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Information Technology for Management

Sajeena J.P.S
Assistant Professor
Department of MBA

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UNIT - I

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What is computer?

- The computer is an electronic device that accepts data, performs operations on that data , presents the results, and stores the data or results as needed. and give you desired result.
- It perform four primary operations are:

1. INPUT – entering data into the computer
2. PROCESSING – performing operations on the data
3. OUTPUT – presenting the results
4. STORAGE – saving data, or output for future use.

Advantage of Computer

- Easy processing of complex tasks.
- It saves time by quick manipulation of data as compared to when done manually.
- The errors in data processing are minimized when a computer is used.
- It has helped in making communication easier by using internet.
- It stores, retrieves, and processes a large amount of data.
- It helps in multitasking of various jobs.

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Disadvantage of Computer

- Un-Employment
- Cyber-crime
- Computer can perform only what is it programmed to do.
- Computer need well defined instructions to perform any operation

Major Components of the Computer

- Input Unit
- Output Unit
- Storage Unit
- Central Processing Unit (CPU)
- Arithmetic and Logic Unit (ALU)
- Control Unit

Interfacing with a Computer

- **Software** – Program that allows an user to interact with computers in person or over a network. Ex: GUI (Graphical User Interface
- **Hardware** – Physical device, port or connection that interacts with the computer or other hardware devices. Ex: Integrated Development Environment (IDE), SATA (Serial Advanced Technology Attachment)

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Introduction to languages

- A Computer language includes various languages that are used to communicate with a Computer machine.
- Some of the languages like programming language which is a set of codes or instructions used for communicating the machine.
- Machine code is also considered as a computer language that can be used for programming.
- Examples are: Python, Ruby, Java, JavaScript, C, C++, and C#

Compiler, Interpreter and Assembler

- A **Compiler** is a special program that translates a programming language's source code into machine code, bytecode or another programming language.
- An **Interpreter** is a computer program that directly executes instructions written in a programming or scripting language, without requiring them previously to have been compiled into a machine language program
- The **Assembler** is a Software that converts an assembly language code to machine language code. It takes basic Binary code and converts them into Binary Code that computer’s processor can use to perform its basic operations.

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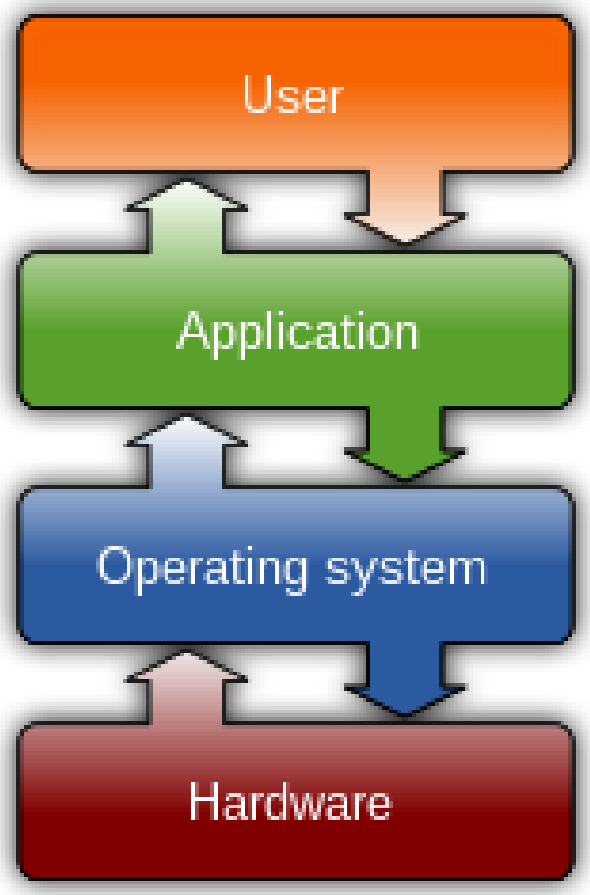
Operating Systems

Definition

An operating system (OS) is system software that manages computer hardware and software resources, and provides common services for computer programs.



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Operating Systems - Functions

- It controls all the computer resources.
- It provides valuable services to user programs.
- It coordinates the execution of user programs.
- It provides resources for user programs.
- It provides an interface (virtual machine) to the user.
- It hides the complexity of software.
- It supports multiple execution modes.
- It monitors the execution of user programs to prevent errors.

Types of OS

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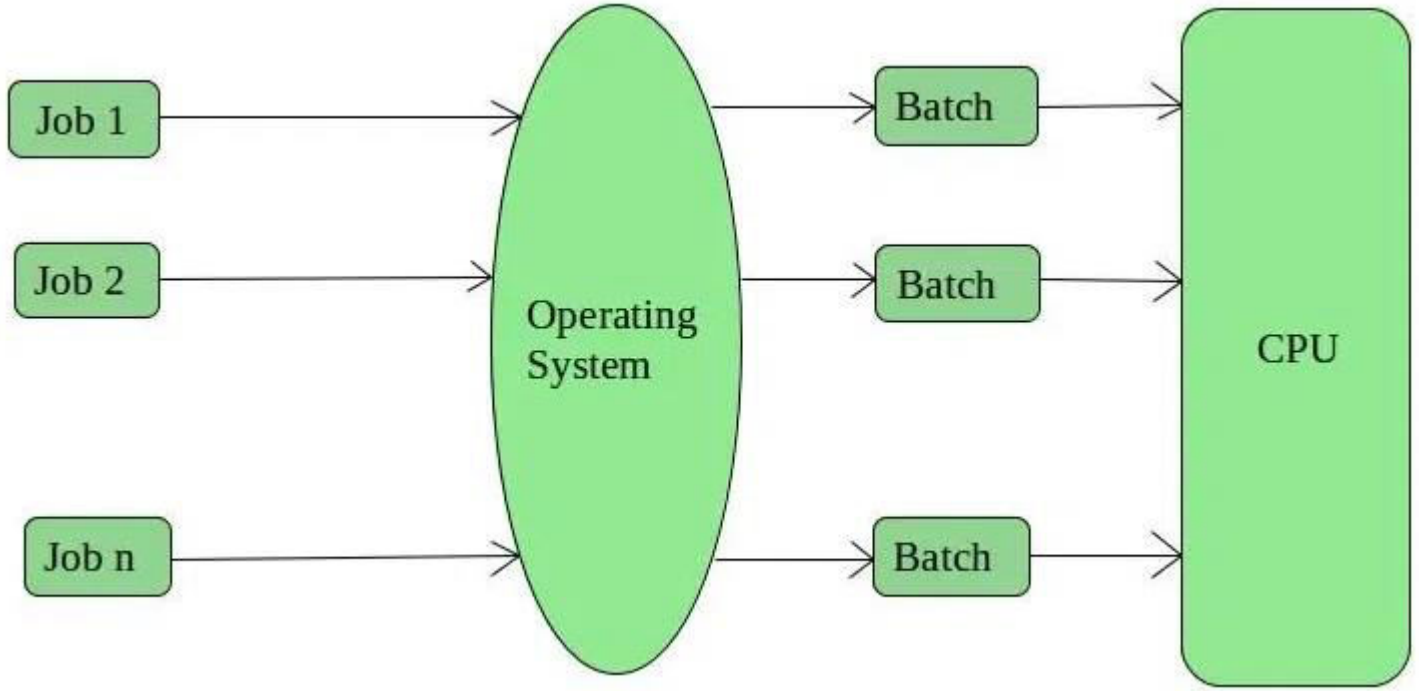
1. Batch Operating System

This type of operating system does not interact with the computer directly. There is an operator which takes similar jobs having the same requirement and groups them into batches. It is the responsibility of the operator to sort jobs with similar needs.



Types of OS

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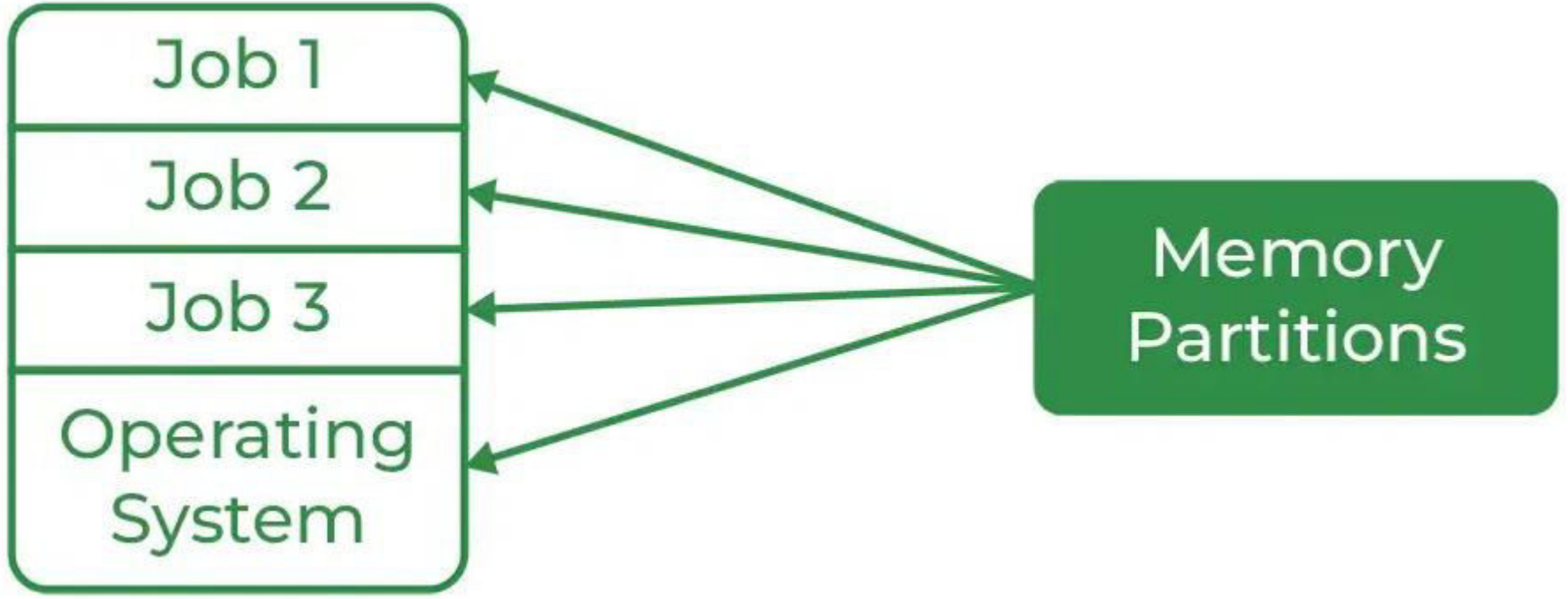
2. Multi-Programming Operating System

Multiprogramming Operating Systems can be simply illustrated as more than one program is present in the main memory and any one of them can be kept in execution. This is basically used for better execution of resources.



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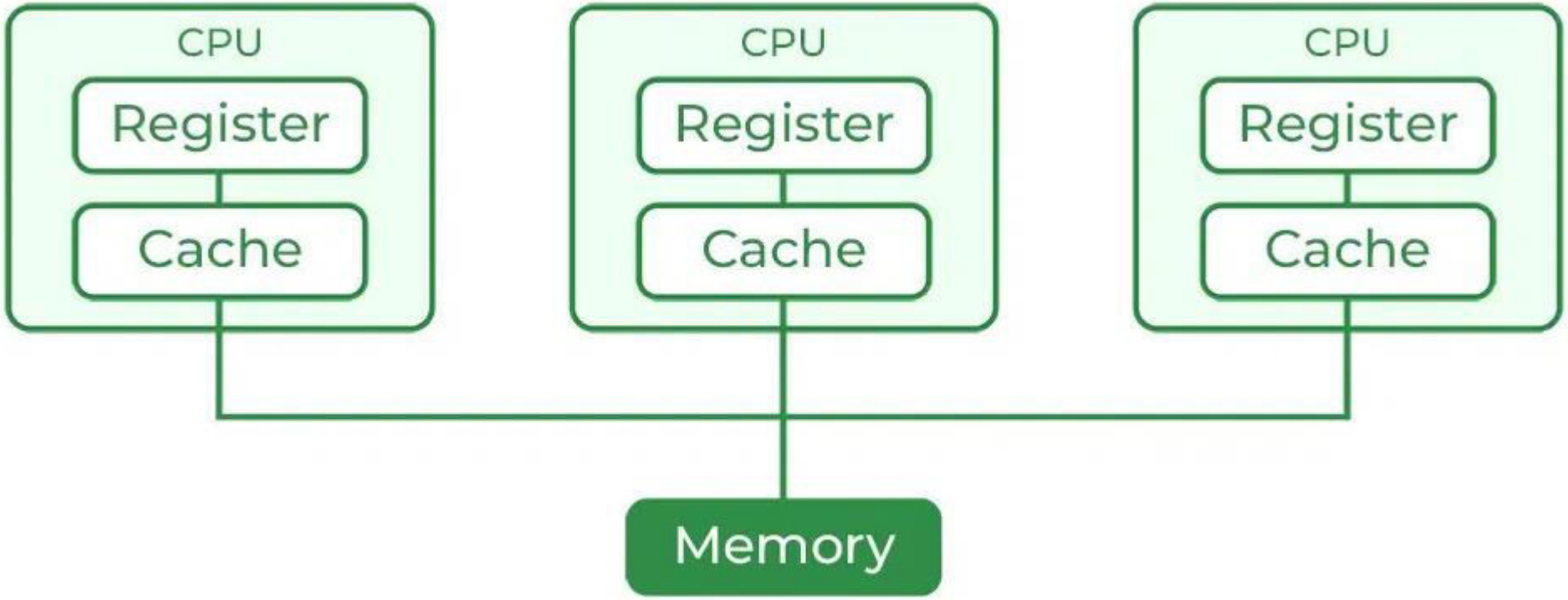
3. Multi-Processing Operating System

Multi-Processing Operating System is a type of Operating System in which more than one CPU is used for the execution of resources. It betters the throughput of the System.



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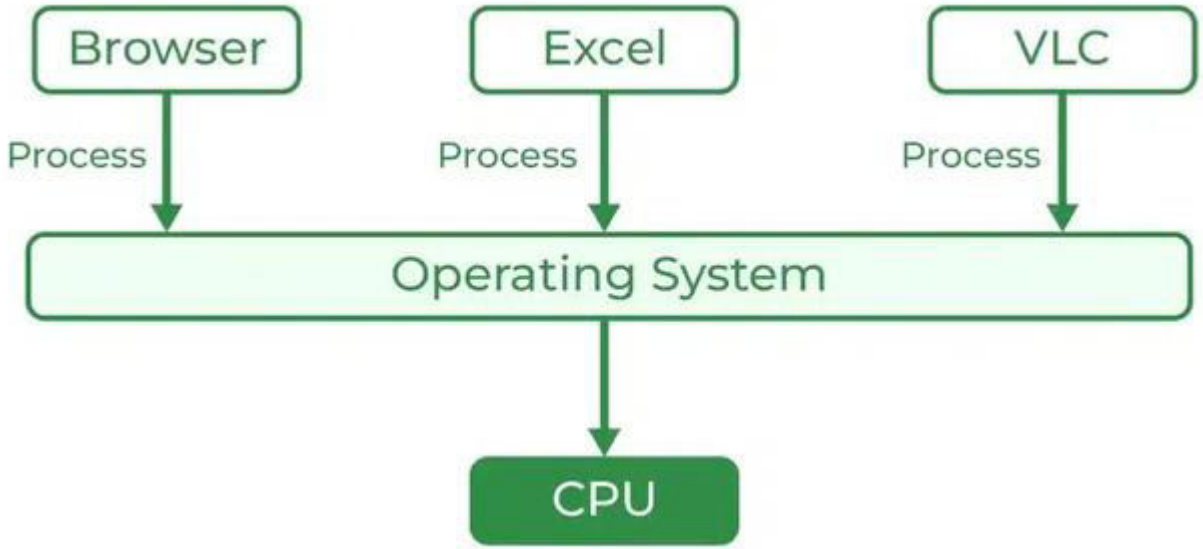
4. **Multi-Tasking Operating System**

Multitasking Operating System is simply a multiprogramming Operating System with having facility of a Round-Robin Scheduling Algorithm. It can run multiple programs simultaneously.

There are two types of Multi-Tasking Systems which are listed below.

1. Preemptive Multi-Tasking
2. Cooperative Multi-Tasking



Types of OS

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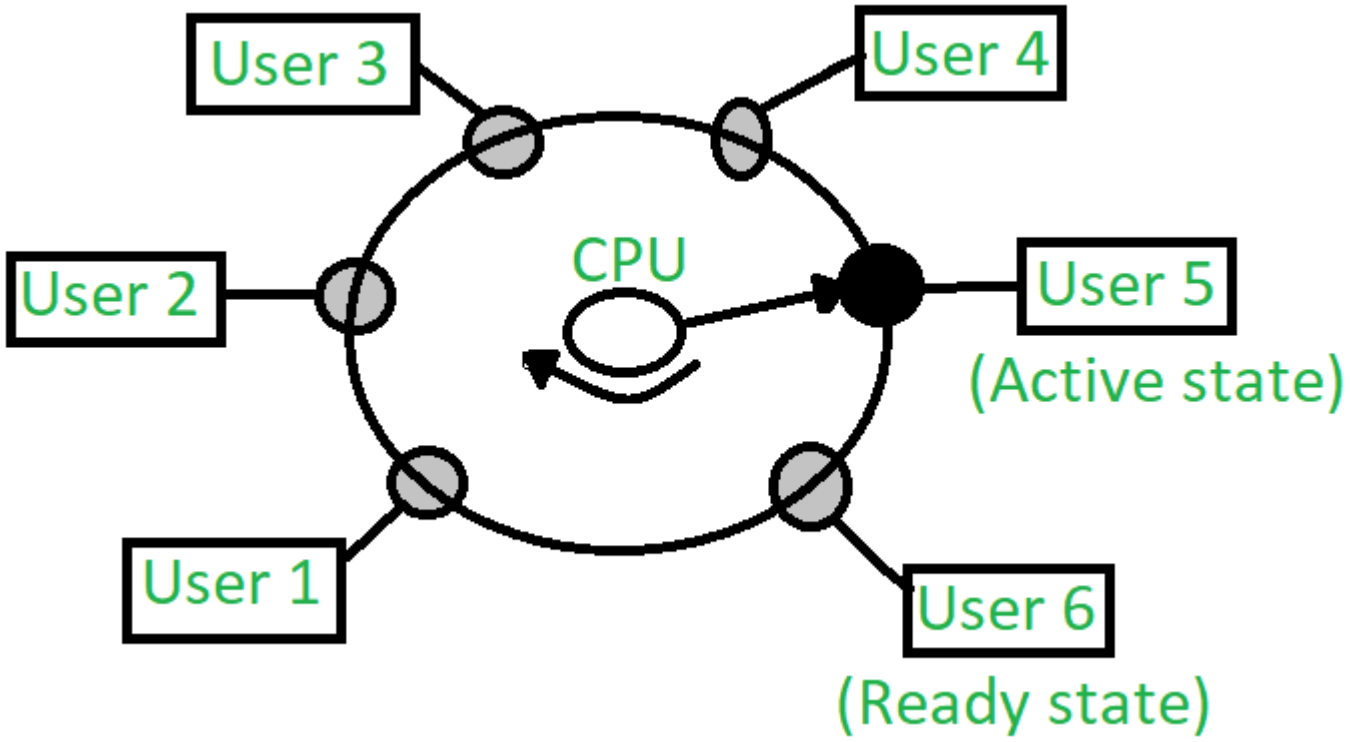
5. Time-Sharing Operating Systems

Each task is given some time to execute so that all the tasks work smoothly. Each user gets the time of the CPU as they use a single system. These systems are also known as Multitasking Systems.



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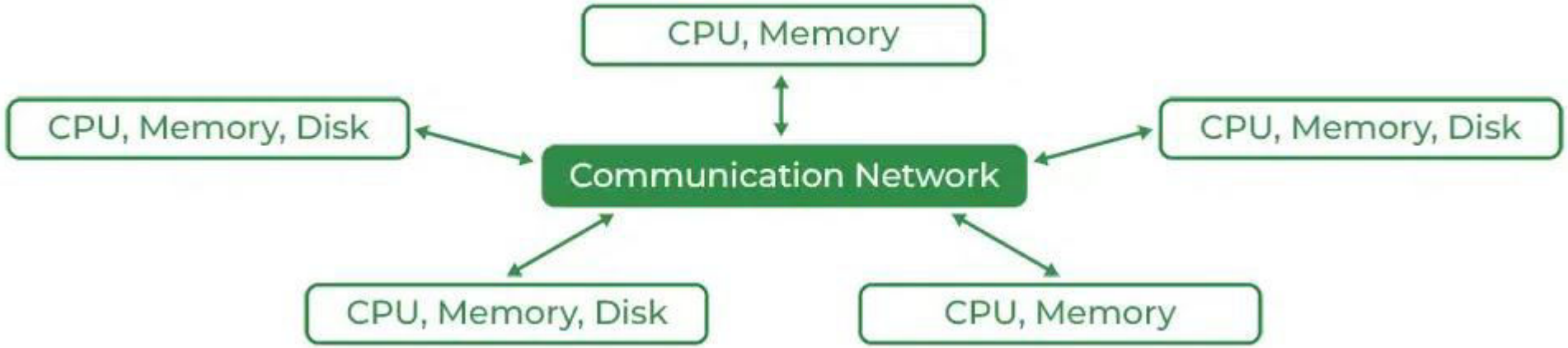
6. Distributed Operating System

Various autonomous interconnected computers communicate with each other using a shared communication network. Independent systems possess their own memory unit and CPU. These are referred to as loosely coupled systems or distributed systems.



Types of OS

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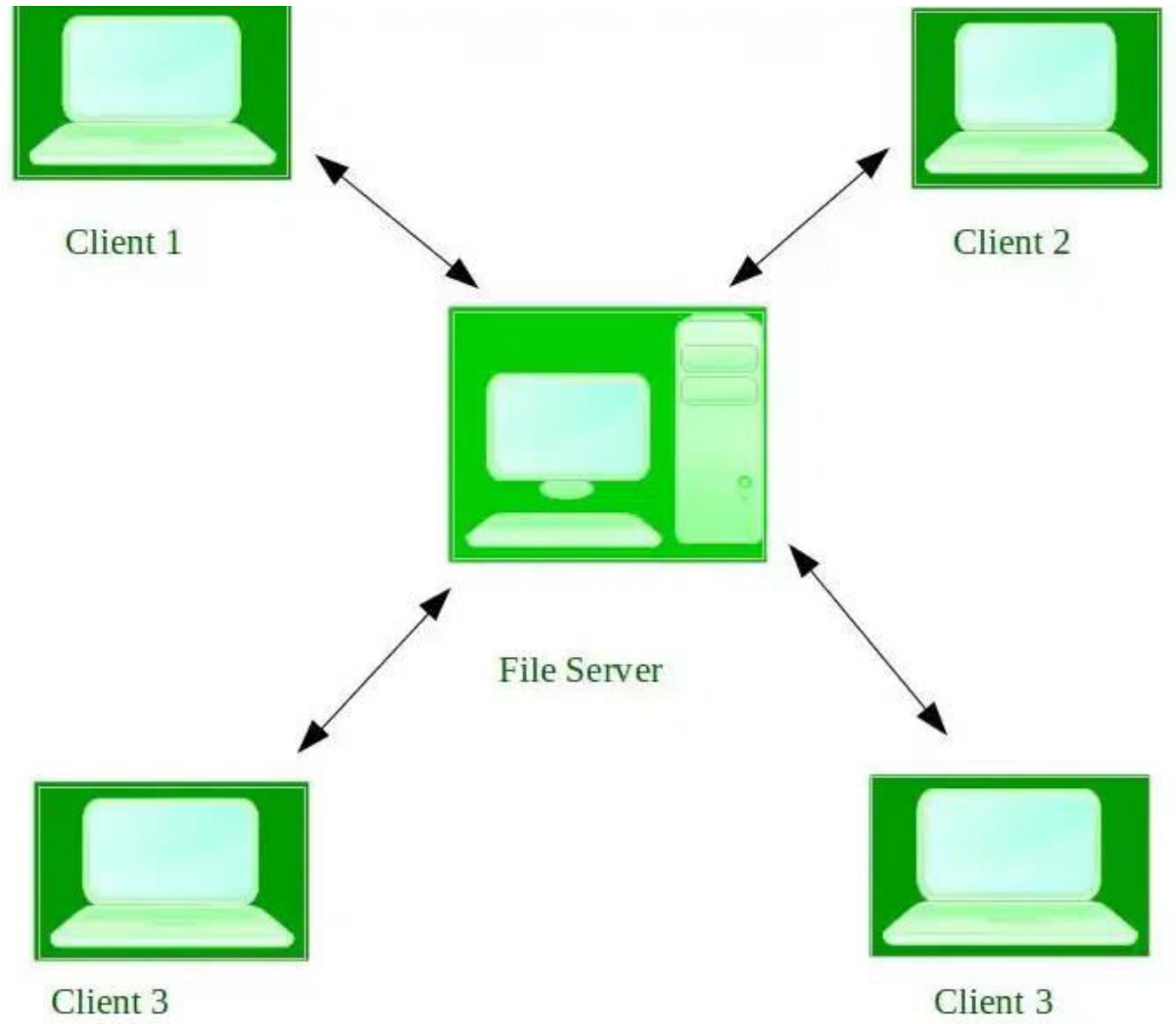
7. Network Operating System

These systems run on a server and provide the capability to manage data, users, groups, security, applications, and other networking functions. These types of operating systems allow shared access to files, printers, security, applications, and other networking functions over a small private network.



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8. Real-Time Operating System

These types of OSs serve real-time systems. The time interval required to process and respond to inputs is very small. This time interval is called response time.

Types of Real-Time Operating Systems

Hard Real-Time Systems:

Hard Real-Time OSs are meant for applications where time constraints are very strict and even the shortest possible delay is not acceptable.

Soft Real-Time Systems:

These OSs are for applications where time-constraint is less strict.

Classification of OS

1. **Single-tasking and multi-tasking** - A single-tasking system can only run one program at a time, while a multi-tasking operating system allows more than one program to be running concurrently.
2. **Single- and multi-user** - Single-user operating systems have no facilities to distinguish users but may allow multiple programs to run in tandem. A multi-user operating system is an operating system that permits several users to access a single system running to a single operating system. These systems are frequently quite complex, and they must manage the tasks that the various users connected to them require.

Classification of OS

4. **Distributed** - A distributed operating system manages a group of distinct, networked computers and makes them appear to be a single computer, as all computations are distributed
5. **Embedded** - Embedded operating systems are designed to be used in embedded computer systems. They are designed to operate on small machines with less autonomy (e.g. PDAs). They are very compact and extremely efficient by design and are able to operate with a limited amount of resources. Windows CE and Minix 3 are some examples of embedded operating systems.

Classification of OS

6. **Real-time** - A real-time operating system is an operating system that guarantees to process events or data by a specific moment in time. A real-time operating system may be single- or multi-tasking.
7. **Library** -A library operating system is one in which the services that a typical operating system provides, such as networking, are provided in the form of libraries and composed with the application and configuration code to construct a unikernel (a specialized, single address space, machine image that can be deployed to cloud or embedded).

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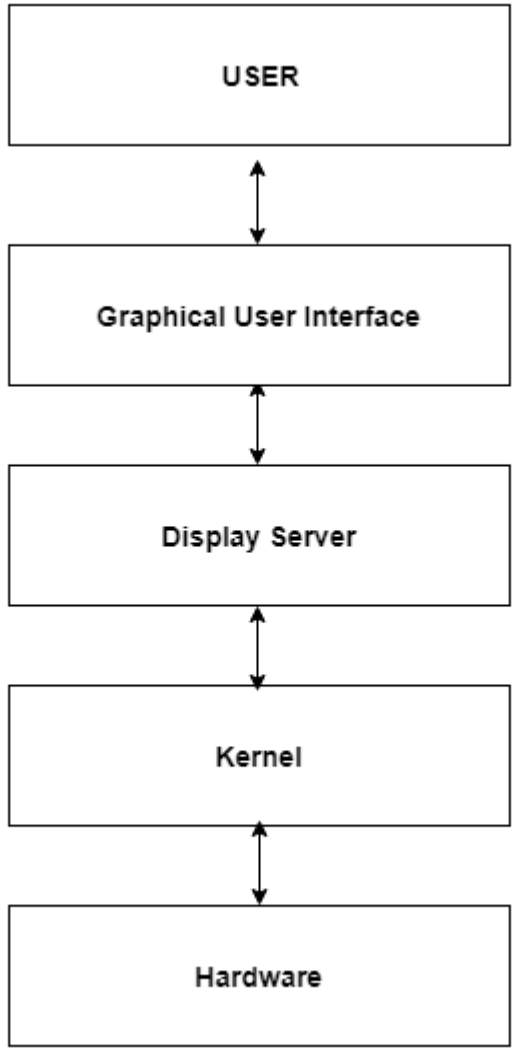
Elements of GUI based operating system

- GUI is an interface that allows users to interact with different electronic devices using icons and other visual indicators.
- The graphical user interfaces were created because command line interfaces were quite complicated and it was difficult to learn all the commands in it.
- Graphical user interfaces are used in many devices such as mobiles, MP3 players, gaming devices, smartphones etc.



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Elements of GUI based operating system

Elements in Graphical User Interface

- Window
- Menu
- Icons
- Controls
- Tabs

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Windows-Use of menus

- The Window menu provides a standard set of menu items that the user can choose to change a window's size or position, or close the application.
- The menu bar allows the user to have point-and-click access to window-specific functions, such as saving a file, copying text, or opening a help window.
- The Window menu (also known as the System menu or Control menu) is a pop-up menu defined and managed almost exclusively by the operating system.
- It provides users with options and built-in commands to access the features or functionalitieso of an application or program

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Tools of windows operating system

- **Disk defragmenter**

Disk gets fragmented when users create or delete files and folders. The same is also caused by installation and uninstallation of programs.

- **Check disks**

Disk errors related to bad sectors, cross-linked files, directory errors, etc. create problems in I/O operations. The check disk tool creates a status report of the disk based on its file system.

- **Disk cleanup**

The disk cleanup utility helps in determining the unused files in the disk and deletes them to significantly increase the free space.

Tools of windows operating system

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- **Wake on LAN**

Wake on LAN tool remotely 'wakes-up' a machine (boots-up a machine) that is present in the network and is switched off.

- **Remote shutdown**

Remote shutdown tool of Endpoint Central allows administrators to perform shutdown, restart, hibernate, stand by, lock computer tasks remotely

- **Chat**

Endpoint Central presents integrated chat, which makes the communication simple and efficient. This enables communication between IT administrators and users who are online, while trouble shooting desktop issues.

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Commands of windows operating system

- All supported versions of Windows and Windows Server have a set of Win32 console commands built in. This set of documentation describes the Windows Commands you can use to automate tasks by using scripts or scripting tools.
- The Windows operating system features over 280 commands for CMD (Command Prompt). Some commands are specific to Windows servers, while others are available for desktop versions. In both cases, CMD commands communicate directly with the OS and allow to perform various IT automation tasks.

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Commands of windows operating system

1. arp Command

arp <options> <address>

2. assoc Command

assoc .<extension>=<filetype>

3. attrib Command

attrib <+ or -> <attribute>

4. bcdboot Command

bcdboot <path>

5. cd Command

cd <directory>

Linux and free and open software

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Linux

- Linux is a Unix-like, open source and community-developed operating system (OS) for computers, servers, mainframes, mobile devices and embedded devices.

Free and Open software

- Free and open-source software (FOSS) is a term used to refer to groups of software consisting of both free software and open-source software where anyone is freely licensed to use, copy, study, and change the software in any way, and the source code is openly shared so that people are encouraged to voluntarily improve the design of the software

Free and Open Software –Examples

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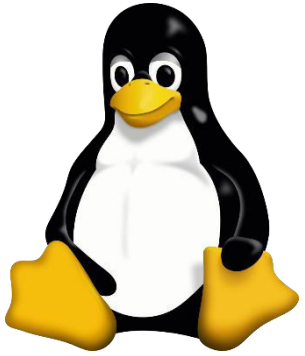
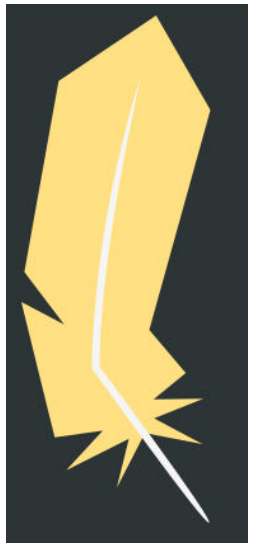


chromebook



1. Linux
2. Ubuntu
3. ChromeOS
4. Android
5. Fedora Linux
6. Linux Lite
7. ReactOS

Computer Networks: Overview

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- Computer Networking is the practice of connecting computers together to enable communication and data exchange between them.
- Computer Network is a collection of two or more computers. It helps users to communicate more easily.
- Basics building blocks of a Computer network are Nodes and Links.
- Nodes are devices that are connected to a network. These can include computers, Servers, Printers, Routers, Switches, and other devices.
- Link in Computer Networks can be defined as wires or cables or free space of wireless networks.
- The working of Computer Networks can be simply defined as rules or protocols which help in sending and receiving data via the links which allow Computer networks to communicate. Each device has an IP Address, that helps in identifying a device.

Computer Networks-Types

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- **LAN**: A Local Area Network (LAN) is a network that covers a small area, such as an office or a home. LANs are typically used to connect computers and other devices within a building or a campus.
- **WAN**: A Wide Area Network (WAN) is a network that covers a large geographic area, such as a city, country, or even the entire world. WANs are used to connect LANs together and are typically used for long-distance communication.
- MAN: A metropolitan area network is a computer network that interconnects users with computer resources in a geographic region of the size of a metropolitan area.

Network topologies

- Network topology is the arrangement of the elements of a communication network.
- Network topology can be used to define or describe the arrangement of various types of telecommunication networks, including command and control radio networks, industrial field busses and computer networks.

Network topologies - Types

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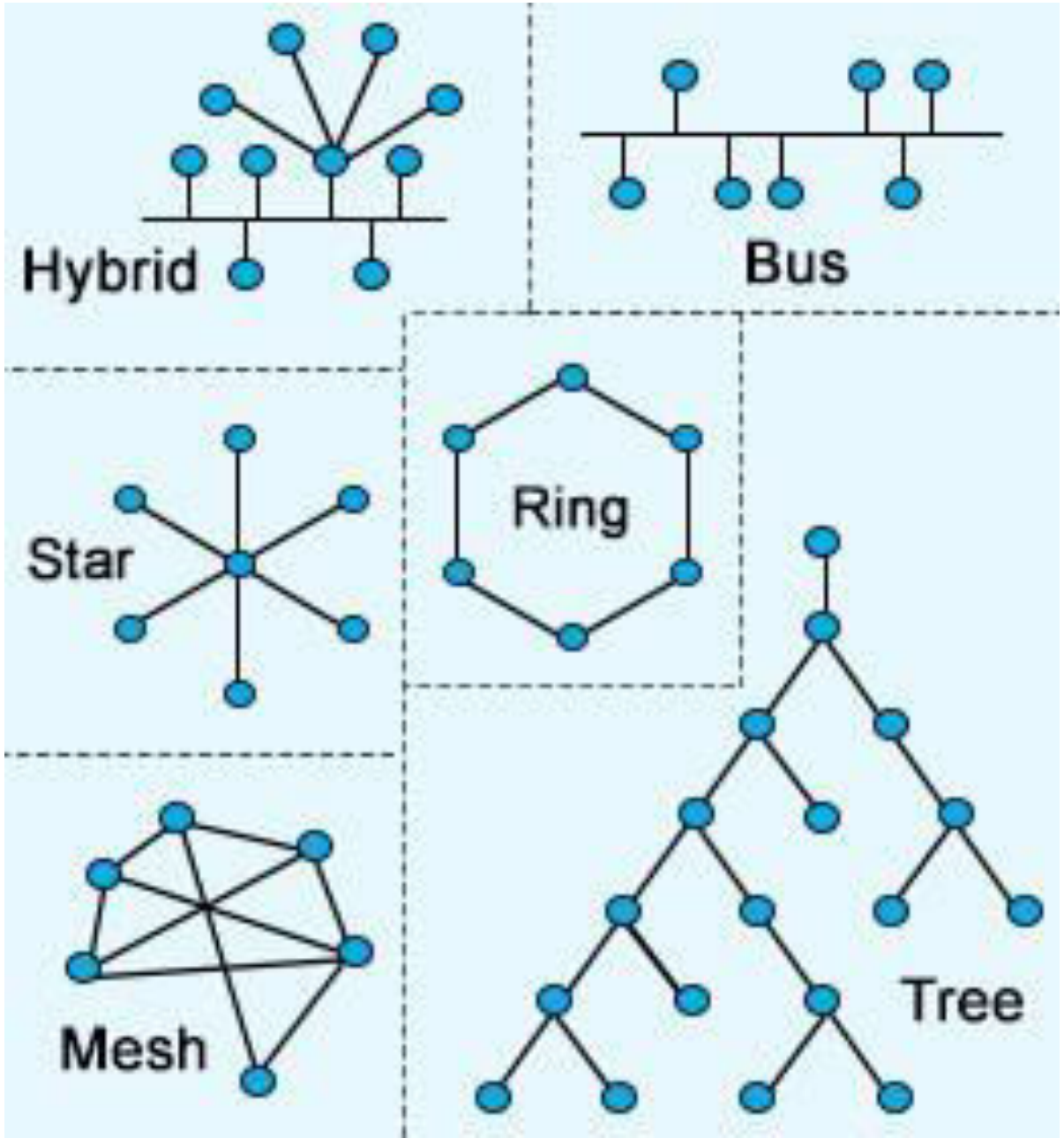

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Internet

- The Internet is the global system of interconnected computer networks that uses the Internet protocol suite (TCP/IP) to communicate between networks and devices.
- It is a network of networks that consists of private, public, academic, business, and government networks of local to global scope, linked by a broad array of electronic, wireless, and optical networking technologies.
- It connects millions of computers, webpages, websites, and servers.
- Using the internet we can send emails, photos, videos, and messages to our loved ones.

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Data representation and computer security

- **Data Representation** refers to the form in which data is stored, processed, and transmitted. Devices such as smartphones, iPods, and computers store data in digital formats that can be handled by electronic circuitry.
- **Computer security** refers to measures and controls that ensure the confidentiality, integrity and availability of the information processed and stored by a computer. This includes everything from protecting physical information assets, to data security and computer safety practices.

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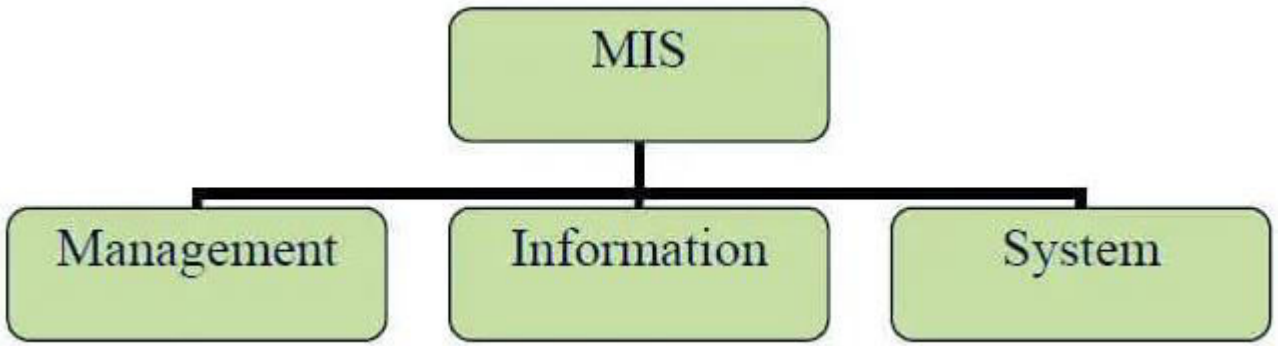
UNIT - II



Data and Information

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Data	Information
Data is unorganised and unrefined facts	Information comprises processed, organised data presented in a meaningful context
Data is an individual unit that contains raw materials which do not carry any specific meaning.	Information is a group of data that collectively carries a logical meaning.
Data doesn't depend on information.	Information depends on data.
Raw data alone is insufficient for decision making	Information is sufficient for decision making
An example of data is a student's test score	The average score of a class is the information derived from the given data.

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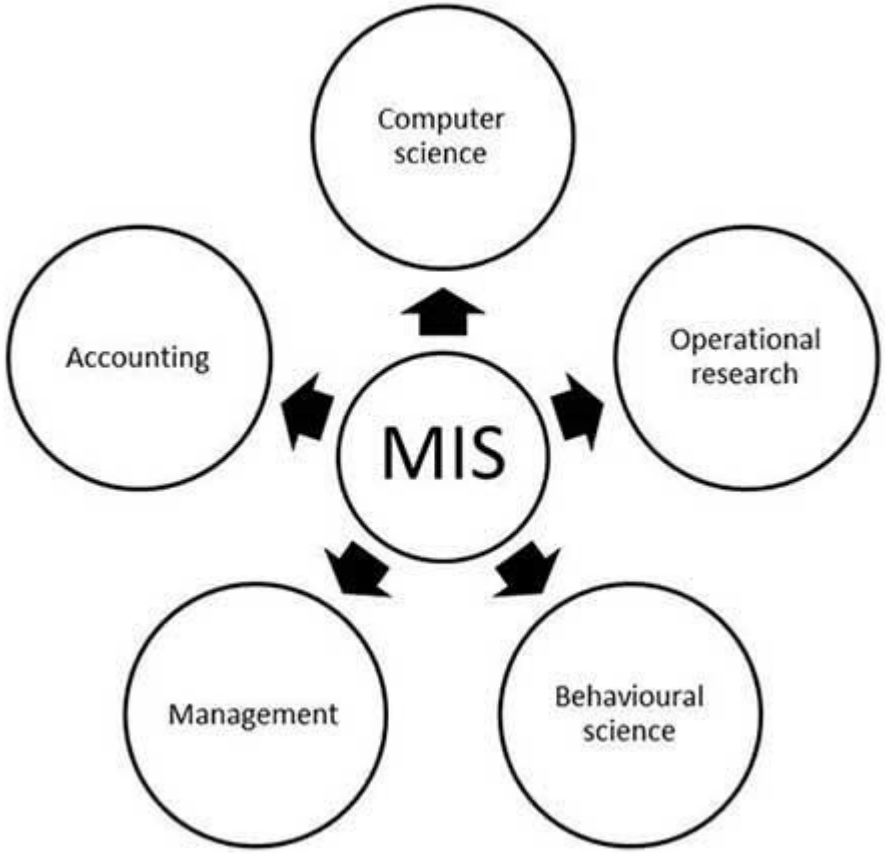
MIS

- "MIS" can be referred to a type of computer software that is used to store, organize and analyze information.
- 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.



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Decision Making

- Decision-making is a cognitive process that results in the selection of a course of action among several alternative scenarios.
- Decision-making is a daily activity for any human being. There is no exception about that. When it comes to business organizations, decision-making is a habit and a process as well.

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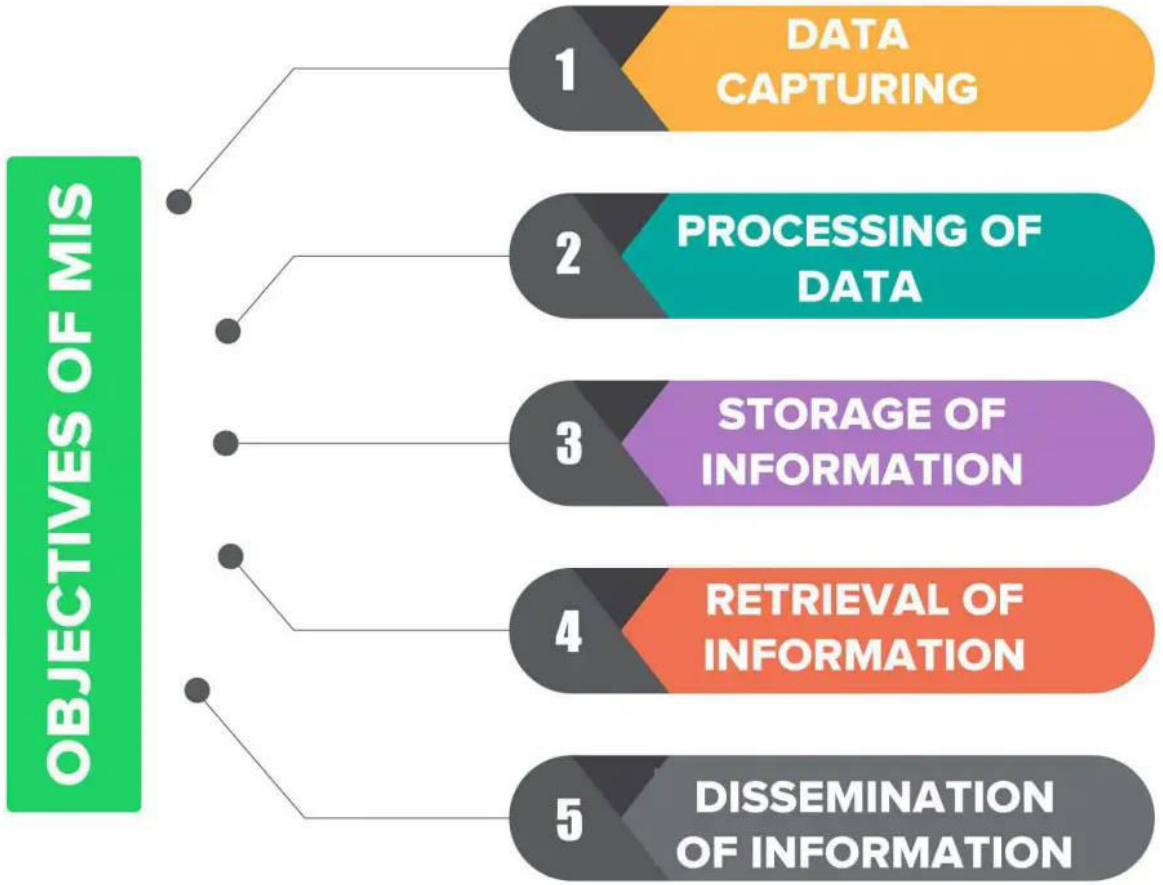
Role of MIS



Role of MIS

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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.

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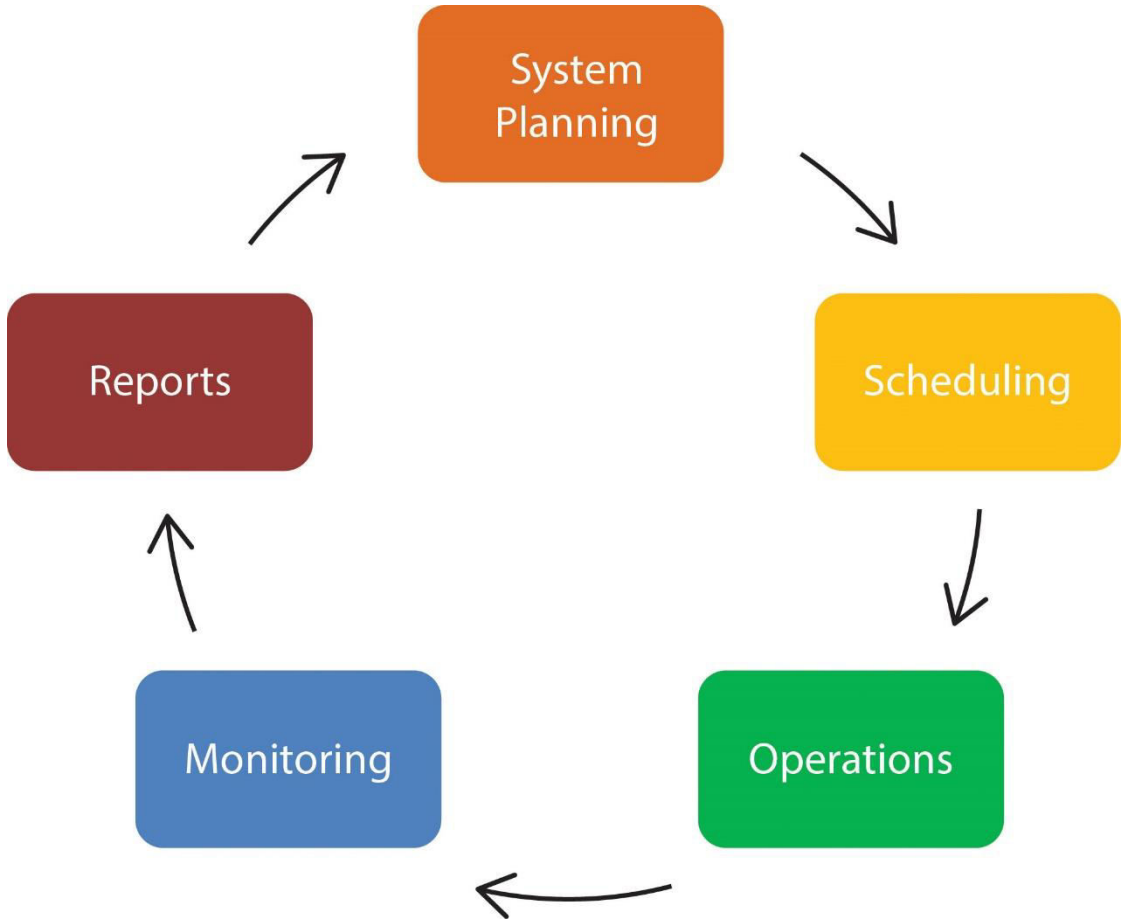
Planning for MIS



System Development Methodologies

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- A system development methodology. it's " a standard process followed by an organization to conduct all the steps necessary to analyze, design, implement, and maintain information systems“
- The whole purpose of system development is the enhancement of the productivity of the organization and the group of people working in that organization, as system development got bigger there was a need to systemize the process of system development and come up with a set of steps that are required for any system development.
- The system development life cycle is a common methodology used in almost every organization, as the system development projects got bigger and the discipline of software engineering began to set some standards or its own a lot of methodologies have seen light and were put together by organizations seeking success according to their own measurement of success.

Conceptual design of MIS

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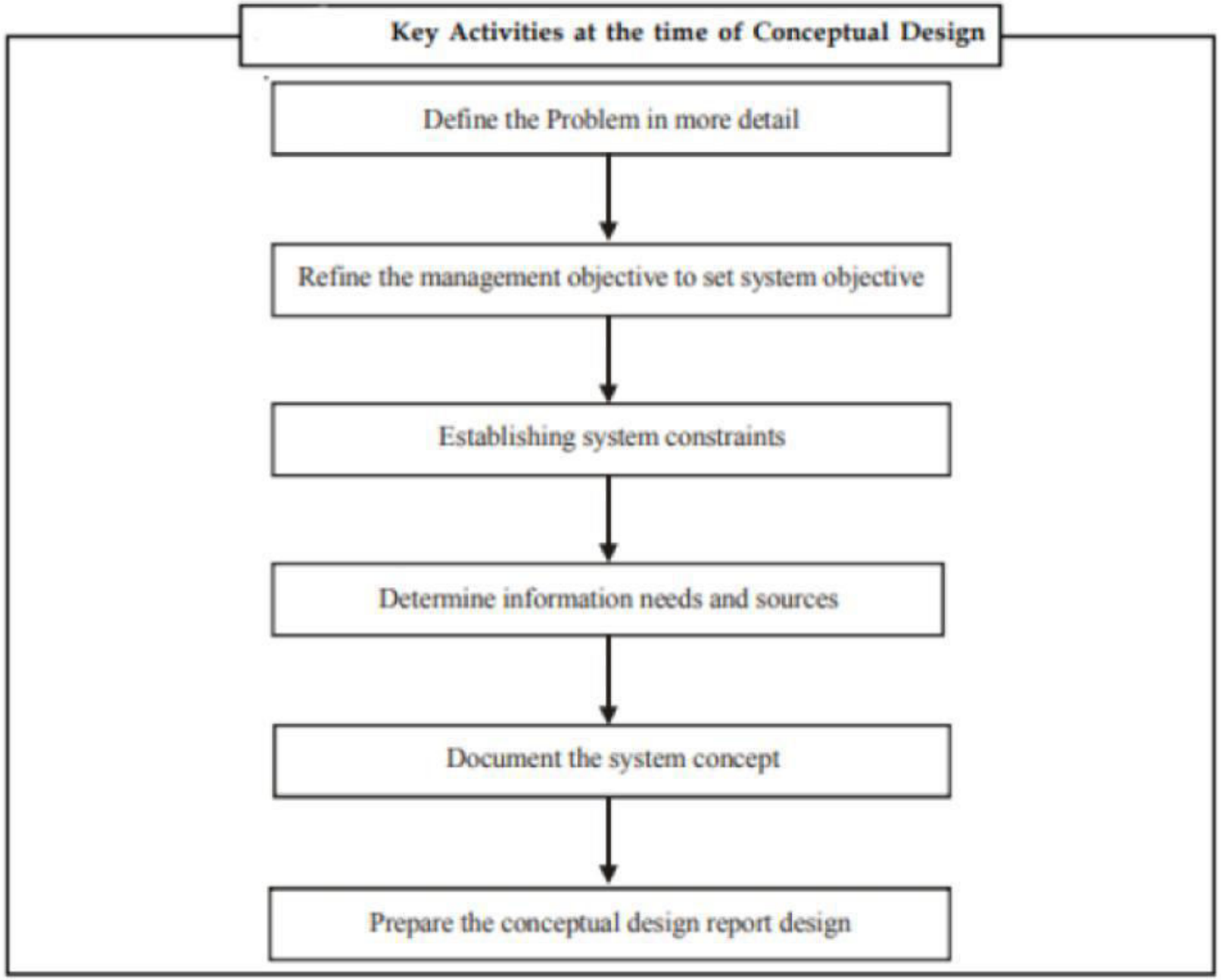

Detailed design of MIS

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1. **User Interface Design:** The user interface design activity is related to facilitate the interaction between the user and their computer based application.
2. **Data design:** It includes the design of the structure of databases i.e. what type of specific data element is carried.Process
3. **Design:** It involves the design of process i.e., the design of software programs, procedure needed by information systems. At this stage the developer has to decide about the detailed specification of software, that is either software has to be purchased, or developed or it is purchased and modified according to the proposed system requirements.

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UNIT - III

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Information systems for strategic advantage

- Strategy is the determination of the basic long-term purpose and objectives of an enterprise and the adoption of courses of action and allocation of resources necessary for carrying out these goals.
- Strategic advantage refers to obtaining a sustainable competitive edge over competitors. The ability to obtain a greater than normal return on investment.
- A strategic necessity is a system that must be installed to remain competitive and stay in business.

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Strategic role for information system

- Strategic role of Information System involves using to develop products, services and capabilities that give a company major advantages over the competitive forces it faces in the global marketplace.
- Information systems that promote business innovation, improve operational efficiency.

Breaking business barriers

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There are three primary groups of barriers for every business out there. They include capital (financial backing), knowledge (level of education and/or experience) and persistence (staying power).

- Reduce costs by allowing companies to cut ICT-related labour costs by as much as 50 per cent
- Allow access to information anytime, anywhere and from any device, and providing companies with better management and control over their data
- Ease of collaboration internally and externally by getting rid of back-end integration issues
- Scalable and elastic computing
- Improve efficiency by removing power costs, need for dedicated spaces for ICT infrastructure, and need for software updates, etc.

Business process reengineering

1. Define Business Process
2. Analyse Business Process
3. Identify and analyse improvement opportunities
4. Design future state processes
5. Develop future state changes
6. Implement future state changes

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Improving business qualities

1. Organized Data
2. Avoid any form of Crisis
3. Storage of information
4. Easy decision making
5. You get a better perspective on the future of your business

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Information system analysis and design

- Information Technology Skills
- Human Interaction Skills
- Managerial Skills

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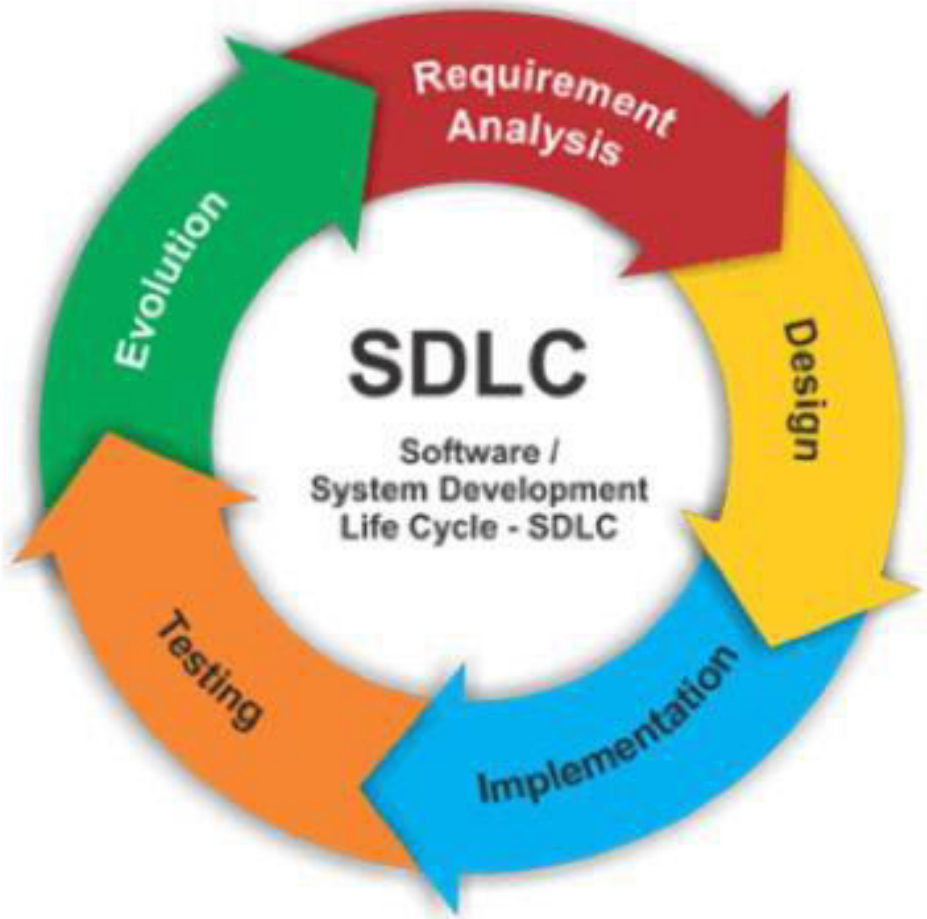
Information SDLC



Hardware and software acquisition

- Hardware and software acquisition is the act of coming into possession of hardware and software solutions in an organization. It can also be referred to as gaining, procuring, securing or obtaining hardware and software.
- Computer hardware may be acquired either by outright purchase or lease transaction.
- An acquisition of hardware may or may not also include software and this software may well be subject to separate license agreements.

Hardware and software acquisition

Hardware Selection Criteria

- Hardware must support current software as well as software planned for procurement in future.
- Hardware must be compatible with existing or planned systems
- Hardware must be upgradeable and expandable to meet the future needs
- Hardware cost must be within the budget
- Hardware must be reliable
- Hardware vendor should be of high reputation

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Hardware and software acquisition

Software Selection Criteria

- Software must be compatible with current and future hardware needs
- Software must be user friendly
- Software vendor should provide user training
- Software vendor should be of high reputation
- Software vendor should provide user manuals

System testing

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- System testing is testing conducted on a complete integrated system to evaluate the system's compliance with its specified requirements.
- System testing takes, as its input, all of the integrated components that have passed integration testing. The purpose of integration testing is to detect any inconsistencies between the units that are integrated together
- System testing, also referred to as system-level testing or system integration testing, is the process in which a quality assurance (QA) team evaluates how the various components of an application interact together in the full, integrated system or application.

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Documentation and its tools

A real-time example of Microsoft, Microsoft launch every product with proper user guidelines and documents, which are very explanatory, logically consistent and easy to understand for any user. These are all the reasons behind their successful products.

Decision Support System

- A decision support system (DSS) is a computerized system that gathers and analyzes data, synthesizing it to produce comprehensive information reports. A decision support system differs from an ordinary operations application, whose function is just to collect data.
- Example
  - GPS route planning. A DSS can be used to plan the fastest and best routes between two points by analyzing the available options.
  - Crop planning. Farmers use DSS to help them determine the best time to plant, fertilize, and reap their crops.

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Conversion methods Decision Support System

- DSS utilizes linear programming, integer programming, network models, goal programming, simulation, and statistical models. These models are implemented via model management facilities. DSS has recently emerged multiple criteria decision making (MCDM) model embedded DSS and knowledge-based

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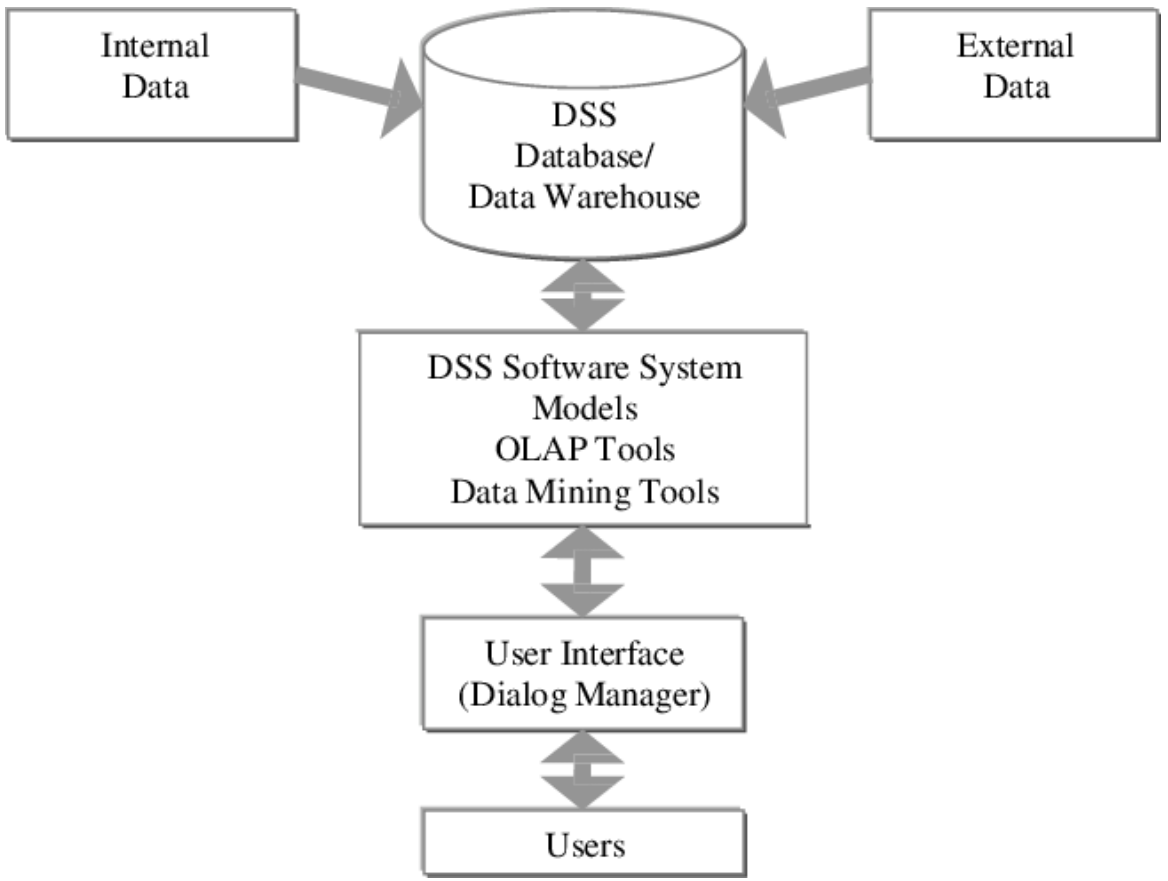
Components of DSS

- Decision support systems consist of three key components:
  - Database
  - Software system, and
  - User interface



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Classification of DSS

1. Text-oriented DSS
2. Database-oriented DSS
3. Spreadsheet-oriented DSS
4. Solver-oriented DSS
5. Rule-oriented DSS, and
6. Compound DSS

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Steps in constructing a DSS

1. Confirm user requirements
2. Systems analysis
3. System design
4. Programming
5. Testing
6. Implementation; and
7. Use and Evaluation

Role in business

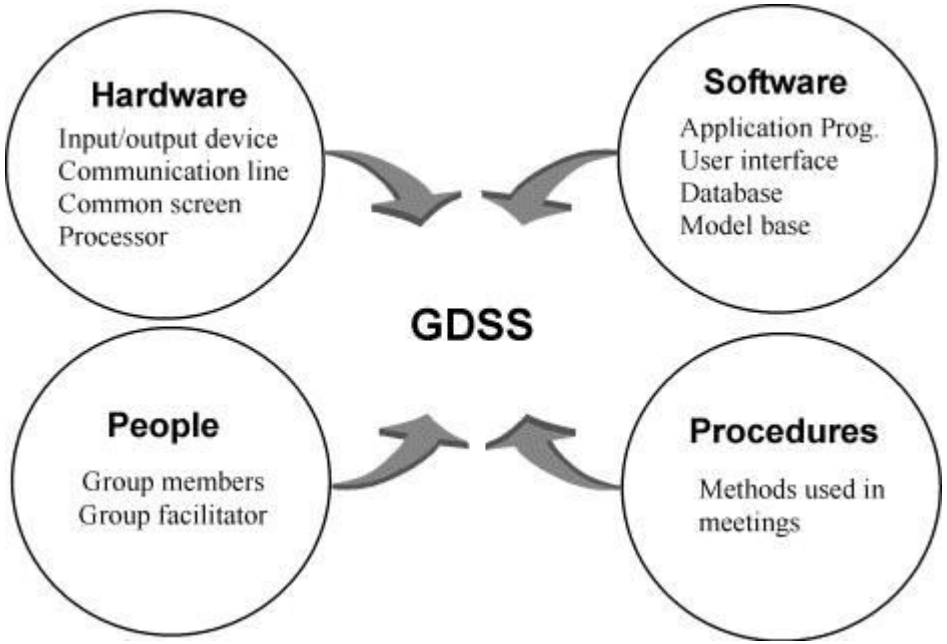
The DSS helps the user spot errors within the program and helps them analyze the information to make decisions.

Role of DSS in Business

- Goal Oriented
- Risk Analysis
- Model Building
- Graphical Analysis

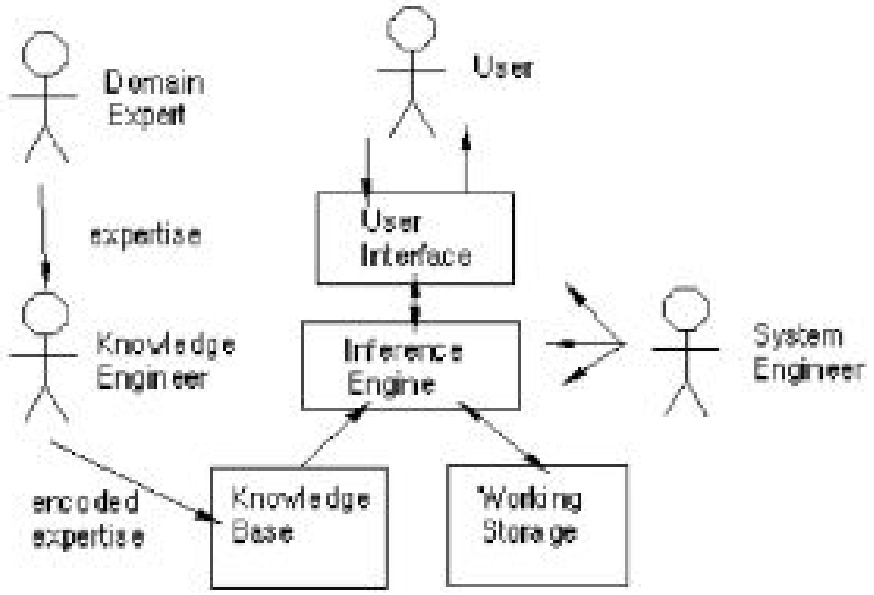
Group decision support systems

- A Group Decision Support System, or GDSS, consists of interactive software that allows for making decisions by a group of participants.
- The goal of a GDSS is to improve the productivity of a group to come to a decision.
- A GDSS is sometimes also referred to as a 'computerized collaborative work system. '



Expert systems

- An ES is a problem-solving computer program that achieves good performance in a specialized problem domain that is considered difficult and requires specialized knowledge and skill.
- A DSS is an interactive system that helps decision-makers utilize data and models to solve unstructured or semi-structured problems.



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UNIT - IV

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System implementation Strategies and process

- Systems implementation is the process of: defining how the information system should be built (i.e., physical system design), ensuring that the information system is operational and used, ensuring that the information system meets quality standard
- 7Key Steps
  1. Set Goals
  2. Determine Roles
  3. Assign Work
  4. Execute and Monitor
  5. Adjust and Revise
  6. Complete the Job
  7. Review and Reflect

System Evaluation

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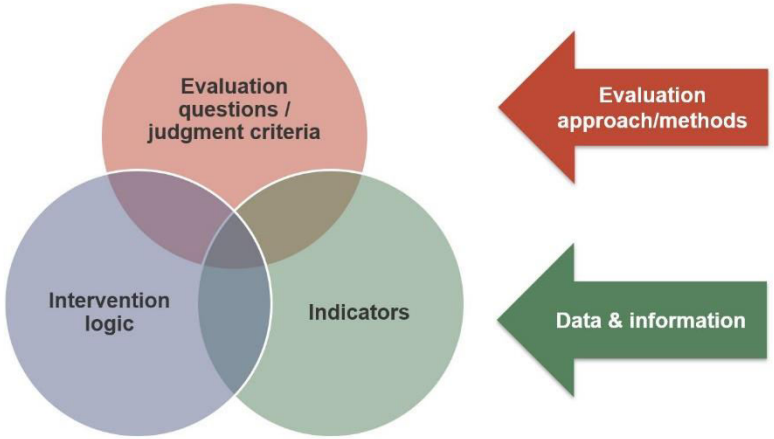
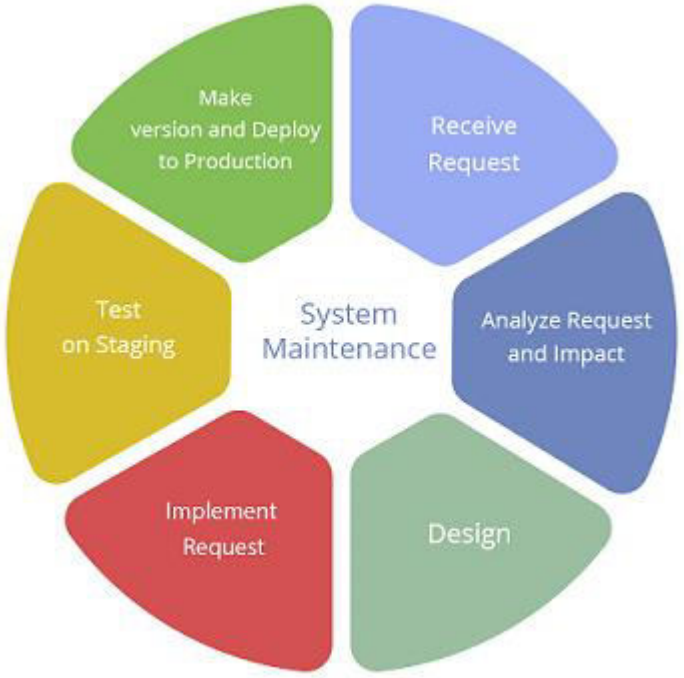
- System evaluation includes measuring the final system against its initial performance goals as well as performing ongoing testing to see that the system continues to meet those goals.
- The three main types of evaluation methods are goal based, process-based and outcomes-based.
- **Goal-based evaluations** measure if objectives have been achieved (We highly recommend S.M.A.R.T. Goals).
- **Process-based evaluations** analyze strengths and weaknesses.
- **Outcomes-based evaluations** examine broader impacts and often investigate what greater good was served as a result of the program or project.



System Maintenance

- The process of monitoring, evaluating, and modifying of existing information systems to make required or desirable improvements may be termed as System maintenance.
- Four Types
  1. Corrective maintenance.
  2. Preventive maintenance.
  3. Risk-based maintenance.
  4. Condition-based maintenance.



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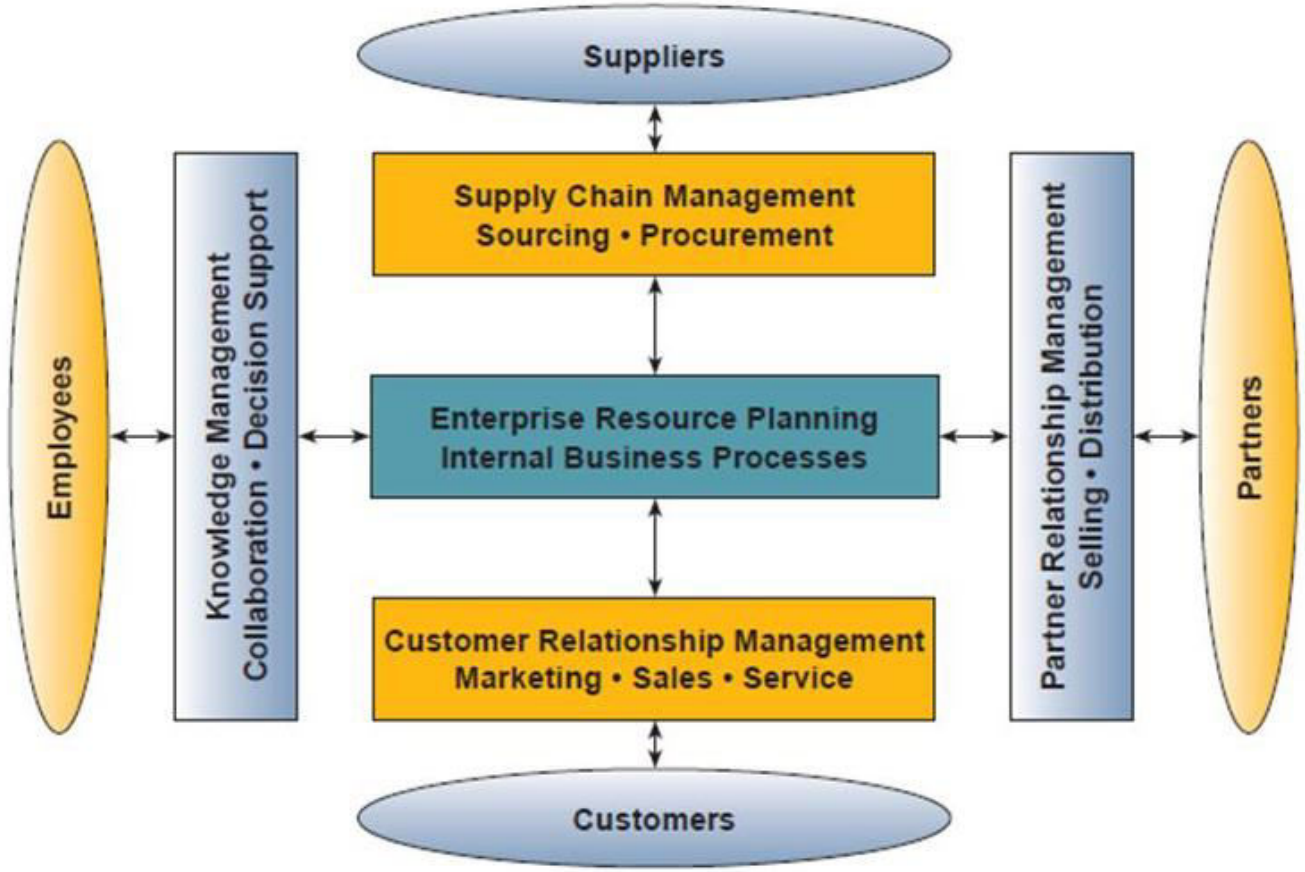
System Applications – cross –functional MIWS

- Cross-functional information systems refer to software applications that are designed to support collaboration, coordination, and information exchange between multiple departments within an organization.
- Examples: ERP, CRM, SCM



ERP

- Enterprise resource planning (ERP) is a type of software system that helps organizations automate and manage core business processes for optimal performance.
- ERP modules are simply the components, or business capabilities/processes, of your ERP system. These modules include functionality that primarily serve the back office of the business, including finance and accounting, procurement, demand planning, and certain nonfinancial functions, such as human resources.

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ERP Modules

CRM

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- Customer relationship management (CRM) is a technology for managing all your company's relationships and interactions with customers and potential customers.
- The goal is simple: Improve business relationships.
- A CRM system helps companies stay connected to customers, streamline processes, and improve profitability.
- Four Components
    1. customer service,
    2. marketing, processes, and
    3. business reporting.

SCM

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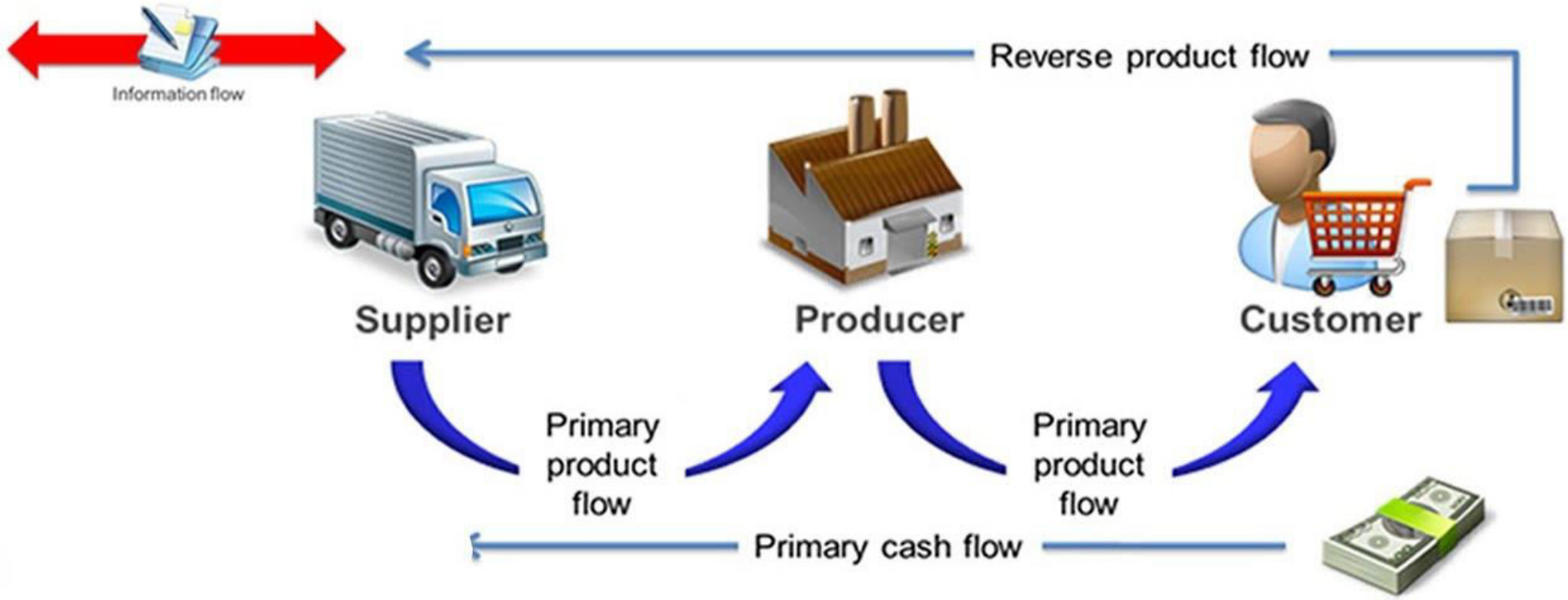
- Supply chain management (SCM) is management of the flow of goods, data, and finances related to a product or service, from the procurement of raw materials to the delivery of the product at its final destination.

- 3 Components
  1. Supplier / Vendor
  2. Manufacturer / Producer
  3. Customer / Distributer



Transaction Processing

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- A transaction processing system allows application programmers to concentrate on writing code that supports the business, by shielding application programs from the details of transaction management.
- It manages the concurrent processing of transactions. It enables the sharing of data.
- A Transaction Processing System (TPS) is an information system that collects, stores, modifies, and retrieves the data transactions of an enterprise.
- Different examples of transaction processing include automated teller machines, credit card authorizations, online bill payments, self-checkout stations at grocery stores, the trading of stocks over the Internet, and various other forms of electronic commerce.

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Artificial Intelligence technologies in business

- Artificial intelligence (AI) is the ability of a computer or a robot controlled by a computer to do tasks that are usually done by humans because they require human intelligence and discernment.
- artificial intelligence enables companies to conduct surveys that provide customer feedback that goes much deeper than just historical data analysis.
- It provides accurate data and helps strategize to facilitate better engagement and sales by providing a better customer experience.

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Artificial Intelligence technologies in business

1. Artificial Intelligence in Sales
2. Artificial Intelligence in Marketing
3. Artificial Intelligence in Customer Support
4. Artificial Intelligence in Operations
5. Artificial Intelligence in Human Resources
6. Artificial Intelligence in Accounting
7. Artificial Intelligence in Contact Centers

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Neural networks

- Neural Networks in Computer Intelligence provides basic concepts, algorithms, and analysis of important neural network models developed to date, with emphasis on the importance of knowledge in intelligent system design.

Fuzzy logic

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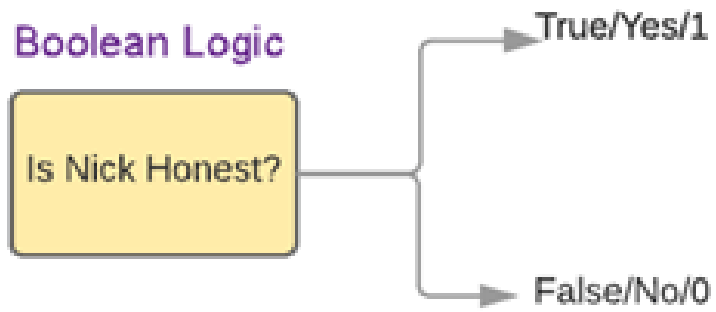
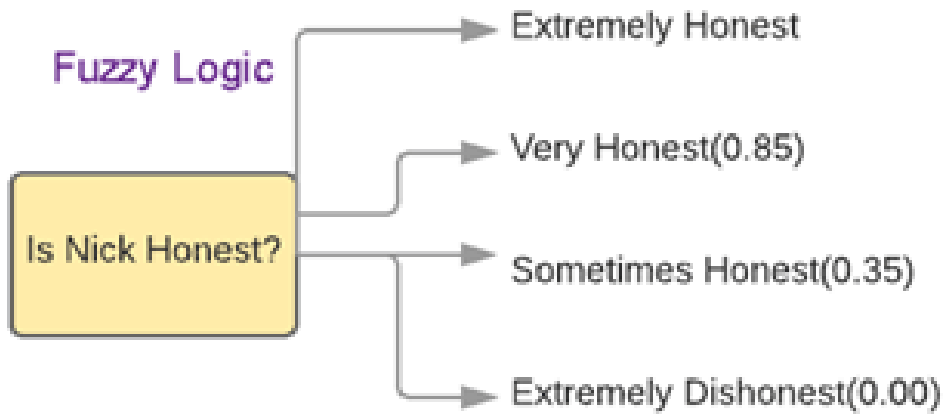
- Fuzzy logic is a set of rules and functions that can operate on imprecise data sets, but the algorithms still need to be coded by humans.
- Both areas have applications in artificial intelligence and complex problem-solving.
- Fuzzy Logic (FL) is a method of reasoning that resembles human reasoning.
- Fuzzy Logic is defined as a many-valued logic form which may have truth values of variables in any real number between 0 and 1. It is the handle concept of partial truth.





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Virtual reality

- Virtual reality is a form of interaction between humans and computers in which a real or imaginary environment is simulated.
- Users interact with that world and manipulate it.
- There are 3 primary categories of virtual reality simulations used today:
  - non-immersive,
  - semi-immersive, and
  - fully-immersive simulations.

Executive information systems

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- An executive information system (EIS), also known as an executive support system (ESS), is a type of management support system that facilitates and supports senior executive information and decision-making needs.
- It provides easy access to internal and external information relevant to organizational goals.
- It is commonly considered a specialized form of decision support system (DSS)
- EIS components can typically be classified as:
  - Hardware
  - Software
  - User interface
  - Telecommunications

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UNIT - V

E-Commerce

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- Ecommerce is a method of buying and selling goods and services through internet.
- E-commerce relies on technology and digital platforms, including websites, mobile apps and social media to make buying and selling possible.
- The standard definition of E-commerce is a commercial transaction which is happened over the internet. Online stores like Amazon, Flipkart, Shopify, Myntra, Ebay, Quikr, Olx are examples of E-commerce websites.
- Types of ecommerce include
  - business-to-consumer (B2C),
  - business-to-business (B2B), and
  - consumer-to-consumer (C2C).

Traditional vs E-Commerce	
Traditional Commerce	**E-Commerce**
Traditional commerce is buying or selling of products and services physically.	E-Commerce carries out commercial transactions electronically on the Internet.
Customer can face to face identify, authenticate and talk to the merchant.	Neither customer nor merchant see the other.
Physical stores are not feasible to be open at all times.	It is always available on all time and all days of the year.
Products can be inspected physically before purchase.	Products can't be inspected physically before purchase.
Scope of business is limited to particular area.	Scope of business is global. Vendors can expand their business Worldwide.
Resource focus Supply side.	Resource focus Demand side.
Business Relationship is Linear.	Business Relationship is End-to-end.
Marketing is one way marketing.	One-to-one marketing.
Payment is made by cash, cheque, cards etc.	Payment system is mostly through credit card, debit card or fund transfer.
Most goods are delivered instantly.	It takes time to transport goods.

Advantages	Disadvantages
Order can be placed from anywhere at any time.	There is no guarantee for the quality of products.
Eliminates the operating cost.	Lack of personal touch.
It helps in connecting with people all across the world.	It doesn't give the luxury of trying before buying the item.
Retargets the customers.	Long delivery period.
There is always detailed product information offered.	There is always a concern with security issues.

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Buying & Selling on Internet

- Buying and selling online is known as e-commerce (electronic commerce), online trading or online shopping.
- Sometimes e-commerce can also involve a good or service being traded for another good or service.
- E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet.
- These business transactions occur either as business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer or consumer-to-business.

Issues in Implementing Electronic Commerce

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1 Cyber Data & Security	2 Converting Shoppers into Paying Customers	3 Attracting the Perfect Customer	4 Customer Experience
5 Customer Loyalty	6 Online Identity Verification	7 Competitor & Competitor Analysis	8 Price & Shipping
9 Product Return & Refund Policies	10 Finding the Right Tech Partners	11 Customer Support	12 Cross-border eCommerce
13 Marketing Budgets	14 Going Omnichannel	15 Data Privacy	16 Logistics
17 Store Agility	18 Customer Expectations	19 Placement of Elements within your page	20 Sustainability

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Applications of Information Technology

- Information Technology (IT) applied to various functional areas of management, such as
- Production / Operations,
- Marketing,
- Human Resource,
- Finance and
- Materials Management

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Review of DBMS

- A database review assesses the configuration of the database server operating system, the server software and the configuration of the database and its settings against industry benchmarks.
- Typical database reviews include:
  - Software version and patch checking.
  - User permission and privileges.
- A database reviewer's role is to: Ensure the required artifacts are provided and in the proper format.

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Thank You.

No.31/1, Kadusonnapana Halli, Hennur-Bagalur Road,
P.O, Kannuru, Bengaluru, Karnataka 562149

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