INTRODUCTION TO BUSINESS DATA PROCESSING

DATA AND INFORMATION

* The word "data" is the plural of datum, which means fact, observation, assumption or occurrence. More precisely, data are representations of facts pertaining to people, things, ideas and events. Data are represented by symbols such as letters of the alphabets, numerals or other special symbols.

* Information can be defined as "data that has been transformed into a meaningful and useful form for specific purposes".

DATA PROCESSING

* Data processing is the act of handling or manipulating data in some fashion. Regardless of the activities involved in it, processing tries to assign meaning to data. Data processing is the process through which facts and figures are collected, assigned meaning, communicated to others and retained for future use.

* Hence we can define data processing as a series of actions or operations that converts data into useful information

STEPS IN DATA PROCESSING

- Collection
- Conversion
- Manipulation
- Storage
- Communication

COLLECTION

* Data originates in the form of events transaction or some observations.

* This data is then recorded in some usable form. Data may be initially recorded on paper source documents and then converted into a machine usable form for processing.

* Alternatively, they may be recorded by a direct input device in a paperless, machine-readable form. Data collection is also termed as data capture.

CONVERSION

- Once the data is collected, it is converted from its source documents to a form that is more suitable for processing. The data is first codified by assigning identification codes.

- A code comprises of numbers, letters, special characters, or a combination of these It is useful to codify data, when data requires classification.

- To classify means to categorize, i.e., data with similar characteristics are placed in similar categories or groups. For example, one may like to arrange accounts data according to account number or date. Hence a balance sheet can easily be prepared.

MANIPULATION

* Once data is collected and converted, it is ready for the manipulation function which converts data into information. Manipulation consists of following activities:

1. Sorting
2. Calculating
3. Summarizing
4. Comparing

MANAGING THE OUTPUT RESULTS

Once data has been captured and manipulated following activities may be carried out :

* **Storing**

  To store is to hold data for continued or later use.

* **Retrieving**

  To retrieve means to recover or find again the stored data or information. Retrieval techniques use data storage devices.

COMMUNICATION

- Communication is the process of sharing information. Thus, communication involves the transfer of data and information produced by the data processing system to the prospective users of such information or to another data processing system.

- As a result, reports and documents are prepared and delivered to the users. In electronic data processing, results are communicated through display units or terminals.

REPRODUCTION

- To reproduce is to copy or duplicate data or information.

- This reproduction activity may be done by hand or by machine.

DATA ORGANISATION

Data can be arranged in a variety of ways, but a hierarchical approach to organisation is generally recommended.

* **Data Item**

A data item is the smallest unit of information stored in computer file.

* **Field**

Data items are physically arranged as fields in a computer file. Their length may be fixed or variable.

Record

A record is a collection of related data items or fields. Each record normally corresponds to a specific unit of information.

File

The collection of records is called a file. A file contains all the related records for an application.

Database

The collection of related files is called a database. A database contains all the related files for a particular application.