**KODARIT ASSIGNMENT**

**Part 1: Identify and describe the function of the following computer parts**

a) CPU (Central Processing Unit)

The CPU is often referred to as the "brain" of the computer. It performs the majority of the processing inside a computer by executing instructions from programs and operating systems. It carries out operations such as arithmetic, logic, control, and input/output (I/O) tasks. The CPU's performance is critical for overall system speed and efficiency.

b) RAM (Random Access Memory)

RAM is the computer's short-term memory, where data and programs that are currently in use are stored temporarily. It allows for quick read and write access, enabling the CPU to quickly retrieve and process data. More RAM generally allows a computer to handle more tasks simultaneously and improve performance in memory-intensive applications.

c) Hard Drive

The hard drive is a data storage device used for storing and retrieving digital information using magnetic storage (HDD) or solid-state storage (SSD). It holds the computer's operating system, software applications, and files. SSDs are faster and more reliable than HDDs, leading to quicker boot times and data access speeds.

d) Motherboard

The motherboard is the main circuit board that connects all the components of the computer. It houses the CPU, RAM, and other essential hardware components and provides connectors for peripherals. It also contains the system's firmware (BIOS/UEFI), which initializes hardware during the booting process.

e) Power Supply Unit (PSU)

The PSU converts electrical power from an outlet into usable power for the internal components of the computer. It provides the necessary voltages and currents required by the CPU, motherboard, and other peripherals. A reliable PSU is crucial for system stability and protecting components from power surges or fluctuations.

f) GPU (Graphics Processing Unit)

The GPU is responsible for rendering images, video, and animations for the computer's display. It offloads these tasks from the CPU, enhancing performance in graphics-intensive applications such as gaming, video editing, and 3D rendering. GPUs have their own dedicated memory (VRAM) and are essential for high-performance visual computing.

g) Network Interface Card (NIC)

The NIC is a hardware component that allows a computer to connect to a network. It can be built into the motherboard or installed as an expansion card. NICs enable wired (Ethernet) or wireless (Wi-Fi) networking, facilitating communication between computers and access to the internet or local networks.

h) Cooling System

The cooling system keeps the computer's components, especially the CPU and GPU, within safe operating temperatures. It can include fans, heat sinks, and liquid cooling solutions. Proper cooling is essential to maintain system stability, prevent overheating, and extend the lifespan of hardware components.

i) Peripheral Devices (e.g., Mouse, Keyboard)

Peripheral devices are external components that connect to the computer to provide input and output functionality. Examples include:

Mouse: A pointing device that allows the user to interact with the graphical user interface (GUI) by moving a cursor on the screen and executing commands through clicks.

Keyboard: An input device used to type text, execute commands, and interact with the computer. It includes keys for letters, numbers**, and various functions.**

**PART 2**

**list and explain the function of at least 15 essentials keyboard shortcuts for coding. Include shortcuts for an operating system of your choice**

1.Ctrl + C: For copying information

Copies the selected text or item to the clipboard, allowing you to paste it elsewhere.

2.Ctrl + V: For pasting the information

Pastes the content from the clipboard to the current cursor position or selected area.

3.Ctrl + A: Copy ALL information

Selects all content within the current document or text field, making it ready for copying, cutting, or other actions.

4.Ctrl + X: To copy while deleting from the page

Cuts the selected text or item, copying it to the clipboard and removing it from the original location.

5.Ctrl + B: To bolden

Applies bold formatting to the selected text in word processors or text editors that support rich text formatting.

6.Ctrl + F: Used to find

Opens the find dialog, allowing you to search for specific text within the current document or webpage.

7.Ctrl + N: Open new document

Creates a new document or window in many applications, providing a blank workspace for new content.

8.Windows + R: To search for a program you want Windows to run for you

Opens the Run dialog, where you can type the name of a program, folder, document, or internet resource, and Windows will open it.

9.Ctrl + Z: Used to undo

Reverts the last action taken, undoing changes made in the current document or application.

10.Ctrl + Y: Used as shortcut for redo an action

Redoes the last action that was undone, restoring changes that were previously undone.

11.Ctrl + T: Open new tab

It open a new tab

12. Ctrl + P : For printing

It is used for printing

13. Alt + Tab: Switch between open applications

Allows you to quickly switch between currently open applications or windows.

14.Windows key + D: Show desktop

 Minimizes all open windows and shows the desktop.

15. Windows key + E: Open File Explorer

Opens a new instance of File Explorer, allowing you to browse files and folders.

16. Windows key + L: Lock computer

Locks the computer, requiring a password to unlock.