform math functions. If you don't want to do any calculations, simply click next insteadof making an option.

Step 5 of 6: Pick which columns to total

☐ borrowers.surname	sum
☐ borrowers.firstname	sum

<< Back   Next >>

Step 6: Choose data order. If you want the data to print out in the order it's found in the database, simply click Finish.

Step 6 of 6: Choose how you want the report ordered

☑ borrowers.surname	asc
☐ borrowers.firstname	asc / desc

Finish

When you are finished you will be presented with the SQL generated by the report wizard. From here you can choose to save the report by clicking 'Save' or copy the SQL and make edits to it by hand.

Confirm Custom Report

Your report will be generated with the following SQL statement.

SELECT borrowers.surname,borrowers.firstname FROM borrowers LEFT JOIN statistics on (statistics.borrowernumber=borrowers.borrowernumber) LEFT JOIN items on (items.itemnumber = statistics.itemnumber) LEFT JOIN biblioitems on (biblioitems.biblioitemnumber = items.biblioitemnumber) ORDER BY borrowers.surname asc

You will need to save the report before you can execute it

Save

If you choose to save the report you will be asked to name your report and enter any notes regardingit.

Save Your Custom Report

Report Name: Circ Report

Notes:

Save Report

Once your report is saved it will appear on the 'Use Saved' page with all other saved reports.

Saved Reports

Choose the report to run from the list

Report Name	Type	Notes	Author	Creation Date	Saved Results	Saved SQL				
patrons			Engard, Nicole (51)	09/22/2009		Show SQL	Edit SQL	Run	Schedule	Delete
bib w/ titles	1		Engard, Nicole (51)	11/06/2009		Show SQL	Edit SQL	Run	Schedule	Delete
branch list	1		Engard, Nicole (51)	11/06/2009		Show SQL	Edit SQL	Run	Schedule	Delete
email list	1		Engard, Nicole (51)	11/06/2009		Show SQL	Edit SQL	Run	Schedule	Delete
patrons with fines	1		Engard, Nicole (51)	11/06/2009		Show SQL	Edit SQL	Run	Schedule	Delete
active patrons	1		Engard, Nicole (51)	11/06/2009		Show SQL	Edit SQL	Run	Schedule	Delete
barcodes			Engard, Nicole (51)	12/14/2009		Show SQL	Edit SQL	Run	Schedule	Delete
Number of Checkouts Per Patron			Engard, Nicole (51)	12/15/2009		Show SQL	Edit SQL	Run	Schedule	Delete
Circ Report			Engard, Nicole (51)	12/18/2009		Show SQL	Edit SQL	Run	Schedule	Delete

From here you can make edits, run the report, or schedule a time to have the report run.

9.10   SELF ASSESSMENT QUESTIONS

1. Why Koha library software package is useful for library automation?.
2. Explain in brief various modules of Koha.

9.11   REFERENCES

1. http://es.koha-community.org/manual/files/3.2.x/en/manual.pdf
2. http://www.slideshare.net/rajivkumarmca/koha-open-source-library-management-software

LESSON - 10
SOUL

OBJECTIVE

After reading this Chapter, you will be able to:

➢ Understand the SOUL;

➢ Hardware & Software Configuration of SOUL;

➢ Features of SOUL;

➢ Modules of SOUL.

STRUCTURE

10.1   INTRODUCTION

The SOUL is state-of-the-art library automation software designed and developed by the INFLIBNET. It is user-friendly software developed to work under client-server environment. Although looking at the name of the software, one may think that it is meant for University libraries only, but in fact it is flexible enough to be used for automating any type or size of library in India. While designing this software, the international standards, bibliographic formats, networking protocols, and typical functions of all types and sizes of libraries, particularly at university level, have been taken into account.

The functions have been grouped into six categories, looking into the functional divisions of Indian University libraries. At present SOUL uses RDBMS on Windows N.T. Operating system as back end to store and retrieve the data. However, keeping in view the trends in IT towards Linux operating system, efforts are under way also to provide SOUL to work on Linux platform. The inputs received from expert team consisting of practicing librarians and the feedbacks

received from users of our earlier software, ILMS, have given a strong base for designing this software. SOUL is near total solution offered by INFLIBNET to Indian libraries. It puts library staff at ease in exploring all the functions to their advantages with the help of professionally prepared manual.

10.2 HARDWARE & SOFTWARE CONFIGURATION

The minimum hardware and software configuration required to use the SOUL is given below.

> **Server:**
> Pentium @ 933 MHz with 128 MB RAM40 GB HDD
> 32 x CD-ROM Drive
> 1.44 Floppy Drive Colour Monitor (SVGA)
> Ethernet card 10/100 MbpsMS-SQL Server 7.0/ 2000
> Windows – NT/Windows 2000 server (OS)

> **Client:**
> Pentium @ 933 MHz with 64 MB RAM2 GB HDD with 100 MB Free space
> 1.44 Floppy Drive Colour Monitor (SVGA)
> Ethernet card 10/100 Mbps Windows 95/98/2000/XP/NT (OS)

10.3 SOUL: STRONG FEATURES

Following are few of the strong features of SOUL, which should induce librarians to use SOUL in their libraries.

> ➢ Windows based user-friendly software. Well-designed screens, logically arranged functionswith extensive help messages make the software user friendly.
> ➢ It is based on client server architecture allowing scalability to the users.
> ➢ It uses RDBMS to organize and query the data.
> ➢ SOUL does not need an extensive training. With very little familiarity, one can begin using it.
> ➢ It is specially designed to work in the large academic libraries, capable of handling largenumber of records.
> ➢ It is multi-user software and there is no limit on simultaneous accesses.
> ➢ Supports internationally known standards such as CCF and AACR II. Etc.
> ➢ Provides export and import facility and adheres to ISO 2709 format.
> ➢ Incorporates all required features to work in a networked environment i.e.. LAN and WAN.
> ➢ OPAC is versatile and very user-friendly with all options inbuilt.
> ➢ OPAC is accessible over the web using any GUI based browsers.
> ➢ Provides comprehensive list of reports, master databases and authority files.

➢ Provides facility to create, view and print records in regional languages.

➢ Functionally it covers every conceivable operation of University library.

➢ Available at affordable cost.

➢ SOUL has been fully tested at a number of university libraries and critically evaluated byteam of experts and practicing librarians.

10.4   MODULES OF SOUL

The SOUL has been divided into following six broad modules as shown below:

A. Acquisition
B. Cataloguing
C. Circulation
D. Serial Control
E. OPAC
F. Administration

Figure.1 SOUL

These modules have further been divided into sub-modules looking at the nature of functions handled by various functional divisions in University libraries. Brief description of the same along with first screens has been given in the following pages.

10.4.1   Acquisition Module

This particular module provides facilities to handle work relating to the acquisition of readingmaterials of all types except serials, starting from suggestion / recommendation by faculty till accessioning, invoice processing. Acquisition module comprises following six broad sub-modulesas given in the

Figure.2 Acquisition Module
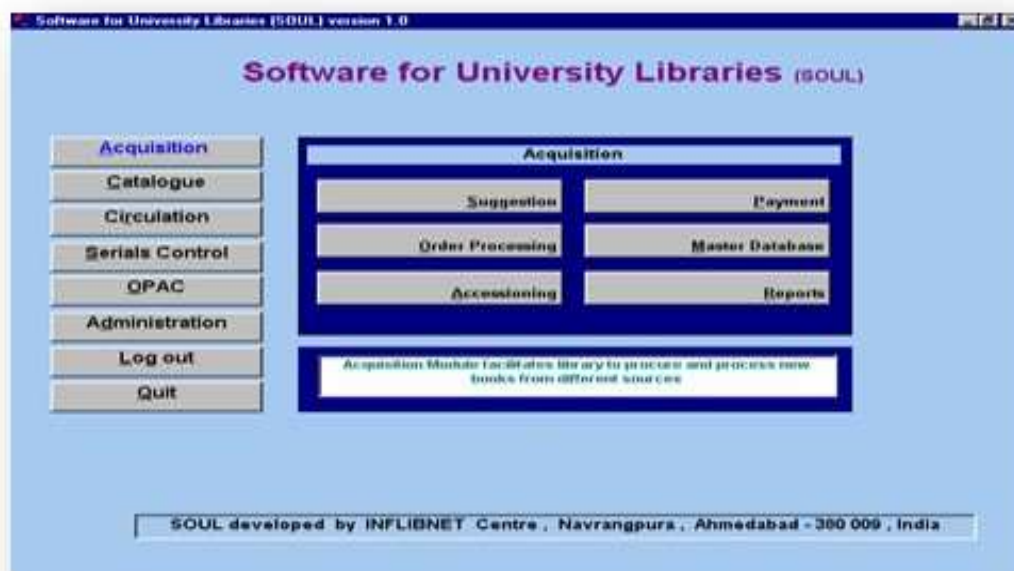
Suggestion sub-module enables creation / updating of databases of new items suggested by a faculty member along with bibliographical details and also suggestor's details such as name, department, user code, budget code etc. Books received through placement of purchase orders as well as those received as gratis are handled from this module. Selecting items for approval, incorporating further details like approval date, budget head, approver's name, rejecteditems, its date and reasons for rejection are also handled here. Number of required reports having combination of several fields can be easily generated.

Order Processing: Selecting the items for ordering, vendor/publisher selection, assigning order and reference number, setting deadlines for supply and other details can be done under this sub module. Facilities for sending reminders, cancelling orders, generating certain reports specificto these modules, are provided.

Receiving/Accessioning: This function supports cross checking with order, receiving partial/ full supply of items listed in order, duplicate checking with an existing title, assigning accession numbers along with further necessary details required and merging the records with existing database, if items are already in the collections.

Payments: Payments sub-module allows processing of the regular invoices, advance payments, and recording of every information pertaining to each invoice including conversion rates, handling charges discounts etc.

Facility for generating reminders to supplier or publisher. Searching the status of payment and generation of reports are other strong features added in this sub-module.

Master Databases: Publisher, vendor, Currency and budget codes (both source wise and department wise) are few major master databases that are frequently handled/created here. Updation, deletion of all this is possible from here.

Reports: There are 13 major reports relating to acquisition that can be created with number of parameters. Acquisition module is capable of handling almost every function that is being carried out in acquisition division of university libraries.

10.4.2   Cataloguing Module

Catalogue module function begins with selecting the items that have already been accessioned in the previous module and furnishing rest of the information as per AACR-II rules. Providing user services such as recent addition services, CAS, creation and updation of authority files etc. are other major functions supported by SOUL. A comprehensive worksheet covering almost every field facilitates data entry of all types of books, conference proceedings, theses etc. Facility to create database in the regional languages, using respective scripts is also provided. This module allows the library staff to conduct comprehensive searches for existing items before cataloguing new items and has provision of import and export of records and retrospective conversion.

Functionally this module has been organised into following sub modules as given in below:

- o Cataloguing Process
- o Catalogue search
- o User services
- o Authority file maintenance
- o Retrospective Conversion
- o Reports

Catalogue Process function allows to pick-up the accessioned item, under process, for the cataloguing purpose. Here one can add remaining information as per specified standards, such as additional bibliographical information, subject headings, classification number etc. Editing of existing records for maintaining consistency can also be done here.

Catalogue Search enables searching of the existing items, its status, identifying duplicationetc. for the purpose of day-to-day cataloguing. This is similar to OPAC.
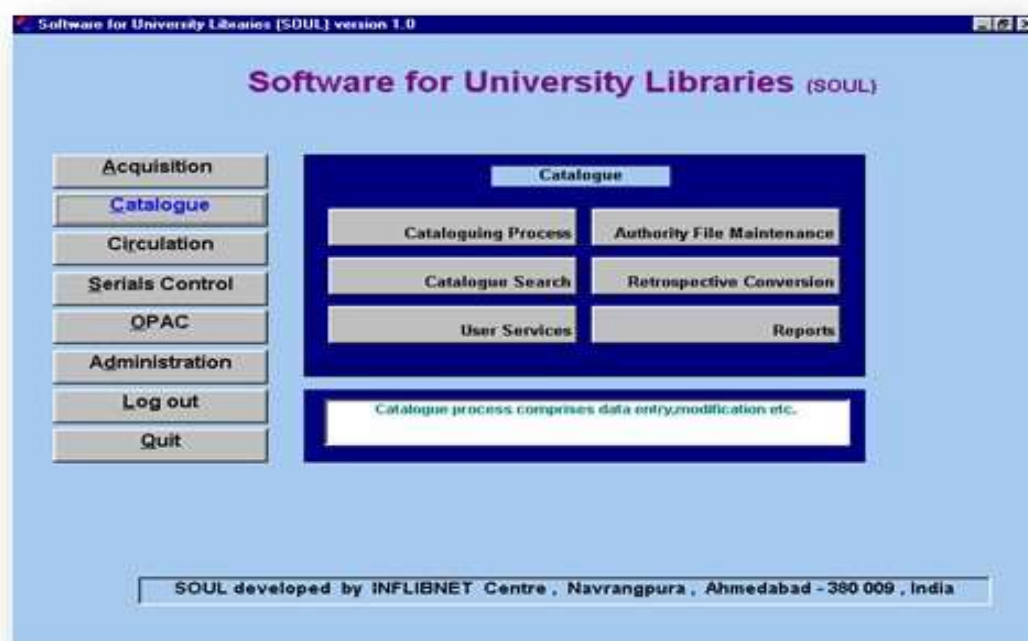
Figure.3 Cataloguing Module

User Services sub module has three major functions viz., generating current awareness list (by date, subject etc), compiling of bibliographies with various combinations and alert services to individual users.

Authority File Maintenance includes creation, updation and use of major authority files for names such as publisher, languages, corporate bodies, meetings, authors, physical media, types of material and also for subject descriptors. This is a unique feature added to this software taking into account the consistency that each library needs to maintain while creating records.

Retrospective Conversion has two major functions viz. data entry of old collection with minimum information without going to first sub-module and import and export of data from and to external sources. By using this function libraries can download the matched records from INFLIBNET union catalogue or other sources and export the records for contributing to union catalogue etc. A versatile ISO2709 interface developed at INFLIBNET, which is built-in to this module, enables to carry out the job.

Reports module allows generation of catalogue cards as per AACR-II, generation of recent editions reports subject and class number wise and other related reports. The catalogue module basically supports all major functions relating to technical processing and has been designed as per the international standards.

10.4.3   *Circulation Module*

Circulation being vital front-end function of any library, sufficient care has been taken in designing this module to achieve transactions within minimum possible time. This module has provision for all possible function handled in a typical academic library, i.e. membership, issues, returns, ILL, reminders, over dues, reservations, recall etc. All these functions have been organised into following eight logical sub-modules as given in **Figure 4**.
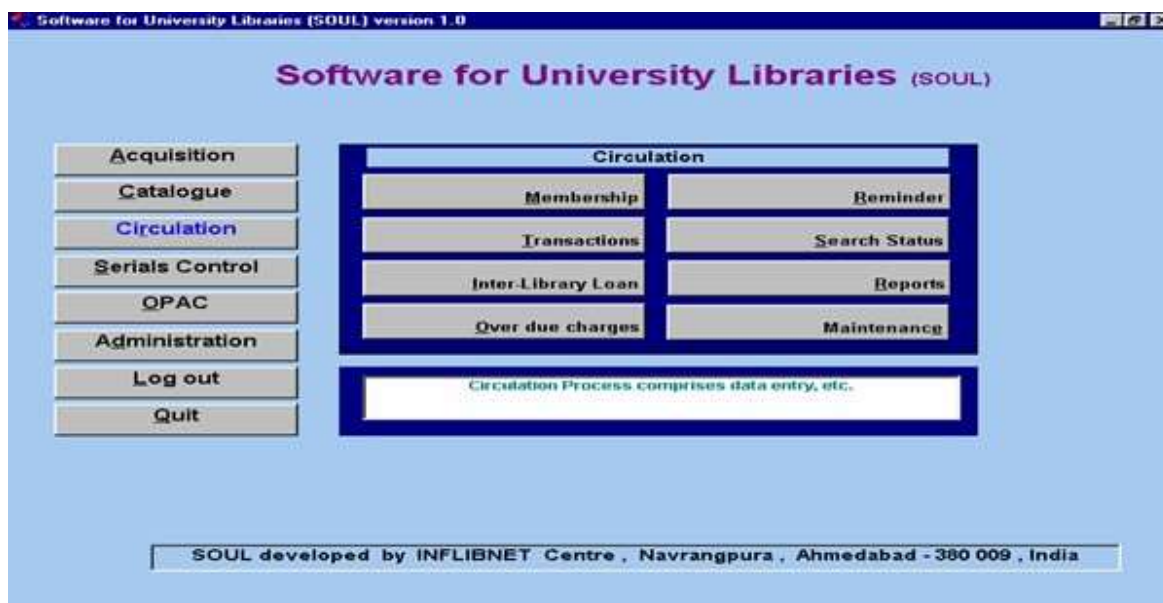

Figure. 4 Circulation Module

1. Membership

2. Transactions

3. Inter-Library-Loan

4. Overdue collection

5. Reminder

6. Status Search

7. Reports

8. Maintenance

Membership sub-module provides the facility to create all types of member records, signing unique membership code, borrowing privileges, renewal, issue of no-due certificates, master databases for codes etc, searching the status of membership or an item, suspending the membership and generating related reports.

Transactions handle all major functions such as issue, return, renewal, reservation, recall or reminder of an item etc. This module also handles cancellation of reserved books, lost/missing books, searching the member status and searching catalogue module etc. Transaction is based on Accession number and Member code. This module supports generating and reading of bar code labels. A unique facility in this module allows one to see simultaneously the details of members, items borrowed, dues etc. while the transaction process is on. This enables issue counterstaff as well end-user to know the exact status of the members borrowing.

Inter Library Loan allows lending of items to specified member library and also borrowing items from other libraries, issues, reminders etc. This sub-module has been developed comprehensively to take care of all the details of user libraries, individuals and items loaned.

Overdue collection facilitates collection of overdue charges in full or in part, providing receipts, keeping up-to-date accounting and tallying totals, etc. Using this function one can generate daily, weekly, monthly reports to find out as to how much overdue charges have been collected.

Reminder module handles individual and group reminder generation for all overdue materials. Comprehensive listing of materials that are overdue can also be generated within a specific period giving from and to dates.

Search status enables the library circulation desk staff to check the status of a member or items borrowed by a user and overdue items.

Maintenance is yet another comprehensive sub-module, which covers binding, lost and cost recovery of books, damaged books, withdrawn books etc.

Reports sub-module allows the generation of as many as 16 major reports and with many combinations. All possible reports that a large library expects are provided for. Above all this module is capable of handling large transactions. If various functions built in this module are effectively puts to use the library staff will save lot of time and help to avoid repetitive jobs.

10.4.4   Serials Module

This module allows one to create an exclusive database for different serials. Handling serials is most complicated job for the library staff. This module has been designed to deal with all these complicated jobs quite effectively. It helps in keeping track of every title received in the library. All functions starting from suggestions, master databases, subscriptions, checking, payment, reminder, binding title history export/import etc have been covered. For the convenience of users, these functions have been grouped under following logical sub-modules as given in
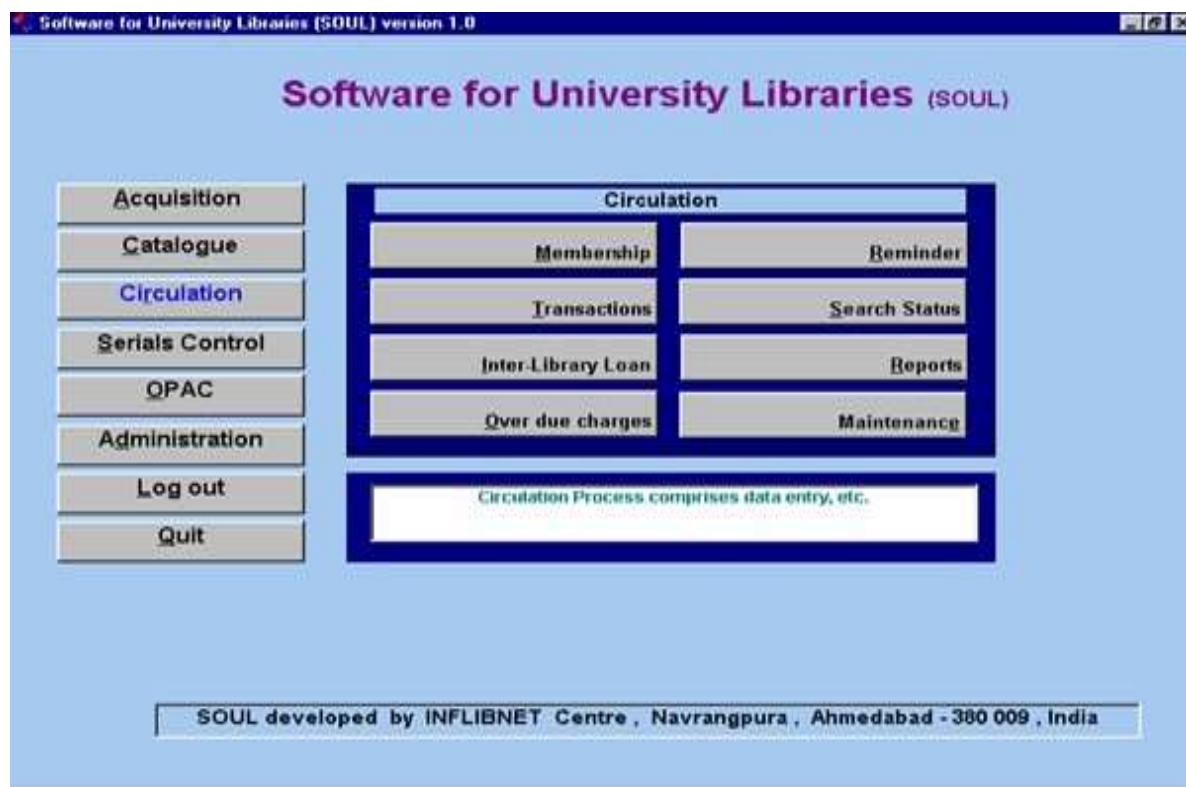
Figure 5.

Figure.5 Serial Control

1. Suggestions
2. Subscription
3. Payment
4. Master Databases
5. Check-in
6. Reminder
7. Binding
8. Search Status
9. Title History
10. Export/Import
11. Report Generation

Suggestion Sub-module enables one to record and keep a track of all the suggestions receivedfor subscribing to serials. Selection of these titles for approval, preparing budget estimates and generation of related reports are covered under this sub-module.

Subscriptions module takes care of ordering/renewal of serials, follow-up relating to the same, sending reminder, if invoices are not received, generating orders by supplier or publisher are included under this option.

Payment function supports processing and recording of all details relating to each invoice, including supplementary invoice such as invoice processing, credit notes processing, reports generation etc.

Master Databases option allows creation of large number of frequently used master databases viz. title entry, language, class number, publisher, binder, country, department, currency, frequency, budget heads, binding type, delivery modes, reports etc. Of these, title entry is main. It is here that the creation of database for each title with bibliographic information begins in the serial module.

Check-in is crucial function to record the receipt of each issue of serial and its accompanying material. To enable one to record the issues, system has a facility to generate schedule in advance for each title by providing necessary inputs viz. Vol. no(s), Issue no(s), frequency, date of publication of first issue, mode of delivery, total number of issues etc.

Sending reminders for non-receipt of issues or issues that are overdue etc for single or all titles by supplier, publisher etc can be done using this sub-module.

Binding supports making sets, generating order, payments, accessioning bound volumes etc.

Status search option facilitates one to find out the status of everything starting from subscription to check-in of issues.

Title history is provided to keep a record of ceasing, suspended, discontinued titles and also the titlechange, splits, mergers along with holdings information for each and every title in the database.

Export/Import of data in ISO2709 format is also provided to enable library to transfer the existing records in to SOUL and also contribute data to INFLIBNET union database.

Reports is a comprehensive function, which has more than 15 built-in reports of all types with different combinations. This adds to the strength of serial module. Serial module is designed to handle largenumber of titles, with many options giving maximum flexibility to user libraries.

10.4.5   *Online Public Access Catalogue Module (OPAC)*

One of the major attractions of SOUL is that it has a powerful Online Public Access Catalogue as given in figure 6 with a choice of search options and variety of display formats. OPAC is a dynamic information desk that allows library staff to post library calendar, library rules and regulations, announcements, or any other information of user interest. SOUL increases the functionality of library's OPAC terminals by allowing the users to access the internal as well as external resources. This enables the users to access various databases developed at INFLIBNET.

Library can keep entire collection available at users fingertips. This powerful, yet easy-to-use anduser friendly searching tool allows user to quickly find the materials in the library. Some of themajor features of OPAC are:

- ☐ SOUL includes Boolean operation when more than one search option is to be used.
- ☐ Search results can be sorted according to the preference of search item.
- ☐ User has option to select variety of display formats.
- ☐ Display of records according to AACR-II format.
- ☐ Easy and quick searches with options.
- ☐ Status of each book starting from acquisition module is reflected.
- ☐ Search key fields, such as, author, title, keywords, class number, accession number, etc.
- ☐ Accessible through the GUI based web browsers like Netscape Communicator, Internet Explorer etc
- ☐ User can see the status of currently borrowed items by entering his/her borrower number
- ☐ Search results can be saved and printed
- ☐ Selection of databases can be made according to the choice of users
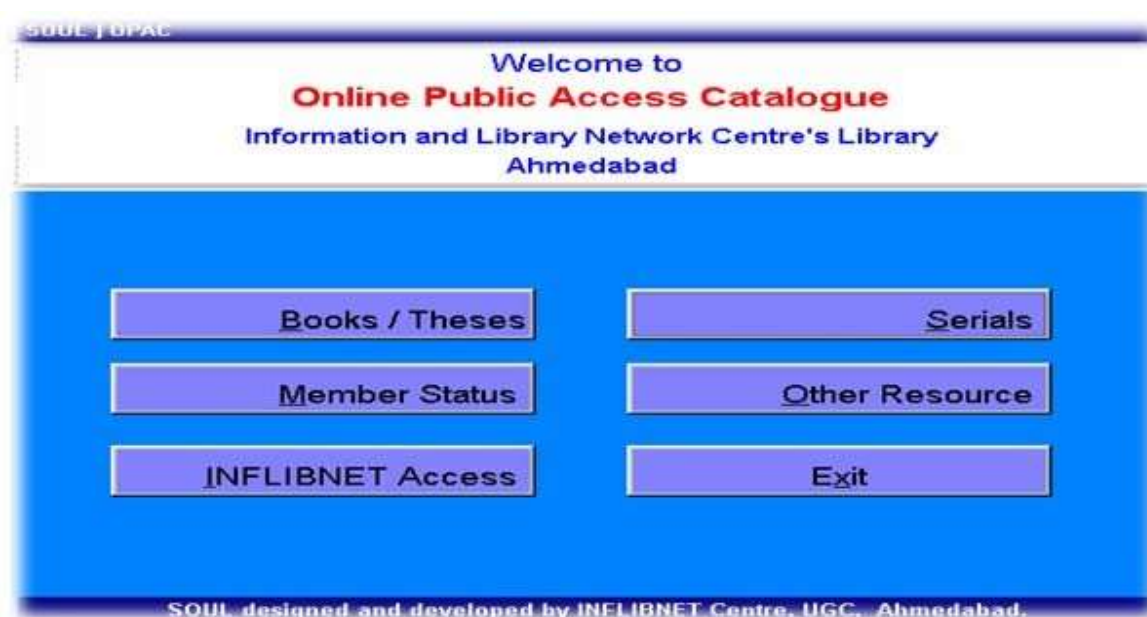

Figure.6 OPAC

10.4.6   *Administration Module*

Administration module as given in Figure 7 has been to authorize users i.e., the library staff to use various modules. Assigning login and password to use each module of the system is done by the system administrator. The security function, backups, recovery of data and other utility functions are some of the features added under this module. Users have been categorized into three levels looking into nature of functions handled by the staff at different levels.

10.5 SELF ASSESSMENT QUESTIONS

1. Why SOUL is not much popular in comparison to other software?
2. Explain the various features of SOUL.

10.6 REFERENCES

1. State of Art Library Software (SOUL).INFLIBNET Regional Training Programme on Library Automation (IRTPLA) 2004.
http://ir.inflibnet.ac.in/bitstream/handle/1944/278/Inf_4.pdf?sequence=1

LESSON – 11
DATABASE MANAGEMENT SYSTEMS

OBJECTIVE

After reading this Chapter, you will be able to:

· Understand the Database management system;
· Describe the importance of databases.
· Describe the major characteristics of databases and database management.
· Outline the major database management systems and describe their advantages and disadvantages.

STRUCTURE

11.1   INTRODUCTION

A database management system is a set of software programs that allows users to create, edit and update data in database files, and store and retrieve data from those database files. Data in a database can be added, deleted, changed, sorted or searched all using a DBMS. If you were an employee in a large organization, the information about you would likely be stored in different files that are linked together. One file about you would pertain to your skills and abilities, another file to your income tax status, another to your home and office address and telephone number, and another to your annual performance ratings. By cross-referencing these files, someone could change a person's address in one file and it would automatically be reflected in all the other files. DBMSs are commonly used to manage:

- Membership and subscription mailing lists
- Accounting and bookkeeping information
- The data obtained from scientific research
- Students information
- Inventory information
- Personal records

- Library information

11.2 CONCEPTS OF DBMS

A DBMS is a complex set of software programs that controls the organization, storage, management, and retrieval of data in a database. DBMS are categorized according to their data structures or types, sometime DBMS is also known as Data base Manager. It is a set of prewritten programs that are used to store, update and retrieve a Database. A DBMS includes:

A modeling language to define the schema of each database hosted inthe DBMS, according to the DBMS data model.

The four most common types of organizations are the hierarchical, network, relational and object models. Inverted lists and other methods are also used. A given database management system may provide one or more of the four models. The optimal structure depends on the natural organization of the application's data, and on the application's requirements (which include transaction rate (speed), reliability, maintainability, scalability, and cost).

The dominant model in use today is the ad hoc one embedded in SQL,despite the objections of purists who believe this model is a corruption of the relational model, since it violates several of its fundamental principles for the sake of practicality and performance. Many DBMSs also support the Open Database Connectivity API that supports astandard way for programmers to access theDBMS.

Data structures (fields, records, files and objects) optimized to deal withvery large amountsof data stored on a permanent data storage device (which implies relatively slow access compared to volatile main memory). A database query language and report writer to allow users to interactively interrogate thedatabase, analyze its data and update it according to the users privileges on data.

11.3 BENEFITS OF DBMS

- ▢ Improved strategic use of corporate data
- ▢ Reduced complexity of the organization's information systems environment
- ▢ Reduced data redundancy and inconsistency
- ▢ Enhanced data integrity
- ▢ Application-data independence
- ▢ Improved security
- ▢ Reduced application development and maintenance costs
- ▢ Improved flexibility of information systems
- ▢ Increased access and availability of data and information
- ▢ Logical & Physical data independence
- ▢ Concurrent access anomalies.
- ▢ Facilitate atomicity problem.
- ▢ Provides central control on the system through DBA.

11.4 CHARACTERISTICS OF DBMS

- ❖ To incorporate the requirements of the organization, system should be designed

for easymaintenance.

- ❖ Information systems should allow interaction access to data to obtain new informationwithout writing fresh programs.
- ❖ System should be designed to co-relate different data to meet new requirements.
- ❖ Data should be stored with minimum redundancy to ensure consistency in stored dataacross different application.
- ❖ An independent central repository, which gives information and meaning of available data,is required.
- ❖ Integrated database will help in understand is the inter-relationships between data stored indifferent applications.
- ❖ The stared data should be made available for access by different users simultaneous.
- ❖ Automatic recovery feature has to be providing to overcome the problems with processingsystem failure.

11.5   ADVANTAGES OF A DBMS

Improved availability: One of the principle advantages of a DBMS is that the same information can be made available to different users.

Minimized redundancy: The data in a DBMS is more concise because, as a general rule, the information in it appears just once. This reduces data redundancy, or in other words, the need torepeat the same data over and over again. Minimizing redundancy can therefore significantly reducethe cost of storing information on hard drives and other storage devices. In contrast, data fields arecommonly repeated in multiple files when a file management system is used.

Accuracy: Accurate, consistent, and up-to-date data is a sign of data integrity. DBMSs foster data integrity because updates and changes to the data only have to be made in one place. The chancesof making a mistake are higher if you are required to change the same data in several different places than if you only have to make the change in one place.

Program and file consistency: Using a database management system, file formats and system programs are standardized. This makes the data files easier to maintain because the same rules and guidelines apply across all types of data. The level of consistency across files and programsalso makes it easier to manage data when multiple programmers are involved.

User-friendly: Data is easier to access and manipulate with a DBMS than without it. In most cases, DBMSs also reduce the reliance of individual users on computer specialists to meet their data needs.

Improved security: As stated earlier, DBMSs allow multiple users to access the same data resources. This capability is generally viewed as a benefit, but there are potential risks for the organization. Some sources of information should be protected or secured and only viewed by select individuals. Through the use of passwords, database management systems can be used to restrict data access to only those who should see it.

11.6   DISADVANTAGES OF A DBMS

There are basically two major downsides to using DBMSs. One of these is cost, and the other the threat to data security.

Cost: Implementing a DBMS system can be expensive and time-consuming, especially in large organizations. Training requirements alone can be quite costly.

Security: Even with safeguards in place, it may be possible for some unauthorized users to access the database. In general, database access is an all or nothing proposition. Once an unauthorized user gets into the database, they have access to all the files, not just a few. Depending on the nature of the data involved, these breaches in security can also pose a threat to individual privacy. Steps should also be taken to regularly make backup copies of the database files and store them because of the possibility of fires and earthquakes that might destroy the system.

11.7 USES OF DATABASE MANAGEMENT SYSTEMS

The four major uses of database management systems are:
1. Database Development
2. Database Interrogation
3. Database Maintenance
4. Application Development

Database Development

Database packages like Microsoft Access, Lotus Approach allow end users to develop the database they need. However, large organizations with client/server or mainframe-based system usually place control of enterprise-wide database development in the hands of database administrators and other database specialists. This improves the integrity and security of organizational database. Database developers use the data definition languages (DDL) in database management systems like oracle 9i or IBM's BD2 to develop and specify the data contents, relationships and structure each databases, and to modify these database specifications called a data dictionary.

Database Interrogation

The Database interrogation capability is a major use of Database management system. End users can interrogate a database management system by asking for information from a database using a *query language* or a *report generator.* They can receive an immediate response in the form of video displays or printed reports. No difficult programming ideas are required.

Database Maintenance

The databases of organizations need to be updated continually to reflect new business transactions and other events. Other miscellaneous changes must also be made to ensure accuracy of the data in the database. This database maintenance process is accomplished by transaction processing programs and other end-user application packages within the support of the database management system. End-users and information specialists can also employ various utilities provided by a DBMS for database maintenance.

Application Development

Database management system packages play major roles in application development. End-users, systems analysts and other application developers can use the fourth generational languages (4GL) programming languages and built-in software development tools provided by many DBMS packages to develop custom application programs. For example you can use a DBMS to easily develop the data entry screens, forms, reports, or web pages by a business application. A database management system also makes the job of application programmers easier, since they do not have to develop detailed data handling procedures using a conventional programming language every time they write a program.

11.8   MODELS OF DBMS

The various models of database management systems are:
1. Hierarchical
2. Network
3. Object-oriented
4. Associative
5. Column-Oriented
6. Navigational
7. Distributed
8. Real Time Relational
9. SQL

11.9   DATABASE MANAGEMENT SYSTEMS SOFTWARE

Examples of DBMSs include

a) CSQL

b) DB2

c) FileMaker

d) Firebird

e) Informix

f) Ingress

g) Microsoft Access

h) Microsoft SQL Server

i) Microsoft Visual FoxPro

j) Mysql

k) OpenLink Virtuoso

l) Oracle

m) PostgreSQL

n) Progress

o) SQLite

p) Sybase Adaptive Server Enterprise

q) Teradata

11.10 SELF ASSESSMENT QUESTIONS

1. Define the term database management system (DBMS).
2. Describe the basic purpose and functions of a DBMS.
3. Discuss the advantages and disadvantages of DBMSs.

11.11 REFERENCES

1. Codd, E.F. (1970). "A Relational Model of Data for Large Shared Data Banks". Communications of the ACM 13 (6): 377–387.
2. O'Brien, James A. 2003, Introduction to Information Systems, McGraw-Hill, 11th Edition.
3. http://nayapaan.blogspot.in/2010/12/what-is-dbms-what-are-characteristics.html.
4. http://www.personal.psu.edu/glh10/ist110/topic/topic07/topic07_05.html

CDS/ISIS

OBJECTIVE

After reading this Chapter, you will be able to:

- ➢ Understand the CDS/ISIS;
- ➢ Basic features of CDS/ISIS;
- ➢ Searching of database in CDS/ISIS.

STRUCTURE

12.1 INTRODUCTION

CDS/ISIS is a software package for generalized Information Storage and Retrieval systems developed, maintained and disseminated by UNESCO. It was first released in 1985 and since then over 20,000 licenses has been issued by UNESCO and a worldwide network of distributors. It is particularly suited to bibliographical applications and is used for the catalogues of many small and medium-sized libraries. Versions have been produced in Arabic, Chinese, English, French, German, Portuguese, Russian and Spanish amongst other languages. UNESCO makes the software available free for non-commercial purposes, though distributors are allowed to charge for their expenses.

CDS/ISIS is an acronym which stands for Computerized Documentation Service / Integrated Set of Information Systems. In 2003 it was stated that "This package is accepted by libraries in the developing countries as standard software for information system development".

The original CDS/ISIS ran on an IBM mainframe and was designed in the mid-1970s under Mr.Giampaolo Del Bigio for UNESCO's Computerized Documentation System (CDS). It was based on the internal ISIS (Integrated Set of Information Systems) at the International Labor Organization in Geneva (Wikipedia).

In 1985 a version was produced for mini- and microcomputers programmed in Pascal. It ran on an IBM PC under MS-DOS . *Winisis*, the Windows version, first demonstrated in

1995, may run on a single computer or in a local area network. A *Java ISIS* client/server component was designed in 2000, allowing remote database management over the Internet from Windows, Linux and Macintosh computers. Furthermore, *GenISIS* allows the user to produce HTML Web forms for CDS/ISIS database searching. The *ISIS_DLL* provides an API for developing CDS/ISIS based applications. The Open ISIS library, developed independently from 2002 to 2004, provided another API for developing CDS/ISIS-like applications.

The most recent effort towards a completely renewed FOSS, UNICODE implementation of CDS/ISIS is the J-Isis project, developed by UNESCO since 2005 and currently maintained byMr. Jean Claude Dauphin.

12.2 WHAT IT IS CDS/ISIS?

CDS/ISIS is a package that has been developed for bibliographic information; that is, information about documents such as books, journal articles, or conference proceedings. However, it has not been developed for library housekeeping applications. Major differentiating features, for which CDS/ISIS has become popular in libraries and information centres all over the world, include the use of variable length fields, sub-fields and repeatable fields. It is free of cost. CDS/ISIS usesadvanced indexing techniques to enable faster searching of the database. Multilingual nature of thepackage is another important feature. Text on menus and worksheets can be changed by the user.

CDS/ISIS is a generalized Information Storage and Retrieval System. It is intended to beused for structured non-numerical databases containing. It is specialized in handling variable-lengthinformation mainly texts. It may manage stand-alone as well as local network database systems. Unlike Dbase or MS-Access, CDS/ISIS is not a relational database system, although it provides some relational facilities. CDS/ISIS deals with questions like: "*which research projects deal with basic education in India*?".It may be expanded by advanced users (programmers) for adding new services and tools. A wide variety of solutions for Internet publishing of data are already available.

12.3 WHAT *IS A DATABASE?*

- The term "database" denotes a collection of structured information;
- A database contains data elements called "records";
- Each record in the database has the same structure;
- Some units of information in a record may be absent, some others may occur more thanonce (a book may have more than one author or may not have an ISBN);
- Data units in a record are called "fields";
- Fields may contain independent data elements called "subfields".
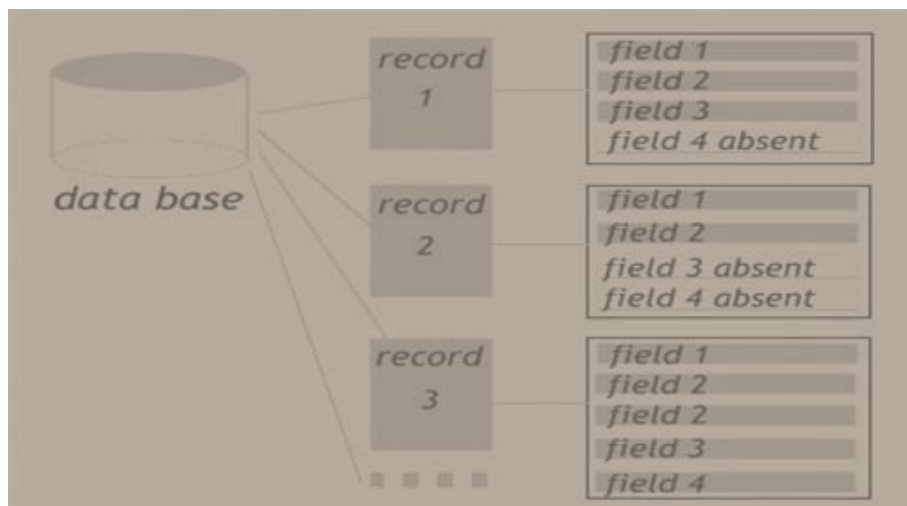
Example of database structure

12.4 BASIC FEATURES OF CDS/ISIS

CDS/ISIS allows the user to design the record structure of each database his own
You can decide:
  • What kind of fields to include
  • Which fields will be sort able and searchable
  • In what shapes your want to display or print the contents of a record

You can keep many different databases each in a different structure in your computer, for manydifferent applications once the database has been created, CDS/ISIS allows to:
• Create new records, to put new information in the archive;
• Keep the stored information up-to-date by adding new data elements, modifying existing onesand deleting unnecessary information;
• Analyze the content of the database to extract searchable information following your owninstruction;
• Search and retrieve subsets of the stored information;
• Display or print the results the way you want.

12.5 BASIC KNOWLEDGE OF CDS/ISIS
  • Records are stored in a file named "Master File" (MST);
  • Each record in the database can be referred to by its unique number, called "Master FileNumber" (MFN);
  • The MFN is automatically assigned by the system when a the record is created;
  • Fields within a record are identified by a code number called TAG;
  • You may access a record not only by its number but by its content;
  • For this purpose, you may maintain a dictionary of searchable terms, also called "*InvertedFile*"

Following reasons have been stated by the library professionals for the failure of CDS/ISIS inlibraries.
     - Difficult in acquisition, circulation, SDI and serials control
     - Not user friendly
     - Difficulties in data entry and printing

- Complex searching is difficult and not user friendly
- No dynamic allocation of memory
- Indexing files are too many and too large to support a big database

12.6 INSTALLATION PROCEDURE (CDS/ISIS)

To install CDS/ISIS for Windows:

➢ Insert the disk 1 in your drive
➢ From Windows 95 Start menu, run:
➢ a:\setup.exe
➢ The following screen will appear:
➢ Choose "
  o Continue
  o " to start the installation procedure
➢ Follow the instructions on the screen: usually you may just click "Ok" to each installation question. The detailed installation procedure of CDS/ISIS package is given in the next chapter (Chapter-4).

12.7 CONCLUSION

In recent years, a large number of software packages for information storage and retrieval as well as for library automation have become available in India. Two of the most widely used software packages in India are the Micro CDS/ISIS and LibSys. While the former is essentially a package for information storage and retrieval, the latter is a complete library automation package containing facility for information storage and retrieval. Micro CDS/ISIS is an advanced non-numerical information storage and retrieval software developed by UNESCO and is available since 1985 to satisfy the needs expressed by many institutions, especially in developing countries, to be able to streamline their information processing activities by using modern (and relatively inexpensive) technologies. The software was originally based on the Mainframe version of CDS/ISIS, started in the late 1960s, thus taking advantage of several years of experience acquired in database management software development. Several partners contributed to its development through the years.

12.8 SELF ASSESSMENT QUESTIONS

1. What is CDS/ISIS?
2. What is a database?
3. What are the basic features of CDS/ISIS?

12.9 REFERENCES

1. National Science Foundation of Sri Lanka. "CDS ISIS Library Software" [Last Update 10th January2003.] http://www.nsf.ac.lk/slstic/isis.htm Accessed June 20, 2007.
2. Buxton, Andrew and Hopkinson, Alan. The CDS/ISIS handbook. London: Library Association,1994.
3. en.wikipedia.org/wiki/CDS_ISIS
4. www.isisnetz.de/download/dokumentationen/tutorial.pdfý

LESSON - 13
SELECTION OF SOFTWARE PACKAGES

OBJECTIVE

After reading this Chapter, you will be able to:

- Options for Selection of software packages;
- Guides to Commercially Available Software;
- Available of software packages in India.

STRUCTURE

13.1   INTRODUCTION

In recent times, libraries are not encouraged to develop the software for its use. In other words, libraries are advised not to waste efforts, time and money in developing in-house programmes for library house-keeping operations and public access information storage and retrieval. Softwaredevelopment is a costly, time consuming and risky job whose results may be uncertain. However,there are number of library software packages available both commercially and as well as in opensources for use.

Good technology can bring enormous benefits but the choices – and the risks – are also huge. Finding the right software – and supplier – for your library can be one of the greatest challengesyour organisation will face. However, with the right approach to software selection, you can avoidthe pitfalls and make sure you get the most from your investment in IT. The key to successful package software selection is to realise that the software itself – what it can do and how it works – is often less important than the choice of supplier. Of course, functionality, performance, scalability and many other technical considerations are important and you will need to take all those factorsinto account when you are looking at the options. However, your choice of supplier will be at leastas important because, in the end, it will be the quality of that relationship that determines the success or failure of the implementation. In fact, the best way to view the process of software selection is not so much as a conventional exercise in procurement but more like the due diligence that you would expect go through as part of a merger or acquisition.

13.2 OPTIONS FOR SELECTION

However, the options available for selection of library automation software are summarised below:

i.   Acquire a prewritten, off-the-shelf software package (e.g. LIBSYS),
ii.   Acquire a turnkey package incorporating both hardware and software (e.g. MINISIS, TULIS),(iii)Write in-house programmes,
iii. Commission writing of programmes, and
iv.   Participate in the formation of, or join a cooperative that offers access to software and/or hardware and/or databases. Rowley (1992) discusses the advantages and disadvantages of commercially available software packages. She concludes, "It is sensible to choose a commercially available package, -since it is too costly to write a local software package or to commission someone to do this, even though a tailor-made package designed specifically for a given application is most likely to fit all the requirements of that application."

13.3   APPROACHES TO PROCURE PACKAGE BASED SOFTWARE

There are two main approaches to procuring package-based software:

- A formal approach, based on a competitive invitation to tender (ITT)
- An adaptive approach, which aims to identify the preferred supplier before defining the system requirements in detail.

The formal approach is widely used for software selections. It is recommended where the requirements are relatively simple or confined to a single department within the organisation or where the organisation wishes to control the subsequent relationship with the proposed supplier.

The guide published by Sayer Vincen (2011) describes the formal approach and sets out the seven simple steps to choosing the right package software for your library –and to finding the right supplier.

Step-2. Getting started
Step-2. Stablishing the rationale
Step-3. Specifying your requirement
Step-4 Preparing and issuing an invitation to tender
Step-5 Identifying preferred supplier and system
Step-6 Negotiatig contracts
Step-7 Completing the selection
(www.sayervincent.co.uk/Asp/.../Selecting_package_software_formal.pdfý).

13.4   GUIDES TO COMMERCIALLY AVAILABLE SOFTWARE

There are a large number of commercially available library automation software packages. Studies that enumerate compare and highlight the salient features of these software packages are also in abundance. An effort is made here to review some such selected studies to enable one to fathom the length, breadth and depth of the problem of selecting suitable software for one's use. Clossbrenner (1984) in his book "How to buy software: The master guide to picking the right program'' describes much general and specific application software but does not mention the library housekeeping or information storage and retrieval software

packages. In his coverage of 648 pages divided into three parts with *25* chapters and four special appendices, a number of software packages are mentioned which could be used for general applications and other areas related to library automation tip. These include packages for word-processing, database management, statistical manipulation, online searching of databases, etc. The book is comprehensive, user friendly master guide for selecting suitable software for specific purposes. Hansen (6) in Microcomputer user's guide to information online lists more than100sources of information, and their access software. Rowley (1992) lists some text retrieval software for micro computer and for mainframe/microcomputer systems. Further, She adds a list of library house-keeping software, their features and suppliers. Mahajan (l986) surveys some 40software packages.

13.5 SOFTWARE WITH CD-ROM

Most of these studies are confined to user interfaces as the principle of comparison of softwarepackages. They usually give rules on how to rank the CD-ROM publications, how to give marks for the CD-ROM databases in addition to the software. In many cases the performance factors that aremost important for professional searchers are usually missing from these collections of rules. Valas(1994) emphasizes the performance factors that are considered to be the most important viewpointsfor a professional searcher. "A retrieval system may be as user friendly as you wish; but you will not like it if one single search sated in an intricate **DATABASES** query may take two hours and displaying the hits may take another two; or if The CD-ROM databases are usually complicated search strategies are not provided with information retrieval and possible at all." public access software. Valas (1994) gives acomparison of some well-known CD-ROM.

13.6   INDIAN SCENARIO

In India there are number of Information retrieval software packages in use. However, there are not many publications dealing with the comparison of different CD-ROM information retrieval software packages. Richards and Robinson (1993) suggest a model for evaluating CD-ROMsoftware whereas; Harry and Oppenheim (1993) discuss the various criteria for evaluating electronic databases. Jacso (1991) describes the evaluation, selection and installation of CD-ROM software, data ware and hardware. Jasco (1993) searches for skeletons in the database cupboardto find errors of omission and commission. McFaul (1 6) comes out with a final report on consistent interface guidelines. Tian-Zhu (1991) limits his 'formal analysis to searching capabilitiesand ease of use of CD-ROM user interfaces. Sieverts (22) and others give additional programmesfor testing, evaluating and comparing software for information storage and retrieval. Chowdhury andChowdhury (1) discusses the automated text retrieval and library management software in India. Anumber of software packages have been released recently by government and private agencies. The authors provides a list of 20and a brief overview of 10 selected Indian packages released up to 1994, namely, CATMAN, CDS/ISIS, LIBRARIAN, LIBSYS,MAITRAYEE, MECSYS, NIRMALS, SANJAY,TULIPS and WILISYS. Considering the cost aspect, it is concluded that CDS/ISIS along with SANJAY (with a few modifications) might prove to be the most suitable package for most Indian libraries. The authors compare the common features such as cataloguing, OPAC, online help, acquisition, circulation and serials control of the selected packages. However, the criteria to evaluatesuch packages are not discussed. major problem areas of library automation in India are as follows: Funds, manpower and retrospective conversion Facilities for entering data in desired format Downloading facilities for data Facilities for data exchange Problems in creating filesin packages based on DBMS due to long fields for longer data fields (e.g., in Oracle), and use of repeatable fields which are common in bibliographic and text

database (e.g. SANJAY, LIBSYS, CDS/ ISIS).

13.7 CONCLUSION

Software selection can be risky. Finding the right system for your library takes time and energy but, with a structured approach, you can reduce the risks involved and help ensure your charity makes the right choice in the end. The best software in the world will achieve little if the implementation fails. Your chances of a successful implementation increase enormously if, at the outset, you are clear and realistic about the benefits you expect to the new system to deliver and if, during the selection, you focus on the supplier as well as on their technology. A good selection process will get the functional requirements right but it will also keep the organisational objectives in mind and make sure you find the right partner to help you achieve them.

13.8 SELF ASSESSMENT QUESTIONS

1. Discuss the various options of selection of software packages.
2. What are the guides to commercially available software?
3. What are the available library software packages available in India?

13.9 REFERENCES

1. Chowdhury, G.G. & Chowdhury, Sudatta. Text retrieval and library management software in India. NlSSAT Newsletter, 1994. 3, 18. (Reproduced from Programme V.28: No.3, July 1994).
2. Dyer, M and Gunson, A. A directory of library and information retrieval software for microcomputers. Ed.4 Grower, Aldershot, 1990.
3. Glossbrenner, Alfred. How to buy software: The master guide to picking the right program. St. Martin's Press, New York, 1984.
4. Gates, H. Factors to consider in choosing a microcomputer for library housekeeping and information retrieval in a small library. Program, 1984, .April 18, 11-23.
5. Harry, V and Oppenheim, C. Evaluation of electronic databases. Part I: Criteria for testing CD ROM products. Online & CD-ROM Review: 1993, 17(4), 11-22.
6. James, E. Library systems evaluation guide. Rush Associates, Powell, Ohio, 1983. (8 vol).
7. Jasco, Peter. CD-ROM databases software and hardware: Selection and installation. Libraries Unlimited, Inc., Englewood Co., 1991.
8. Jasco, Peter. Searching for skeletons in the database cupboard. Part I: Errors of omission, Database, 1993. February, p. 38-49. Part II: Errors of commission. Database, 1993. April, p. 30-36.
9. Kimberley, R. (Ed). Text retrieval: A directory of software, Ed.3. Grower, Aldershot, 1990.
10. Levees, J. Library System: A buyer's guide, Ed.2. Grower, Aldershot, 1989.
11. Mahajan, S.M. The role of minis and micros in bibliographic information retrieval. In: Library and information science horizon edited by B. Guha. Allied Publishers Pvt. Ltd., New Delhi, 1986. pp. 263-85.
12. Malwad, N. M. Selection Criteria for Library Automation Software. DESIDOC Bulletin of Information Technology, Vol 15, No 2, March 1995, pp 17-26
13. Malwad, N.M. Role of CDS/ISIS in computerised information handling in India. Keynote address delivered at the inaugural function of the CDS/ISIS programme at the S.K. University, Ananthapur, 16 May, 1994.

MODEL QUESTION PAPER

ACHARYA NAGARJUNA UNIVERSITY: CENTER FOR DISTANCE EDUCATION
M.L.I.Sc.
SEMESTER - II
Library Automation

Time: 3 Hours   Maximum Marks: 70

Answer any five questions.   **All questions carry equal marks.**

1. Discuss the need and importance of Library Automation.
2. Discuss the component of Library Automation.
3. State various housekeeping activities in Libraries
4. Describe the Automation of Circulation Section.
5. State the areas in Social Control Automation
6. Discuss the structure of LIBSYS
7. State the salient features of SOUL.
8. Describe the essentials of Database Management.
9. Describe the steps in selection of Library Software.
10. Discuss the structure of CDS/ISIS.

****