CHAPTER-1

INTRODUCTION
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Like all living things man also relies on information and its communication for survival. Cell reproduction, the senses, the thoughts, the control of vital processes and the defence of the organs and the organism, all require an (in-built) information system. On the other hand, the satisfaction of basic needs, such as food, clothing and social relations, demand the creation of a different system of information known as external system of communication. In the past, as well as today, man dedicates a large part of his life on information and communication (written or oral). It has been estimated that man spends about seventy percent of his time in communication, yet it is only recently that a large section of people are being explicitly employed in information activities. Information and intelligent automation technologies offer us new and powerful instruments capable of intervening all activities.¹

The term ‘information Technology’ (IT) is most commonly used to mean a combination of computer and communication technology used for information storage retrieval and dissemination. It also covers the developments and improvement of non-print media for recording information.

technology has called for radical changes in the spheres of library and information services in the different institution and organization.

Information Technology provides easy to access to a wide spectrum of information through Computer networking, CD-ROMs and Internet. It has been influencing every segment of our daily life. Information society is one in which most of the people will be engaged in 'brain' rather than 'physical' work. Information Technology has many more wonders in its store to unravel for the human progress in every field.

The word 'Information Technology' is a combination of two words. One in 'Information' and the other is 'Technology'. Information means knowledge and Technology means use of computer and communications. IT means the application of computer and communications technologies for gathering, processing, storage, retrieval and dissemination of information.²

Librarians Glossary³ defines IT as "A development of information sources handled by computers and communication by electronic channels, database can thus be accessed telephone and television links, and computer output can be transmitted in an electronic format directly to a remote receiver."

Macmillan dictionary of Information Technology defines IT as "the

acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a micro-electronic-based combination of compute ring and telecommunication."

**According to Albeit:** It can be defined from the library and information science point of view as "application of various technologies for the acquisition, processing, storage and dissemination of information. The term various technologies include micro-electronic based computers, telecommunications, reprography and printing etc."

**UNESCO** defines IT as "the scientific, technological and engineering disciplines and the managerial techniques used in information handling and processing; their application: computers and their interaction with men and machines and associated social, economic and culture matters."

**Moll** defines IT as "various means of obtaining, storing and transferring information using computer, telecommunication and microelectronics."

**Need for Information Technology:** Today, IT is beyond the working ability of any library to cater and satisfies the information requirement of the users without using modern information at the right time to right person, it is essential to use modern information technologies. It provides opportunities for libraries and information centers to widen the scope of their activities and increase their
significance with in the organization they serve. In the present day contest the information technology is needed in libraries because of the following reason:

- Information explosion
- Availability of the information in machine-readable form.
- Multi-use of machine-readable records.
- Need to provide better service on wider scale by adopting online storage and retrieval, dissemination
- Information technology offers a new dimension to store resources among the libraries by creating library networks.
- Using microfilm facility can solve space problems. And access of information much faster.
- Many users for any number of times for various purposes can use a machine-readable bibliographic data.

With the support of information technology, a user does not need to visit a completely mechanized library.

**Components of IT:** Information Technology refers to how best the modern technological developments are being exploited to record, process, store, transfer, and retrieved the information. It is the combination of several technologies, which

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may be grouped into three categories:

1. **Computer Technology.**

2. **Telecommunication Technology.**

3. **Printing Technology.**

1. **Computer Technology:** Computers differ in their processing, speeds and storage capacity. They also vary in their size and cost. Some computers are dedicated to a specific purpose. Other computers are designed to solve a wide class of problems. This section will first introduce:

   - Microprocessors.
   - Microcomputers.
   - Minicomputers.
   - Mainframe.
   - Supercomputers.

**Computer Networks:** A group of computer or computer system linked together with the help of communication links is called a computer network.

**Types of Computer Networks:** Networks can be classified as follows:

   - LAN

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2. Telecommunication Technology: Communication Technology is a developing at rapid pace. The need to communicate more quickly and more efficiently has become a central focus in our technological society. The major developments in this area are:

- Audio Technology.
- Audio-Visual Technology.
- Teletext.
- Videotext.
- Fax.
- Online search.
- E-mail.
- Satellite Technology.
- Networking.
- Teleconferences.
- Voice mail etc.

3. Printing Technology.\(^6\) It signifies all the various activities and techniques

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associates with the facsimile reproduction of document. They are of various types:

- Microfilm.
- Microprint.
- Photostat.
- Reflex copy.
- Xerography.
- Thermo fax.

**Benefits of IT in libraries:** A wide variety of advantages can be derived by the appropriate use of IT. Advantages of IT can refer to anything useful produced with the assistance of technology which allows to complete more tasks with greater accuracy and better quality in less time and for lower costs. It could be higher productivity; better quality or it might be less tangible like or improving staff moral and motivation. It certain nature of jobs, hours of manual works is possible for completion within minutes through IT. Perhaps, there may not be any area of operation or service where you cannot apply IT and get benefits in the following ways:

- IT helps to avoid duplication of efforts.
- IT facilities co-operation and resource sharing through library networks.
- IT helps to introduce new services and improve existing services.
- IT allows integration of various library operations.
• IT executes repetitive nature of works.
• IT facilities faster information communication.
• IT helps to increase the quality and range of services.
• IT facilities easy and wider access to all kinds of information sources.
• IT increases moral and motivation of library staff.
• IT helps to increase efficiency and effectiveness in library operations.
• IT ultimately helps to save time, space, energy and resources.
• IT helps to improve productivity and image of the library.

Application of IT in Libraries: The single force that has brought revolutionary changes in functioning of libraries is information technology. Libraries use IT to increase the efficiency and effectiveness of their operations and services. IT has virtually immense potential for a variety of application in libraries. IT helps libraries in creating database of easy access to and making them available for easy access to user inside as well as out side through networks. In an automated library, once database are developed in the computer, many services like bibliographic service, indexing services, CAS, SDI etc. will be automatically generated from them and the users can have direct access to them. IT offers a variety of computer based information products and services including access to external databases, CD-ROMs etc. Networking has enabled libraries to share their resource more
Effectively, especially in the present day of increasing document prices and decreasing library budget.

The use of IT with its immense capabilities of acquiring, storing, processing, retrieving and disseminating information with high speed and accuracy has made a tremendous impact on the overall functioning of libraries in the country. In India, many libraries have already stored using IT for various library activities, such as Acquisition, Cataloguing, Circulation, Serial Control and OPAC.⁷

**Acquisition:** Computerized acquisition helps in selection ordering books and other library materials. It helps in preparing subject wise budget allocation. While selecting, ordering, accessioning books, libraries will be using most of the same bibliographic details of document, such as author, title, imprint, collation etc. in this process, computer enable libraries in making use of the same data available in different files without entering it again each time. In this way, computers help in performing the following important activities in acquisition⁸.

- Processing purchase requests.
- Pre-order searching.
- Approval process.

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• Placement orders.
• Receiving and accessioning documents.
• Invoice processing and payment arrangement.
• Order follow-up and on-line enquiries.
• Preparation of reports.

Cataloguing: Cataloguing includes the job of describing recording and displaying details of holding of the library. Computers are used to aid in the production, maintenance and updating of catalogue; the quality of catalogue depend ultimately on the catalogues. In other words input data still the cataloguers work. The use of computer in cataloguing is a follows:

• It is quite possible to produce catalogue cards much more efficiently since with single keyboarding efforts several types of cards are produced.
• It is minimize data entry.
• It is quite possible to produce book catalogue i.e. catalogue records arranged in the form of a list of entries and housed as books.

Circulation: Circulation of document is one of the important operations of a library. Circulation procedure in a conventional system is very lengthy and consumes much of the staff time in repetitive works. The use of the
technological devices such as computers, barcode scanners and its software in circulation help in performing this routine operation easily and quickly. It saves lot of time for the staff as well as users. It helps in maintaining up to date membership records and in finding out least status of document under circulation. It helps in the following activities in circulation:

- Issue and return of the documents.
- Renewal and reservation of documents.
- Sending remainders notices.
- Calculation and collection of over dues.
- Maintenance of membership records.
- Circulation statistics.
- Stock verification.

**Serials Control:** Serial control is a major task in the library; serial includes journals, newspapers, annual reports, monographs, series, etc.

A computer can hold records of the various particular, about serial such as periodicity, frequency of arrival; computerization is the right way to get optimal efficiency and faster services.

Automated serials control system is expected to have the following capabilities.
• Ensure that issue received is properly registered.

• Send out reminders for issue not yet received.

• Prepare list of serial by venders.

• Maintain records of payment expenditure and budget by funds.

• Prepare routing slip for journal issue.

• Prepare list of serial ready for binding.

• Monitor the expiry of journal subscription and send out several orders to publishers/venders to prepare list of search due for renewal.

**On-line Public Access Catalogue (OPAC):** OPAC is acronym for ‘On-Line Public Access Catalogue’, OPACs are library catalogue in the traditional sense and they are online bibliographic retrieval system. They are becoming a part of the modern life.

A public access on-line catalogue must, at minimum, provide the bibliographic records content, retrieval functions and access points similar to, and understand able in terms of ‘card catalogue. Therefore, the record content will include entry information, notes information and tracing information. the user must be able to locate in the database, all editions or other versions of a work, all works on a given subject, and a work or works with a specific title.⁹

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Maulana Azad Library: The Central Library Of Aligarh Muslim University is known as Maulana Azad Library. It is one of the oldest library of the world.

The Library complex of the University consist of a central library and over 80 college/departmental libraries. The central Library was set up in 1875. In 1960 it was named as Maulana Azad library when the first Prime Minister, Pt. Jawahar Lal Nehru, inaugurated its present building. The seven-storied building is surrounded by 4.75 acres of land in the beautiful lawns and garden. It is the most beautiful building of the university and one of the few very attractive libraries in the country. The library has over 10,00,000 books.

The collection consists of books, periodical, pamphlets, manuscripts, paintings, and photographs. M.A Library performs the functions of a national library so far as its collection of oriental manuscripts are concerned. It is because of these rich collections of immense research value that this library is reckoned among major libraries of the world\textsuperscript{10}.

Different sections of Maulana Azad Library:

- Acquisition Section.
- Technical Section.

• Circulation Section.
• Reference Section.
• Periodical Section.
• OPAC

**Acquisition Section:**

**Main activities of Acquisition Section:**

1. Maintenance use of bibliographic aids (e.g. dealers catalogues, trade lists etc.)
2. Maintenance of order files.
3. Receipt, handling and inspection of incoming shipments.
4. Preparation of bills for payment, book keeping and other financial activities.
5. Preparation of accession lists.
6. Ordering and checking of periodicals.

**Application of IT in Acquisition Section of MAL:**

1. Created online database of vendors/suppliers/publishers.
2. Placing of orders with the suppliers.
3. New accessions listing.
4. Control of accounts.
**Technical Section:**

**Main activities of Technical Section:**

**Cataloguing section**
1. Preparation of the Main entry.
2. Preparation of Shelf list.
3. Label pasting.
5. Preparation of List of Additions.

**Classification section**
1. Duplicate Checking.
2. Determining specific subject of book.
3. Allotting class number.
5. Assigning Subject Heading.

**Application of IT in Technical Section**
1. To generate catalogue cards.
2. Generating machine-readable records consisting of appropriate tags.
3. It is minimize data entry.
4. It is quite possible to produce book catalogue i.e. catalogue records arranged in the form of a list of entries and housed as books.
Circulation Section:

Main activity of Circulation Section:

1. Issue and return of documents.
2. To check over due books.
3. To prepare statistics.
4. Calculation of fines and issuing if fine notice.

Application of IT in Circulation Section:

1. Charging and Discharging of the document.
2. Issue reservation notice.
3. Renewal of loans.
4. To trap the reserve document.
5. To update loan file.
6. To check overdue books and to prepare reminders.

Periodical Section:

Main activity of Periodical Section:

1. Inputting serial data.
2. Ordering new serials.
3. Renewal of presently subscribed serials.

4. Accessioning of serials.

5. Prepare list of serials ready for bindings.

**Application of IT in Serial Control:**

1. Monitor the expiry of journal subscriptions and send out several orders to publishers/venders or prepare a list of serials due for renewal.

2. Ensure that issues received are properly registered.

3. Maintain records of payment, expenditures and budgets by fund.

4. Prepare routing slips for journals issues.

5. Accessioning of individual issues as and when the issues are received.

**Selection of the problem:** The problem of the present study is entitled “Application of IT in different sections of Mualana Azad Library: a survey”

**Definition of terms:**

**Application:** According to the Funk and Wagnall’s New Standard Dictionary “the testing or carrying into effect of general law, truth, or percept by bringing it into relation with practical affairs or applying it into a particular case, also
the capacity of being thus used or means of result of such action.”

**IT:** According to ALA glossary “Information Technology is the application of computer and other technologies to the acquisition, organization, storage, retrieval and dissemination of information.”

**Mualana Azad Library:** The Mualana Azad Library is one of the old large libraries of the sub-continent. The library originated from the personal collection of Sir Syed Ahmed Khan, which he donated in response to an appeal for funds the M.A.O.College Fund Committee in the early 1870s. The library was named after Lord Lytton, the Viceroy and Governor General of India, who laid the foundation stone of the College on 8 January 1877.

**A.M.U:** Aligarh Muslim University (A.M.U) is the central university of India, which is located in Aligrh.

**Survey:** According to Oxford English Dictionary “The examine and ascertain the conditions, situation or value of formally or officially.”

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Objectives of the study:

1. To find out the awareness of staff regarding the various information services.
2. To reveal the computer literacy among the staff in the different sections of Maulana Azad Library.
3. To identify the problems faced by the staff when they download the documents or files through the software they are using.
4. To know how many documents does the library acquire every week.
5. To trace out the total allocation of budget for various subject in the library.
6. To ascertain the total collection of Maulana Azad Library.
7. To find out the most popular CD-ROM database among the staff of Maulana Azad Library.
8. To highlight the staff opinion regarding various types of services provided by Maulana Azad Library.
9. To evaluate how many e-journals are accessible in Maulana Azad Library.
10. To observe whether tracing programs are necessary for the effective utilization of OPAC.
11. To enumerate the infrastructure facilities available in the library.
12. To collect suggestions from the staff for further development of library resources, facilities and services.

**Hypotheses:**

1. Majority of the library professionals are aware of various IT applications available in the Maulana Azad Library.

2. The library subscribes e-journals.

3. A large number of library professionals are having the knowledge of computers.

4. Training programmes are necessary for the effective utilization of OPAC.

**Scope and limitation of study:** The present study is entitled application of IT in different sections of MAL, AMU, Aligarh: a survey. The main objective of the study is to investigate the view of library professions regarding application of IT in library.
Methodology: The present study is conducted on a sample of 40 library professions of Maulana Azad Library, AMU, Aligarh.

The tools used for the study were questionnaire, observation, and informal interview.

Method of data collection: For this study the data collection though a questionnaire, observation and informal interview. A questionnaire consisting of 14 questionnaires of each section was designed.

Organization of report:

Chapter I

Introduction:

The introductory chapter deals with small description about Information Technology, Use of IT in different sections of MAL, AMU, Aligarh followed by need and significance of the study, selection of the problem, scope and limitation of the study, objectives, hypothesis, methodology.

Chapter II

Review of related literature:
A total no of previously published literature related to the present study are summarized.

Chapter III

Methodology:

This chapter deals with the statement of the problem, objectives, hypothesis, methodology, sample population, variable taken, pilot study, tool used for the study and data analysis method.

Chapter IV

Data Analysis and Interpretation:

This chapter deals with the analysis and interpretation of data collected through questionnaire.

Chapter V

Conclusion, findings, tenability of hypothesis.