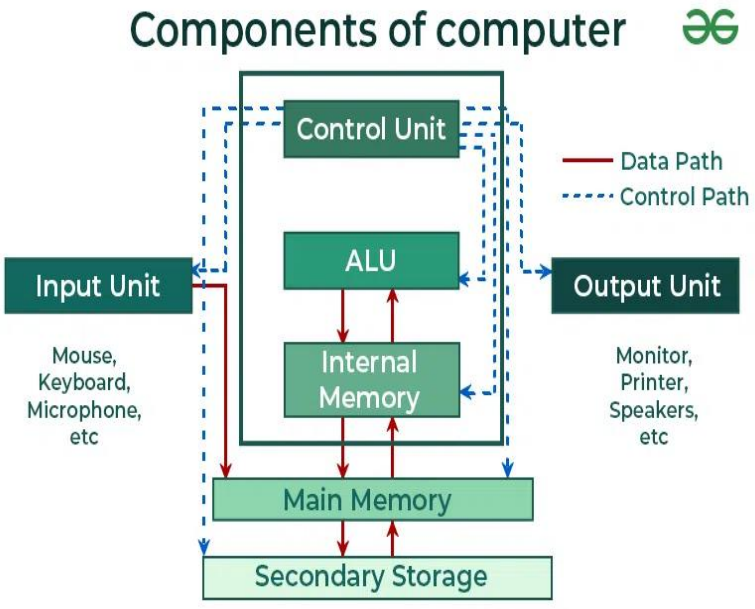
CCA-101: Fundamentals of IT & Programming

Assignment -1

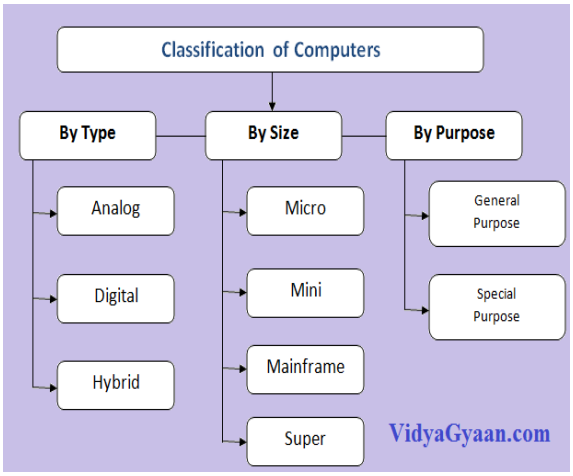
Q1: What are the four fundamental parts of computer? Explain it with the help of diagram.

The four main parts of a computer which ensure the users can access a wide variety of tools and services include the central processing unit, or CPU, the motherboard, the hard drive, and random-access memory, or RAM.



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

There are five main kinds of computers based on size: PC (Personal Computer), minicomputer, microcomputers, supercomputers, and mainframe.



Q3: What is the meaning of computer generation? How many Computer Generations are defined? What technologies were/are used?

Generations of Computer: The modern computer took its shape with the arrival of your time. It had been around the 16th century when the evolution of the computer started. The initial computer faced many changes, obviously for the betterment. It continuously improved itself in terms of speed, accuracy, size, and price to urge the form of the fashionable day computer.

The basic terms related to generations of computers are listed below.

1. **Vacuum Tube:** Vacuum tubes have the functionality of controlling the flow of electronics in a vacuum. Generally, it is used in switches, amplifiers, radios, televisions, etc.
2. **Transistor:** A transistor helps in controlling the flow of electricity in devices, it works as an amplifier or a switch.
3. **Integrated Circuit (IC):** Integrated circuits are silicon chips that contain their circuit elements like transistors, resistors, etc.
4. **Microprocessors**: Microprocessors are the components that contain the CPU and its circuits and are present in the Integrated Circuit.
5. **Central Processing Unit (CPU):** The CPU is called the brain of the computer. CPU performs processing and operations work.
6. **Magnetic Drum:** Magnetic Drum is like a cylinder that stores data and cylinder.
7. **Magnetic Core:** Magnetic cores are used to store information. These are arrays of small rings.
8. **Machine Language:** Machine Language is the language that a computer accepts (in the form of binary digits). It is also called low-level programming language.
9. **Memory:** Memory is used to store data, information, and program in a computer.
10. **Artificial Intelligence:** Artificial intelligence deals with creating intelligent machines and behaviours.

Q4: Differentiate between Volatile & Non- Volatile memories.

Difference Between Volatile Memory and Non-Volatile Memory

Parameter	Volatile Memory	Non-Volatile Memory
Speed	The volatile memory is the fastest form of memory in nature. These memories hold the most frequently used data- and any user can access them quickly.	Non-volatile memory is a relatively slower form of memory. The process of accessing data from a non-volatile memory is comparatively slower.
Data Retention	It can only retain data until there is a continuous power supply.	It retains data and info even after one turns the power supply off.
Data Transfer	Transferring data from a volatile memory is very easy.	Transferring data from a non-volatile memory is very difficult.
Permanency	The information and data in volatile memory are not permanent.	The information and data in non-volatile memory are permanent unless deleted.
CPU Access	The device’s CPU can easily access the data stored on the Volatile memory.	The system needs to copy data to the volatile memory from the non-volatile memory to allow the CPU to access it.

Amount of Storage	A volatile memory has a very low capacity.	A non-volatile memory, like an HDD, has a very high capacity.

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

Difference Between System Software and Application Software	
System Software	**Application Software**
This acts as an interface between the system and the applications	This is designed directly from the user perspective
It is the platform that allows the various application software to run on the system	These are independent applications which can be download and installed in the system
System Software is generally developed in low-level languages. This is so that the interaction between the software and hardware can be simplified and made more compatible	Each application has a specific purpose and thus is developed with high-level languages so that the purpose can be fulfilled
Is working is more automated. Once a system is turned on, the system software starts working	User action is required to start application software. These applications can only be work when the user commands the system to do so
These are responsible for the working of the system	They have minimum involvement in the processing and functioning of the computer device

Q6. a) Create a file in MS-word to insert a paragraph about yourself and save it with file name "yourself". Describe all steps involved in it.

Q6 b) Write steps regarding followings

- To change the font style
- To change the font size
- To change the font colour
- To highlight (in yellow) the line that reads "need to get IMS's address".

These questions are partial…….

Q7. Create a file in MS-Word for the following document and save it with file name 'ms_word'. Describe all steps involved in it.

Step-by-step explanation:

- Make sure your document is open. ...
- Find the "File" tab and click on it. ...
- Click "Save" or "Save As". ...
- Under "Save As", decide on your save location. ...
- Double-click your save location. ...
- In the "File Name" field, type in your preferred file name.

- Click "Save" to save your file.

Q14. a) What tools are available to customize our PowerPoint presentation?

- Add and delete slides.
- Apply or change a slide layout.
- Apply Themes to presentations.
- Get design ideas for slides.
- Change slide masters.
- Change the page orientation.
- Add a watermark to your slides.
- Organize slides into sections.

Q16. What is the difference between Machine Language and High-Level Language?

Difference Between High-Level and Low-Level Languages

Parameter	High-Level Language	Low-Level Language
Basic	These are programmer-friendly languages that are manageable, easy to understand, debug, and widely used in today's times.	These are machine-friendly languages that are very difficult to understand by human beings but easy to interpret by machines.
Ease of Execution	These are very easy to execute.	These are very difficult to execute.
Process of Translation	High-level languages require the use of a compiler or an interpreter for their translation into the machine code.	Low-level language requires an assembler for directly translating the instructions of the machine language.
Efficiency of Memory	These languages have a very low memory efficiency. It means that they consume more memory than any low-level language.	These languages have a very high memory efficiency. It means that they consume less energy as compared to any high-level language

Q17. Discuss about different data types of C programming Language.

Primary Data Types in C

Here are the five primitive or primary data types that one can find in C programming language:

1. Integer – We use these for storing various whole numbers, such as 5, 8, 67, 2390, etc.

2. Character – It refers to all ASCII character sets as well as the single alphabets, such as ‘x’, ‘Y’, etc.

3. Double – These include all large types of numeric values that do not come under either floating-point data type or integer data type. Visit double data in c to know more.

4. Floating-point – These refer to all the real number values or decimal points, such as 40.1, 820.673, 5.9, etc.

5. Void – This term refers to no values at all. We mostly use this data type when defining the functions in a program.

Q19. Describe the syntax of the following statements

a) If – else statement b) for loop c) while loop d) do-while loop

Q8.Equations:

$X_2 + Y_5 = 30$

$Z^3 + Q^4 = 50$

$A_2 + B^8 = X_2 + Y^8$

Q9.Xxxx yyyy zzzzz

Xxxx yyyy zzzzz

Xxxx yyyy zzzzz

Xxxx yyyy zzzzz	Xxxx yyyy zzzzz	Xxxx yyyy zzzzz

Q10.Create a table.

Alice Super Market				
S.no	**Item**	**Quantity**	**Rate**	**Amount**
1	**Sugar**	**2kg**	**50**	**100**
2	**Salt**	**2nos**	**15**	**30**
3	**Turmeric**	**10nos**	**2**	**20**
4	**Pepper**	**50grm**	**100**	**50**
5	**Rice**	**5kg**	**50**	**250**

Roll No	Name	Marks
1	n1	60
2	n2	70
3	n3	80
4	n4	90
5	n5	40
6	n6	50
7	n7	77
8	n8	44
9	n9	88
10	n10	55
	SUM	654
	AVERAGE	65.4
	MAX	90
	MIN	40