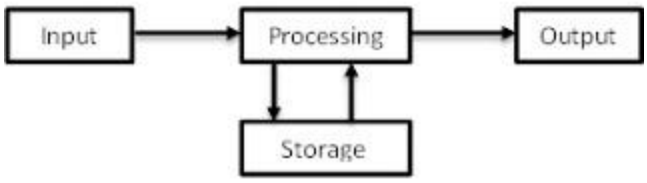
TOPIC ONE: OVERVIEW OF COMPUTER SYSTEM

Definition of a Computer

A computer can be defined as an electronic machine (device) which under the control of a stored program accepts data, stores the data, processes the data and brings out the results as information.

Computer as an IPOS system



Computer performs 4 key operations on data

a. Input b. Processing c. Output d. Storage

Input: data are entered into the computer through the input unit. Data are raw facts that are to be processed into meaningful form.

Processing: Computer performs certain operations on data entered into it; the Central Processing Unit (CPU) handles this operation.

Output: The result of what has been processed will be displayed by the output device such as the monitor.

Storage: Inputted data and processed information are stored in the memory and permanent storage on the computer.

Constituents of a Computer system

The computer is referred to as a system because it is made up of several components that work together to enable it function properly. There are 2 main constituents of the computer system, these are:

- The hardware
- The Software

Hardware

These are the physical components of the computer system. They are the tangible parts that can be seen and touched. There are two major parts, namely:

- The system unit
- The peripherals

System unit: The system unit is the rectangular casing that houses (contains) several important components that controls the operation of the computer system such as the motherboard, CPU (Microprocessor), RAM, Sound card, video card, CD drive, Floppy disk drive etc. It also provides interface for connection of the peripherals.

Peripherals: These are the devices connected to the system unit for the purpose of input, output and storage operations. Examples of peripheral devices are keyboard, Mouse, Monitor, Printer, Scanner, DVD, CD, USB flash drive etc.

Software

The software is a term used to describe the collection (or set) of programs that can be run on a computer system. A program is a set of instructions that tells the computer what to do, when to do it and how to do it.

There are two types of software, these include:

- System software
- Application software

System software: This software controls the computer hardware and the internal operations of the computer system. Examples include Windows OS (Windows XP, Windows ME, Windows Vista, Windows 7, Windows 8, Windows 10), Linux OS(Redhat, Fedora, Ubuntu etc.), MAC OS etc.

Application software: These are software that enables the user to perform specific operation or task on the computer. Examples include:

Application software (packages)	**Functions / Uses**
MS Word, WordPad, WordPerfect	Used for word processing
MS Excel, Lotus1-2-3, Quattro Pro	Used for spreadsheet, calculation and analysis
Corel draw, Paint, Photoshop, PageMaker, Corel Graphics	Used for graphic works
Front page, Publisher, Dreamweaver, cold fusion	For web designing
MS Access, Oracle, Postgre sql, Fox pro, Dbase, Ingress, MySQL	For database management

MS outlook, Outlook express, MS exchange, Sendmail	For email management
MS PowerPoint, Impress, Prezi, Harvard Graphics	Used for presentation of seminars and lectures
Maths, MATLAB, SPSS, Mintab	Create and edit mathematical formulae/statistical analysis
Internet explorer, Mozilla firefox, chrome, Opera mini, UC browser, Netscape Navigator, Safari , Mosaic,	Internet/Web browsing

Characteristics of a Computer

- · **Speed:** Computer performs its data processing operation at a very high speed. The speed of the computer is measured in Hertz (Hz). A computer with speed rating of Mega Hertz (MHz) can perform millions of cycle of operation per second.

- · **Accuracy:** Computer gives accurate result as long as the correct data is keyed into it.

- · **Versatility:** computer can be used to perform various kinds of task e.g. graphic design, word processing, web development etc.

- · **Reliability/Durability:** Computers do not get tired like human; they can work continuously for days and weeks without any error.

- · **Memory and storage:** Computer can store large amount of data and information. The capacity of the memory/storage device is measured in bytes. A byte is a group of eight bits. A kilobyte (KB) is 1024 bytes. A megabyte (MB) is 1,000,024 bytes.

- · **Programmable:** The computer hardware is useless without the program that controls it. Thus, all tasks and activities performed by a computer are made possible by means of a program.

- · It is electronic in nature