

BASICS OF COMPUTER



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Trade: I Chapter: I

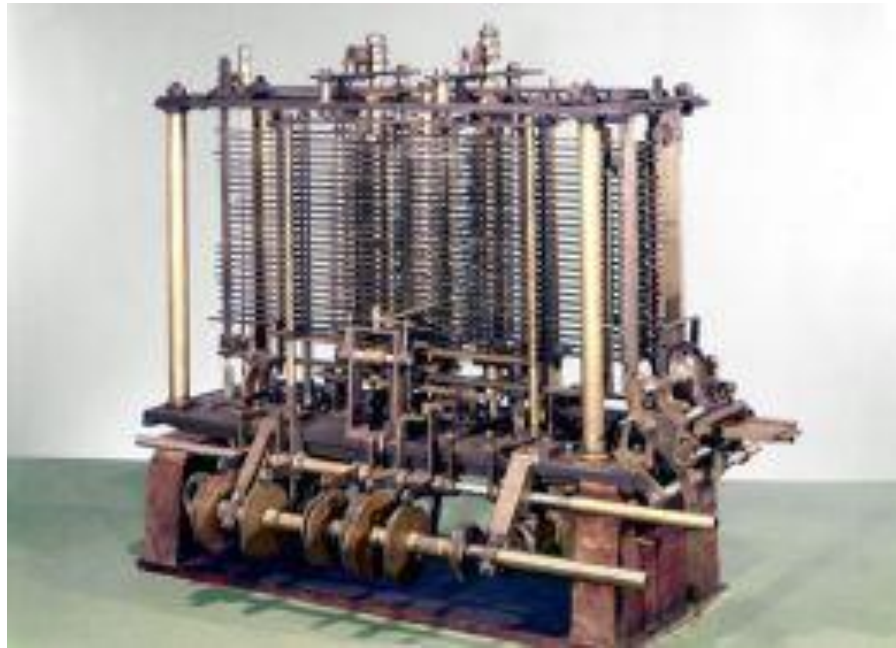


Topics to be covered today

- Father of Computer
- Types of Computer
 - Based on Size
 - Based on Function
- Components of a Computer

Father of Computer

- **Charles Babbage**, a British Mathematics professor, is considered as the father of computer
- Babbage invented a 'counting machine' called **The Difference Engine** in 1821 which eventually turned into today's PC





TYPES OF COMPUTER

According to Size

4 Types of Computers

1. Micro-Computers
2. Mini-Computers
3. Mainframe Computers
4. Super Computers

Micro-Computers

Microcomputers are the **most common type** of computers in existence today

These include:

PC

Laptop

Notebook

Palmtop



Mini-Computers

A **minicomputer** is a class of multi-user computers that **lies between**

- largest **mainframe computers**
- smallest **microcomputers**



Mainframe Computers

- These computers are **capable of handling and processing very large amounts of data quickly**
- Mainframe computers are used in large institutions such as **Government, Banks and Large Corporations**



Super Computers

- Focused on performing **tasks involving intense numerical calculations** such as
 - weather forecasting
 - complex scientific computations





TYPES OF COMPUTER

According to Function

4 Types of Computers

1. Servers
2. Workstations
3. Information Appliances
4. Embedded Computers



Servers

- Server usually refers to a computer that is **dedicated to providing a service**
 1. Database server
 2. File servers
 3. Web servers

Workstations

- Workstations are computers that are **intended to serve one user**
- May contain special **hardware enhancements** not found on a personal computer.

Information Appliances

- Information appliances are computers specially **designed to perform a specific user-friendly function** —such as
 - Playing music
 - Photography
 - Editing Text

Embedded Computers

Computers that are a **part of a machine or device**

- Generally execute a program that is stored in **non-volatile memory** and is **only intended to operate a specific machine or device**
- Embedded computers are typically required to **operate continuously without being reset or rebooted**

For Example:

- **A car** may contain a number of embedded computers
- **A washing machine** and a **DVD player** would contain only one.



Components of a Computer

- 1. Monitor
- 2. Motherboard
- 3. CPU
- 4. RAM
- 5. Expansion cards
- 6. Power supply
- 7. Optical disc drive
- 8. Hard disk drive
- 9. Keyboard
- 10. Mouse

Monitor

- A **Monitor** is an electronic visual display for computers

3 Types of Display:

CRT (Cathode Ray Tube)

LCD (Liquid Crystal Display)

Plasma

LCD vs Plasma: LCD got limited viewing angle

Motherboard

- ❑ The motherboard is the main component inside the case
- ❑ It is a large rectangular board with integrated circuitry that connects the rest of the parts of the computer including the CPU, the RAM, the disk drives



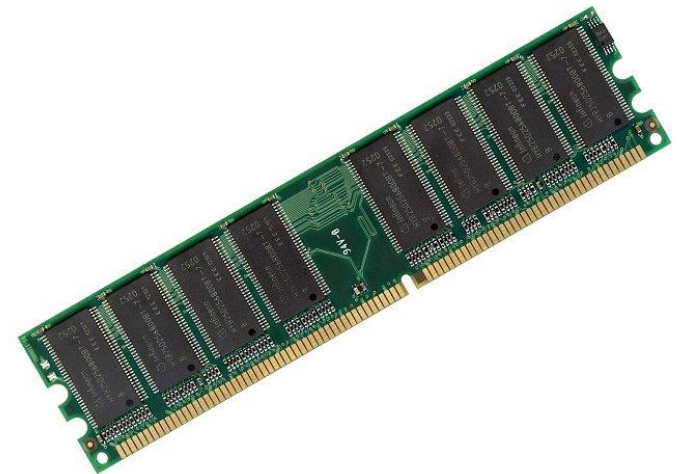
CPU

- The **central processing unit (CPU)** is the portion of a computer system that **carries out the instructions of a computer program**



RAM

- ❑ **Random Access Memory (RAM)** is a form of computer data storage
- ❑ RAM is associated with **volatile type of memory** where the **stored information is lost if the power is removed**
- ❑ **2 Types** of RAM
 - SRAM** (Static RAM)
 - DRAM** (Dynamic RAM)



Expansion cards

- The **expansion card** is a printed circuit board that can be **inserted into an expansion slot** of a computer motherboard **to add functionality to a computer system**

Example:

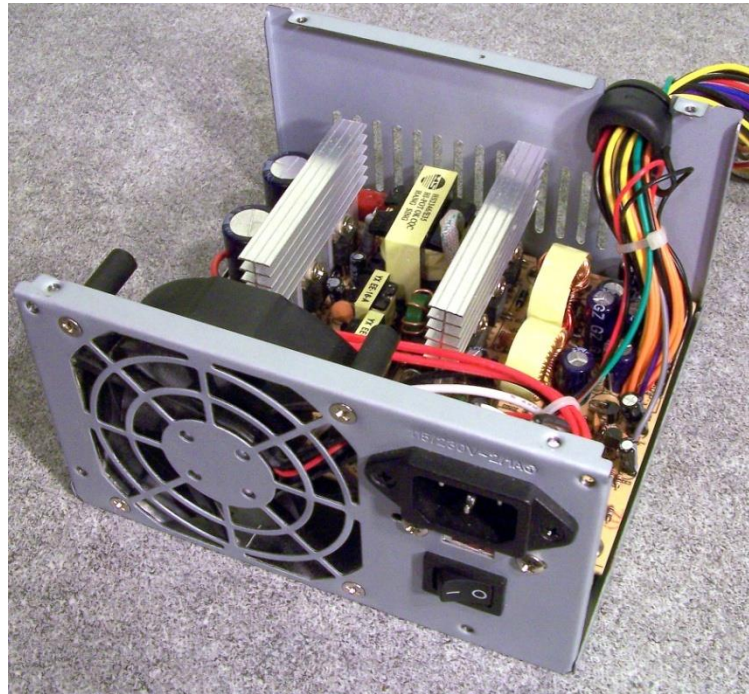
Network Card

Graphics Card



Power supply

- A **power supply unit (PSU)** supplies DC power to the other components in a computer



Optical disc drive

- An **optical disc drive (ODD)** is a disk drive that uses laser light or electromagnetic waves near the light spectrum as part of the process of reading or writing data to or from optical discs

Example: CDs

DVDs

Blue-Ray Discs (50GB)



Hard disk drive

- A hard disk drive (HDD) is a **non-volatile, random access** device for digital data
- Data is **magnetically read from and written to** the drive.



Keyboard

- A keyboard typically has characters engraved or printed on the keys and each press of a key typically corresponds to a single written symbol

3 Types of Keyboard:

Standard Size

Laptop Size

Thumb Size



Mouse

- **A Mouse** is a **pointing device** that functions by detecting **two-dimensional motion** relative to its supporting surface
- The **mouse's motion** typically **translates into the motion of a cursor on a display**, which allows for fine control of a graphical user interface







Any questions?