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Experiment - 5

Aim :- To study about various computer hardware.

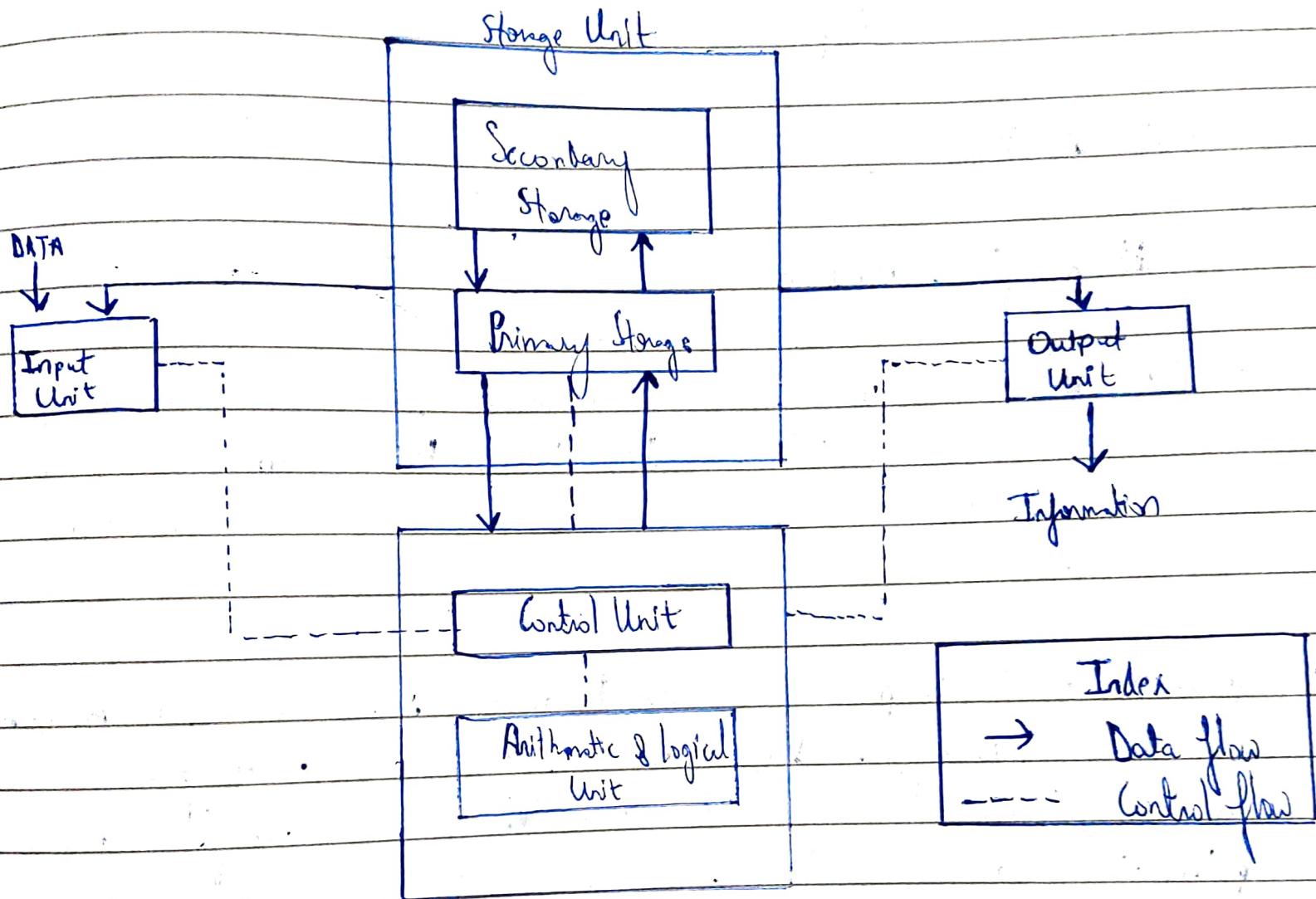
Apparatus :- CPU, monitor, mouse, keyboard, speakers.

Theory :- ① CPU: A CPU (central processing unit) is also known as brain of a computer every processing & function performed on computer are done by CPU. There are various different parts in CPU which function together to make the computer work. There are the following parts below:



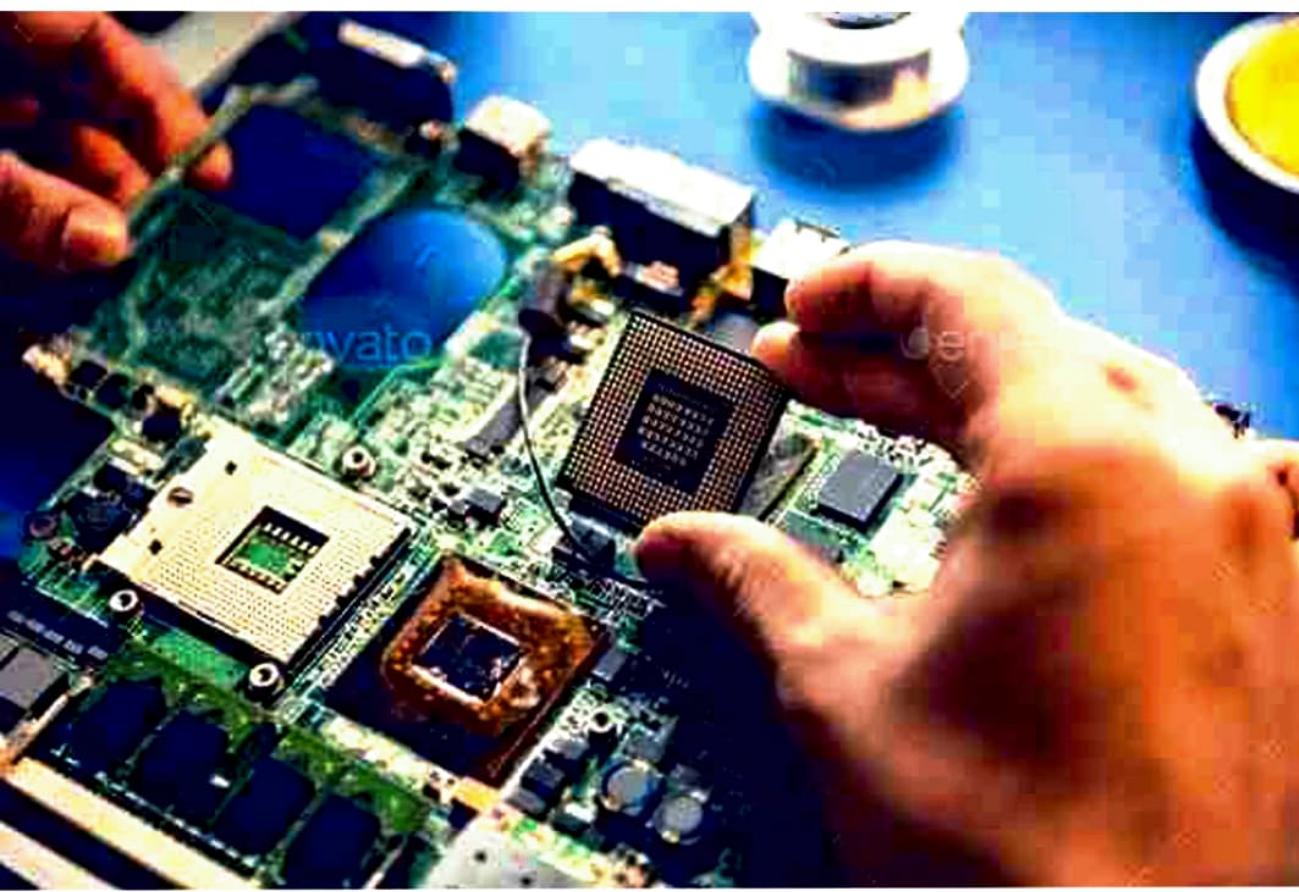
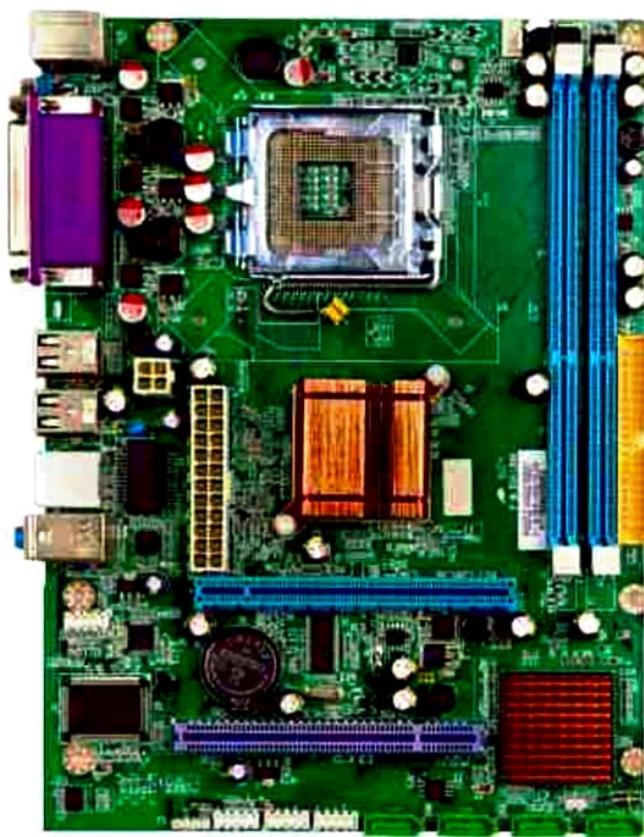
- a.) Motherboard:- It is also called as mainboard; It is the body of the computer, through which all other computer components interface. It is the central circuit board making up a complex electronic system. A motherboard provides the electrical connections by which the other components of the system communicate.
- b.) Microprocessor: It is a computer processor that operates the functions of a CPU unit on a single chip integrated circuit of MOSFET construction. The microprocessor is a multi-purpose, clock-driven, register based, digital integrated circuit, that accepts binary data as input, process it according to the instruction stored in its memory & provides the results as output.
- c.) RAM (Random Access Memory): It is fast access memory that is cleared when the computer is powerdown. RAM attaches directly to the motherboard, and is used to store programs that are currently running. RAM is a set of integrated circuits that allows the stored data to be accessed in any order.
- d.) ROM (Read only memory): It is a type of non-volatile memory used in computers & other electronic devices. Data stored in ROM cannot be electrically modified after the manufacture of the memory device. It is used for storing software that are rarely changed during life of a system.
- e.) HDD (Hard Disk Drive): It is a non-volatile storage device which stores digitally encoded data on rapidly rotating platters with magnetic surfaces. Just about every new computer comes with a hard disk these days unless it comes with a new solid-state drive. Typical desktop hard ~~disk~~ drives storage between 1TB & 4TB, rotates at 7,200 rpm & have a media transfer rate of 1 MB/s or higher.
- f.) Power supply: - The power supply as its name might suggest is the device that supplies power to all components in the computer. Its case hold the transformer, voltage control, & a cooling fan. The power supply converts about 100-120V of AC power to low-voltage DC power for the internal components to use. The most common power supplies are built to conform with ATX form factor.

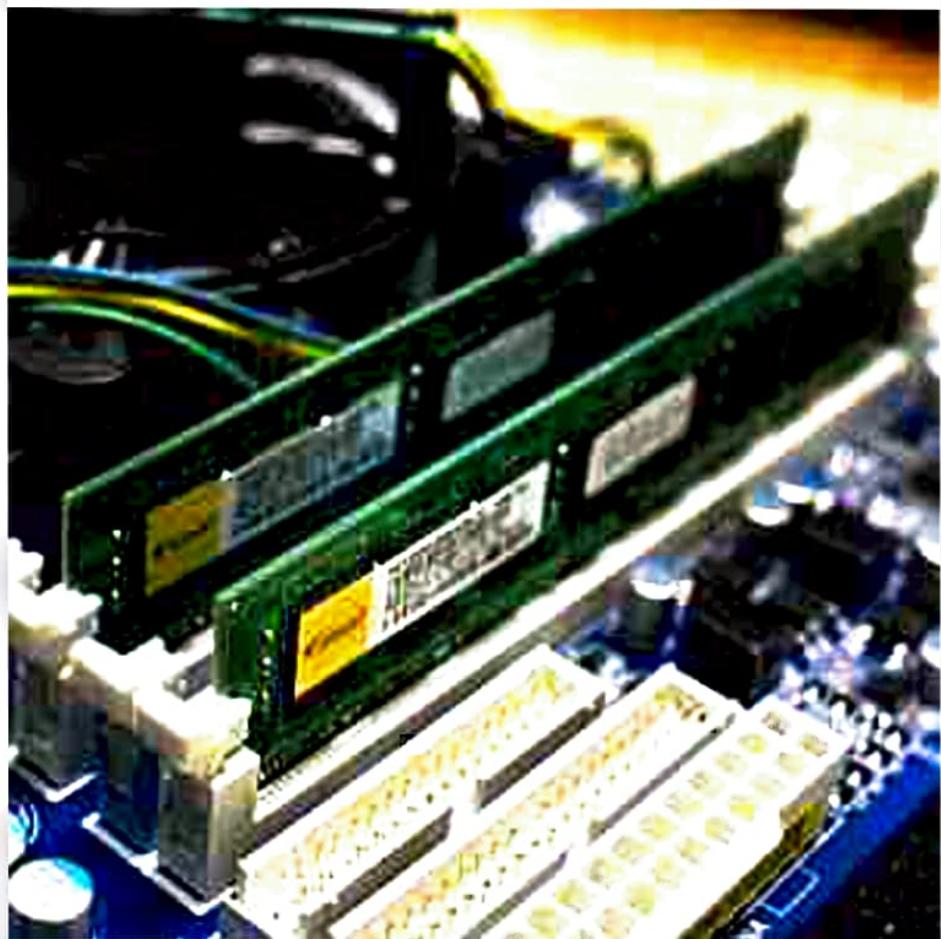
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Control processing

BLOCK DIAGRAM OF COMPUTER





READ ONLY MEMORY



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② Monitor: A computer monitor is an output device that displays information in pictorial form. A monitor usually comprises the visual display, circuitry, casing, & power-supply. Monitors are connected to the computer VGA, Digital visual interface, HDMI, Display port, or other proprietary connectors & signals.



Conclusion— Thus we have studied about all the hardware ports that are mounted on CPU & also learned their functions.