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Answer to the Question No-1

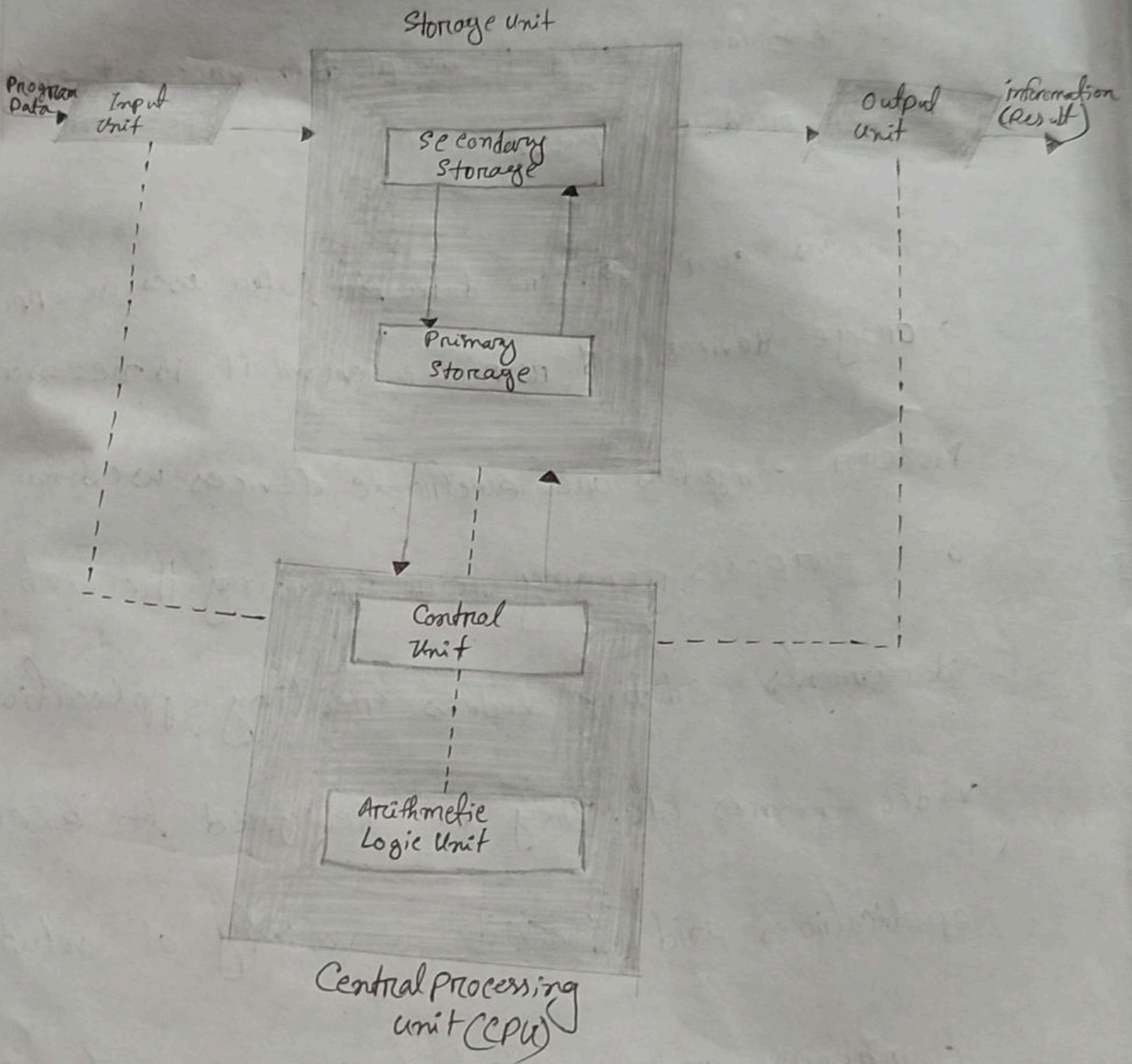
* Computer : A computer is a machine or device that performs processes, calculations and operations based on instructions provided by a software or hardware program. It has the ability to accept data, process it and then produce outputs.

Computers can also store data for later uses in appropriate storage devices, and retrieve whenever it is necessary.

Modern computers are electronic devices used for a variety of purposes ranging from browsing the web, writing documents, editing videos, creating applications, playing video games etc. They are designed to execute applications and provide a variety of solutions by combining integrated hardware and software.

② Components.

* Computer Organization Diagram :

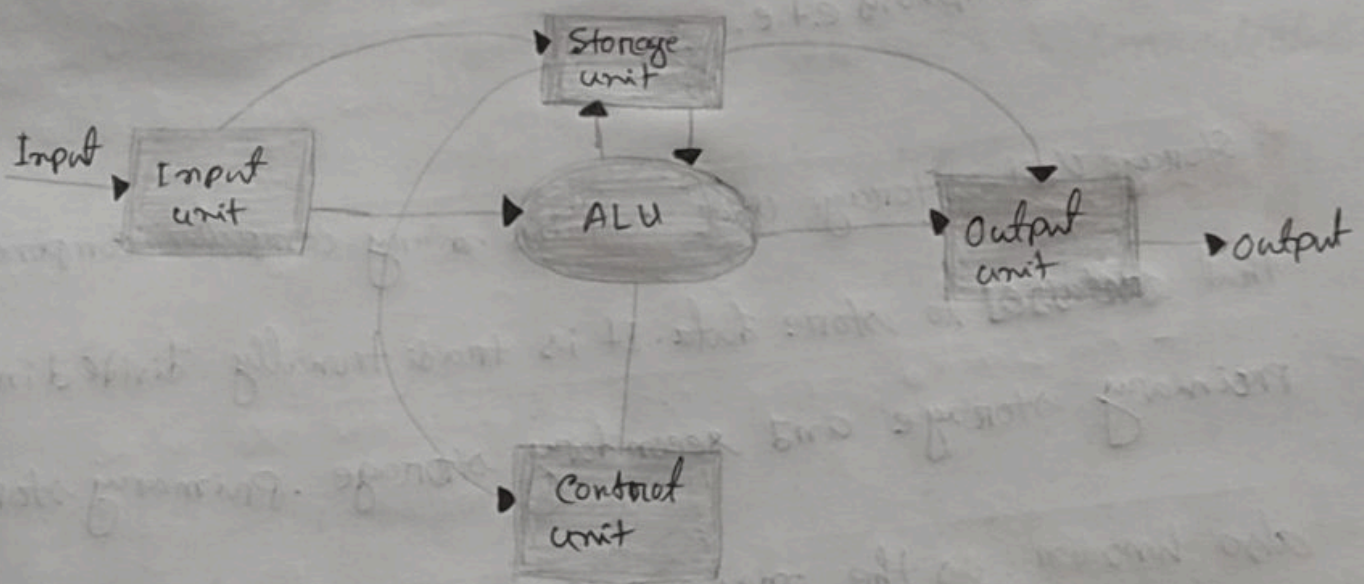


Computer Organization Diagram

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Answer to the Question no-2

② A computer system is basically a machine that simplifies complicated tasks. It should maximize performance and reduce cost as well as power consumption. The different components in the Computer System Architecture are Input unit, Output unit, Storage unit, Arithmetic Logic unit, Control unit e.t.c.



*Input unit : The input unit provides data to the computer system from the outside. So basically it links the external Environment with the computer. It takes data from the Input device, converts it into machine language and then loads it into

④ the Computer system. keyboard, Mouse, printer etc are the most used input device.

* Output Unit: The output unit provides the result of Computer process to the user, i.e. it links the computer with the external environment. Most of the output data is the form of audio or video. The different output device are monitor, printer, speaker, headphones etc.

* Storage Unit: Storage unit contains many computer components that are used to store data. It is traditionally divided into primary storage and secondary storage. Primary storage also known as the main memory and is the memory directly accessible by the CPU. Secondary or external storage is not accessible by the CPU. The data from secondary

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storage needs to be brought into the primary storage before the CPU can use it.

* Arithmetic logic unit: All the calculation related to the computer systems are performed by the arithmetic logic unit. It can perform operation like addition, subtraction, multiplication, division etc. The control unit transfer data from storage unit to arithmetic unit when calculation need to be perform. The arithmetic logic unit and the control unit together form the central processing unit.

* Control unit: This unit controls all the others units of the computer system and it handles the data and activities of the various physical components of the computer. It transfers instructions between a computers hardware and software. It is also known as a processor, microprocessor, or central processor.

⑥ Differences between primary and secondary storage:

Primary Storage

① Primary storage is temporary

② Primary storage is directly accessible by processor/cpu.

③ Primary storage devices are expensive.

④ It has faster data access.

⑤ It's used for processing data.

⑥ It has limited storage capacity.

⑦ Small size

⑧ Example: RAM, ROM, PROM.

Secondary Storage

① Secondary storage is permanent.

② Secondary storage is not directly accessible by CPU.

③ Secondary storage devices are less expensive when compare to primary storage devices

④ It has slower data access.

⑤ It's used for storing data.

⑥ It has expensive and scalable storage capacity.

⑦ Large size

⑧ Example: HDD, CD, DVD.

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Answer to the Question No-3

* Translator: A translator is a piece of software that handles the translation of source code into a form that can be executed by a processor. Interpreters, compilers and assemblers are all types of translator. It takes a program written in the source program and modifies it into a machine program. It can find and detect the error during translation.

Example of translator:

- ☑ Interpreter : Ocaml, List processing (LISP), Python.
- ☑ Assembler : Fortran Assembly program (FAP)
Symbolic Optimal Assembly Program (SOAP).
- ☑ Compiler : Microsoft visual studio, Common business oriented language.

⑧ * High level language to machine code :

A high level language to machine code can be done by interpreter coding. A translator, in software programming terms, is a generic term that could refer to a compiler, assembler, or interpreter; anything that converts higher level code into another high-level code (e.g., Basic, C++, Fortran, Java) or lower-level (i.e., a language that the processor can understand), such as assembly language.

- Interpreter: An interpreter translates code like a compiler but reads the code and immediately executes on that code, and therefore is initially faster than a compiler.
- Compiler: Compiler is a computer program that translates a program written in a high-level language to the machine language of a computer. The compiler is used to translate source code into machine code or compiled one.