Computer System Architecture

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Tutorial 1:

1. Give two examples for Computer Architecture and Computer Organization.

Example for Computer Architecture:

1. Instruction set
2. Number of bits
3. I/0 mechanism
4. Addressing technique

Example for Computer Organization:

1. Control signals
2. Interfaces between computer and peripherals
3. The memory technology
4. Give the meaning of structure and function in each level of computer system.

Structure: The way the components are interrelated

Function: The operation of each individual component as part of the structure

1. State the 4 function of computer.
2. Data Processing
3. Data Storage
4. Data movement
5. Control
6. What is the function of data processing in computer?

Processing data involve the storage and the external environment.

1. Which type of process involves all 4 function of Computer?

Control

1. What is the main structure of the CPU? Explain function of the structures.

Control Unit controls the operation of the CPU and hence the computer.

Arithmetic and logic unit (ALU) performs the computer’s data processing functions.

Registers provides storage to the CPU internally.

CPU interconnection provides communication between control unit, ALU and registers.

1. What is the switches used in the EDVAC?

Electromechanical relays

1. What is the main different of IBM 7094 with the IAS computer?

IBM 7094 computer used transistor whereas IAS computer used vacuum tube.

1. What are the two elements used in integrated circuits for processing and storage?

Gate for data processing and memory cells for data storage.

1. What is the main disadvantage of ferromagnetic material memory?

Destructive readout (Other: Fast but bulky, Expensive)