

Function of an Operating System

* Acts as interface between user and the computers

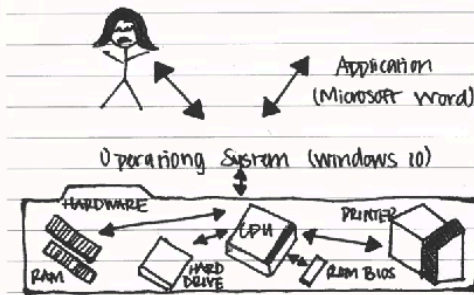
- 1). Shell
- 2). Graphical User Interface (GUI)
- 3). Command Line

* Acts as interface between applications and hardware

- 1). Kernel and device drivers
- 2). Utilities
- 3). 32-bits vs 64-bits
- 4). Application compatibility

* Monitors system health and functionality

* Data Management



Cyber Notes

LPI Certified, If interested in SOC Academy Classes

OS/IO Class

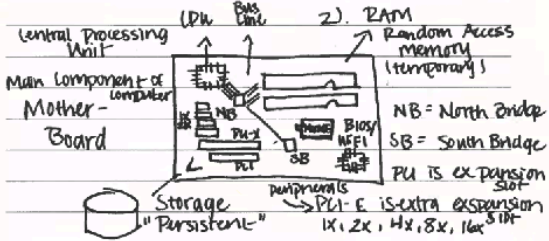
EmpTIA has ITF+/Ten+

Computers only understand 2 things (1,0)

Processor takes 1 and 0 to make a result and this gets repeated, temporary location to store results

Processor runs in SECONDS, when you blink, there are billions of 1 and 0

Components of Computers: 1) Processor (CPU)



Newer model of motherboard will likely have PCI-E

SB is platform, NB is embedded in chip. SB is also known as platform center

Peripherals could have between 1x - 16x on a motherboard

Cyber Notes

UEFI is hardware and software based. Bus carries 1 and 0s

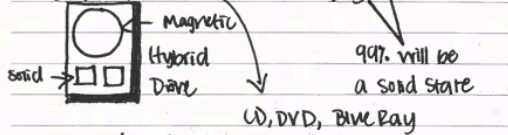
BIOS/UEFI purpose is to check everything. PCs are peripherals!

Storage: 1) There are four factors in storage. 2) Some storage are faster than others

* Technology VS Interface

Magnetic Dr vs Solid State Dr vs Hybrid Dr (has solid and magnetic state)

Interface: DATA → "Ribbon", IDE. SCSI → "Ribbon". SATA → NVME → M.2. USB.



WD, DVD, BluRay can arguably be magnetic. Magnetic (HDD). Solid State (SSD). Hybrid (H/HDD).

Ribbon cable "DATA" connects the interface to the motherboard

NVME is wireless interface that takes the solid part of storage and put it directly on the motherboard

Cyber Notes

Software

1). System (OS)

Microsoft: 8.1, 10, 11, 2012, 2014, 2019, 2022, Azure

Apple: Mac OS, iOS

Linux: Debian (Ubuntu, Mint, "Gnu/Linux"), Red Hat (CentOS, Fedora)

Android

Google (Chrome)

2). Application

Web Browser:

1). Safari

2). Firefox

3). Google

4). Edge

Office / Libre

AI

Microsoft Link

Teams

Solitaire

Management / Utilities

* Control Panel

3 types of servers

* Stand-Alone Server

* Rack-Mounted

* Blade

Embedded OS: it is embedded in the CPU, on the chip

Embedded OS (firmware w/ OS IN IT)

↑

Motherboard

User Account Control (UAC)

- * permission structure for granting access to applications and file
- * least privilege
- * important to control administrative permission

Vin 32 Profile

- * add profile to access control file
- * IT individual should know different users.

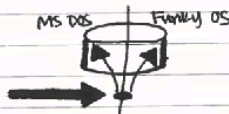
O/S:

1). Microsoft

2). Linux

3). Apple

Other:



Partition is a way to manage a hard drive.

Function of an Operating System



Workstation, Servers, and Mobile Device OS

* Workstation OS

- * Ms Window; Apple OS X / macOS; Linux; Chrome OS
- * Enterprise client
- * Network OS (NOS)
- * Home client

* Mobile Device OS

- * Apple iOS and Android
- * OS is tied to the hardware

* Server OS

- * Windows server / Azure; Linux server; UNIX