

NETWORKING & SYSTEM ADMINISTRATION LAB

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Experiment No.: 1

Aim

Familiarization of hardware components in a computer

Procedure

Computer hardware is the physical parts or components of a computer, such as the monitor, mouse, keyboard, computer data storage, hard disk drive (HDD), graphic cards, sound cards, memory, motherboard, and so on, all of which are physical objects that are tangible. Some important components includes:

1.Mother board

The motherboard is the piece of computer hardware that can be thought of as the "backbone" of the PC, The motherboard serves to connect all of the parts of a computer together. The CPU, memory, hard drives, and other ports and expansion cards all connect to the motherboard directly or via cables.



2. Central Processing Unit

The central processing unit (CPU) is the computer component that's responsible for interpreting and executing most of the commands from the computer's other hardware and software.



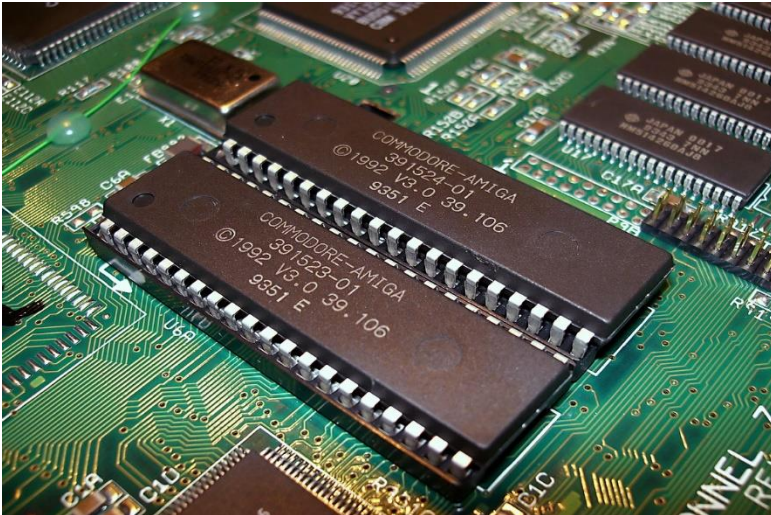
3. Random Access Memory

Random-access memory (RAM), which stores the code and data that are being actively accessed by the CPU. For example, when a web browser is opened on the computer it takes up memory; this is stored in the RAM until the web browser is closed. It is typically a type of dynamic RAM (DRAM), such as synchronous DRAM (SDRAM), where MOS memory chips store data on memory cells consisting of MOSFETs and MOS capacitors. RAM usually comes on dual in-line memory modules (DIMMs) in the sizes of 2GB, 4GB, and 8GB, but can be much larger.



4. Read Only Memory

Read-only memory (ROM), which stores the BIOS that runs when the computer is powered on or otherwise begins execution, a process known as Bootstrapping, or "booting" or "booting up". The ROM is typically a nonvolatile BIOS memory chip, which stores data on floating-gate MOSFET memory cells.



5. Monitor

A monitor is a piece of computer hardware that displays the video and graphics information generated by a connected computer through the computer's video card. Monitors are similar to TVs but usually display information at a much higher resolution. A monitor is sometimes referred to as a screen, display, video display, video display terminal, video display unit, or video screen.



6. keyboard

The keyboard is the piece of computer hardware used to input text, characters, and other commands into a computer or similar device. Even though the keyboard is an external peripheral device in a desktop system (it sits outside the main computer housing), or is "virtual" in a tablet PC, it is an essential part of the complete computer system. Microsoft and Logitech are some of the most popular physical keyboard manufacturers, but many other hardware makers also produce them.



7. Graphics Card

A graphics card is an expansion card for your PC that is responsible for rendering images to the display. High-end GPUs are used for gaming, ray tracing, graphics production, and even mining cryptocurrency. Here's a brief overview of everything you need to know about graphics cards.



8.Hard Disk Drive

A computer hard disk drive (HDD) is a non-volatile data storage device. Non-volatile refers to storage devices that maintain stored data when turned off. All computers need a storage device, and HDDs are just one example of a type of storage device.



9.Optical Drive

An optical drive is an internal or external computer disk drive that uses laser beam technology to read and write data. Optical disk drives are associated with compact discs, DVD and BLUERAY technology. Like the of the last century, ODDs have fallen out of fashion and are no longer included as a default component of new desktop and laptop computers.



10.SSD

Solid state drives and USB flash drives use the same type of non-volatile memory chips that retain information when there is no power. The difference is in the form factor and capacity of the drives. While a flash drive is designed to be external to the computer system, an SSD is designed to reside inside the computer in place of a more traditional hard drive.

