**Classes of computers**

**Supercomputer**Supercomputeris the fastest type of computer. Supercomputers are very expensive and are employed for specialized applications that require immenseamounts of mathematical calculations. Weather forecasting, animated graphics, fluid dynamic calculations, nuclear energy research, and petroleum exploration require a supercomputer.

**Mainframe**Mainframeis a very large and expensive computer capableof supporting hundreds, or even thousands, of connected users simultaneously. In some ways, mainframes are more powerful than supercomputers because they support more simultaneous programs. But supercomputers can execute a single program faster than a mainframe.

**Minicomputer**Minicomputeris a midsized computer. In size and power, minicomputers lie between workstations and mainframes. But in general, a minicomputer is a multiprocessing system capable of supporting from 4 to about 200 users simultaneously.

**Microcomputer**The term microcomputeris generally synonymous with personal computer (PC), or a computer that depends on a microprocessor. Microcomputers are designed to be used by individuals, whether in the form of PCs, workstations or notebook computers. A microcomputer contains a central processing unit (CPU) on a microchip (the microprocessor), a memory system (typically read-only memory (ROM) and random access memory (RAM)), a bus system and I/O ports, typically housed in a motherboard.

**Workstation**Workstationis a computer intended for individual use that is faster and more capable than a personal computer. It's intendedfor business or professional use (rather than home or recreationaluse). Workstations and applications designed for them are used by small engineering companies, architects, graphic designers, and any organization, department, or individual that requires a faster microprocessor, a large amount of random access memory, and special features such as high-speed graphics adapters.

**PDA**PDAis short for personal digital assistant, is a handhelddevice that combines computing, telephone/fax, Internet and networking features. A typical PDA can function as a cellular phone, fax sender, Web browser and personal organizer. PDAs may also be referred to as a palmtop, hand-held computer or pocket computer.

Unlike portable computers, most PDAs began as pen-based, using a stylus rather than a keyboard for input. This means that they also incorporated handwriting recognitionfeatures. Some PDAs can also react to voice input by using voice recognition technologies. PDAs are available in either a stylus or keyboard version.

Apple Computer, which introduced the Newton MessagePad in 1993, was one of the first companies to offer PDAs. As technology changed the world of mobile devices, the PDA has become obsoleteas devices like touch-screen smartphones and tablets grow in popularity.

**What is a laptop computer?**

A laptop is a small, portable computer, small enough to sit on your lap. Nowadays, laptop computers are more frequently called notebook computers, though technically laptops are somewhat larger in size than notebooks, in both thickness and weight.

The laptop was originally designed to be similar to a desktop, but small and light enough to be used sitting in your lap. For this reason, years ago, a laptop had more features than notebooks did, but the tradeoff was larger and heavier than a notebook. This is because the notebook style of portable computers was for mobility, not portability. To be a more mobile device, the notebook was a thinner design and it weighed less than the laptop, simply because it didn't come packed with features and multiple devices and drives.

Years ago, notebook computers had a smaller display than a laptop, fewer internal drives (hard drive, floppy or CD-ROM - depending on the year manufactured), and the sound, modem, and such would be integrated - not separate upgradable hardware devices. Laptops were considered to be desktop replacements; portable computers with features, functions, and options comparable to your desktop computer.

So while there technically is a difference between the two and that is the size and weight of the device (which in turn impacts the system's features) today there is even less of a difference between the two since technology advancements means that most common computer devices and peripherals are much smaller now.

Today technology allows devices to be slimmer, smaller and better for mobile computing by design, so the size of portable computers (both in thickness and weight) is decreasing. For this reason, options that once defined the difference between a laptop and notebook computer are separated by a small, almost invisible fine line today.

Another reason the term laptop is becoming less frequently used is because a portable "comparable to desktop" system today could easily lead to heat discomfort and possible injury if left in your lap for extended periods of time. By calling a laptop a notebook, it also removes the association that the portable device is well-suited to being used only on your lap. Another reason that the term laptop does not fit in with today's technology is that these traditionally heavier portable computers that once were clearly a laptop are just not made anymore.

Consumers frequently call their notebook a laptop and use the two words interchangeably. However, many computing manufacturers have actually dropped the term laptop completely from their product lineup in favor of the term notebook.