**MIS Definition**

- MIS is a formalised computer information system which can integrate data from various sources to provide the information necessary for decision making at management level.

**Summary of Lecture No.6**

- Understand data definition functions
- Understand data manipulation functions
- Be able to write short SQL programs

**Lecture Objectives**

- To understand the purpose and functions of the components of an MIS
- To understand the relationship existing between MIS and DSS and DBMS

**Contents**

- Information Characteristics
- MIS Definition
- Elements of MIS
- Decision making levels
- Management use of Information
- MIS for competitiveness
- MIS design
- MIS and (DSS, DBMS)

**Information characteristics**

- Relevance
- Timeliness
- Accuracy
- Verifiability

**The six elements of MIS**

- Inputs (Data)
- Outputs (Management Information)
- Processes (Programs and Procedures)
- Data files
- Personnel
- Hardware

**Decision making levels**

- Strategic decision making
- Tactical decision making
- Operational decision making

**Further Reading**

- "Management Information Systems and Decision Support Systems" by Chakib Kara-Zaitri
- "Database Management Systems" by Dr. Chakib Kara-Zaitri

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Module in Database Management and Decision Support Systems
### Strategic decision making
- Involves establishing objectives for the organisation and making long term plans for attaining these objectives.
- Examples include:
  - Location of plants
  - Capital sources
  - New products

### Tactical decision making
- Involves implementing the decisions made at strategic level, including the allocation of resources in order to pursue organisational objectives.
- Examples include:
  - Plant layout
  - Budget allocation
  - Production scheduling

### Operational decision making
- Involves executing specific tasks and ensuring that they are carried out efficiently and effectively.
- Examples include:
  - Determining inventory re-order times and quantities
  - Assigning tasks

### Planning
- Planning occurs prior to the execution of any organisational activity. The activities which must occur to reach the objectives are identified and the resources (money, equipment, labor) necessary to support these activities are allocated.

### Control
- Control is the process of comparing actual results with the plans identified in the planning process. A large proportion of MIS is feedback.

### Why use MIS
Many firms view MIS as tools to gain advantage over their competitors. The techniques used to improve competitiveness are

### MIS Design
- The designer must keep in mind the objectives of the organisation, the decisions which must be made and whether those decisions are for planning or control.
- The type of information required depends heavily on the decision level (S, T, O)

### Management use of information
- Planning
- Control
**Computer Reports**

- Scheduled reports: Produced on a regular basis, widely distributed, and often contain large amounts of information.
- Demand reports: Generated on request, and fill irregular needs for information (SQL, QBF).
- Exception reports: Notify management when a system goes out of control so that appropriate corrective action is taken.
- Predictive reports: Useful in planning decisions, and make use of statistical modeling techniques (regression, time series, simulation).

**MIS and DBMS**

- Data are the central resource of an MIS. A DBMS is a collection of programs that serve as an interface between application programs and a set of co-ordinated and integrated files called a database.
- DBMS have been important in making MIS possible.

**MIS and DSS**

- A DSS provides a set of integrated computer tools which allow a decision maker to interact directly with computers in order to retrieve information useful for semi-structured and un-structured decisions.
- A DSS is an extension of an MIS.

**MIS impact on business**

- Easier business growth (use of powerful CPUs)
- Fewer clerical workers (More analysts and programmers)
- Reduced information processing costs.
- Automation of some decisions (particularly at lower level)
- More and better information