PC basics - software

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What is an operating system?

▶ An operating system is the most important software that runs on a computer.

▶ It manages the computer's memory and processes, as well as all of its software and hardware.

▶ It also allows us to communicate with the computer without knowing how to speak the computer's language.

▶ **Without an operating system, a computer is useless**.

The operating system's job

- Our computer's operating system (OS) manages all the software and hardware on the computer.

- Most of the time, there are several different computer programs running at the same time, and they all need to access our computer's central processing unit (CPU), memory, and storage.

- The operating system coordinates all of this to make sure each program gets what it needs.

Types of operating systems

➡️ Operating systems usually come **pre-loaded** on any computer we buy.

➡️ Most people use the operating system that comes with their computer, but it's possible to upgrade or even change operating systems.

➡️ The three most common operating systems for personal computers are **Microsoft Windows**, **macOS**, and **Linux**.

Microsoft Windows

▶ Microsoft created the Windows operating system in the mid-1980s.

▶ There have been many different versions of Windows, but the most recent ones are **Windows 11** (released in 2021), **Windows 10** (released in 2015), Windows 8 (2012), **Windows 7** (2009), and Windows Vista (2007).

▶ Windows comes pre-loaded on most new PCs, which helps to make it the most popular operating system in the world.

macOS

- macOS (previously called OS X) is a line of operating systems created by Apple.

- It comes preloaded on all Macintosh computers, or Macs.

- Some of the specific versions include Sonoma (release in fall 2023), Ventura (2022), Monterey (2021), Big Sur (2020), Catalina (2019),Mojave (2018), High Sierra (2017), and Sierra (2016).

Linux

▶ Linux (pronounced LINN-ux) is a family of open-source operating systems, which means they can be modified and distributed by anyone around the world.

▶ This is different from proprietary software like Windows, which can only be modified by the company that owns it.

▶ The advantages of Linux are that it is free, and there are many different distributions – or versions—we can choose from.

Operating systems for mobile devices

- Mobile devices such as phones, tablet computers, and MP3 players are different from desktop and laptop computers, so they run operating systems that are designed specifically for mobile devices.

- Examples of mobile operating systems include **Apple iOS** and **Google Android**.

What is an application?

- You may have heard people talking about using a program, an application, or an app.

- App is a type of software that allows you to perform specific tasks.

- Applications for desktop or laptop computers are sometimes called desktop applications, while those for mobile devices are called mobile apps.

Desktop applications

- There are countless desktop applications, and they fall into several categories.

- Some are more full featured (like Microsoft Word), while others may only do one or two things (like a clock or calendar app). Examples:

  - Word processors
  - Web browsers
  - Media players
  - Games

Mobile apps

- A mobile app (or mobile application) is a software application developed specifically for use on small, wireless computing devices, such as smartphones and tablets, rather than desktop or laptop computers.

- Mobile apps are sometimes categorized according to whether they are web-based or native apps, which are created specifically for a given platform. A third category, hybrid apps, combines elements of both native and web apps.

Thank you for your attention!