Data: Data refers to raw, unorganized facts, figures, or symbols that represent something but do not inherently carry any specific meaning. Data can exist in various forms, such as numbers, text, images, audio, or video. In its raw form, data lacks context and significance.

Information: Information, on the other hand, is processed and organized data that has been given context, meaning, and relevance. It is the result of interpreting, analyzing, or structuring data in a way that makes it useful and understandable to the recipient. Information provides insights, answers questions, or aids decision-making.

Process : a process refers to a series of interrelated tasks or activities that are executed to achieve a specific goal or objective. These tasks are often carried out in a predefined sequence and may involve the manipulation, transformation, or analysis of data and information.

Information system An information system (IS) can be defined technically as a set of interrelated components that collect, process, store, and distribute information to support decision making and control in an organization

Needs of Information

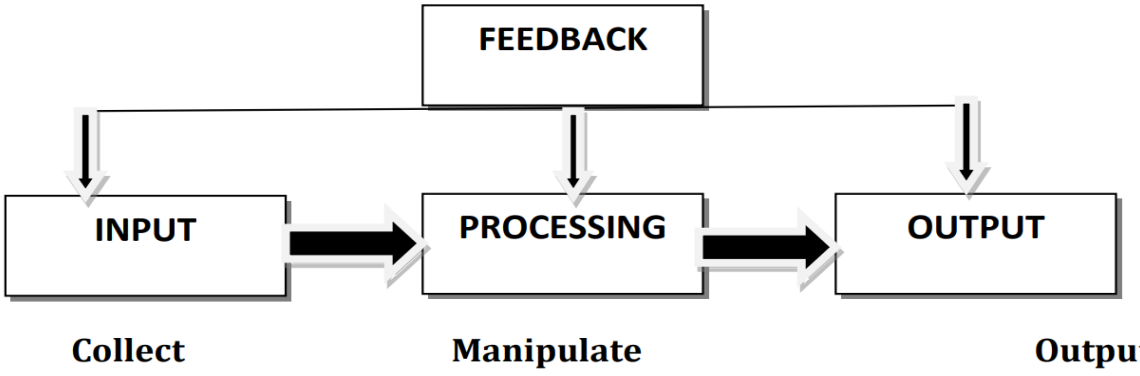
- Decision Making
- Planning and Forecasting
- Operational Efficiency
- Performance Monitoring
- Risk Management
- Understanding customer needs
- Innovation
- Employee Engagement and Development
- Stakeholder Communication

Characteristics of Information

- Quality
- Timeliness
- Completeness
- Relevance
- Reliable
- Accurate
- Flexible
- Simple
- Secured
- Verifiable

Information system is organized combination of people (users, specialists), data, information, hardware (machine and media) , software (programs and procedures) , communication, resources and techniques to perform input, processing, output, storage, and control activities that transform data resource into information products.

Building Blocks of Information System/Components of Information System



CBIS (Computer Base Information System)

- Hardware
- Software
- Database
- Telecommunication, Network, Internet
- People (User)
- Procedure (Includes set of Rules and Regulations)

UNIT – 2

The term system defined as a set of interconnected elements that work together to achieve some common purpose or goal. For example: Human body is a system.

Different types System

- Simple and Complex
- Open and Closed System
- Deterministic and Probabilistic System
- Stable and Dynamic
- Permanent and Temporary
- Adaptive and Non-adaptive
- Sub-system and super-system

Sr.No	Deterministic	Probabilistic
1	The systems whose results *can be predicted* are called as **Deterministic System**.	The systems whose results *cannot be predicted* are called as **Probabilistic System**.
2	Deterministic system provides guarantee of output	Probabilistic system does not provides guarantee of output
3	In deterministic system, same process is followed to get the output	In Probabilistic system, different process is followed to get the output
4	**Example**: computer systems become deterministic systems.	**Example:** Sales forecasting system is an example of probabilistic system.

Sr. No.	OPEN SYSTEM	CLOSED SYSTEM
1	An open system is one that **interacts** with its environment.	A closed system is one that does **not interact** with its environment.
2	Open system **is affected** with the change in living organisms and its environment.	Closed system are **not affected** with the living organisms and its environment because barrier exists between the environment and the system from being affected.
3	The company in turn is a system within the larger industry system. The company interacts with its environment, a larger system, makes that individual company an open system.	In research for instance, we attempt to develop models that are essentially closed models.
4	In reality, an open system **must exist.**	In reality, closed system **rarely exists.**
5	The demand forecasting is a Example of open system	All kind of accounting system, case, stock, Attendance of employee is close system.
6	**EX:-** All Industry is a part of national economic system and are an open system.	**EX:-** The scientists who device a laboratory system to measure the elastically of a metal is assuming a closed system.
7	Every social organization is an open system.	Simple operational lower level functional management is closed system.