"Welcome”!

Imperial College of Engineering
(RU Affiliated)

BSC Engineering 1st year 1st semester Examination ,2024

Course code: CSE1111

Course title: Introduction to Computer System

Presented by:-

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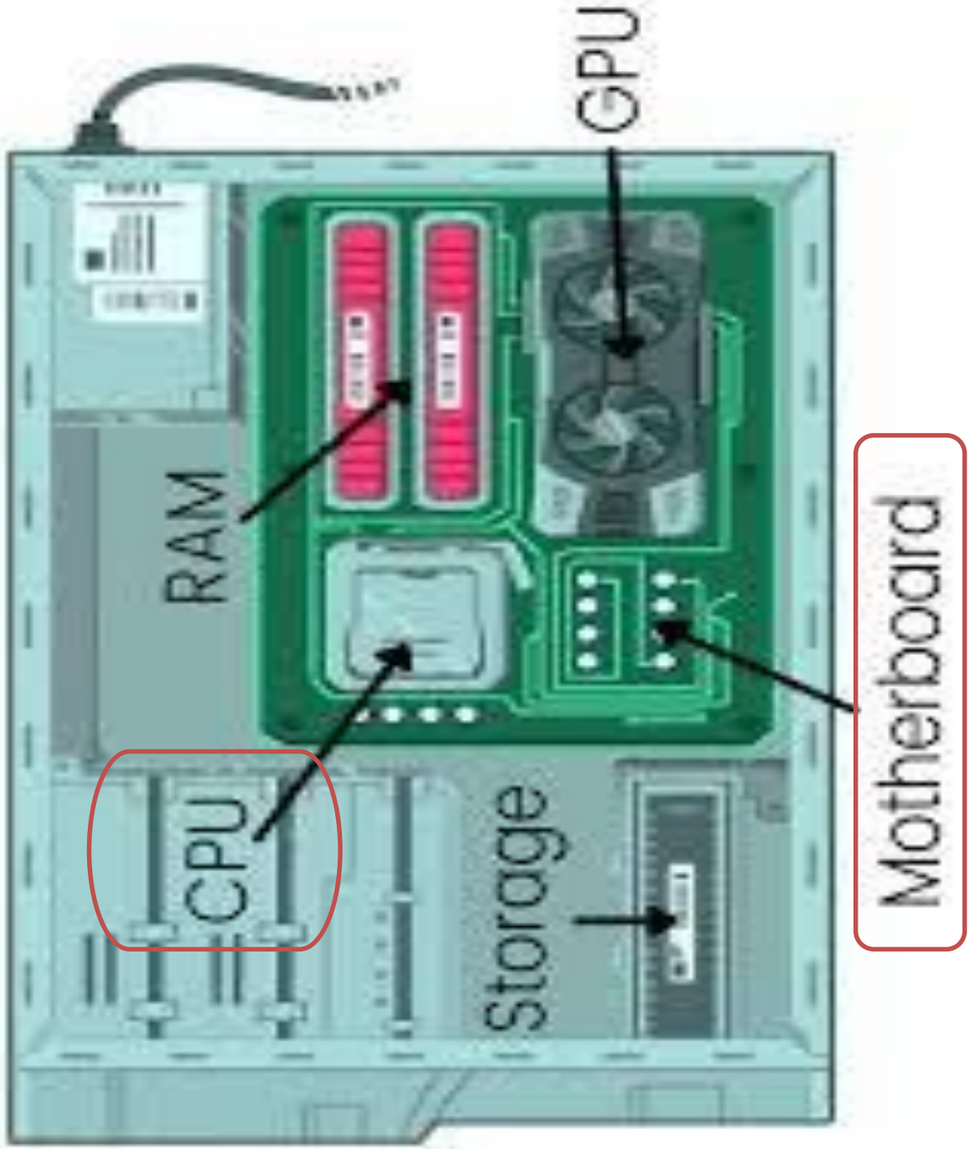

Fig:01

TITLE

“CPU and Motherboard”

“The Heart of Your Computer”

“ Overview”

- Introduction.
- Motivation.
- Describe CPU.
- Describe Motherboard.
- Conclusion.

“MOTIVATION”

This presentation is motivated by the need to demystify these critical components and explore their roles in the computing ecosystem.

- **Understanding CPU and Motherboard.**
- **Impact on Performance.**
- **Upgrade and Compatibility.**
- **Empowering Informed Choices.**

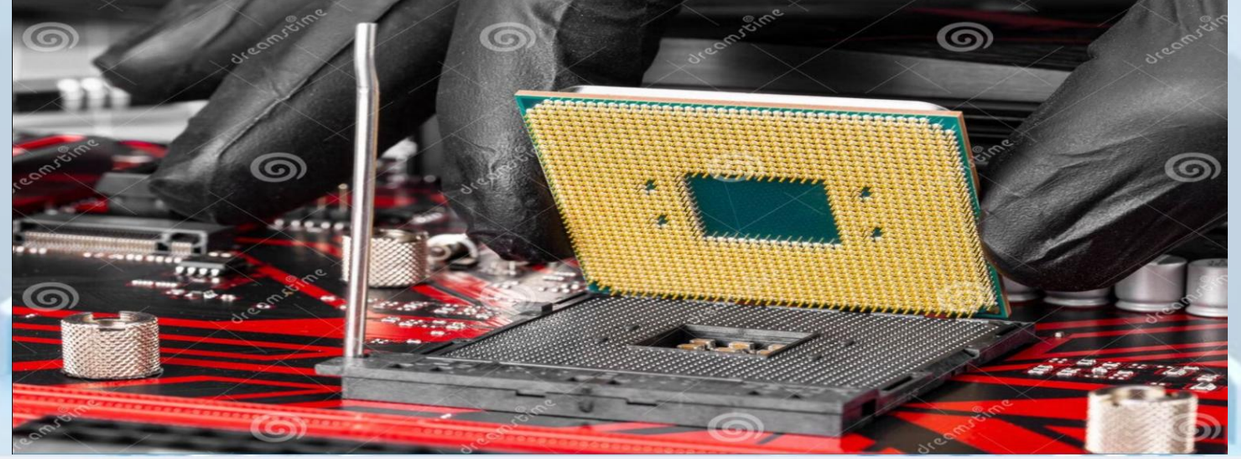

Fig:02

What is a CPU?

1 Brain of the Computer

Processes instructions and performs calculations.

2 Speed Matters

Measured in GHz, affects overall system performance.

3 Multi-Core Power

Multiple processing units for enhanced multitasking capabilities.

Components of CPU:-

The main components of a CPU are:

- **Control Unit:** Directs operations.
- **ALU:** Handles calculations.
- **Registers:** Store data temporarily.
- **Cache:** Speeds up data access.
- **Busses:** Transfer data.
- **Clock:** Sets processing speed.

Thease parts work together to process tasks quickly.

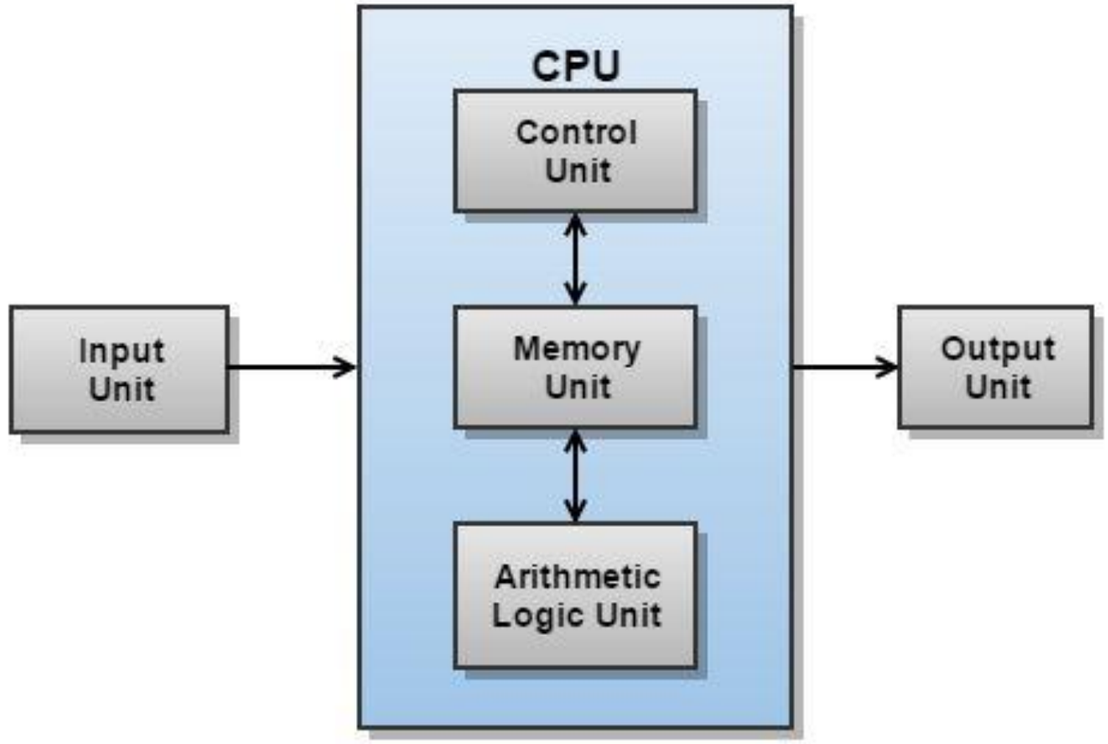

Fig:03

Popular CPUs in the Market

Model	Cores	Clock Speed
Intel Core i9-13900K	24	5.8 GHz
AMD Ryzen 9 7950X	16	5.7 GHz

Fig:04

What is Motherboard?

Function

Connects CPU, RAM, storage, and peripherals.

Compatibility

Determines component compatibility (CPU socket, RAM type).

Form Factors

Popular sizes: ATX, Micro-ATX, Mini-ITX.

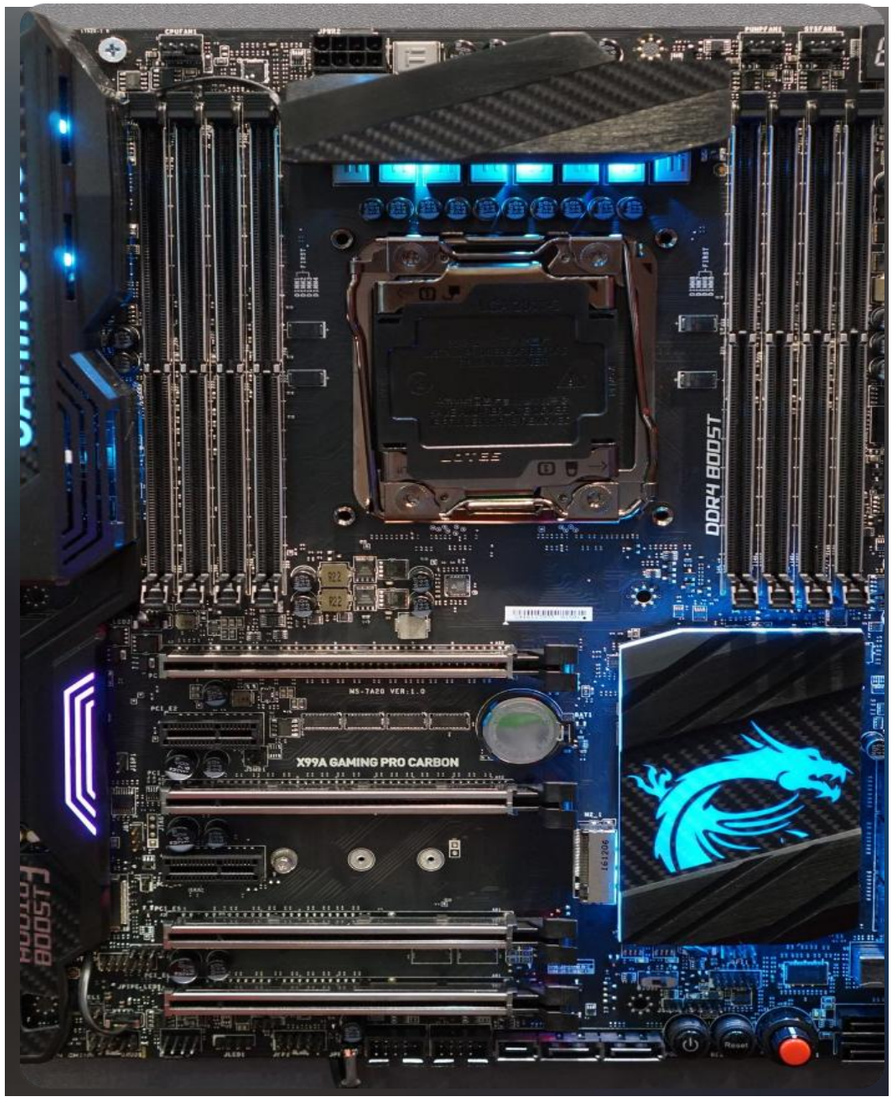

Fig:05

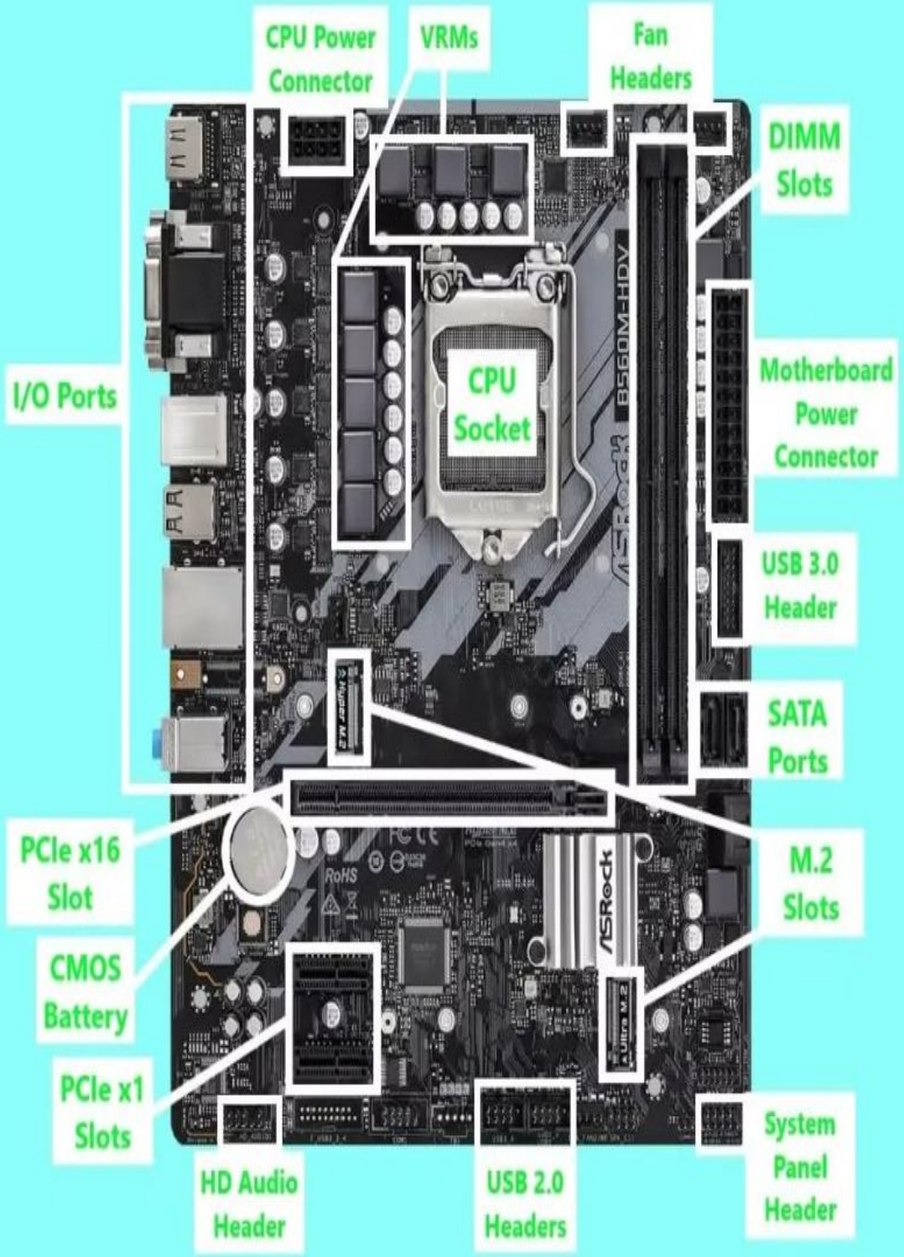

Fig:06

Key Components of a Motherboard

1

CPU Socket

Houses and connects the CPU.

2

RAM Slots

Accommodate memory modules for system RAM.

3

PCIe Slots

Expand functionality with graphics cards and peripherals

4

Storage Ports

Connect SSDs and HDDs via SATA/M.2.

Popular Motherboards

Fig:07

ASUS ROG Strix Z790-E

High-end Intel gaming motherboard with PCIe 5.0.

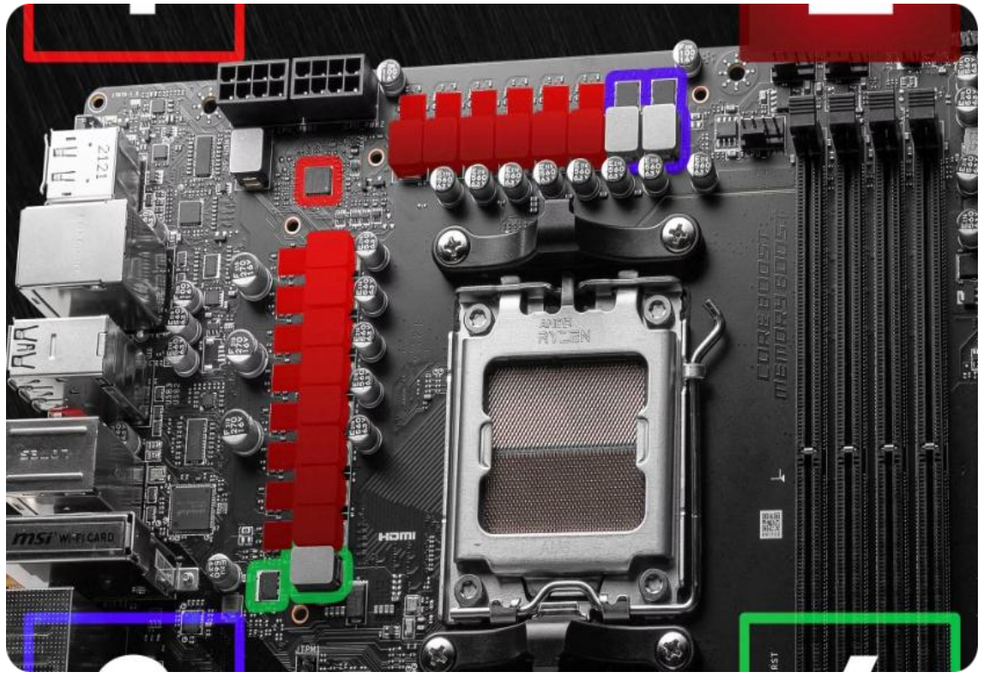

Fig:08

MSI MAG B650 TOMAHAWK

AMD Ryzen compatible with PCIe 4.0 support.

Summary

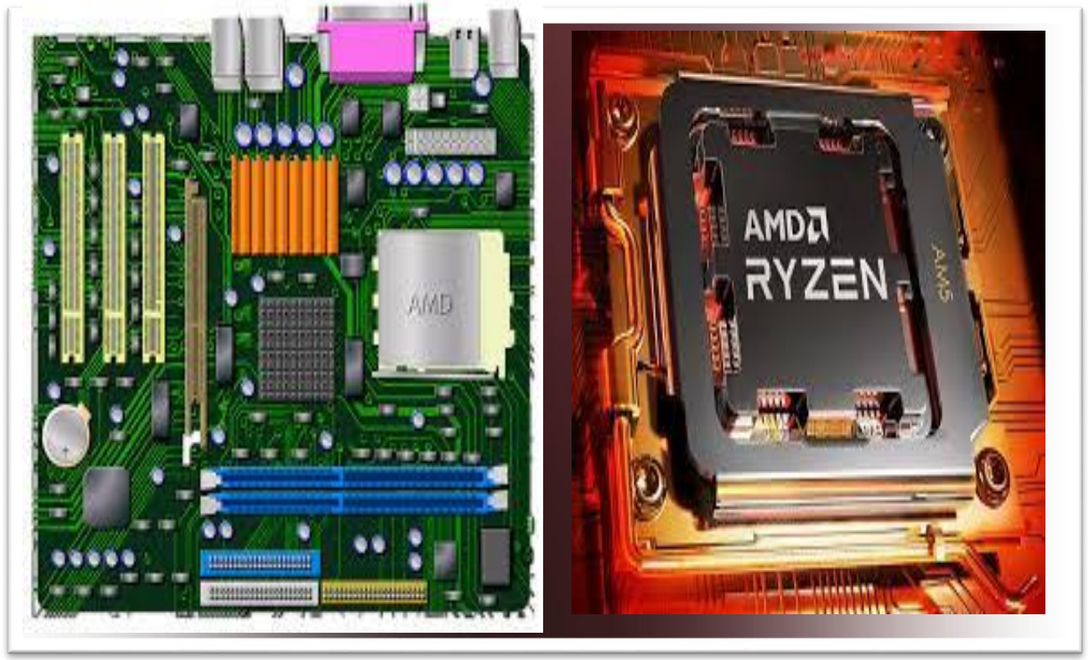

Fig:09

CPU

Processes tasks, runs applications.

Motherboard

Connects and powers all system components.

Compatibility

Crucial for optimal system performance.

THANK YOU FOR BEING HERE....