на п"ятницю перекладати і виписати слова текст 1 і текст 2 перші 4 сторінки. передайте всім

Today's personal computers are drastically different from the massive, hulking machines that emerged out of World War II–and the difference isn't only in their size. By the 1970s, technology had evolved to the point that individuals–mostly hobbyists and electronics buffs–could purchase unassembled PCs or "microcomputers" and program them for fun, but these early PCs could not perform many of the useful tasks that today’s computers can. Users could do mathematical calculations and play simple games, but most of the machines’ appeal lay in their novelty. Today, hundreds of companies sell personal computers, accessories and sophisticated software and games, and PCs are used for a wide range of functions from basic word processing to editing photos to managing budgets. At home and at work, we use our PCs to do almost everything. It is nearly impossible to imagine modern life without them.

Invention of the PC: The Computer Age

The earliest electronic computers were not “personal” in any way: They were enormous and hugely expensive, and they required a team of engineers and other specialists to keep them running. One of the first and most famous of these, the Electronic Numerical Integrator Analyzer and Computer (ENIAC), was built at the University of Pennsylvania to do ballistics calculations for the U.S. military during World War II. ENIAC cost $500,000, weighed 30 tons and took up nearly 2,000 square feet of floor space. On the outside, ENIAC was covered in a tangle of cables, hundreds of blinking lights and nearly 6,000 mechanical switches that its operators used to tell it what to do. On the inside, almost 18,000 vacuum tubes carried electrical signals from one part of the machine to another.

Invention of the PC: Postwar Innovations

ENIAC and other early computers proved to many universities and corporations that the machines were worth the tremendous investment of money, space and manpower they demanded. (For example, ENIAC could solve in 30 seconds a missile-trajectory problem that could take a team of human “computers” 12 hours to complete.) At the same time, new technologies were making it possible to build computers that were smaller and more streamlined. In 1948, Bell Labs introduced the transistor, an electronic device that carried and amplified electrical current but was much smaller than the cumbersome vacuum tube. Ten years later, scientists at Texas Instruments and Fairchild Semiconductor came up with the integrated circuit, an invention that incorporated all of the computer’s electrical parts–transistors, capacitors, resistors and diodes–into a single silicon chip.

But one of the most significant of the inventions that paved the way for the PC revolution was the microprocessor. Before microprocessors were invented, computers needed a separate integrated-circuit chip for each one of their functions. (This was one reason the machines were still so large.) Microprocessors were the size of a thumbnail, and they could do things the integrated-circuit chips could not: They could run the computer’s programs, remember information and manage data all by themselves.

The first microprocessor on the market was developed in 1971 by an engineer at Intel named Ted Hoff. (Intel was located in California’s Santa Clara Valley, a place nicknamed “Silicon Valley” because of all the high-tech companies clustered around the Stanford Industrial Park there.) Intel’s first microprocessor, a 1/16-by-1/8-inch chip called the 4004, had the same computing power as the massive ENIAC.

The Invention of the PC

These innovations made it cheaper and easier to manufacture computers than ever before. As a result, the small, relatively inexpensive “microcomputer”–soon known as the “personal computer”–was born. In 1974, for instance, a company called Micro Instrumentation and Telemetry Systems (MITS) introduced a mail-order build-it-yourself computer kit called the Altair. Compared to earlier microcomputers, the Altair was a huge success: Thousands of people bought the $400 kit. However, it really did not do much. It had no keyboard and no screen, and its output was just a bank of flashing lights. Users input data by flipping toggle switches.

In 1975, MITS hired a pair of Harvard students named Paul G. Allen and Bill Gates to adapt the BASIC programming language for the Altair. The software made the computer easier to use, and it was a hit. In April 1975 the two young programmers took the money they made from “Altair BASIC” and formed a company of their own—Microsoft—that soon became an empire.

The year after Gates and Allen started Microsoft, two engineers in the Homebrew Computer Club in Silicon Valley named Steve Jobs and Stephen Wozniak built a homemade computer that would likewise change the world. This computer, called the Apple I, was more sophisticated than the Altair: It had more memory, a cheaper microprocessor and a monitor with a screen. In April 1977, Jobs and Wozniak introduced the Apple II, which had a keyboard and a color screen. Also, users could store their data on an external cassette tape. (Apple soon swapped those tapes for floppy disks.) To make the Apple II as useful as possible, the company encouraged programmers to create “applications” for it. For example, a spreadsheet program called VisiCalc made the Apple a practical tool for all kinds of people (and businesses)–not just hobbyists.

The PC Revolution

The PC revolution had begun. Soon companies like Xerox, Tandy, Commodore and IBM had entered the market, and computers became ubiquitous in offices and eventually homes. Innovations like the “Graphical User Interface,” which allows users to select icons on the computer screen instead of writing complicated commands, and the computer mouse made PCs even more convenient and user-friendly. Today, laptops, smart phones and tablet computers allow us to have a PC with us wherever we go.

A personal computer (PC) is a general-purpose computer, whose size, capabilities, and original sale price makes it useful for individuals, and which is intended to be operated directly by an end-user with no intervening computer operator. This contrasted with the batch processing or time-sharing models which allowed larger, more expensive minicomputer and mainframe systems to be used by many people, usually at the same time. Large data processing systems require a full-time staff to operate efficiently.

Types

Workstation

A workstation is a high-end personal computer designed for technical, mathematical, or scientific applications. Intended primarily to be used by one person at a time, they are commonly connected to a local area network and run multi-user operating systems. Workstations are used for tasks such as computer-aided design, drafting and modeling, computation-intensive scientific and engineering calculations, image processing, architectural modeling, and computer graphics for animation and motion picture visual effects.

Desktop computer

Prior to the wide spread usage of PCs, a computer that could fit on a desk was remarkably small. Today the phrase usually indicates a particular style of computer case. Desktop computers come in a variety of styles ranging from large vertical tower cases to small form factor models that can be tucked behind an LCD monitor. In this sense, the term 'desktop' refers specifically to a horizontally oriented case, usually intended to have the display screen placed on top to save space on the desk top. Most modern desktop computers have separate screens and keyboards.

Gaming computer

A gaming computer is a standard desktop computer that typically has high-performance hardware, such as a more powerful video card, processor, and memory, in order to handle the requirements of demanding video games. A number of companies, such as Alienware, manufacture prebuilt gaming computers, and companies such as Razer and Logitech market mice, keyboards, and headsets geared towards gamers.

Single unit

Single unit PCs (also known as all-in-one PCs) are a subtype of desktop computers, which combine the monitor and case of the computer within a single unit. The monitor often utilizes a touchscreen as an optional method of user input, however detached keyboards and mice are normally still included. The inner components of the PC are often located directly behind the monitor, and many are built similarly to laptops.

Nettop

A subtype of desktops, called nettops, was introduced by Intel in February 2008 and are desktops characterized by low-cost and lean-functionality. A similar subtype of laptops (or notebooks) are the netbooks (see below). The product line features the new Intel Atom processor which specially enables them to consume less power and to be built into small enclosures.

Home theater PC

Antec Fusion V2 home theater PC with keyboard on top.

A home theater PC (HTPC) is a convergence device that combines the functions of a personal computer and a digital video recorder. It is connected to a television or a television-sized computer display and is often used as a digital photo, music, video player, TV receiver and digital video recorder. Home theater PCs are also referred to as media center systems or media servers. The general goal in a HTPC is usually to combine many or all components of a home theater setup into one box. They can be purchased pre-configured with the required hardware and software needed to add television programming to the PC, or can be cobbled together out of discrete components as is commonly done with MythTV, Windows Media Center, GB-PVR, SageTV, Famulent or LinuxMCE. More recently, home theatre PCs have been given the ability to connect to services that play movies and TV shows on demand.

Portable

Laptop

A laptop computer or simply laptop, also called a notebook computer, is a small personal computer designed for portability. Usually all of the interface hardware needed to operate the laptop, such as USB ports (previously parallel and serial ports), graphics card, sound channel, etc., are built in to a single unit. Laptops contain high capacity batteries that can power the device for extensive periods of time, enhancing portability. Once the battery charge is depleted, it will have to be recharged through a power outlet. In the interest of saving power, weight and space, they usually share RAM with the video channel, slowing their performance compared to an equivalent desktop machine. For this reason, Desktop or Gaming computers are generally preferred to laptop PCs for gaming purposes.

One main drawback of the laptop is sometimes, due to the size and configuration of components, relatively little can be done to upgrade the overall computer from its original design. Internal upgrades are either not manufacturer recommended, can damage the laptop if done with poor care or knowledge, or in some cases impossible, making the desktop PC more modular. Some internal upgrades, such as memory and hard disks upgrades are often easy, a display or keyboard upgrade is usually impossible. The laptop has the same access as the desktop to the wide variety of devices, such as external displays, mice, cameras, storage devices and keyboards, which may be attached externally through USB ports and other less common ports such as external video.

A subtype of notebooks, called subnotebooks, are computers with most of the features of a standard laptop computer but smaller. They are larger than hand-held computers, and usually run full versions of desktop/laptop operating systems. Ultra-Mobile PCs (UMPC) are usually considered subnotebooks, or more specifically, subnotebook Tablet PCs (see below). Netbooks are sometimes considered in this category, though they are sometimes separated in a category of their own (see below).

Desktop replacement

A desktop replacement computer (DTR) is a personal computer that provides the full capabilities of a desktop computer while remaining mobile. They are often larger, bulkier laptops. Because of their increased size, this class of computer usually includes more powerful components and a larger display than generally used in smaller portable computers and can have a relatively limited battery capacity (or none at all). Some use a limited range of desktop components to provide better performance at the expense of battery life. These are sometimes called desknotes, a portmanteau of the words "desktop" and "notebook," though the term is also applied to desktop replacement computers in general.

Netbook

Netbooks (also called mini notebooks or subnotebooks) are a rapidly evolving[39] category of small, light and inexpensive laptop computers suited for general computing and accessing web-based applications; they are often marketed as "companion devices," that is, to augment a user's other computer access.[39] Walt Mossberg called them a "relatively new category of small, light, minimalist and cheap laptops."[40] By August 2009, CNET called netbooks "nothing more than smaller, cheaper notebooks."

Initially, their primary defining characteristic was the lack of an optical disc drive, requiring it to be a separate and external device. This has become less important as flash memory devices have gradually increased in capacity, replacing the writable optical disc (e.g. CD-RW, DVD-RW) as a transportable storage medium.

At their inception in late 2007 — as smaller notebooks optimized for low weight and low cost[41] — netbooks omitted key features (e.g., the optical drive), featured smaller screens and keyboards, and offered reduced specification and computing power. Over the course of their evolution, netbooks have ranged in size from below 5 in[42] to over 13 in,[43] and from ~1 kg (2-3 pounds). Often significantly less expensive than other laptops,[44] by mid-2009, netbooks had been offered to users "free of charge", with an extended service contract purchase of a cellular data plan.

In the short period since their appearance, netbooks have grown in size and features, now converging with new smaller, lighter notebooks. By mid-2009, CNET noted "the specs are so similar that the average shopper would likely be confused as to why one is better than the other," noting "the only conclusion is that there really is no distinction between the devices."

Tablet

A tablet is a type of portable PC with a "slate" form factor. Tablets de-emphasize the use of traditional input devices (such as a mouse or keyboard) by using a touchscreen display, which can be controlled using either a stylus pen or finger. Some tablets may use a "hybrid" or "convertible" design, offering a keyboard that can either be removed as an attachment, or a screen which can be rotated and folded directly over top the keyboard. Some tablets may run a traditional PC operating system such as Windows or Linux; Microsoft attempted to enter the tablet market in 2002 with its Microsoft Tablet PC specifications, for tablets and convertible laptops running Windows XP. However, Microsoft's early attempts were overshadowed by the release of Apple's iPad; following in its footsteps, most modern tablets use slate designs and run mobile operating systems such as Android and iOS, giving them functionality similar to smartphones. In response, Microsoft built its Windows 8 operating system to better accommodate these new touch-oriented devices.

Ultra-mobile PC

The ultra-mobile PC (UMPC) is a specification for a small form factor of tablet PCs. It was developed as a joint development exercise by Microsoft, Intel, and Samsung, among others. Current UMPCs typically feature the Windows XP, Windows Vista, Windows 7, or Linux operating system and low-voltage Intel Atom or VIA C7-M processors.

Pocket PC

A pocket PC is a hardware specification for a handheld-sized computer (personal digital assistant) that runs the Microsoft Windows Mobile operating system. It may have the capability to run an alternative operating system like NetBSD or Linux. It has many of the capabilities of modern desktop PCs.

Currently there are tens of thousands of applications for handhelds adhering to the Microsoft Pocket PC specification, many of which are freeware. Some of these devices also include mobile phone features and thus actually represent a smartphone. Microsoft compliant Pocket PCs can also be used with many other add-ons like GPS receivers, barcode readers, RFID readers, and cameras. In 2007, with the release of Windows Mobile 6, Microsoft dropped the name Pocket PC in favor of a new naming scheme. Devices without an integrated phone are called Windows Mobile Classic instead of Pocket PC. Devices with an integrated phone and a touch screen are called Windows Mobile Professional.