एक कदम प्रगति की ओर...

#DAY 4

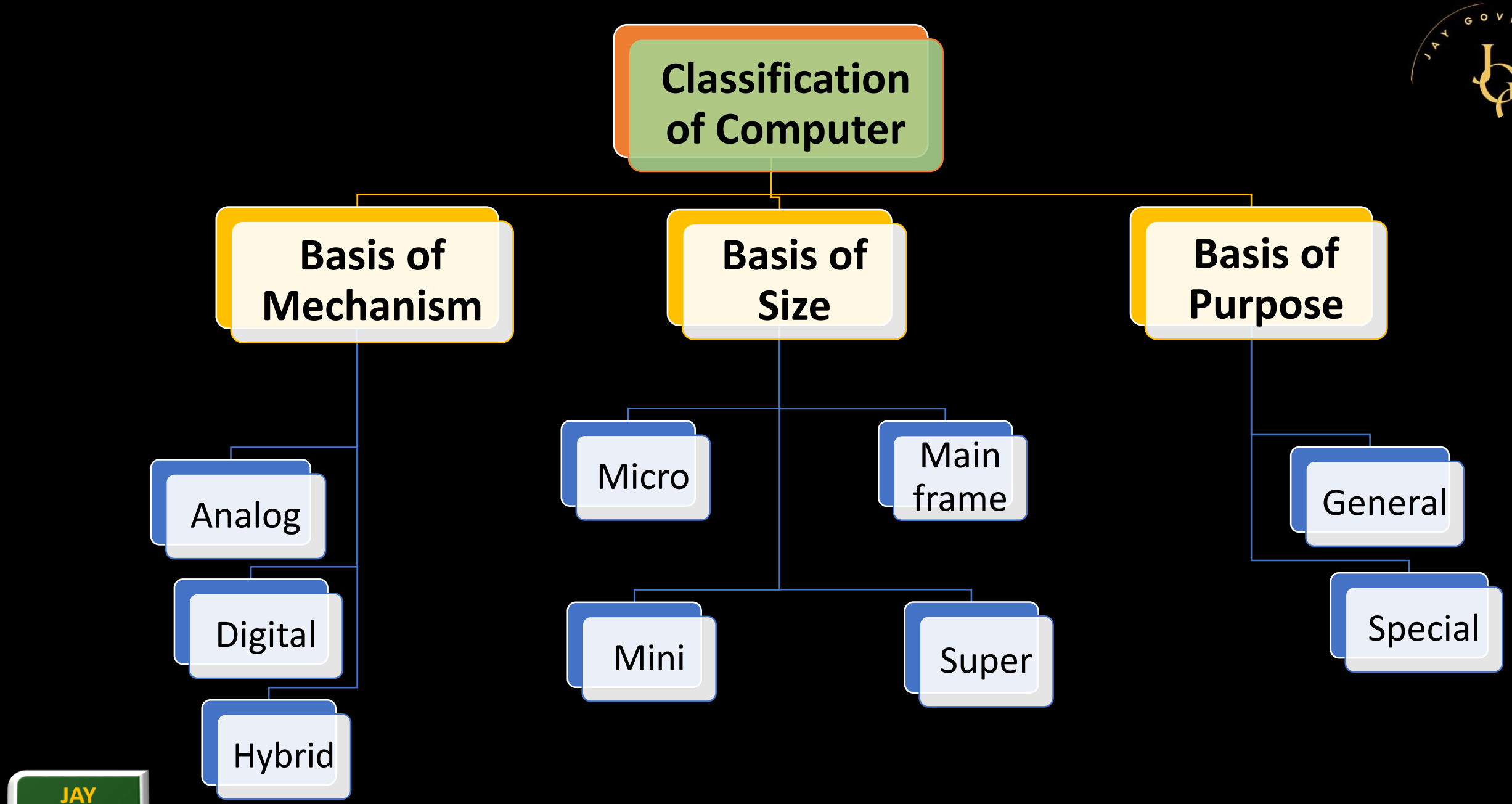
Types of COMPUTER

JAY GOVIND

TOPIC

- **CLASSIFICATION OF COMPUTER**
  - On the basis of Mechanism
  - On the basis of Size
  - On the basis of purpose

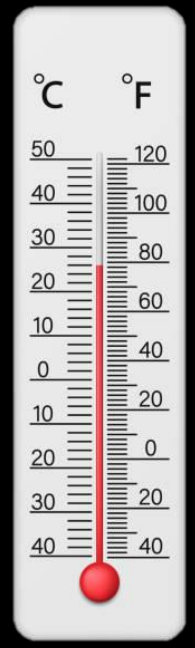
JAY GOVIND


Classification of Computer
Basis of Mechanism
Basis of Size
Basis of Purpose
Analog
Digital
Hybrid
Micro
Main frame
Mini
Super
General
Special
JAY GOVIND

By Mechanism

On the Basis of Mechanism, Computers are classified into three categorized: -

1. **Analog Computer**
2. **Digital Computer**
3. **Hybrid Computer**



JAY GOVIND

Analog Computer

- In Analog Computers, data is represented as continuously varying voltage and operate essentially by measuring rather counting.
- As the data is continuously variable, the results obtained are estimated and not exactly repeatable.
- It can able to perform multiple tasks simultaneously and also capable to work effectively with the irrational number. E.g. 1/8 = 0.125 and 1/6=0.1666.
- Voltage, temperature and pressure are measured using analog devices like voltmeters, thermometers and barometers.

JAY GOVIND

Digital Computer

- The digit computer is a machine based on digital technology which represents information by numerical digit.
- In Digital Computers data is represented as discrete units of electrical pulses. The data is measured in quantities represented as either the ‘on’ or ‘off’ state.
- Therefore, the results obtained from a digital computer are accurate.
- Virtually all of today’s computers are based on digital computers.

JAY GOVIND

Hybrid Computer

- It combines the good features of both analog & digital computers.
- It has a speed of analog computer & accuracy of digital computer.
- Hybrid Computers accept data in analog form and present output also in digitally.
- The data however is processed digitally.
- Therefore, hybrid computers require analog-to-digital and digital-to-analog converters for output.

JAY GOVIND

By Size

On the Basis of size, Computers are classified into three categorized: -

1. **Micro Computer**
2. **Mini Computer**
3. **Mainframe Computer**
4. **Super Computer**

JAY GOVIND

Micro Computer

- Micro computer is also known as personal computer. It is a general purpose computer that is designed for individual use.
- Micro computers are the computers with having a microprocessor chip as it central processing unit.
- Originated in late 1970s due to advancement in technology.
- First micro computer was built with 8 bit processor.
- Designed to use by individual whether in the form of pc’s, workstation or notebook computers.

JAY GOVIND

- Small in size.
- Ex: laptop, Desktop and Palmtop are few examples.
- They are suitable for personal work that may be making an assignment, watching a movie, or at office for office wok.

Mini Computer

- Mini computer is a medium sized computer (with 2 or more processors) and can support 4 to 200 users at a time.
- Micro computers are the computers with having a microprocessor chip as it central processing unit.
- Mini computers are originated in 1960s.
- In 1970s it contains 8 bit or 12 bit processor.
- Gradually the architecture requirement is grown to 16 and 32 bit.

- Small mainframes that perform limited tasks.
- Less expensive than mainframe computer.
- Mini computers are Lower mainframe in the terms of processing capabilities.
- Mini computers are used in institutes and departments for tasks such as billing, accounting and inventory management.

Mainframe Computer

A very powerful computer which capable of supporting thousands of user simultaneously.

Mainframes are very large & expensive computers with having larger internal storage capacity & high processing speed.

JAY GOVIND

- It contains powerful data processing system and is capable to process 100 million instructions per second.
- It is capable to run multiple operating systems and mainly used to handle bulk of data & information for processing.
- Mainframes are used in the organization that need to process large number of transaction online & required a computer system having massive storage & processing capabilities.
- Mainframe system is housed in a central location with several user terminal connected to it.
- Much bigger in size & needs a large rooms with closely humidity & temperature.
    - IBM & DEC are major vendors of mainframes. Ex : MEDHA, SPERRY, IBM, DEC, HP, HCL

Super Computer

- These are the largest, fastest and the most expensive computer.
- Used for complex scientific application that requires huge processing power.

They are capable of processing trillions of instructions in a few seconds as it has thousands of processors interconnected.

JAY GOVIND

- They are special purpose computers that are designed to perform some specific task like weather forecasting, scientific simulations.
- It was first developed by **Roger Cray in 1976.**
- Examples are CDC Cyber, Cray, IBM Roadrunner, The Titan.
- Installed **in 1991, PARAM 8000** was India's first supercomputer.

By Purpose

On the Basis of Purpose, Computers are classified into two categorized: -

1. General Purpose Computer
2. Special Purpose Computer

JAY GOVIND

General Computer

- A general purpose computer is designed to be able to carry out many different tasks.
- The instructions needed to perform a task are not wired permanently into the internal memory.
- When one job is over, instructions for another job can be loaded into the internal memory for processing.
- Desktop Computers and laptops are general purpose computer.
- It can be used to prepare word documents, presentations, manage inventories, print sales reports, or access the internet.

JAY GOVIND

Special Computer

- Special purpose computer is tailor-made solely to cater to the requirements of a particular task.
- They perform the task for which they are designed very efficiently.
- The instructions needed to perform a particular task are wired permanently into the internal memory so that it can perform the given task on a single command.
- For Example: Weather forecasting, Air traffic Control System, Missile Guidance System, etc.

JAI HIND