


Computer Organization and Architecture

- Computer Architecture is a functional description of requirements and design implementation for the various parts of computer.
- It deals with functional behavior of computer system. It comes before the computer organization while designing a computer.

□ **Computer Organization:**

- Computer Organization comes after the decide of Computer Architecture first.
- Computer Organization is how operational attribute are linked together and contribute to realize the architectural specification.
- Computer Organization deals with structural relationship.



Computer Architecture	Computer Organization
Computer Architecture is concerned with the way hardware components are connected together to form a computer system.	Computer Organization is concerned with the structure and behaviour of a computer system as seen by the user.
It acts as the interface between hardware and software.	It deals with the components of a connection in a system.
Computer Architecture helps us to understand the functionalities of a system.	Computer Organization tells us how exactly all the units in the system are arranged and interconnected.
A programmer can view architecture in terms of instructions, addressing modes and registers.	Whereas Organization expresses the realization of architecture.
While designing a computer system architecture is considered first.	An organization is done on the basis of architecture.
Computer Architecture deals with high-level design issues.	Computer Organization deals with low-level design issues.
Architecture involves Logic (Instruction sets, Addressing modes, Data types, Cache optimization)	Organization involves Physical Components (Circuit design, Adders, Signals, Peripherals)

