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Assignment 1 $\Rightarrow$ CCA 101 Fundamentals of IT
Programming

Submitted To

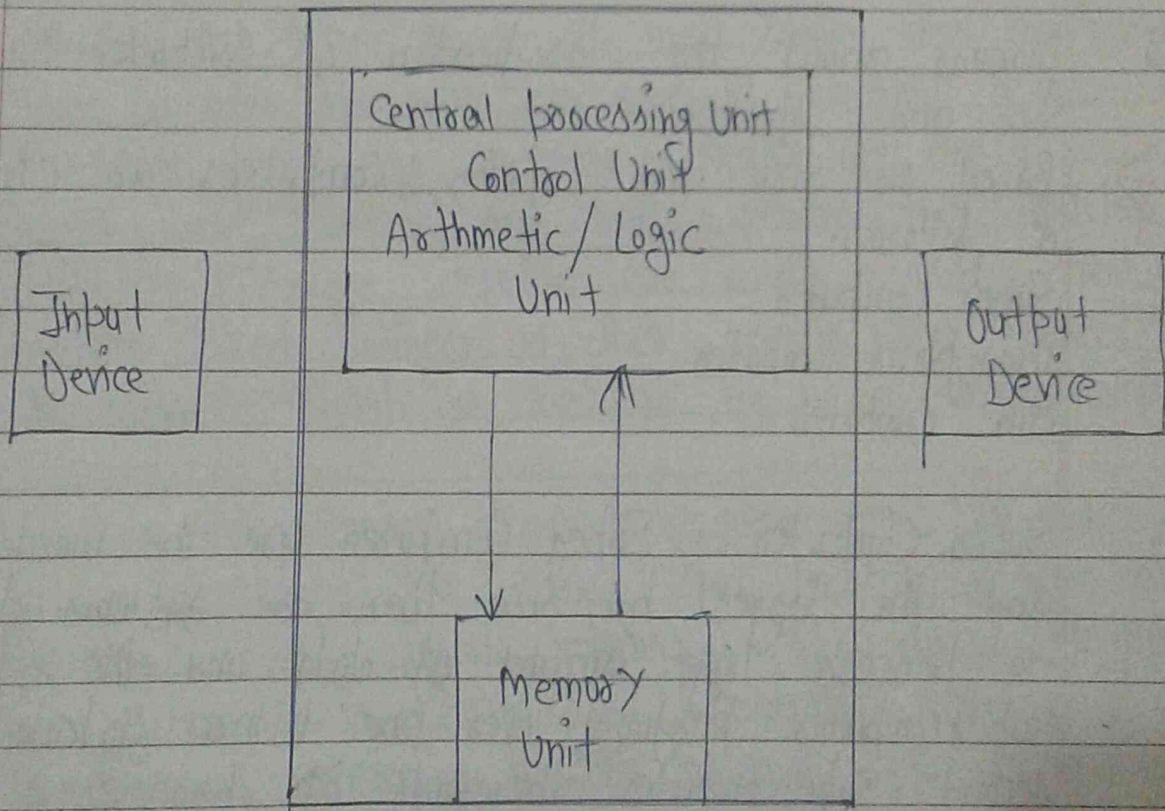
Submitted by

Assignment $\Rightarrow$ 1

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

Ans $\Rightarrow$ A Computer is a fast system that is organized to accept store and process data and produce output results under the direction of a stored program of instruction. This section explains how a Computer system is organized.

Basic organization of Computer system includes input processing unit memory unit and output devices.



Input Device $\Rightarrow$ Computer system use many device for input purpose input devices include the mouse input pen touch screen and microphone. Regardless of the type of device used all are components for Interaction and Communication between people and Computer System.

Date: _____
Page No: _____

Control processing Unit (CPU) $\Rightarrow$ It is the brain of the Computer without this unit Computer unable to process.

Output Device $\Rightarrow$ Output device is used to show the result of the instructions. Example monitor, printer, Headphones etc.

Memory Unit $\Rightarrow$ A memory unit is the collection of storage unit or devices together the memory unit stores the binary information in the form of bits.

Q.2. Discuss about the classification of Computer based on Size and Capacity.

Ans $\Rightarrow$ Based on Size and Capacity, Computers are classified as follows.

Super Computer

Mainframe Computer

Mini Computer

1. Super Computer $\Rightarrow$ Super Computers are the most powerful and the largest by size these are systems designed to process huge amount of data and the fastest Super Computer perform over one trillion calculations in a second. Super Computers have thousands of processors because of their extraordinary speed, accuracy and solving highly complex problems and performing tasks that demand huge amounts of calculations.

2. Mainframe Computer $\Rightarrow$ Mainframe Computers are very often filling an entire room and can process thousands of instructions per second in a mainframe environment users connect to the mainframe through the many terminals.

wired to the mainframe. Mainframe are capable of supporting hundreds to thousands of users simultaneously. Some of the function performed by a mainframe include flight scheduling reservation and connect to the server through an network by using desktop Computers.

MicroComputer: $\Rightarrow$ MicroComputers are the most frequently used type of Computer. Also known as personal Computer (PC) a microComputer is a small system designed to be used by one person at a time.

MiniComputer: $\Rightarrow$ Mini Computer are much smaller than mainframe. These Computer are also less expensive. Sometimes referred to as Midrange server or midrange Computer. They are typically larger more powerful and more expensive than desktop Computers. Midrange Computers are usually used by small and medium sized business as their servers users connect to the server through a network by using desktop Computers.

Q.3. What is the meaning of Computer generation? How many Computer generations are defined? What technologies were used?

Ans: $\Rightarrow$ The evolution of digital Computing is often divided into generation. Each generation is characterized by dramatic improvements over the previous generation in the internal organization of Computer and programming language.

Five Generation of Computers $\Rightarrow$

1. First Generation
2. Second Generation
3. Third Generation
4. Fourth Generation
5. Fifth Generation

1. First Generation: $\Rightarrow$ Vacuum Tubes (1940-1956): $\Rightarrow$ The first Computer System used vacuum tubes for circuitry and magnetic drums for memory and were often enormous taking up entire rooms. These Computers were very expensive to operate and in addition to using a great deal of electricity the first Computers generated a lot of heat which was often the malfunction. First generation Computers relied on machine language the lowest-level programming language understood by Computers to perform operation and they could only solve one problem at a time. It would take operators days or even weeks to set up a new problem input was based on punched cards and paper tape output displayed on printouts. The UNIVAC (Universal Automatic Computer) and ENIAC (Electronic Numerical Integrator and Computer) Computers are examples of first-generation computing devices. The UNIVAC was the Commercial Computer delivered to a business client, the U.S Census Bureau in 1951.

2. Second Generation: Transistors (1956-1963): $\Rightarrow$ The world would see transistors replace vacuum tubes in the second generation of Computers. The transistor was invented at Bell Labs in 1947 but did not see widespread use in Computers until the late 1950s. The Transistor was far superior to the vacuum tube allowing Computers to become smaller, faster, smaller, cheaper, more energy efficient and more reliable than their first-generation predecessors. Though the transistor still generated a great deal of heat that subjected the Computer to damage it was a vast improvement over the vacuum tube. Second-generation still relied on punched cards for input and printouts for output. Second generation Computers moved from cryptic binary machine language to symbolic or assembly language.

3. Third Generation: Integrated Circuits (1964-1971) : $\Rightarrow$ The development of the integrated circuit was the hallmark of the third generation of Computers. Transistors were miniaturized and placed on silicon chips called semiconductors which drastically increased the speed and efficiency of Computers. Instead of punched cards and printouts users interacted with third generation Computers through keyboards and monitors and interfaced with an operating system which allowed the device to run many different applications at one time with a central program that monitored the memory. Computers for the first time became accessible to a mass audience because they were smaller and cheaper than their predecessors.

4. Fourth Generation: Microprocessors (1971-Present) : $\Rightarrow$ The microprocessor brought the fourth generation of Computers as thousands of integrated circuits were built onto a single silicon chip. What in the first generation filled an entire room could now fit in the palm of the hand. The Intel 4004 chips, developed in 1971 located all the components of the computer from the unit and memory to input/output controls on a single chip.

In 1981 IBM introduced its first Computer for the home use and in 1984 Apple introduced the Macintosh. Microprocessors also moved out of the realm of desktop Computers and into many areas of life as more and more everyday products began to use microprocessors. As these small Computers became more powerful, they could be linked together to form networks which eventually led to the development of the Internet. Fourth generation Computers also saw the development of GUIs, the mouse and hand held devices.

5. Fifth Generation: Artificial Intelligence (Present and Beyond) : $\Rightarrow$ Fifth generation Computing devices based on artificial intelligence are

classmate
Date _____
Page _____

still in development though there are some applications such as voice recognition that are being used today. The use of parallel processing and Super Conductors is helping to make artificial intelligence a reality. Quantum Computation and molecular and nanotechnology will radically change the face of computers in years to come. The goal of fifth-generation computing is to develop devices that respond to natural language input and are capable of learning and self-organization.

Q.4. Differentiate between volatile & Non-volatile memories?

Ans →

Sr No	Volatile	Non-Volatile
1	Temporary Storage	Permanent Storage
2	Store data in MB	Store data in GB
3	Used in normal operation	Use for Start up process of Computer
4	Writing data is faster	Writing data is slower

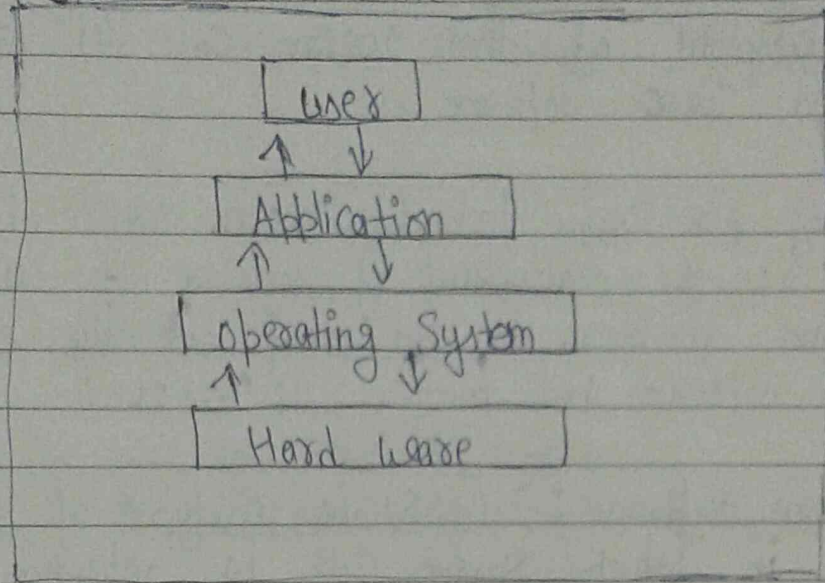
Q.5. Distinguish among System Software, application software and often Source Software on the basis of their features?

Ans → Software is a set of instructions used to operate computers and execute specific tasks.

Type of S/W → The Software is used extensively for different purposes in several domains. It can be categorized into different types.

System Software: → It is a type of software that is designed to run a computer's hardware and application program software like operating system, compiler, editor and drivers etc. come under this category. A computer cannot function without the presence of these. If we think of the computer system as a layered model, the system software is the interface between the hardware and user application.

Q operating System (OS) $\Rightarrow$ operating system acts on manages of all the resources of Computer, i.e. resource manager. It is system software that manages Computer hardware and software resource and provides services. Thus operating system becomes an interface between user and machine.



Operating System Representation

Utility programs $\Rightarrow$ These programs analyze and maintain a Computer. These programs are focused on how OS works on that basis it perform task to enable smooth functioning of Computer. This program may come along with OS like windows defender, windows disk cleanup tool, Antivirus backup software files, manages, disk Compression tool all are Utility software.

Application Software $\Rightarrow$ It is software created for a specific purpose used by end user. It can be called an application or simply an app. Examples: word processor, accounting, application a web browser an email client, media player etc.

Proprietary Software $\Rightarrow$ It is software that is owned by an individual or a company (generally the one that developed it) there are

almost always major restrictions on its use and its Source Code is almost always kept secret. The proprietary software is a non-free Computer Software for which the software is a non-free Computer software of publisher or another person retains intellectual property rights usually copyright of the source code. It is also known as Closed Source software.

Overview of open Source technology ⇒ open source technology is defined as the development of software for allowing end users and developers to not only see the source code of software, but modify it as well.

Open-Source Software ⇒ (OSS) is a type of Computer Software in which Source Code is released under a licence in which the copyright holder grants users the rights to study, change and distribute the software to anyone for any purpose. The Linux operating system (OS) is the best known examples of open Source Software technology.

Q.6 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!

Ans) 1. click on short button

2. click on Microsoft office

3. Select Microsoft office word

4. click the microsoft office button

5. Select new. The new document dialog box appears.

6. Create a file

7. click the microsoft office button

8. Select Save As ⇒ word Document. The save as dialog box appears.

9. Select the location where you want to save the document using the drop-down menu.
10. Enter a file name "yourself" for the document.
11. click the Save button.

Q.7 Write steps regarding followings:

- > To change the font style
- > To change the font size
- > To the font color
- > To highlight (in yellow) the line that reads "need to get Ims's address"

Ans: 1. Select the text you want to modify

2. Left click the drop-down arrow next to the Font style box on the home tab. The font style drop-down menu appears.
3. Move your cursor over the various font style. A live preview of the font will appear in the document.
4. Left click the font style you want to use. The font style will change in the document.

2. change to font size:

1. Select the text you want to modify.
2. Left click the drop-down arrow next to the font size box on the Home tab. The font size drop-down menu appears.
3. Move your cursor over the various font sizes. A live preview of the font size will appear in the document.
4. Left click the font size you want to use. The font size will change in the document.

3. change the font colour:

1. Select the text you want to modify.
2. Left click the drop-down arrow next to the font color box.

on the Home tab The font color menu appears

3 Move your cursor over the various font colors A live preview of the color will appear in the document.

4 Left click the font color you want to use the font color will change in the document

5 To highlight on yellow the line that "need to get IMS address"

6 Select the text you want to modify

7 Left click the drop down arrow next to the text highlight color on the Home tab The font color menu appears.

8 Move your cursor over the various Text highlight color (yellow). A live preview of the color will appear in the document

9 Left click on yellow color want to use the text color will change.

10 Create a file in MS word for the following document and save it with file name "ms word". Describe all steps involved in it.

Ans) 1 Click on start button

2 Click on microsoft office

3 Select microsoft office word

4 Click on microsoft office button

5 Select new the new document dialog box appears

6 Type MS word on work sheet and select "MS word".

7 Click Bold on home tab Press Enter

8 Type "MS word is a widely used commercial word processor developed by mso"

9 Select "MS word" Left click the drop-down arrow next to the font color bar on the Home tab The font color menu appears

10 Move your cursor over the red color

11 Left click the red font color The red font color will change in the document

12 Select the word processor click Underline on Home Tab Press Enter

13 Select the text to format as a list

14 Click the bullets or numbering commands on the Home Tab

15. Left click the bullet style to use. It will appear in the document.
16. Position your cursor at the end of a list item and Press the Enter Key to add an item to the list.
17. Select "Creating" left click the drop-down arrow next to the font color box on the Home tab. The font color left-clicks the blue font color. The blue font color will change in the document.
18. Move your cursor over the blue color left click the blue font color. The blue font color will change in the document.
19. Select "Saving and" left click the font color the drop-down arrow next to the font color box on the Home tab the font color menu appears.
20. Move the cursor over the red font left click the red font color. The red font color will change in the document.
21. click the microsoft office button.
22. Select Save As $\Rightarrow$ word Document you want to save the document using the drop-down menu.
23. Enter a file name "MS word" for the Document.
24. click the Save button.

Q8 Create a file in MS-Word for the following document and save it with file name 'equations'. Describe all steps involved in it.

Equations

$$x^2 + x^5 = 30$$

$$2^3 + 0^4 = 50$$

$$A_2 + B^8 = x_9 + x^8$$

Ans) Click on microsoft - office Button

2. Select New the new Document dialog box appears

3. Type Equations on work sheet and Select "Equations"

4. Click Bold and Underline on Home tab and Press Enter

5. Enter the text $x + y = 30$ to insert
6. Place cursor in the document where you want to create a "Subscript or Superscript".
7. Go to the Home tab on the Ribbon and click "Subscript and Superscript (x_2) (x^2) icon" in the font group.