constructive in managing the business. We will discuss all the aspects of MIS in the coming heads in an elaborate manner.

Decision Support Systems: Decision Support systems are methodical models used to progress managerial or professional decision making by bringing significant data to a manager's notice. In many cases, these systems use the identical data as management information systems, but DSS purify the data to make it more functional to managers. It support with exceptional and nonrecurring decisions, which are moderately unstructured. Mainly what factors to reflect on and what information are needed.

Office Automation Systems: Office automation systems endow with electronic mail, word processing, electronic filing, scheduling, calendaring, and other kinds of support to office workers. First introduced with personal computers, these "groupware" applications became essential with the extensive use of personal digital assistants. It combines word processing, telecommunications and data processing to computerize office information, draws on stored data as a result of data processing and comprise handling of correspondence, reports and documents.

1.20. Management Information Systems (MIS)

1.20.1.   Definition

G.B. Davis defined a Management Information System (MIS) is "an integrated man/machine system for providing information to hold up the operations, management and decision making functions in an organization." Here the system utilizes hardware and software, manual procedures, management decision model and data base.

An MIS need not be wholly computer based; it is however inevitable that the information deriving from the high volume of data in basic operational processes is computerized; what is still not so certain is whether the once off "high level" information also needed in an MIS, is best obtained using a computer.

Apart from this there are many other thoughts over and above to this definition are as follows:

- A management information system aims at meeting the information needs of managers, predominantly with regard to the current and past operations of the enterprise.
- Management information system is a system which provides precise, timely and meaningful data for management planning, analysis and control to optimize the growth of the organization.
- Thus, from the above definition it had been extracted that "Management Information System" (M.I.S.) is vitally concerned with processing data into information. Which is then communicated to the different departments in an organization for appropriate decision making?
- The MIS is a system which provides information support for decision making in the organization.
- The MIS is an integrated system of man and machine for providing the information to support the operations, the management and the decision making function in the organization.

- The MIS is a system based on the database of the organization evolved for the purpose of providing information to the people in the organization.
- The MIS is a Computer based Information System.

Though there are a number of definitions, all of them converge on one single point, i.e., the MIS is a system to support the decision-making function in the organization. The difference lies in defining the elements of the MIS. However, in today's world MIS a computerized business processing system generating information for the people in the organization to meet the information needs decision making to achieve the corporate objective of the organization. In any organization, small or big, a major portion of the time goes in data collection, processing, documenting it to the people.

In order to get a better grip on the activity of information processing, it is necessary to have a formal system which should take care of the following points:

- Handling of a voluminous data.
- Confirmation of the validity of data and transaction.
- Complex processing of data and multidimensional analysis.
- Quick search and retrieval.
- Mass storage.
- Communication of the information system to the user on time.
- Fulfilling the changing needs of the information.

The management information system uses computers and communication technology to deal with these points of supreme importance.

1.20.2.   Objectives of MIS

1. **Data Capturing:** MIS capture data from various internal and external sources of organization. Data capturing may be manual or through computer terminals.
2. **Processing of Data:** The captured data is processed to convert into required information. Processing of data is done by such activities as calculating, sorting, classifying, and summarizing.
3. **Storage of Information:** MIS stores the processed or unprocessed data for future use. If any information is not immediately required, it is saved as an organization record, for later use.
4. **Retrieval of Information:** MIS retrieves information from its stores as and when required by various users.
5. **Dissemination of Information:** Information, which is a finished product of MIS, is disseminated to the users in the organization. It is periodic or online through computer terminal.

1.20.3.   Characteristics of MIS

1. **Systems Approach:** The information system follows a systems approach. Systems approach means taking a comprehensive view or a complete look at the interlocking sub-systems that operate within an organization.
2. **Management Oriented:** Management oriented characteristic of MIS implies that the management actively directs the system development efforts. For planning of MIS, top-down approach should be followed. Top down approach suggests that the system development starts from the determination of management's needs and overall business objective. To ensure that the implementation of systems polices meet the specification of the system, continued review and participation of the manager is necessary.
3. **Need Based:** MIS design should be as per the information needs of managers at different levels.
4. **Exception Based:** MIS should be developed on the exception based also, which means that in an abnormal situation, there should be immediate reporting about the exceptional situation to the decision –makers at the required level.
5. **Future Oriented:** MIS should not merely provide past of historical information; rather it should provide information, on the basis of future projections on the actions to be initiated.
6. **Integrated:** Integration is significant because of its ability to produce more meaningful information. Integration means taking a comprehensive view or looking at the complete picture of the interlocking subsystems that operate within the company.
7. **Common Data Flow:** Common data flow includes avoiding duplication, combining similar functions and simplifying operations wherever possible. The development of common data flow is an economically sound and logical concept, but it must be viewed from a practical angle.
8. **Long Term Planning:** MIS is developed over relatively long periods. A heavy element of planning should be involved.
9. **Sub System Concept:** The MIS should be viewed as a single entity, but it must be broken down into digestible sub-systems which are more meaningful.
10. **Central database:** In the MIS there should be common data base for whole system

1.20.4.   Role of MIS in an Organization:

The role of the MIS in an organization can be compared to the role of heart in the body. The information is the blood and MIS is the heart. In the body the heart plays the role of supplying pure blood to all the elements of the body including the brain. The heart works faster and supplies more blood when needed. It regulates and controls the incoming impure blood, processes it and sends it to the destination in the quantity needed. It fulfils the needs of blood supply to human body in normal course and also in crisis. The MIS plays exactly the same role in the organization.

1. The system ensures that an appropriate data is collected from the various sources, processed, and sent further to all the needy destinations. The system is expected to fulfil the information needs of