

## EBM 200LEVEL, SECOND SEMESTER

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### SUMMARY OF CIT202: UNIT 1

computer is a fast operating machine that can be used for the home and business to enhance productivity. In other words, a computer is a collection of electronic parts, or hardware that have a set of electronic instructions called **software**. All computers perform the same basic functions; they **enable you to store and manipulate information**.

### CHARACTERISTICS OF COMPUTER

- The ability to perform calculation at very high speed.
- Ability to take in information and to store that information for future retrieval or use.
- The ability to take in and store sequence of instructions called program which must be written in the language of computer.
- The ability to obey sequence of program instructions provided the program is stored within the computer.
- The ability to use simple logical rules to make decisions for their own internal control, or for the control of some external activity e.g. to take over the role of calculator operator.
- The ability to communicate with other systems. The ability to exploit a complex internal structure of a microelectronics circuitry in a variety of ways.

### CLASSIFICATION OF COMPUTER

- **Super computer:** This is the term used for the most powerful computer available at any time. A supercomputer is focused on performing one task involving intense numerical calculations such as weather forecasting and solving scientific problems. Supercomputers at the moment can carry out trillions of operations per second! The **Cray** is perhaps the most well known supercomputer, named after its designer, **Seymour Cray**.
- **Mainframe computer:** The term Mainframe computer was created to distinguish the traditional, large, institutional computer intended to service multiple users from the smaller, single user machines. These computers are capable of handling and processing very large amounts of data easily and quickly. A mainframe speed is so fast that it is measured in millions of tasks per milliseconds (MTM). While other computers became smaller, Mainframe computers stayed large to maintain the ever growing memory capacity and speed. Mainframe computers are used in large institutions such as government, banks and large corporations. Mainframes (often colloquially referred to as Big Iron) are computers used mainly by large organizations for critical applications, typically bulk data processing such as census, industry and consumer statistics, ERP, and financial transaction processing.
- **Minicomputer:** Minicomputer (colloquially, mini) is a largely obsolete term for a class of multi-user computers that lies in the middle range of the computing spectrum, in between the largest multi-user systems (mainframe computers) and the smallest single-user systems (microcomputers or personal computers).
- **Microcomputer:** The term "microcomputer" itself, is now practically an **anachronism**. A microcomputer is a computer with a microprocessor as its central processing unit. Another general characteristic of these computers is that they occupy physically small amounts of space when compared to mainframe and minicomputers. The term "**Microcomputer**" was introduced with the advent of single chip large scale integrated circuit computer processors. Example of microcomputers includes:
  - a. **Desktop computer:** A desktop computer is a personal computer (PC) in a form intended for regular use at a single location.
  - b. **Personal Digital Assistants:** (More Commonly Known As PDA'S)  
A Personal Digital Assistant (PDA) is a handheld computer, also known as small or palmtop computers.
  - c. **Palmtop Computers:** A subnotebook (also ultraportable laptop or minilaptop computer) is a small and lightweight portable computer, with most of the features of a standard laptop computer but smaller. The term "ultra-mobile PC" (UMPC) is also frequently used to refer to such machines.
  - d. **Laptop and Notebook Computers:** A laptop computer or simply laptop (also notebook computer, notebook and notepad) is a small mobile computer. Laptops contain components that are similar to their desktop counterparts and perform the same functions, but are miniaturized and optimized for mobile use and efficient power consumption, although typically less powerful for the same price.
- **Embedded computer:** They are general purpose CPUs that are a part of a machine or device. This computer runs a program that is stored in read only memory (ROM) and is only intended to operate a specific machine.

### Mainframes vs. Supercomputer

supercomputers generally focus on problems which are limited by calculation speed while mainframes focus on problems which are limited by input/output and reliability ("throughput computing") and on solving multiple business problems concurrently (mixed workload). The differences and similarities include:

1. Both types of systems offer parallel processing
2. Supercomputers are optimized for complicated computations that take place largely in memory, while mainframes are optimized for comparatively simple computations involving huge amounts of external data.

#### **Classes by Function**

1. **Servers:** Usually refers to a computer that is dedicated to the task of storing and retrieving large amounts of data.
2. **Workstation:** are computers that are intended to serve one user and may contain special hardware enhancements not found on a personal computer.
3. **Portable Data Entry Terminals:** (more commonly known as PDET's) are handheld devices that are used to record or capture data away from the mainframe computer that they are linked to. Examples of PEDTs include Barcode readers Gas Meter, Optical mark readers (as in lottery ticket readers) , Optical character recognition, Scanner Graphics tablet, Magnetic stripe reader.

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