Vocabulary: Unit 1: Introduction to Computers

Term	Definition
Chip	A computer device that stores and retrieves information, data, files, programs, etc., from a disk.
Disk drive 	(HDD) - data storage device that stores and retrieves digital data using magnetic storage with one or more rigid rapidly rotating platters coated with magnetic material.
Embedded processor	(Microcontroller) - small computer system that is designed to perform specific functions within a larger system. Typically integrated into a larger device or system to provide control and processing capabilities. Limited capabilities.
Expansion slot	A socket or connector located on a computer's motherboard that allows the user to add additional hardware components to the system. (Place in a computer where an expansion card can be inserted)
Hardware	The physical components of a computer system or other electronic device. Anything you can touch.
Information processing	The series of operations that are performed on data in order to extract meaningful information.
Input	Any data or information that is provided to a computer or other electronic device to perform a specific task/function.
Integrated circuit 	An electronic circuit formed on a small piece of semiconducting material, performing the same function as a larger circuit made from discrete components.
Keyboard	Panel of keys; input device
Memory	Storage
Microprocessor	An integrated circuit that contains all the functions of a central processing unit of a computer (CPU = Microprocessor)
Monitor	• Output device that displays information processed by the computer • Shows visual output (text, images, videos, graphics) • They come in different sizes, resolutions and types

Motherboard	• The main circuit board of a computer that connects all of the other components together (CPU,RAM, power supply, etc.) • It provides the electrical connections and allows communication between them
Output	Data or information that are produced by a computer system or other electronic device after processing input
Personal computer (Microcomputer)	(PC) - type of computer designed for use by an individual user. It is typically a small, single-user computer system that can be easily set up on a desk or table. “Personal computer” and “microcomputer” are often used interchangeably to refer to any small, single-user computer system.
RAM	• Random Access Memory • Type of memory used for temporary storage that the CPU is actively using (short-term memory) • RAM allows the CPU to access data quickly • The more RAM you have the better your performance usually is • Analogy: cooking in your kitchen, fridge=storage, cutting board=RAM • 8-16 GB is a good amount
ROM	• Read-Only Memory • Type of memory that is pre-programmed with data or instructions that cannot be altered or modified once it has been written • Non-volatile memory, meaning that it retains its contents even when the power to the computer is turned off • Useful for storing critical system data and firmware
Scanner	A device that scans and digitizes images or documents into a digit format
Software	Code, programme, instructions that enable a computer or other device to perform specific tasks or functions. You can’t physically touch this.
Decode	Process of translating data or info that has been encoded back into its original form.
Execute	To run a program.
External bus	Also known as an expansion bus, is a communication pathway that connects external devices to a computer or other electronic device. Without an external bus, the computer would not be able to access external devices or expand its capabilities beyond its internal components.
Fetch	Process of retrieving an instruction or a piece of data from memory or storage for processing by a computer’s CPU. (Critical operation in the execution of programs; CPU retrieves instructions & data from memory/ storage)

Internal cache	Small amount of high-speed memory that is built into the processor of a computer or other electronic device. Used to temporarily store frequently accessed data and instructions in order to speed up the performance of the device.
Memory management	Process of controlling and coordinating computer memory. Effective memory management is critical for optimizing the performance and stability of a computer system. Poor memory management can result in system crashes, data loss, and slow performance.
Microcode	Microcode is a low-level, hardware-specific code that is used to control the behaviour of a computer's processor. It is a layer of software that acts as an intermediary between the hardware and the higher-level software that runs on the computer.