CCA-101 Fundamental of IF (programing)

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Assignment - 1

Q1 What are the four fundamental parts of computer? Explain it with the help of diagram.

Ans⇒ Four fundamental parts of Computer

1. Monitor
2. Keyboard
3. Mouse
4. C.P.U

Explain

1. Monitor

A computer monitor, technically termed as a VDU, can be plainly described as an electronic device that transmits information from the computer onto a screen, thereby acting as an interface and connecting the views with the computer.

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② Keyboard

Programs and data are entered into a computer through a keyboard which is attached to a computer. A keyboard is similar to the keyboard of a typewriter. It contains alphabets, digits, special characters, function keys and some keys.

③ Mouse

A mouse is a pointing device. It is held in one hand and is moved across a flat surface.

④ C.P.U Central Processing Unit

The C.P.U is the brain of a computer. Its primary job is to run program and control the operation of all other components, such as memory, keyboard and printer.

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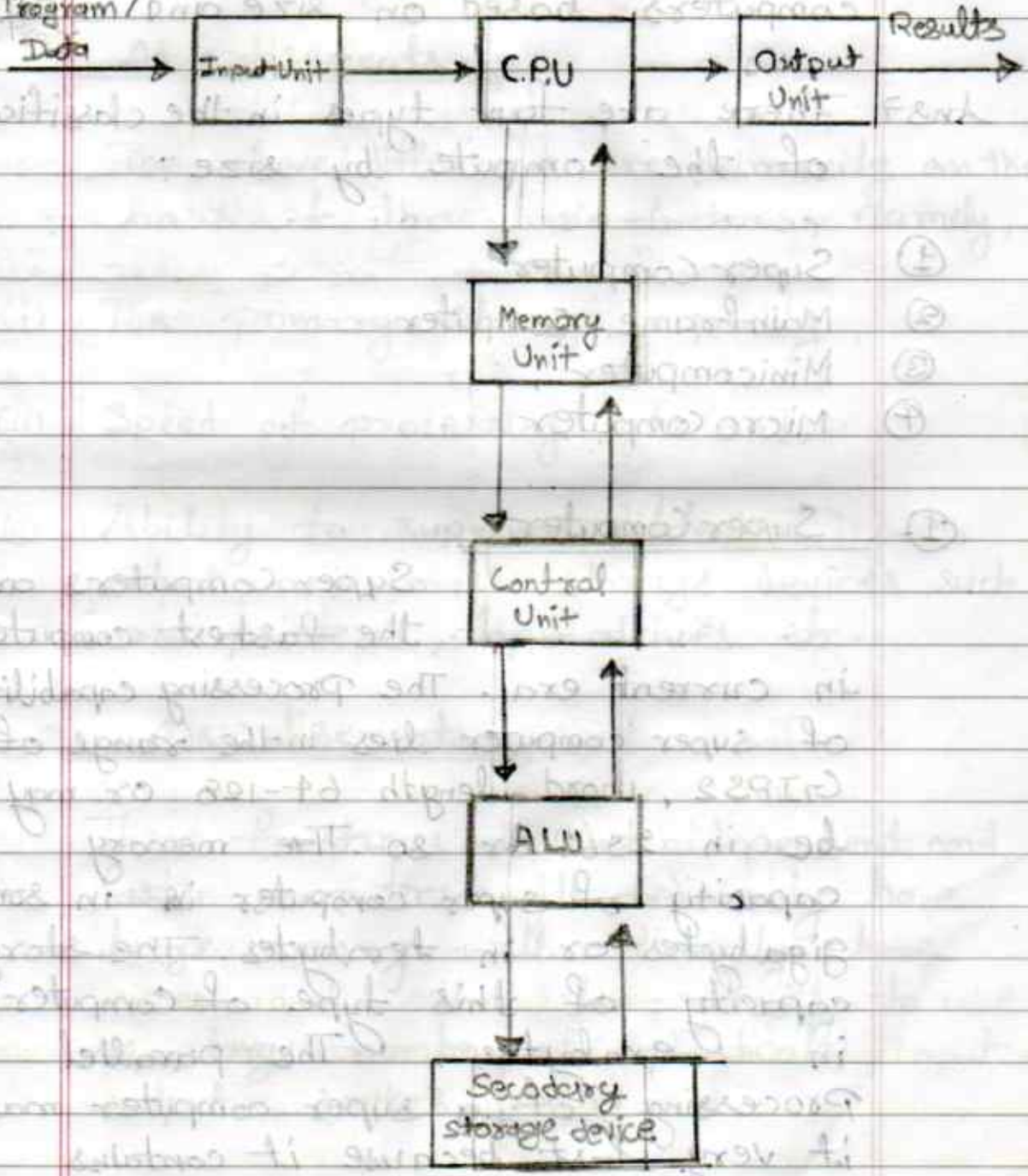
Explain Diagram.



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Q2- Discuss about the classification of computers based on size and capacity

Ans- There are four types in the classificatio of the compute by size:

1. Super Computer
2. Mainframe Computer
3. Minicomputer
4. Micro computer

1. Super Computer

Super Computers are the ~~fastest~~ computer in current era. The Processing capabilities of super computer lies in the range of GIPS2, word length 64-128 or may be in 256 or so. The memory capacity of super computer is in some gigabytes or in terabytes. The storage capacity of this type of computer in exabytes. The parallel Processing of a super computer make it very fast because it contains number of C.P.U that operates paralle

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The size factors

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The above differences are primarily on the basis of three basic factors, namely,

(i) The primary storage capacity,

(ii) Speed of processing data and,

(iii) Ability to support different input, output and mass storage devices such as printers, tape drives etc.

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These features are inter dependent and faster computers will ordinarily have large memory ~~will ordinarily have~~ sizes and shall have facility to use a large number of sophisticated input-output devices.

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(2) Mainframes Computers

Mainframes are bigger computers, capable of handling data processing needs of, say, head office of a bank, or a big multinational company or may be a public utility office. Mainframe computer systems have large storage and the speed of processing is also very high.

They also offer the advantage of wider choice with regard to up gradition of the system in future.

The speed of processing is expressed in terms of 10 to 100 millions of instrications per second (MIPS), and cost somewhere between 1 to 5 millions dollars depending upon the configuration. IBM still holds almost 80 per cent of mainframe market with its popular mainframe series IBM System 390.

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The mainframe popularity has fallen due to emergence of micro computers and popularity of client server technology. However, they still find niche markets in large volume data processing requirments such as central database servers.

③ Mini Computers :-

Mini computers are very popular among medium sized companies. Mini computer offer facilities for faster processing of voluminous information. Mini Computer, of course, are bigger then microcomputers but smaller than most of their elders called mainframes.

They cost somewhere between Rs. 5 to 15 lac depending upon the configuration. However, these prices are only indicative and are subject to substantial change over time.

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They have also been used extensively as gateways between mainframe networks and as main servers for local area networks of micro computer

④. Micro Computers

The smallest among them are micro-computers. They are small in physical siz (most of them are desktop system; however, notebook micro computers that can fit into a briefcase are also avilable). They are economical in terms of costs and are friendly in use. Personal Computers (PCs) fall into this category.

These computer can be used for sma data processing jobs of biggar companies or serve as complete computer systems for small firms. PC can al be connected with bigger.

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Q3. What is the meaning of compute generation? How many Computer Generations are difined? What technologies were/are used?

Ans⇒ Generation in computer terminology is a change in technology a computer is/was being used. Initially, the generation term was used to distinguish between varying hardware technologies. Nowadays generation includes both hardware and software, which together make up an entire computer system.

The computers are divided into five generation —

① First Generation Computer: Vacuum Tubes (1940 - 1956)

② Second Generation Computers (1956 - 1963)

③ Third Generation Computers (1964 - 1971)

④ Fourth Generation Computers (1971 - Present)

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(5) Fifth Generation Computers (Present and beyond)

1- First Generation Computer : Vacuum Tubes (1940-1956)

The technology behind the primary generation computers was a fragile glass device, which was called vacuum tubes. These computers were very heavy and realy large in size These weren't very reliable and Programming on them was a relly tedious tasks as they used high-level Programming language and used no Os

First-generation computers were used for calculation, storage, and control that they needed a full room and consume lot of electricity.

Main first generation computers are

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- ENIAC
- EDVAC
- UNIVAC

② Second Generation Computer:
Transistors (1956-1963)

Second Generation computers used the technology of transistors rather than bulky vacuum tubes. Another feature was the core storage. A transistor may be a device composed of semiconductor metrial that amplifies a sign or opens or closes a circuit.

Programing language was shifted from high level to programing language and made programming comparatively a simple task for programmers.

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3. Third Generation Computers: Integrated Circuits. (1964 - 1971)

During the third generation, technology envisaged a shift from huge transistors to integrated circuits, also referred to as IC. Here a variety of transistors were placed on silicon chips, called semiconductors was the most speed and reliability. IC was made from silicon and also called silicon chips.

4. Fourth Generation Computers: Micro-processors (1971 - Present)

In 1971 first microprocessors were used, the large scale of integration LSI circuits built on one chip called microprocessors. The most advantage of this technology is that one microprocessor can contain all the circuits required to perform arithmetic, logic, and control functions on one chip.

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Technologies like multiprocessing, multiprogramming, time-sharing operating speed, and virtual memory made it a more user-friendly and customary device.

5- Fifth Generation Computers:

The technology behind the fifth generation of computers is AI. It allows computers to behave like humans. It is often seen in programs like voice recognition, area of medicines, and entertainment. Within the field of games playing also it's shown remarkable performance where computer are capable of beating human competitors.

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Q4. Differentiate between Volatile & Non-Volatile memories.

Ans- **Volatile Memory -** Volatile Memory is a type of memory hardware that stores and fetches data at a very high speed.

Non-Volatile Memory - Non-Volatile memory is a permanent memory.

Difference Between Volatile Memory and Non-Volatile Memory -

	Volatile memory	Non-Volatile mem
1-	Volatile memory are stored temporarily.	Non-Volatile memory ar stored permanently.
2-	RAM is an example of	

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	Volatile memory.	ROM is an example of Non-Volatile memory.
3.	Volatile memory is more costly per unit size.	Non-Volatile memory is less costly per unit size.
4.	Volatile memory has a huge impact on the system's performance.	Non-Volatile memory has a huge impact on a system's storage capacity.
5.	In volatile memory, Processor has direct access to data.	In non-Volatile memory, Processor has no direct access to data.
6.	Volatile memory chips are generally kept on the memory slot.	Non-Volatile memory chips are embedded on the motherboard.
7.	Volatile memory is the type of memory in which data is lost as it is powered off.	Non-Volatile memory is the type of memory in which data remains stored even if it is powered-off.

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Q5. Distinguish among system software, application software and open soure software on the basis of their features.

Ans=> System Software

System software is software designed to provided a platform for other software. Examplas of system software include operating systems like macOS, Linux, Android and Microsoft Windows computational sciene software, game engines, search engines, industrial automation, and software as a service applications.

Application software

An application program (software application, or application, or app for short) is a computer program designed to carry out a specific task other than one relating to the operation of the computer itself, typically to be used by

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end-users. Word processors, media players, and accounting software are examples.

3- Open Soure Software

Open soure software is software with source code that anyone can inspect, modify, and enhance.

- 5 Features of Open Soource Software

- Innovation... Open-source software helps facilitate more rapid innovation as it encourages the sharing of resources and information that in turn support technical development.

- Freedom ...
- Integrity ....
- Continuity ....
- Giving Back to the Community .....
- Final Thoughts .....

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