WHAT IS MIS?

BY: YOGESH JOSHI

MIS is an organized integration of hardware and software technologies, data, processes, and human elements

It is a software system that focuses on the management of information technology to provide efficient and effective strategic decision making

MIS is the acronym for Management Information Systems

MANAGEMENT INFORMATION SYSTEM

"MIS IS A PLANNED SYSTEM OF COLLECTING, STORING AND DISSEMINATING DATA IN THE FORM OF INFORMATION NEEDED TO CARRY OUT THE FUNCTIONS OF MANAGEMENT."

PEOPLE

DATA

SOFTWARE

HARDWARE

A Management Information System is

An integrated user-machine system

For providing information

To support the operations, management, analysis, and decision-making functions

In an organization

The system utilizes

Computer hardware & software

Manual procedures

Models for analysis, planning, control, and decision making, and

A database

MIS Definition

Management Information System is an integrated man/machine system for providing information to hold up the operations, management and decision making functions in an organization.G.B
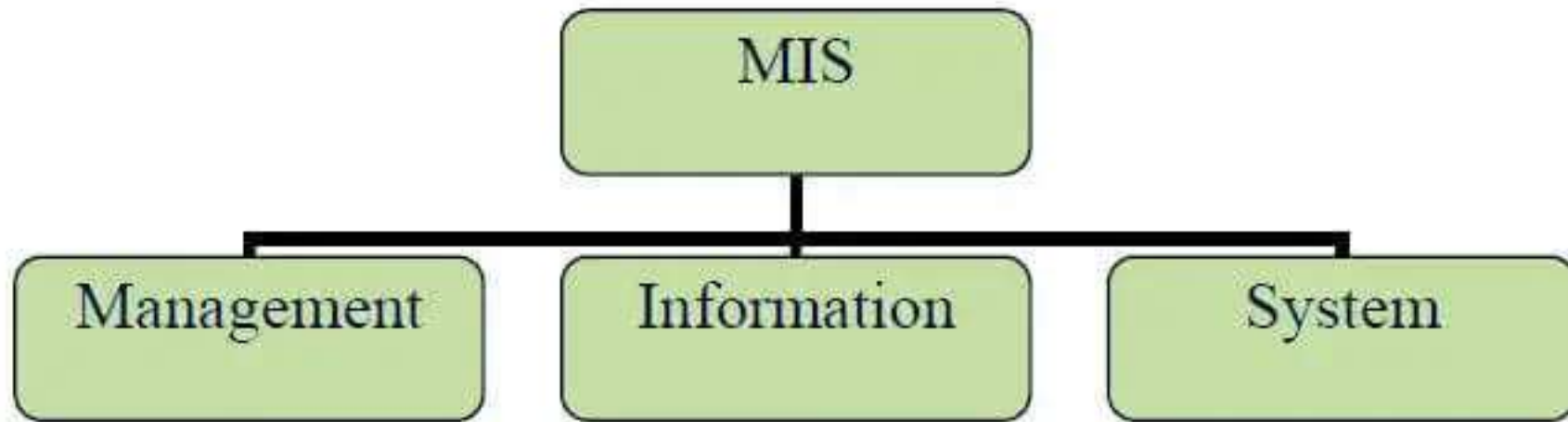
Walter I. Kennevan A Management Information System is an organized portfolio of formal systems for obtaining, processing, and delivering information in support of the business operations and management of an organization

MIS Meaning

Management: Management is the art of getting things done through and with the people in formally organised groups

Information: Information is data that is processed and is presented in a form which assists decision-making

System: A system is an orderly grouping of interdependent components linked together according to a plan to achieve a specific goal

Components of MIS

- **People Resources:** People are required for the operation of all information system

- **Data Resources:** Database holds processed and organized data

- **Software Resources:** It includes all sets of information processing instruction

- **Hardware Resources:** Include all physical devices and materials used in information processing

- **Process:** is a step undertaken to achieve a goal
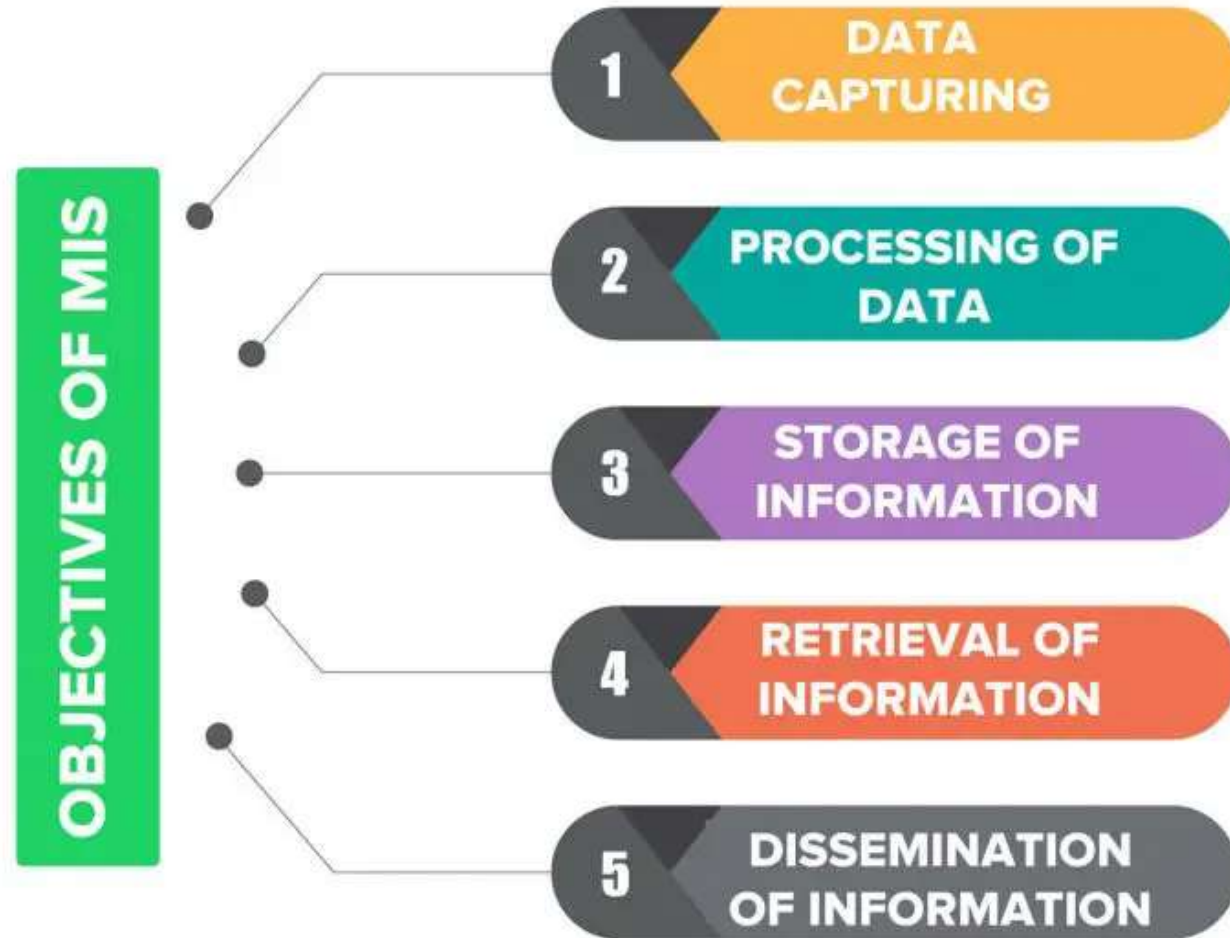
Objectives of MIS

Data Capturing

Processing of Data

Storage

Retrieval

Dissemination

OBJECTIVES OF MIS

1. DATA CAPTURING
2. PROCESSING OF DATA
3. STORAGE OF INFORMATION
4. RETRIEVAL OF INFORMATION
5. DISSEMINATION OF INFORMATION

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Data Capturing

MIS capture data from various internal and external sources of the organization

Data capturing may be manual or through computer terminals

Processing of Data

The captured data is processed to convert into the required information

Processing of data is done by such activities as calculating, sorting, classifying, and summarizing

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

RETRIEVAL OF INFORMATION

MIS retrieves information from its stores as and when required by various users

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 a computer terminal

Characteristics of MIS

System Approach

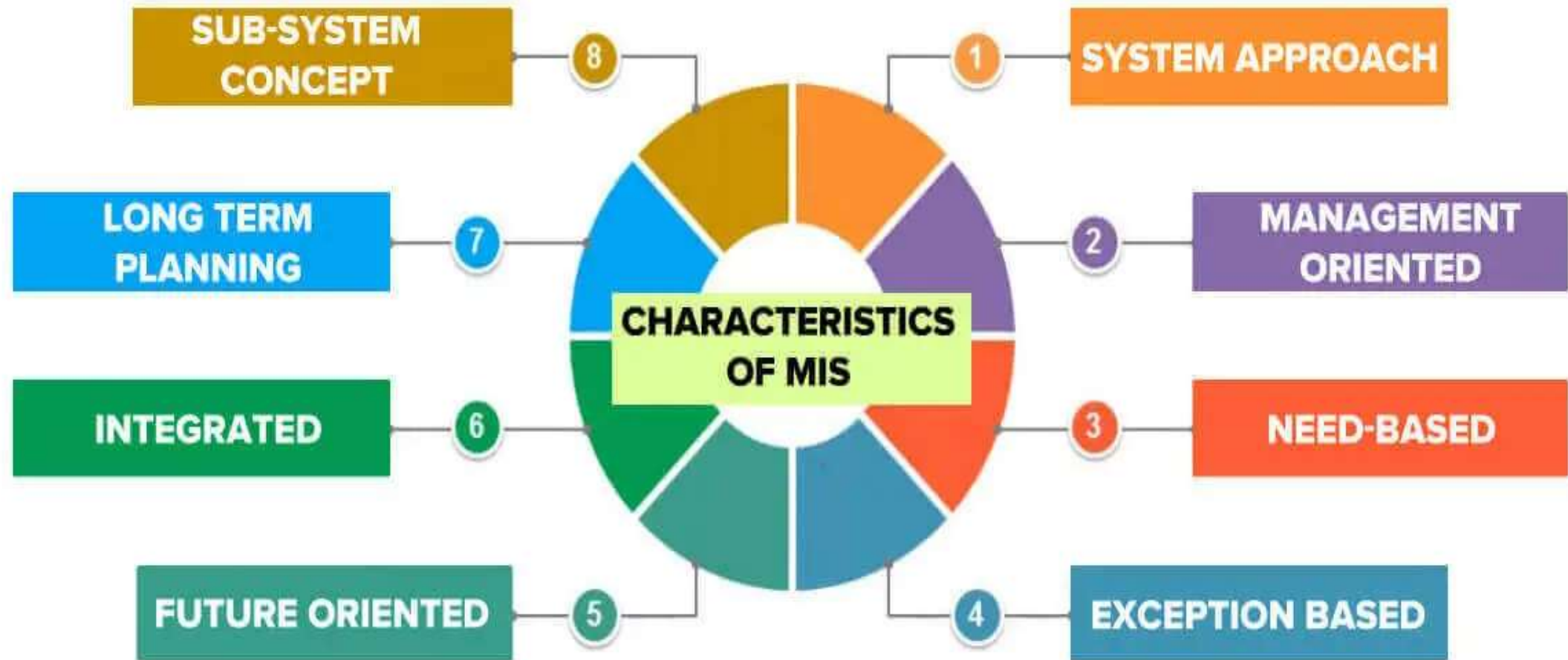Management Oriented

Need-Based

Exception Based

Future Oriented

Integrated

Long Term Planning

Sub-System Concept

Central Database

CHARACTERISTICS OF MIS

- 8 SUB-SYSTEM CONCEPT
- 1 SYSTEM APPROACH
- 7 LONG TERM PLANNING
- 2 MANAGEMENT ORIENTED
- 6 INTEGRATED
- 3 NEED-BASED
- 5 FUTURE ORIENTED
- 4 EXCEPTION BASED

System Approach

The information system follows a System's approach

The system's approach implies a holistic approach to the study of system and its performance in the light for the objective for which it has been constituted

Management Oriented

The top-down approach suggests that the system development starts from the determination of management needs and overall business objectives

The MIS development plan should be derived from the overall business plan

Management oriented characteristic of MIS also implies that the management actively directs the system development efforts

Need-Based

MIS design and development should be as per the information needs of managers at different levels, strategic planning level, management control level and operational control level

In other words, MIS should cater to the specific needs of managers in an organization's hierarchy

Exception Based

MIS should be developed on the exception-based reporting principle, which means an abnormal situation, i.e. the maximum; minimum or expected values vary beyond tolerance limits

In such situations, there should BE exception reporting to the decision-maker at the required level

Future Oriented

Besides exception-based reporting, MIS should also look at the future

In other words, MIS should not merely provide past or historical information; rather it should provide information, on the basis of projections based on which actions may be initiated

Integrated

Integration is a necessary characteristic of a management information system

Integration is significant because of its ability to produce more meaningful information

For example, in order to develop an effective production scheduling system, it is necessary to balance such factors as setup costs, Workforce, Overtime rates, Production capacity, Inventory level, Capital requirements and Customer services

Long Term Planning

MIS is developed over relatively long periods

Such a system does not develop overnight

The MIS designer must have the future objectives and needs of the company in mind

Sub-System Concept

The process of MIS development is quite complex and one is likely to lose insight frequently

Thus, the system, though viewed as a single entity, must be broken down into digestible sub-systems which are more meaningful at the planning stage

Central Database

A central database is a mortar that holds the functional systems together

Each system requires access to the master file of data covering inventory, personnel, vendors, customers, etc

It seems logical to gather data once, validate it properly and place it on a central storage medium, which can be accessed by any other subsystem

Functions of MIS

To Improve Decision-Making

To Improve Efficiency

To Provide Connectivity

Data Processing

Prediction

Planning

Control

Assistance

To Improve Decision-Making

The Management Information System furnishes relevant information on diverse matters, thereby enhancing the decision-making prowess of the management

By utilizing the speedy and precise data provided by the MIS, managers can make prompt and informed decisions, which ultimately enhances the quality of decision-making and contributes to the company's value

To Improve Efficiency

- The Management Information System facilitates managers in executing their duties with enhanced ease and efficiency, resulting in improved productivity

To Provide Connectivity

The MIS provides managers with better connectivity with the rest of the organization

The Management Information System is commonly utilized in decision-making processes within a system

One such application of MIS is to identify issues that require prompt attention, offer timely feedback, and inform senior management of the current progress and areas for improvement
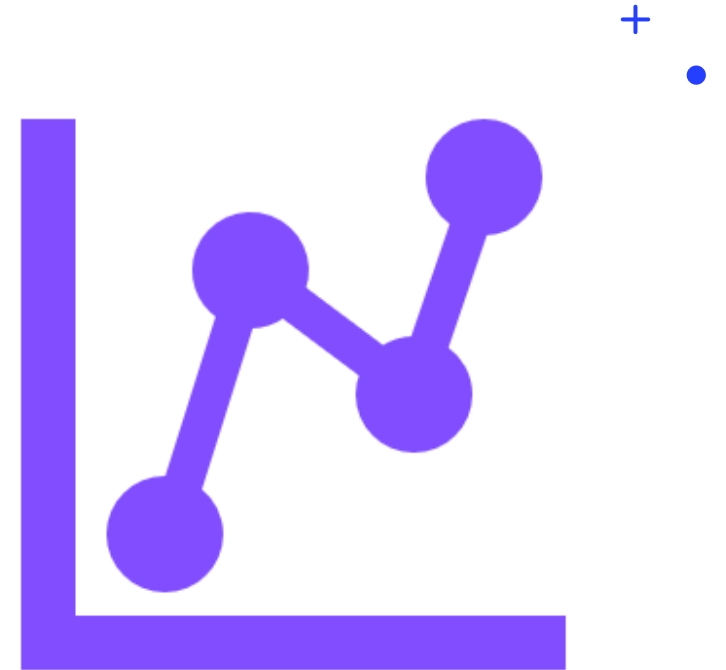
Data Processing

DATA PROCESSING INVOLVES COLLECTING, TRANSMITTING, STORING, AND PROCESSING DATA TO GENERATE AN OUTPUT

PREDICTION INVOLVES ANALYZING DATA USING MODERN MATHEMATICS, STATISTICS, OR SIMULATION TO ANTICIPATE FUTURE SCENARIOS

Prediction

- By utilizing methods of modern mathematics, statistics, or simulation, data analysis is conducted to predict potential future scenarios

Planning

- The analysis of data of a regular nature may give many indications on likely future events or situations and this can be utilized in planning or reviewing the plan already made earlier
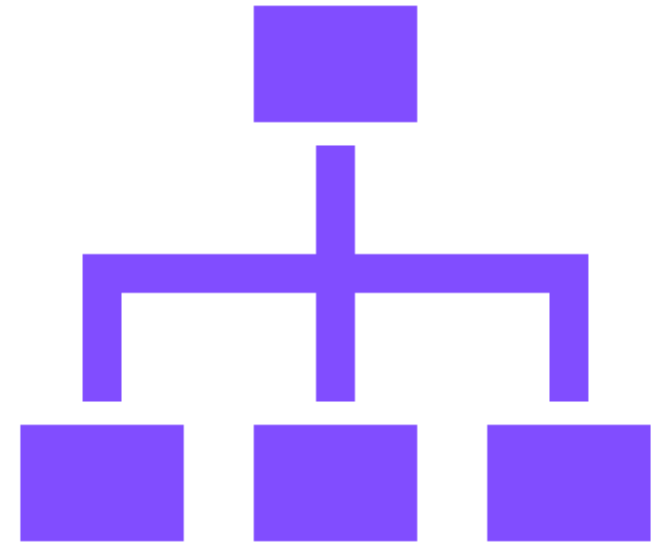
Control

By examining records of daily, monthly, quarterly, or annual activities, certain factors that require management and control can be identified

However, some factors may require the attention of senior management to remain under control

It is essential to note that ignoring smaller factors at the beginning may have the potential to disrupt other factors as well

Assistance

- One of the principal functions of MIS is to support senior management by analyzing regular records and drawing inferences about various factors related to the company's operational performance, such as human resources, financial resources, material resources, and more

Advantage of MIS

Generate Competitive Advantages

Implementation of Management by Objectives Techniques

Fast Reaction to Market Changes

MIS as Strategic Resource

Change in Industry Structure

Functional Use

External and Internal Change

Availability of Customer Data
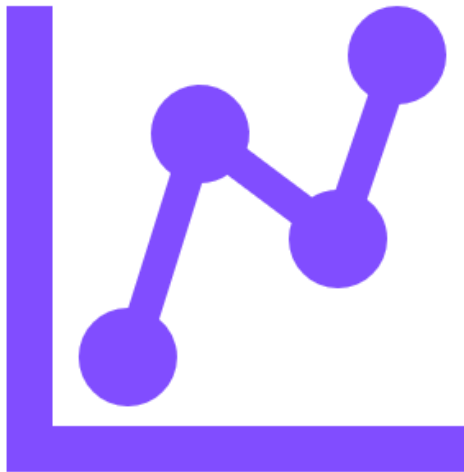
Generate Competitive Advantages

BUSINESS HOUSES SUCCEED OR FAIL BASED ON HOW THEY FACE COMPETITIVE CHALLENGES

MIS IF IMPLEMENTED PROPERLY, PROVIDES A WEALTH OF INFORMATION TO ALLOW MANAGEMENT TO CONSTRUCT AND DEVELOP EFFECTIVE PLANS TO MEET, AND BEAT, THEIR COMPETITION

Implementation of Management by Objectives Techniques

- MIS allow all participants, both management and staff, to view, analyse and interpret useful data to set goals and objectives

Fast Reaction to Market Changes

MIS can deliver facts, data and trends to business with lighting speed

Having this information allows business houses to react quickly to market changes, regardless of the type or volatility

MIS as Strategic Resource

MIS helps in taking strategic, tactical and operational decisions

It helps the management to understand cost, quality, price, technology, productivity and product

It helps to smoothen the business process and thereby facilitate managing of business operations

It helps to maintain the business standards like ISO, QS, CMMI, six sigma etc

It helps to be a head in the competition

It helps company in analysing their own SWOT

It also helps in maintaining its own profitability

It will help in taking new business decisions like new plans, new product, new business line etc

It protects company from business cycles

It provides future direction to the organisations

MIS AS STRATEGIC RESOURCE

It also provides the competitive edge

Change in Industry Structure

Customers' bargaining power

Suppliers' bargaining power

Threats of new entrant in market

Pressure from substitute products and services and u Existing industry competitors

Birth of new business/ New business initiatives

Functional Use

Lower the cost

Information and information system facilitate value chain

External and Internal Change

MIS creating knowledge is an asset

MIS helps in Internal Change: MIS will change the business process, MIS will change the old standards and set new standards

MIS is a key for continuous improvement process

Availability of Customer Data

The availability of the customer data and feedback can help the business houses to align their business process according to the need of the customers

The effective management of customer data can help the company to perform direct marketing and promotion activities

Therefore, information is considered to be an important asset for any company in the modern competitive world

Role of MIS

Decision making

Coordination among the department

Finding out Problems

Comparison of Business Performance
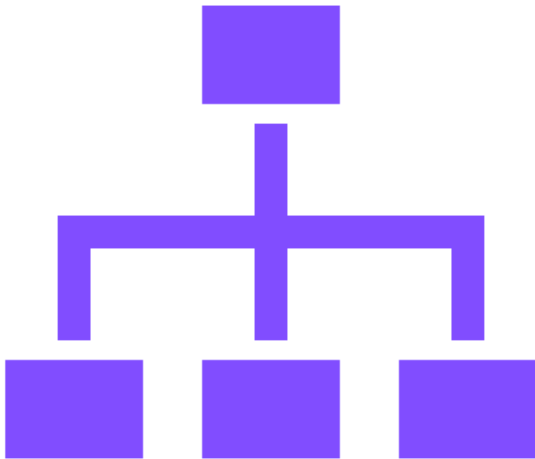
Strategies for an Organization

Decision making

Management Information System plays a significant role in the decision-making process of any organization

In any organization, a decision is made on the basis of relevant information which can be retrieved from the MIS

Coordination among the department

- Management Information System satisfy multiple need of an organization across the different functional department

Finding out Problems

As we know that MIS provides relevant information about every aspect of activities

Hence, if any mistake is made by the management then MIS, information will help in finding out the solution to that problem

Comparison of Business Performance

MIS store all past data and information in its Database

That why the management information system is very useful to compare business organization performance

Strategies for an Organization

Today each business is running in a competitive market

An MIS supports the organization to evolve appropriate strategies for the business to assent in a competitive environment
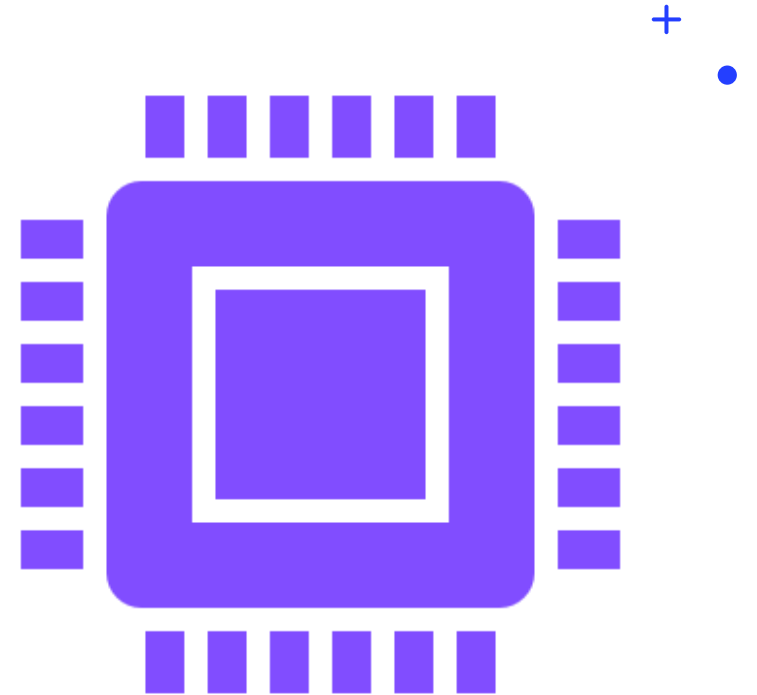
Challenges of MIS

High Cost

Training of Employee

Maintenance Cost

High Cost

- Development of new computerized based information system is a problem for the organization due to the cost factor and it creates problems because with the change of time there is need of up-to-date of the information system

Training of Employee

- Employees should have the capacity of learning of the information system with the changing competitive and business environment; otherwise it will be difficult for the organization to stay in the market

Maintenance Cost

Sometimes a problem arises due to server crash and website crash

Sometimes it leads to the loss of information

So, maintenance cost is needed to tackle the above problem

Limitations of MIS

While MIS may solve some critical problems but it is not a solution to all problems of an organization

It cannot meet the special demands of each person

MIS if designed in an improper manner does not serve the management and hence is of little relevance

The MIS is not good if the basic data is obsolete and outdated

Mostly information provided by the MIS is in quantitive form

MIS at Different Levels

A report on sales forecasts for all products, plotted against the forecasts for the entire industry

A summary of cash balances for all divisions for the year, the month, and the week, with the ability to drill down to details for all divisions

A summary of completion of all projects, with details of work remaining, estimated overruns on time, and cost with comparison figures of projects in the past

Requirements of Management Information System

- Database
- Qualified System and Management Staff
- Top Management Support
- Active Participation of Operating Management
- Control and Maintenance of Management Information System
- Evaluation of Management Information System

Summary

- Management Information Systems , referred to as Information Management and Systems, is the discipline covering the application of people, technologies, and procedures collectively called information systems, to solving business problems.

ANY QUESTION ?

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