

Lecture no. 1

Department: Information and Library Science

Subject: Information Storage & Retrieval

Name of the lecture: Definition & Methods of Data Processing.

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DEFINITIONS

DATA: Is the raw material which includes facts, figures, letters, words, or symbols to represent an object, Idea, condition or situation such as medical Statistics, school students enrolment, and any Production figure.

DESCRIPTOR: is a special term cited to describe subject content that is assigned to the document by an Indexer. It is use specifically in thesaurus.

INFORMATION: It consists of selected data to be organized for the users, problem, time, place and function.

DATA PROCESSING: The main function of data processing is the converting of data to information.

INFORMATION TECHNOLOGY: Is a set of tools that helps you work with information and perform tasks related to information processing.

VOCABULARY CONTROL: It is the establishment of relationships among analyzed source materials to facilitate the identification of all source materials in system relating to a given subject.

CODE: Is any system of symbols in the communication process. It is the system of rules that enables message in the source language (natural language) to be transformed into a target language (code language)

NOTATION: The physical representation of a code.

REASONS FOR THE USE OF CODE:

1. To translate from a difficult- to- use source language to an easy- to- use language.
2. To decrease the amount of space required to record information.

3. To distinguish between alternatives or words that is difficult to be distinguished in the source language.

Ex: plant (biology) 570

Plant (manufacture) 650

***METHODS OF DATA PROCESSING**

THERE ARE THREE METHODS:

1- MANUAL METHOD:

To perform operations in the data processing cycle by hand and with the use as tools such as: pens, files, folders, work sheets....

2- MECHANICAL METHOD:

To perform operations with the use of mechanical devices that requires manual aid such as: typewriters, document control register, Calculators.....

ADVANTAGES OF MECHANICAL OVER MANUAL METHOD

- A - Eliminates recopying and restoring of data.
- B- Improve speed and accuracy of manual processing.
- C- Eliminates human efforts in data processing by
Processing six operations which are:
Recording - Sorting - Comparing – Calculating -
Summarizing and Reporting.

3- ELECTRONIC METHOD:

The use of computer to perform operations automatically by the movement of electrical impulses through programs rather than the movement of mechanical parts by hand.

COMPUTER OPERATIONS Include:

- A – INPUT: Source documents – coded recorded.
- B - PROCESSING: Make logical decisions.
- C - OUTPUT: The results of data processing to be recorded on paper, magnetic tape, floppy disk, flash memory, CD-Rom, etc.

ADVANTAGES OF THE ELECTRONIC METHOD

Some of the advantages of the electronic method are:

- A - Speed of processing.

- B – The processing of data is continuous while each machine performs only one operation.
- C – Saving space with the use of compact equipment and storage.
- D – Greater accuracy than other systems.
- E – The capacity of computers and their versatility to complete tasks that could never performed with other systems.