TERM-1 Comptia A+ N+ Assignment

Module 1 [Hardware and its components]

Topic: The Visible Computer

Assignment Level Basic

* What is hardware?

Ans-  the external and internal devices and equipment that enable you to perform major functions such as input, output, storage, communication, processing, and more

* What is the purpose of Hardware?.

Ans-Hardware refers to the external and internal devices and equipment that enable you to perform major functions such as input, output, storage, communication, processing, and more.

Assignment Level Intermediate

* list out two types of hardware.

Ans- There are two types of computer hardware: external and internal. External hardware devices include monitors, keyboards, printers, and scanners, whereas internal hardware devices include motherboards, hard drives, and RAM.

Assignment Level Advance

* What is core hardware

Ans-  a small CPU or processor built into a big CPU or CPU socket.

* Do a practical of identifying hardware

Ans- done

Topic: Category of components

Assignment Level Basic

1. What are the category of components in hardware?

Ans-There are five main hardware components in a computer system: Input, Processing, Storage, Output and Communication devices

2.Why category is needed?

Ans-The classification of products into categories enables departments to find the products and data they need in no time.

Assignment Level Intermediate

* Do a practical to identify the components in which category they come.

Ans-done

Topic: Input Device

Assignment Level Basic

* What is input device?

Ans- input devices include keyboards, mouse, scanners, cameras, joysticks, and microphones.

* Why input device needed?

Ans- Input devices help us to instruct the computer system what we want it to do for us, so that it can give us the result we want.

Assignment Level Intermediate

1. List out the input device.

**Ans- Input Device**

**Input Device**

Keyboard

Mouse.

Joy Stick.

Light Pen.

2. Do a practical to identify input device and describe how it works.

Ans- An input device is any hardware device that sends data to your computer input devices.

Topic: Motherboard

Assignment Level Basic

* What is motherboard?

Ans- A motherboard is the main printed circuit board (PCB) in a computer.

2. Why it is called motherboard?

Ans-  It's called a motherboard because it's the main circuit board. Much like the term “mothership," the word motherboard signifies its essential nature.

Assignment Level Intermediate

* What it is called if we remove all components from the motherboard?

Ans-  Since motherboards primary and most important connections are female, the PC Board is primarily female.

* Describe types of motherboard

Ans-  Different types of motherboard come in different form factors, including AT, ATX, LPX, BTX, Pico BTX, and Mini ITX, each with its characteristics and suitability for different computer designs.

Assignments level Advance:

1. Do a practical by identifying parts of motherboard.

Ans- Keyboard and mouse. There are mainly 2 types of mouse and keyboard connectors. ...

* Universal Serial Bus (USB) ...
* Parallel port. ...
* CPU chip. ...
* RAM slots. ...
* Floppy Controller. ...
* IDE controller. ...
* PCI slot.

2.Do a practical by describing the data flow in motherboard

Ans- Input devices -> Processing / Memory devices -> Output devices.

* Do a practical by removing all removable parts from the motherboard.

Ans- **In general terms, the process is quite simple, if time-consuming:**

1 Disconnect all cables and remove all expansion cards from the current motherboard.

2 Remove the screws that secure the old motherboard and remove the motherboard.

Topic: CPU

Assignment Level Basic

* What is CPU.

Ans- The CPU is the brain of a computer, containing all the circuitry needed to process input, store data, and output results.

2. Write the full form of CPU.

Ans- Central Processing Unit

Assignment Level Intermediate

* What are the types of CPU?

Ans-.Single-core CPU

Dual-core CPU.

Quad-core CPU.

Hexa-core CPU.

Octa-core CPU.

Deca-core CPU.

2. What do we need to keep the CPU Healthy?

Ans- **10 Ways To Keep Your Computer Health**

Restart your computer at least once a week. ...

Hygiene your Programs. ...

Defrag your hard drive. ...

Investigate Startup programs. ...

Install Antivirus Software. ...

Use an Anti-Surge Protection Extension. ...

Back-Up Your Files.

Assignment Level Advance

* Do a practical to remove processor and apply thermal paste in it and install it again.

Ans- **Thermal paste.**

Step 1: Gain Access to CPU Cooler. ...

Step 2: Remove the CPU Cooler. ...

Step 3: Wipe Off Existing Thermal Paste. ...

Step 4: Apply Fresh Thermal Paste. ...

Step 5: Mount the CPU Cooler. ...

Step 6: Assembly Is the Reverse of Disassembly.

* Do a practical to Identify CPU and its Sockets.

Ans- Locate the CPU. This will be easily distinguishable by the large heat sink and fan installed above it. You should find the socket type written underneath the socket on the motherboard.

Topic: Monitor

Assignment Level Basic

* What is Monitor?

Ans-A monitor is an electronic output device used to display information being entered and processed on a computer.

Assignment Level Intermediate

* List out the types of monitor.

Ans- **5 types of monitors available today**

LCD monitor. LCD stands for Liquid crystal display and is the most widely used monitor in the world. ...

* LED monitor. An LED (Light Emitting Diode) display is among the newest techs out there and can be flat or curved. ...
* OLED monitor. ...
* CRT monitor. ...
* Plasma monitor
* Do a practical to identify monitor Technology.

Ans- done

* What are the Technologies used in monitor.

Ans- Two types of screens (monitors) are currently used: cathode tube (CRT) and liquid crystals (derived TFT, LCD and LED) but also plasma and OLED

Assignment Level Advance

* Describe how does the crt monitor works.

Ans- display pictures when electron beams from an electron gun strike a luminous surface.

Topic: system bus

Assignment Level Basic

* What is system bus

Ans- A system bus is a facet of computer architecture that transmits and shares data throughout the computer and between devices.

Assignment Level Intermediate

1. List out the types of system bus.

Ans-Data bus, Address bus, and Control bus.

2. Describe the working of system bus

Ans- transmits and shares data throughout the computer and between devices.

3. Do a practical to identify the system bus.

Ans-

Topic: Chipset

Assignment Level Basic

1.What is chipset

Ans- a set of chips that extends the interfaces between all of the components of a motherboard

Assignment Level Intermediate

1.What are the types of chipset?

Ans- For PC motherboards, there are two main chipsets: the northbridge and the southbridge.

2. Which chipset does have direct contact with the cpu.

Ans- The northbridge chip is located at the top,

3.Do a practical to identify the chipset

Ans-the letter and number combination following the brand name

Assignment Level Advance

1. Describe how does the Northbridge chipset work

Ans-The northbridge connects to the memory through the front-side bus (FSB) or the memory bus.

Topic:Memory

Assignment Level Basic

1.What is memory?

Ans- Memory refers to the psychological processes of acquiring, storing, retaining, and later retrieving information.

2.What are the types of memory?

Ans- sensory memory, short-term memory, and long-term memory.

Assignment Level Intermediate

1.Describe memory in detail.

Ans-Memory is the process of taking in information from the world around us, processing it, storing it and later recalling that information, sometimes many years later.

2. What are memory types.

* Ans-working memory.
* sensory memory.
* short-term memory.
* long-term memory.

Assignment Level Advance

1. Do a practical to identify memory types.

* Ans- . working memory.
* sensory memory.
* short-term memory.
* long-term memory.

2.Do a practical to install memories in system

Ans- 1.Align a DIMM on the socket such that the notches on the DIMM matches the break on the socket.

2.Firmly insert the DIMM into the socket until the retaining clips snap into place and the DIMM is properly seated when a click is heard.

3.Do a practical to identify main memory frequencies.

* Ans-Random-access memory (RAM) is short-term memory, where only the data currently in use by the CPU is kept.
* Read-only memory (ROM) is non-volatile memory that connects by electronically modified post manufacturing.

Topic: System Unit

Assignment Level Basic

* What is System Unit?

 the part of A computer that houses the primary devices that perform operations and produce results for complex calculations

Assignment Level Intermediate

* How does system unit work?

houses the primary devices that perform operations and produce results for complex calculations.

* What are the components and system unity?

Ans-Unity components are functional pieces of every GameObject

Assignment Level Advancd

* Do a practical to identify system unit

the part of a computer that houses the primary devices that perform operations and produce results for complex calculations

* Do a practical to assemble and disassemble system unit.

 – Unplug your computer and peripheral items · 2 – **Remove side covers** · 4 – Remove standalone fans · 5 – Remove the storage drive · 6 – Remove memory (RAM) modules.

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Topic: BIOS

Assignment Level Basic

1. What is bios.

BIOS instructs the computer on how to perform basic functions like booting and keyboard control

Assignment Level Intermediat

1.How to check the ip address

**Here's how to find the IP address on the Android phone:**

* 1.Go to your phone's settings.
* Select “About device.”
* Tap on “Status.”
* Here you can find information about your device, including the IP address.

2.How to check the ip address through cmd?

 type in ipconfig and press the Enter key. The IP configuration is displayed, listing the IPv4 Address, Subnet Mask, and Default Gateway Address for the computer.

3.How can we enter static address in network adapter?

* Open “Settings” on your computer.
* Select “Network and internet.”
* Select your current connection.
* Select “Manage known networks” > “Properties” > “IP settings.”
* Select “Edit.”
* Select “Manual.”
* Select “IPv4” and switch it to “On.”

Assignment Level Advanced

* Do a practical to release the packets from the adapter.

Token Bucket can send large bursts at a faster rate while leaky bucket always sends packets at constant rate.

2. Do a practical to renew the lease of the ip address.

* Click on the Windows. ...
* Click on Command Prompt from the search results.
* Enter “ipconfig/release” and then press [Enter] to release your computer's current IP address. ...
* Enter “ipconfig/renew” and then press [Enter] to renew your computer's IP address.

3. Do a practical to check the connectivity to the google.

 helps Android manage Wi-Fi and other network connections.

Topic: Wireless networking

Assignment level Basic:

* What is the difference between WEP and WPA

The WPA Wi-Fi protocol is more secure than WEP, because it uses a 256-bit key for encryption, which is a major upgrade from the 64-bit and 128-bit keys used by the WEP system.

2. What is Wireless Network?

a computer network that makes use of Radio Frequency (RF) connections between nodes in the network.

Assignment level Intermediate:

* What is a wireless network connection?

a computer network that makes use of Radio Frequency (RF) connections between nodes in the network.

* What are the basic concepts of networking?

Switches, routers, and wireless access points are the essential networking basics.

: Assignment level advance

* What do you need to know about networking?

**Below are several core concepts in computer networking that a networking professional would be required to know:**

* LAN vs. WAN.
* Clients and servers.
* DNS lookup & IP addresses.
* Ethernet.
* Default gateway.
* Routers and switches.

09-Dec-2022

* How do you explain computer networking?

A network is a collection of computers and devices that are connected together to enable communication and data exchange

Topic: Wireless networking

Topic: THE Internet

Assignment level Basic

* What do you mean by the term URL?

a unique identifier used to locate a resource on the Internet.

* Term which is used to see web pages is called what?

Browser: A software application used to locate and display Web pages.

Assignment level Intermediate:

* In the Ethernet which topology is used?

In a ring network each Ethernet switch is connected to two other switches forming a ring.

2. Set of rules and regulations while working on internet, which term is used?

 rules are guidelines and instructions for doing something right.

Assignment level advance:

* What do you mean by RAS?

Reliability, availability and serviceability (RAS) is a set of related attributes that must be considered when designing, manufacturing, purchasing and using a computer product or component.

* What are the main search engines to get more website URL on Internet?
* Google.
* Yahoo.
* Baidu.
* Yandex.
* Duckduckgo.
* ASK.
* Ecosia.
* AOL.

3.What does the PROTOCOL consist of?

a set of rules or procedures for transmitting data between electronic devices, such as computers.

Topic: Virtualization

Assignment level Basic:

* What is Virtualization

a process that allows a computer to share its hardware resources with multiple digitally separated environments.