

NETWORKING & SYSTEM ADMINISTRATION LAB

Experiment No.: 1

Aim

Identify major components of a computer system such as

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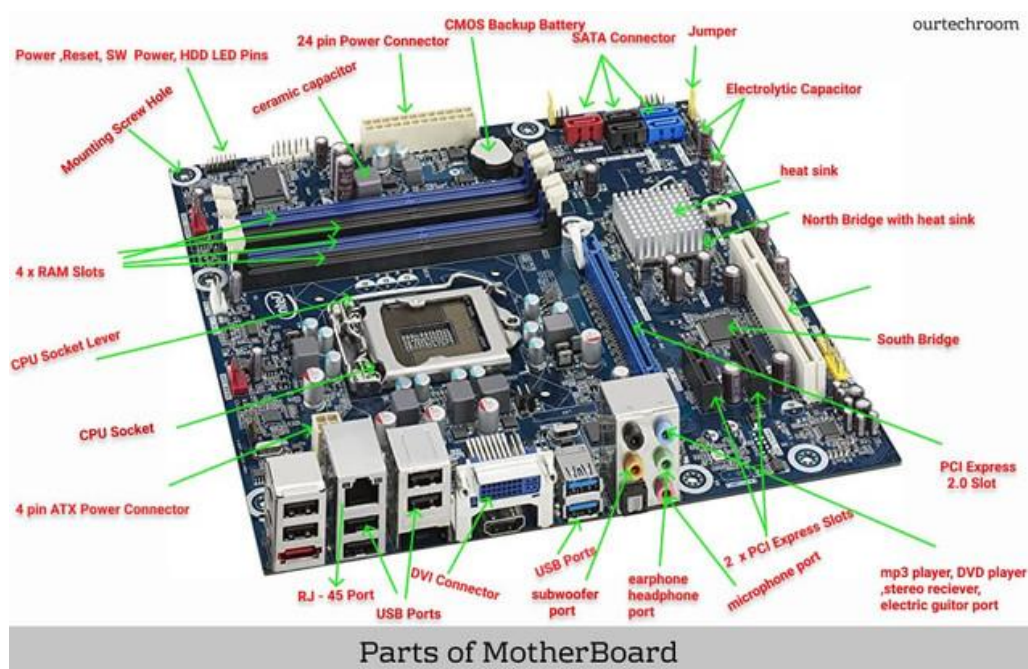
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- Motherboard
- RAM Modules
- Daughter Cards
- Bus Slots
- SMPS
- Internal Storage Devices
- Interfacing Ports

Procedure

- **Motherboard**

A motherboard is also known as the system board or the main board. The motherboard accommodates the central processing unit (CPU), random access memory (RAM), expansion slots, heat sink and fan assembly, basic input/output system (BIOS) chip, chipset, and the circuitry that interconnects the motherboard components.



- RAM Modules

In computing, a memory module or RAM (random-access memory) stick is a printed circuit board on which memory integrated circuits are mounted. Memory modules permit easy installation and replacement in electronic systems, especially computers such as personal computers, workstations, and servers.

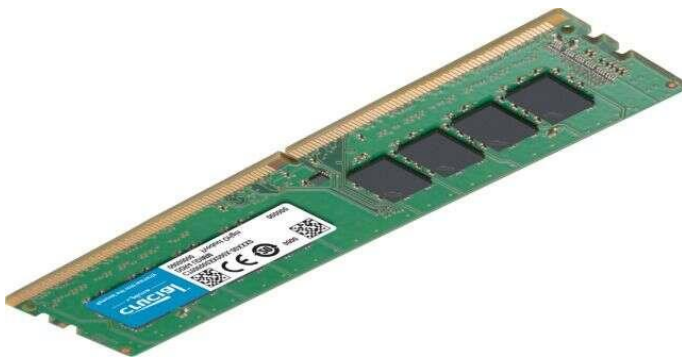
Three types of RAM

Static RAM (SRAM)

Dynamic RAM (DRAM)

Synchronous Dynamic RAM (SDRAM)

Random Access Memory(RAM)



Static RAM



Synchronous Dynamic RAM(SDRAM)



- Daughter Cards

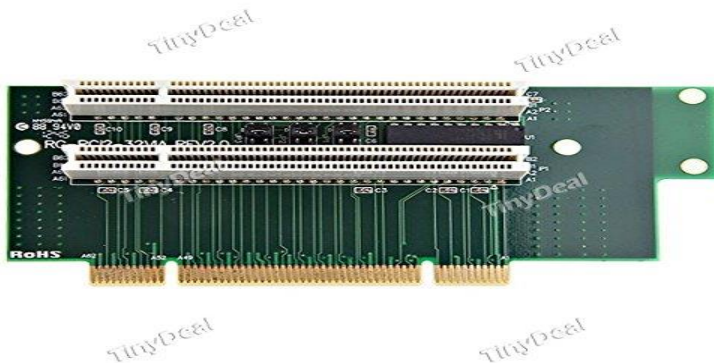
A daughterboard is type of circuit board that plugs in or is attached to the motherboard or similar expansion card to extend its features and services. A daughterboard complements the existing functionality of a motherboard or an expansion card.



A motherboard with daughterboard

- Bus Slots

Alternatively known as a bus slot or expansion port, an expansion slot is a connection or port inside a computer on the motherboard or riser card. It provides an installation point for a hardware expansion card to be connected



- SMPS

A switched-mode power supply (SMPS) is an electronic circuit that converts power using switching devices that are turned on and off at high frequencies, and storage components such as inductors or capacitors to supply power when the switching device is in its non-conduction state.



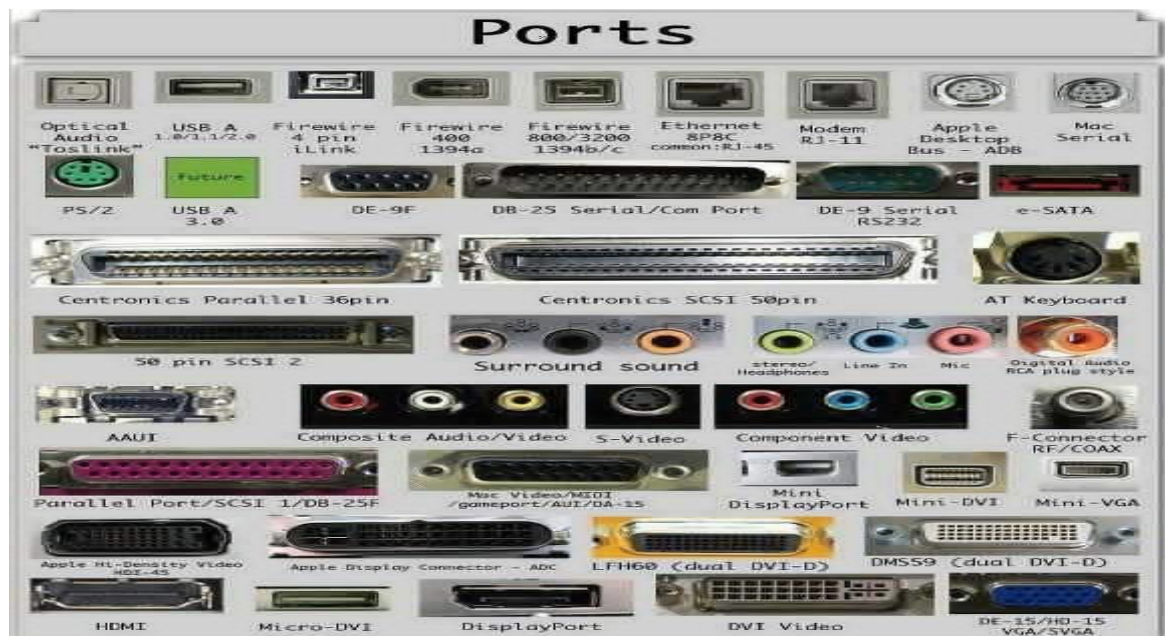
- Internal Storage Devices

Floppy diskette, Hard drive, Magnetic strip, SuperDisk, Tape cassette, Zip diskette.



- Interfacing Ports

Serial port, Parallel port, USB port, S/2 port, VGA port, Modem port, FireWire Port, Sockets.



Experiment No.: 2**Aim**

Prepare a comparative study of specifications of desktop and server class computer

COMPONENTS	SPECIFICATION
Memory (RAM)	8 to 16GB of RAM
Operating System	Microsoft Windows 10 Home, Pro, Enterprises or Education version / MacOS 10.15.X “Catalina” / 11.X “BigSur”.
Processor	10 th or 11 th Gen Intel Core i5, i7, / i9 processor (CPU)
Storage	240 GB Solid state drive / larger.
HeadPhones	Headphones or Earbuds, with Built-in Microphone
Mouse	Built-in or external trackpad, wireless and/or USB, 2-button, optical mouse
Network	802.11ac Wi-Fi capability.
Sound	Sound card or built-in audio, and speakers
Webcam	Either external USB device / built-in
Warranty	3 year on-site (better) or depot warranty, accidental damage service highly recommended
Backup devices or scheme	External USB or Thunderbolt drive with Time Machine (Mac) or Windows backup software and/or cloud backup service/subscription
Monitor	for notebook: 13” – 17” display for desktop: 19” – 27” widescreen flat-panel display

