



Computer Architecture

The _____ format is usually used to store data.

- a) BCD
- b) Decimal
- c) Hexadecimal
- d) Octal

Answer: a

Explanation: The data usually used by computers have to be stored and represented in a particular format for ease of use.

A source program is usually in _____

- a) Assembly language
- b) Machine level language
- c) High-level language
- d) Natural language

Answer: c

Explanation: The program written and before being compiled or assembled is called as a source program.

Which memory device is generally made of semiconductors?

- a) RAM
- b) Hard-disk
- c) Floppy disk
- d) Cd disk

Answer: a

Explanation: Memory devices are usually made of semiconductors for faster manipulation of the contents.

The small extremely fast, RAM's are called as _____

- a) Cache
- b) Heaps
- c) Accumulators
- d) Stacks

Answer: a

Explanation: These small and fast memory devices are compared to RAM because they optimize the performance of the system and they only keep files which are required by the current process in them

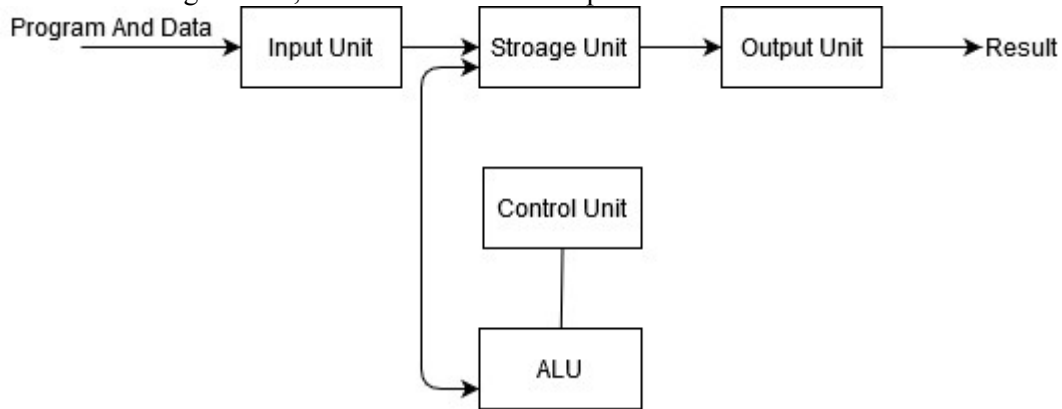
Computer architecture functional unit:

Computer architecture deals with the specification of the instruction set and the hardware units that implement the instructions.

Computer hardware consists of electronic circuits, displays, magnetic and optic storage media and also the communication facilities.

Functional units are a part of a CPU that performs the operations and calculations called for by the computer program.

Functional units of a computer system are parts of the CPU (Central Processing Unit) that performs the operations and calculations called for by the computer program. A computer consists of five main components namely, Input unit, Central Processing Unit, Memory unit Arithmetic & logical unit, Control unit and an Output unit.



Input unit

- Input units are used by the computer to read the data. The most commonly used input devices are keyboards, mouse, joysticks, trackballs, microphones, etc.

Central processing unit

- Central processing unit commonly known as CPU can be referred as an electronic circuitry within a computer that carries out the instructions given by a computer program by performing the basic arithmetic, logical, control and input/output (I/O) operations specified by the instructions.

Memory unit

- The Memory unit can be referred to as the storage area in which programs are kept which are running, and that contains data needed by the running programs.
 - The Memory unit can be categorized in two ways namely, primary memory and secondary memory.
 - It enables a processor to access running execution applications and services that are temporarily stored in a specific memory location.
 - Primary storage is the fastest memory that operates at electronic speeds. Primary memory contains a large number of semiconductor storage cells, capable of storing a bit of information. The word length of a computer is between 16-64 bits.
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Arithmetic & logical unit

- Most of all the arithmetic and logical operations of a computer are executed in the ALU (Arithmetic and Logical Unit) of the processor. It performs arithmetic operations like addition, subtraction, multiplication, division and also the logical operations like AND, OR, NOT operations.

Control unit

- The control unit is a component of a computer's central processing unit that coordinates the operation of the processor. It tells the computer's memory, arithmetic/logic unit and input and output devices how to respond to a program's instructions.

Output Unit

- The primary function of the output unit is to send the processed results to the user. Output devices display information in a way that the user can understand.

An n-bit microprocessor has

- a) n-bit program counter b) n-bit address registers
c) n-bit ALU d) n-bit instruction registers

Ans.: d

Cache memory works on the principle of

- a) Locality of data
b) Locality of memory
c) Locality of reference
d) Locality of reference & memory

Ans.: c

The circuit converting binary data in to decimal is

- a) Encoder
b) Multiplexer
c) Decoder
d) Code converter

Ans.: d

Status bit is also called

- a) Binary bit
b) Flag bit
c) Signed bit
d) Unsigned bit

Ans.: b

An address in main memory is called

- a) Physical address
- b) Logical address
- c) Memory address
- d) Word address

Ans.: a

register keeps track of the instructions stored in program stored in memory.

- A. AR (Address Register)
- B. XR (Index Register)
- C. PG (Program Counter)
- D. AC (Accumulator)

Correct Answer

PC (Program Counter)

5 The memory unit that communicates directly with the CPU is called the

- A. main memory
- B. Secondary memory
- C. shared memory
- D. auxiliary memory.

Correct Answer:

main memory
