Virtualisation

Type I (Bare metal)	Hypervisor is installed directly on the computer and interacts directly with its hardware
Type II	Hypervisor runs as a software application within a host operating system
Virtualisation:	Multiple systems can be installed and run simultaneously on a single computer. No single specific operating system is required as a platform component

Common Computing Devices

Would laptops make good servers?	Laptops have limited options to expanding resources and storage, and therefore cannot compare to the performance of a full rack server, for example. A laptop is also not meant to run nonstop for long periods such as months or years. Overheating and battery life will be problematic

Using a Workstation

Alt-Tab	show previews of the window and allow a user to quickly switch between them

Using an OS

Open Source OS:	Linux, Chromium, or Android
Commercial OS	Windows & MacOS

Using an OS (cont)

Key Combinations:	**CTRL + F50**	force the browser to ignore any locally cached files when refreshing a page
	Ctrl and pressing either + or -	instruct the browser to either zoom in or zoom out.
	Holding Ctrl + Alt + Del	bring up a page for account controls and locking the Windows session. This is not a browser hotkey combination.
	ALT + F4	will invoke a Windows function that closes the currently open window.
Windows 10:	Windows 10 Enterprise/Windows 10 Enterprise (Long Term Servicing Channel) is similar to the Pro edition, but it is designed for licensing by large businesses.	

Using an OS (cont)

Windows 10 Pro is designed for medium to large sized businesses, and comes with networking and management features designed to allow network administrators more control over each client device.

Windows 10 Home is designed for domestic small/home office business use.

Windows 10 Education/Pro Education has some of the same features as the Enterprise and Pro editions, but it is designed for licensing by schools and colleges.

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Using an OS (cont)

Shell:	The "shell" provides an interface between the user and the computer. Early operating systems for PCs utilized command-line interfaces or simple menu systems. Modern computers utilize a Graphical User Interface (GUI) and a command-line interface.

Your first step to open a file located on a network server is to open the Network object from Explorer and locate the server (computer) the file is hosted on.

Which of the following methods can be used to open the Computer Management console? (Select all that apply.)	Right-click the This PC object in File Explorer.
	Right-click the Start button.

Managing an OS

UAC	protection feature in windows that prevents scripts or other software from performing administrative tasks without authorization. Using UAC, the user must input their credentials or click through an authorization prompt before configuration changes can be made.

Managing an OS (cont)

GUI	A GUI is any interface that is controlled by a mouse, keyboard, and/or touchscreen.
Command Line Interface (CLI)	allows users to interface with the operating system without using a Graphical User Interface (GUI). It is not recommended for use by a standard user.
Microsoft Management Console (MMC)	provides a framework for building management consoles. The Service snap-in allows you to configure service properties as well as start and stop services.
Task Manager	allows only the starting, stopping, or restarting of services.

Administrators can assist you in changing your password, but you should be able to do that on your own.

Linux equivalent of Task Scheduler	Cron
Pagefile (swap file/virtual memory file)	It's a file that Windows uses as Virtual Memory. Virtual Memory is disk space Windows uses when it runs out of physical memory, or RAM.

Programming and App Development

What is an interpreted programming language?	Interpreted languages do not need to be compiled because the code gets converted to machine code at runtime
Pseudocode	a code-like language that does not use a specific syntax for a particular programming language. It contains many of the same features (like variables, functions, and conditional statements) but it is generic and can be used as a guide to developing the actual source code.
conditional branch	Branches are instructions to your computer to execute a different sequence of instructions based on a condition. In this scenario, the conditional branch being used is called an IF-THEN-ELSE statement.
vector	programming concept that allows for a variable size container. Vectors can grow or shrink in size as elements are added or removed.

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Programming and App Development (cont)	
markup language	A markup language is not considered a programming language. It uses nested tags within a document to describe its structure and contents.
Compiled language	like C++, use syntax to perform actions which are compiled and linked resulting in an executable file.
loop	a sequence of instructions that is continually repeated until a certain condition is reached. Typically, a certain process is done, such as getting an item of data and changing it, and then some condition is checked such as whether a counter has reached a prescribed number.
advantage of using a server over a workst-ation	If data is stored on the server and not on the local workst-ation, it is easier to apply access controls and to back it up.
function	will do something and return a value to the main program
procedure	A procedure just "does something" without returning a value to the main program.

Programming and App Development (cont)	
identifier	used in a program to access a program element, such as a stored value, class, method, or interface. For example, you might assign the identifier FirstName to a stored value that contains a user's first name. In essence, an identifier is a label for something within your program. If your identifier stores data, then it will be either a variable or a constant.
define an object?	Attributes, methods, and proper-ties. Attributes are values and data types that define the object. Methods define what you can do to an object. Properties represent an alternative way of accessing a field publicly.

Batch files, Windows PowerShell scripts, and VB Scripts are the three scripting options commonly used in Windows 10 to perform administrative activities and other tasks.

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