Fundamentals of computer

Computer: The computer is developed as a man's need for fast accurate computing device. Originally, the term computer referred to "a person who performed numerical calculations" , often with the aid of a mechanical calculating device, Now a days computer is a electronic device that can receive a set of instructions, or program, and then carry out this program by performing calculations on numerical data or by manipulating other forms of information.

2. Characteristics of computer
- ➢ Speed: Computer can calculate at very high speeds.
- ➢ Storage: Computers have their main memory and auxiliary memory systems. A computer can store a large amount of data.
- ➢ **Accuracy:** The accuracy of a computer system is very high.
- ➢ **Versatility:** Computers are very versatile machines. They can perform activities ranging from simple calculations to performing complex CAD modeling and simulation to navigating missiles and satellites.
- ➢ **Automation:** Computers can be programmed to perform a series of complex tasks involving multiple programs. Computers will perform things flawlessly.
- ➢ Diligence: Diligence means being constant and earnest in effort and application.

3. Computer Uses
- ➢ **Military Application:** The first digital computers, with their large size and cost, mainly performed scientific calculations, often to support military objectives.
- ➢ Business Application: Form the beginning, stored program computers were applied to business problems.
- ➢ **Creative Arts:** They have also been used for entertainment, with the video game becoming a huge industry.
- ➢ **Robotics:** Computers have been used to control mechanical device since they became small and cheap enough to do so.
- ➢ **Artificial Intelligence**: Computer to things previously regarded as the exclusive domain of humans.
- ➢ **Networking and the Internet:** Computers have been used to coordinate information in multiple locations.

4. Different Type of Computer Systems
- ➢ **Super Computers:** The mightiest computers, and of course the most expensive are known as supercomputers. Supercomputers process billions of instruction per second. One uses super computers for tasks that require mammoth data manipulation, such as worldwide weather forecasting and weapons research.
- ➢ **Mainframes Computers:** In the jargon of the computer trade, large computers are called mainframes. Mainframes are capable of processing data at very high speed millions of instruction per second and have access to billions of characters of data. The principal use of it is for processing vast amounts of data quickly, some of the obvious customers are banks, insurance companies and manufacturers.
- ➢ **Personal Computers (PC):** Personal computer are often called Pcs. A Pc is based on a micro-processor originally made by the Intel Company (Intel's Pentium0 with other companies such as AMD. PC s usually use and Operating System made by Microsoft, i.e. MS Windows, MS DOS. The term "PC" often means machines that ate compatible to IBM other than a Macintosh.
- ➢ MAC: The computers made by processor, made by Motorola are referred as Mac. Macintoshes use operating system, called Mac OD, made by Apple.

➢ **Notebook Computers:** A computer that fits in a briefcase, Notebook computers, also known as Laptop computer, now also referred as laptops, are portable and popular with travellers who need a computer that can go with them, Most notebooks accept diskettes or network connections, So it is easy to move data from one computer to another.

5. Functional Components of Computer: The computer comprises of two; the hardware and the software (Programs). The hardware is a physical aspect of the computer which is governed by programs (called software).

Hardware: Hardware is the physical aspect of computers. The hardware are the parts of computer itself including the Central Processing Unit (CPU)), memory keyboards, monitors, case and drives (floppy, hard CD, DVD, optical tape etc.). Other extra parts called peripheral components or devices which include printers, modems, scanners, digital cameras and cards (sound, Color and video) etc.

Software: Programs are a series of instructions that a computer can interpret that a computer can interpret and execute on hardware programs are also called software to distinguish them from hardware, the physical equipment used in data processing. These programming instructions cause the computer to perform arithmetic and logical operations or comparisons (and then take some additional action based on the comparison (and then take some additional action based on the comparison) or to input or output data in a desired sequence. In conventional computing the operations are executed sequentially. Programs are often written as a series of subroutines, which can be used in more than one program or at more than one point in the same program.