

Cheat Sheet Module 1

Essential Concepts

Hardware

- Computer hardware consists of physical components. Key parts include the Central Processing Unit (CPU), which processes instructions; Random Access Memory (RAM) for temporary data storage; and storage devices like hard drives for permanent data storage. Peripherals like monitors, keyboards, and mice enable user interaction with the computer.

Software

- Software is divided into system software and application software. System software includes the operating system (OS), which manages hardware and software resources, device drivers that facilitate communication between the OS and hardware, and utility programs for maintenance tasks. Application software helps users perform specific tasks, like word processing or browsing the internet.

Security

- Computer security focuses on protecting systems and data from threats. Antivirus software detects and removes malicious software, while firewalls prevent unauthorized network access. Understanding threats like phishing, where attackers trick users into providing sensitive information, is essential for maintaining security.

Privacy

- Privacy in computing involves protecting personal information from unauthorized access. Regulations like the General Data Protection Regulation (GDPR) grant individuals control over their data. Encryption is a common method for securing data on websites.

Identifying Your Operating System (OS)

- Knowing your operating system (OS) is crucial for troubleshooting and software compatibility. In Windows, you can identify the OS by right-clicking "My Computer" and selecting "Properties," or using the "System Information" window accessed via Windows Key + R, then typing "msinfo32."

Snips and Screenshots

- Taking screenshots captures the current display for sharing or reference. Windows provides tools like the Snipping Tool for capturing specific screen areas and the PrtScn key for capturing the entire screen to the clipboard.

Managing Windows

- Managing windows involves minimizing, maximizing, and switching between them. The minimize button hides a window to the taskbar, while Alt + Tab switches between open windows, aiding in multitasking.

Keyboard and Keyboard Shortcuts

- Keyboard shortcuts increase efficiency by allowing quick execution of commands. Common shortcuts include Ctrl + C for copying, Ctrl + V for pasting, and Ctrl + Z for undoing the last action.

Start Menu

- The Start Menu in Windows provides access to programs, files, and settings. It includes sections like "All Programs" for installed applications and a search bar for quickly finding items.

Files and Folders

- Creating files and folders helps organize data. Right-clicking the desktop or within a directory and selecting "New" allows the creation of new folders, while "File > New" in applications creates new files.
- Organizing files and folders involves moving, copying, and categorizing items into subfolders. This improves data management and retrieval efficiency.
- Deleting files moves them to the Recycle Bin, where they can be restored or permanently removed by emptying the bin. Using Shift + Delete bypasses the Recycle Bin for immediate deletion.

Local, Network, and Online Files

- Local files are stored on a computer's internal storage, offering quick access without an internet connection. These files are managed using tools like File Explorer.
 - Network files are stored on a network server, accessible by multiple computers within the same network. This facilitates easy collaboration and shared access to data.
 - Online files are stored on cloud services, accessible from any internet-connected device. This provides flexibility and remote access, enhancing data availability and collaboration.
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Glossary

API

a set of protocols and tools for building software and applications, allowing different programs to communicate with each other

application software

software designed to perform specific tasks for users, such as word processing or web browsing

authentication

the process of verifying the identity of a user or device

backup

the process of copying data to ensure it can be restored in case of loss

BIOS

basic input/output system, firmware that initializes hardware during the booting process

buses

electrical pathways used for communication between computer components

chipset

a group of microchips that manage data flow between the processor, memory, and peripherals

cloud storage

a service that allows data to be stored and accessed over the internet

CMOS Battery

a battery on the motherboard that powers the cmos chip, maintaining system settings

command

an instruction given to a computer to perform a specific task

Control Panel

a feature in Windows that allows users to modify system settings and controls

CPU

central processing unit, the primary component that performs calculations and executes instructions

data privacy

the practice of protecting personal information from unauthorized access and misuse

desktop

the primary user interface of a computer, displaying icons, files, and applications

download

the process of transferring data from the internet to a local device

escape key

a key on the keyboard used to exit or cancel operations

file

a collection of data stored on a computer, identified by a unique name

File Explorer

a file management tool in Windows that allows users to navigate and organize files and folders

file path

the address or location of a file within a file system

firewall

a security system that monitors and controls incoming and outgoing network traffic

fixed media

non-removable storage devices, such as hard drives

folder

a virtual container used to organize files on a computer

FTC

Federal Trade Commission, a US agency that enforces consumer protection laws

graphic card

a hardware component that renders images, video, and animations

hard drive

a data storage device used for storing and retrieving digital information

hardware

the physical components of a computer system

hierarchy

a system of organizing files and folders in a structured manner

information privacy

the right of individuals to control access to their personal information

input device

a device used to provide data to a computer, such as a keyboard or mouse

install

the process of adding software to a computer system

internet security

measures taken to protect computers and data from online threats

keyboard

an input device used for typing and entering commands

kernel

the core part of an operating system, managing system resources and communication between hardware and software

local file

a file stored on a computer's internal storage

Mac

a line of personal computers designed and sold by apple inc

mainboard

another term for motherboard, the main circuit board in a computer

maximize

to enlarge a window to fill the entire screen

memory

components that store data temporarily or permanently, such as ram or rom

menu bar

a horizontal bar at the top of a window providing access to various menus and commands

minimize

to reduce a window to an icon on the taskbar

monitor

an output device that displays visual information

motherboard

the main circuit board that connects all components of a computer

mouse

an input device used to point, click, and interact with the computer screen

network file

a file stored on a network server, accessible by multiple computers

operating system

software that manages computer hardware and software resources, and provides services for computer programs

option key

a key on the Mac keyboard used for various shortcuts and commands

output device

a device that outputs data from a computer, such as a monitor or printer

print screen

a key on the keyboard used to capture the current screen display

privacy

the right to keep personal information secure and confidential

program

a set of instructions executed by a computer

RAM

Random Access Memory, volatile memory used for temporary data storage

recycling bin

a folder where deleted files are temporarily stored

removable media

storage devices that can be easily removed from a computer, such as usb drives

restart

to reboot a computer, closing all applications and restarting the operating system

ROM

Read-Only Memory, non-volatile memory used for permanent data storage

screenshot

an image capturing the current display of a computer screen

shortcut

a quick way to perform a command or open a program using a combination of keys

sleep

a low-power mode that saves the current state of the computer

snip

a term used for capturing a specific part of the screen

software

programs and applications that run on a computer

sound card

a hardware component that processes audio data

Start Menu

a menu in Windows that provides access to programs, settings, and files

Task Manager

a utility that provides information about running processes and system performance

taskbar

a bar at the bottom of the screen in Windows that shows open applications and provides quick access to system functions

title bar

the horizontal bar at the top of a window displaying the window's title

USB port

a standard interface for connecting peripherals to a computer

user interface

the means by which a user interacts with a computer or software

window

a rectangular area on the screen displaying the contents of an application

Windows

a popular operating system developed by Microsoft

Windows Key

a key on the keyboard that opens the Start Menu in Windows