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Chapter 1 : Computer Software for sale | eBay

Add creative software to your laptop or desktop computer to significantly expand its versatility and flexibility. Audio, video, and image editing and creation programs let you create ads, fliers, and logos that look professional and bring in customers.

See our program definition for additional examples of computer programs. How do you get software? Software can be purchased at a retail computer store or online and come in a box containing all the disks floppy diskette , CD , DVD , or Blu-ray , manuals, warranty, and other documentation. Software can also be downloaded to a computer over the Internet. Once downloaded, setup files are run to start the installation process on your computer. Free software There are also a lot of free software programs available that are separated into different categories. Shareware or trial software is software that gives you a few days to try the software before you have to buy the program. Freeware is completely free software that never requires payment, as long as it is not modified. Open source software is similar to freeware. Not only is the program given away for free, but the source code used to make the program is as well, allowing anyone to modify the program or view how it was created. See our Top 10 free PC programs everyone should have , for a list of software you may want to install on your computer first. Installing and uninstalling software How to uninstall Windows software. How do you use computer software? Once the software is installed on the computer hard drive , the program can be used anytime by finding the program on the computer. On a Windows computer, a program icon is added to the Start Menu or Start Screen , depending on your version of Windows. How to maintain software After the software is installed on your computer, it may need to be updated to fix any found errors. Updating a program can be done using software patches. Once updates are installed any problems that may have been experienced in the program will no longer occur. How is software created and how does it work? A computer programmer or several computer programmers write the instructions using a programming language that tell the software how to function and what to do. Once the program has been completed, it is compiled into a language that the computer can understand. How do I create a computer program? When I save a document, is that file also considered software? When you create or edit a file using your software â€” a Microsoft Word document, for instance, or a Photoshop image â€” that file is considered a "resource" or "asset" used by the software. However, the file itself is not considered "software" even though it is an essential part of what your software is doing. What was the first piece of computer software? The first software program that was held in electronic memory was written by Tom Kilburn. The computer that held that program was called the Small Scale Experimental Machine, otherwise known as the "Baby" computer. This "Manchester Baby" is widely celebrated as the birth of software.

Chapter 2 : CNET Download - Free Software, Apps, Downloads, and Reviews

Once the printer was added using the HP software, the HP software gave me all the control options, including "Scan to computer". If the printer is added using the Windows settings app, the HP software is useless.

The Ishango bone Devices have been used to aid computation for thousands of years, mostly using one-to-one correspondence with fingers. The earliest counting device was probably a form of tally stick. Later record keeping aids throughout the Fertile Crescent included calculi clay spheres, cones, etc. The Roman abacus was developed from devices used in Babylonia as early as BC. Since then, many other forms of reckoning boards or tables have been invented. In a medieval European counting house , a checkered cloth would be placed on a table, and markers moved around on it according to certain rules, as an aid to calculating sums of money. The Antikythera mechanism is believed to be the earliest mechanical analog "computer", according to Derek J. It was discovered in in the Antikythera wreck off the Greek island of Antikythera , between Kythera and Crete , and has been dated to circa BC. Devices of a level of complexity comparable to that of the Antikythera mechanism would not reappear until a thousand years later. Many mechanical aids to calculation and measurement were constructed for astronomical and navigation use. A combination of the planisphere and dioptra , the astrolabe was effectively an analog computer capable of working out several different kinds of problems in spherical astronomy. An astrolabe incorporating a mechanical calendar computer [9] [10] and gear -wheels was invented by Abi Bakr of Isfahan , Persia in The sector , a calculating instrument used for solving problems in proportion, trigonometry, multiplication and division, and for various functions, such as squares and cube roots, was developed in the late 16th century and found application in gunnery, surveying and navigation. The planimeter was a manual instrument to calculate the area of a closed figure by tracing over it with a mechanical linkage. A slide rule The slide rule was invented around â€”, shortly after the publication of the concept of the logarithm. It is a hand-operated analog computer for doing multiplication and division. As slide rule development progressed, added scales provided reciprocals, squares and square roots, cubes and cube roots, as well as transcendental functions such as logarithms and exponentials, circular and hyperbolic trigonometry and other functions. Slide rules with special scales are still used for quick performance of routine calculations, such as the E6B circular slide rule used for time and distance calculations on light aircraft. In the s, Pierre Jaquet-Droz , a Swiss watchmaker , built a mechanical doll automaton that could write holding a quill pen. By switching the number and order of its internal wheels different letters, and hence different messages, could be produced. In effect, it could be mechanically "programmed" to read instructions. It used a system of pulleys and wires to automatically calculate predicted tide levels for a set period at a particular location. The differential analyser , a mechanical analog computer designed to solve differential equations by integration , used wheel-and-disc mechanisms to perform the integration. In , Lord Kelvin had already discussed the possible construction of such calculators, but he had been stymied by the limited output torque of the ball-and-disk integrators. The torque amplifier was the advance that allowed these machines to work. Starting in the s, Vannevar Bush and others developed mechanical differential analyzers. Charles Babbage , an English mechanical engineer and polymath , originated the concept of a programmable computer. Considered the " father of the computer ", [17] he conceptualized and invented the first mechanical computer in the early 19th century. After working on his revolutionary difference engine , designed to aid in navigational calculations, in he realized that a much more general design, an Analytical Engine , was possible. The input of programs and data was to be provided to the machine via punched cards , a method being used at the time to direct mechanical looms such as the Jacquard loom. For output, the machine would have a printer, a curve plotter and a bell. The machine would also be able to punch numbers onto cards to be read in later. The Engine incorporated an arithmetic logic unit , control flow in the form of conditional branching and loops , and integrated memory , making it the first design for a general-purpose computer that could be described in modern terms as Turing-complete. Eventually, the project was dissolved with the decision of the British Government to cease funding. He gave a successful demonstration of its use in computing tables in However, these were not programmable and generally lacked the versatility and accuracy of modern digital computers.

The differential analyser , a mechanical analog computer designed to solve differential equations by integration using wheel-and-disc mechanisms, was conceptualized in by James Thomson , the brother of the more famous Lord Kelvin. This built on the mechanical integrators of James Thomson and the torque amplifiers invented by H. A dozen of these devices were built before their obsolescence became obvious. By the s, the success of digital electronic computers had spelled the end for most analog computing machines, but analog computers remained in use during the s in some specialized applications such as education control systems and aircraft slide rule. Digital computers It has been suggested that this section be split out into another article titled Digital computer. Discuss May Electromechanical By , the United States Navy had developed an electromechanical analog computer small enough to use aboard a submarine. This was the Torpedo Data Computer , which used trigonometry to solve the problem of firing a torpedo at a moving target. During World War II similar devices were developed in other countries as well. Early digital computers were electromechanical; electric switches drove mechanical relays to perform the calculation. These devices had a low operating speed and were eventually superseded by much faster all-electric computers, originally using vacuum tubes. The Z2 , created by German engineer Konrad Zuse in , was one of the earliest examples of an electromechanical relay computer. It was quite similar to modern machines in some respects, pioneering numerous advances such as floating point numbers. The engineer Tommy Flowers , working at the Post Office Research Station in London in the s, began to explore the possible use of electronics for the telephone exchange. Experimental equipment that he built in went into operation five years later, converting a portion of the telephone exchange network into an electronic data processing system, using thousands of vacuum tubes. The German encryption machine, Enigma , was first attacked with the help of the electro-mechanical bombes which were often run by women. It had paper-tape input and was capable of being configured to perform a variety of boolean logical operations on its data, but it was not Turing-complete. Colossus Mark I contained 1, thermionic valves tubes , but Mark II with 2, valves, was both 5 times faster and simpler to operate than Mark I, greatly speeding the decoding process. Like the Colossus, a "program" on the ENIAC was defined by the states of its patch cables and switches, a far cry from the stored program electronic machines that came later. Once a program was written, it had to be mechanically set into the machine with manual resetting of plugs and switches. It could add or subtract times a second, a thousand times faster than any other machine. It also had modules to multiply, divide, and square root. High speed memory was limited to 20 words about 80 bytes. Built under the direction of John Mauchly and J. The machine was huge, weighing 30 tons, using kilowatts of electric power and contained over 18, vacuum tubes, 1, relays, and hundreds of thousands of resistors, capacitors, and inductors. Turing proposed a simple device that he called "Universal Computing machine" and that is now known as a universal Turing machine. He proved that such a machine is capable of computing anything that is computable by executing instructions program stored on tape, allowing the machine to be programmable. Von Neumann acknowledged that the central concept of the modern computer was due to this paper. Except for the limitations imposed by their finite memory stores, modern computers are said to be Turing-complete , which is to say, they have algorithm execution capability equivalent to a universal Turing machine. Stored programs A section of the Manchester Baby , the first electronic stored-program computer Early computing machines had fixed programs. Changing its function required the re-wiring and re-structuring of the machine. A stored-program computer includes by design an instruction set and can store in memory a set of instructions a program that details the computation. The theoretical basis for the stored-program computer was laid by Alan Turing in his paper. In , Turing joined the National Physical Laboratory and began work on developing an electronic stored-program digital computer. His report "Proposed Electronic Calculator" was the first specification for such a device. Grace Hopper was the first person to develop a compiler for programming language. At least seven of these later machines were delivered between and , one of them to Shell labs in Amsterdam. Transistors A bipolar junction transistor The bipolar transistor was invented in From onwards transistors replaced vacuum tubes in computer designs, giving rise to the "second generation" of computers. Compared to vacuum tubes, transistors have many advantages: Silicon junction transistors were much more reliable than vacuum tubes and had longer, indefinite, service life. Transistorized computers could contain tens of thousands of binary logic circuits in a relatively compact space. At the

University of Manchester , a team under the leadership of Tom Kilburn designed and built a machine using the newly developed transistors instead of valves. The idea of the integrated circuit was first conceived by a radar scientist working for the Royal Radar Establishment of the Ministry of Defence , Geoffrey W. This new development heralded an explosion in the commercial and personal use of computers and led to the invention of the microprocessor. While the subject of exactly which device was the first microprocessor is contentious, partly due to lack of agreement on the exact definition of the term "microprocessor", it is largely undisputed that the first single-chip microprocessor was the Intel , [58] designed and realized by Ted Hoff , Federico Faggin , and Stanley Mazor at Intel. The 50lb IBM was an early example. Later portables such as the Osborne 1 and Compaq Portable were considerably lighter, but still needed to be plugged in. The first laptops , such as the Grid Compass , removed this requirement by incorporating batteries - and with the continued miniaturization of computing resources and advancements in portable battery life, portable computers grew in popularity in the s. These smartphones and tablets run on a variety of operating systems and soon became the dominant computing device on the market, with manufacturers reporting having shipped an estimated million devices in 2Q

Chapter 3 : What is Software?

Software can be purchased at a retail computer store or online and come in a box containing all the disks (floppy diskette, CD, DVD, or Blu-ray), manuals, warranty, and other documentation. Software can also be downloaded to a computer over the Internet.

Open Source[edit] Software that has released the files it was written in, usually free, so you can download and change the original code, therefore changing the program. Viro has contributed 1, changes to the kernel, which sits at the core of the Linux operating system, over the past three years, according to a new report from the Linux Foundation. During the past three years, the top 10 individual developers have contributed nearly 15 percent of the changes to the kernel, while the top 30 developers have submitted 30 percent, the report states. OS[edit] An operating system has two jobs: Utilities perform a variety of functions like disk defragmenting or data compression. When utilities become popular they are usually incorporated into the operating system. Driver[edit] A printer needs a driver A computer driver is a program that controls a device. For other devices, you may need to install a new driver when you connect the device to your computer. In DOS systems, drivers are files with a. In Windows environments, drivers often have a. A driver acts like a translator between the device and programs that use the device. Each device has its own set of specialized commands that only its driver knows. In contrast, most programs access devices by using generic commands. The driver, therefore, accepts generic commands from a program and then translates them into specialized commands for the device. The two reasons for backing up your files are; a disaster recovery - to restore the files to an operational state following a disaster, and b to restore small numbers of files after they have been corrupted or accidentally deleted. Archives are the first copy of data and back ups are a second copy of data. Also back up systems assume that fault will cause data loss and fault-tolerant systems will not assume fault. A common method of backup for isolated systems without high-speed network or backup devices is to maintain the system and applications software installation disks locally, near the system, and backup only user data. In the event of a crash one then reinstalls system and application software from scratch and then restores the user data. When using this method one should not neglect to make off-site backups of the commercial software and user data so that in the event of a local disaster such as fire, flood, or earthquake that crunches the system, rapid recovery is still possible if desirable. A backup allows the user to make a duplicate copy in case the hard-disk drive fails. Virus[edit] A virus is a program that can destroy and corrupt data on a computer. Virus are programs that can copy themselves and create problems in one computer without the user ever knowing or authorizing it. Virus can only be spread when they are taken to an uninfected computer. Viruses are commonly confused with computer worms and Trojan horses. A worm has the capabilities to spread itself to other computers without needing to be transferred as part of a host. Trojan horses are files that appear to be harmless until they are executed. There are two different techniques to accomplish this, examining scanning and identifying suspicious behavior An example of a anti virus software program is Norton anti virus. Norton anti virus NAV is a popular product of Symantec Corporation and is one of the most widely used anti virus programs. It is aimed at a centrally managed corporate environment and has different features not present in the traditional retail version of the software. In order to receive updates, a valid subscription is required; an initial subscription good for one year or 90 days for OEM copies is included with the purchase. Defrag[edit] The hard drive is divided into sectors that can hold files. If a file is bigger than a section which it usually is it is stored on the next sector. If the next sector is already being used, then it has to store it on a sector farther away, but the address of the new sector is stored so that the computer knows where all the parts of the file are. It dutifully finds sectors that are next to each other big enough to hold a file and copies the file there, then deleting it form the fragmented sectors where it used to be. Defrag Defragmentation reduces the amount of space or "fragmentation" in a file space. By using compaction, it creates larger regions of free space. The image to the side of the text represents the allocation of the free space as well as the combining of the files in order to defragment the hard drive. Larger files and greater numbers of files also contribute to fragmentation and consequent performance loss. Defragmentation attempts to alleviate these problems. Scandisk[edit]

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Microsoft Scan Disk This is a utility program originally used by DOS and Microsoft Windows that checks and repairs file systems and bad clusters within the system. The recent versions are now integrated in Disk Properties as "error-checking. Interfaces and Widgets How you work with the computer Interfaces is the functioning of two things, ex the way software and hardware interacts or how either would interact with a person ie the user. You type commands into the computer. This is the precursor to GUI graphical user interface.

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Chapter 4 : Software - Wikipedia

The Best Free PC to PC File Transfer Software If you are looking for a free tool to transfer files from one computer to another, you are in the right place. EaseUS Todo PCTrans is a reliable and easy-to-use PC transfer software.

An easy and fast complete backup. Verified Acronis user "Easy reliable backup" 5. With the arrival of Windows 10, Norton Ghost was no longer an option. I would highly recommend this product. Verified Acronis user "Acronis Review" 5. I like the graphic interface. I backed up AND successfully restored my entire main partition C: Verified Acronis user "Acronis" 5. Verified Acronis user "Superb Software" 5. Easy and fast to download, easy and fast to backup and first class customer service. Highly recommended to all those of you, like me, who wish to feel confident that if something went wrong with their MAC Book Pro they will have a full image of their HD to recover from, or copy to a new MAC. Verified Acronis user "Does all the work and thinking for you! So many tools to use and so many options to protect your work. Verified Acronis user "Excellent product! I am currently using it to do incremental backups on a weekly basis. What amazes me is how fast it is! My last incremental backup was a bit over 10GB, and it only took about 12 minutes It was as if nothing ever changed with an exception of the storage available on the device. Verified Acronis user "Finally I feel at ease! The way the different methods of backing up are explained and then visualized by animation [I will speak up in a heartbeat to anyone I hear who is shopping for great back up software.

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Chapter 5 : Computer Software

Full list of computer software and support and help with those programs.

Send this info to a friend To: Check this box if you wish to have a copy mailed to you. See our privacy policy. A A How to transfer your files to a new computer Follow these simple tips for a smooth transition Published: April 26, Transferring your files and applications from the old to the new? We put together this quick guide to help you make a switch with ease. Back up your files before you move them. Make sure all your files, folders, music, photos, and other items are safely backed up on an external drive, in the cloud, or on a USB flash drive. Do that before you start setting up the new computer. If you need a little help getting started, take a look at our computer backup guide. Both Microsoft and Apple supply utilities for transferring files from one computer to another. Winodws users can run Windows Easy Transfer. Migration Assistant will switch your files, settings, and so on to the new Mac, but it will also transfer your applications. Getting ready to buy a new laptop, desktop, or Chromebook? Even with that list, this step could present a few challenges. First, you probably installed a lot of your older software from CDs. That external drive might come in handy later for watching movies or listening to music. An alternative is to put the software CD into your old computer, copy the application to a temporary directory, copy that to a flash drive, then install it on your new computer. Check with the vendor for updates. In some cases, you might want to buy the newest version of the application, especially if it includes better security and more features than older ones. What about that old printer? Ports and connectors have changed in the past few years, so if you buy a new computer, you might also need a new printer. New Macs, for example, now have Thunderbolt ports instead of Firewire. You can buy an adapter, but that might slow down communications between your printer and computer. If the ports and connectors from your old printer and your new computer are compatible, you can keep your printer. Keep your data to yourself! Avoid ID theft and protect personal data when getting rid of an old computer. Take the hard drive out of your old computer and use it as a backup drive. Download the data-wiping software at DBAN.

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Chapter 6 : Types of Computer Software - Wikiversity

Software is a set of programs, which is designed to perform a well-defined function. A program is a sequence of instructions written to solve a particular problem. The system software is a collection of programs designed to operate, control, and extend the processing capabilities of the computer.

How to keep your Windows computer up-to-date Content provided by Microsoft Applies to: Microsoft Update includes updates from Windows Update and from Office Update, in addition to updates for other Microsoft products and for third-party device drivers. New content is added to the site regularly so that you can obtain recent updates and fixes to help protect your computer and to keep it running smoothly. To use the Microsoft Update site to install all critical updates for your computer, follow these steps: Connect to the Internet, and then start Windows Internet Explorer. On the Tools menu, click Windows Update. If Microsoft Update is not installed, click Microsoft Update. Otherwise, go to step 7. On the Review and Install Updates Web page, click Install Updates, and then follow the instructions on the screen to complete the installation. After you install the high priority updates, you can repeat these steps to install other updates. To do this, click Custom on the Keep your computer up to date Web page. Then, you can select updates from the sections that are listed on the navigation pane. Automatic Updates feature You can also use the Automatic Updates feature to install updates. By using Automatic Updates, you do not have to visit the Microsoft Update Web site to scan for updates. Instead, Windows automatically delivers them to your computer. Automatic Updates recognizes when you are online, and searches for updates from the Windows Update Web site. An icon appears in the notification area at the far right of the taskbar every time that new updates are available. You can specify how and when you want Windows to update your computer. For example, you can configure Windows to automatically download and to install updates on a schedule that you specify. Or you can have Windows notify you when it finds updates that are available for your computer, and then download the updates in the background. This enables you to continue to work uninterrupted. After the download is completed, an icon appears in the notification area with a message that the updates are ready to be installed. When you click the icon or the message, you can install the new updates in a few steps. For more information about the Automatic Updates feature, click the following article number to view the article in the Microsoft Knowledge Base: If you want to obtain updates to install later on one or more than one computer, use either the following Web sites. Windows Update Catalog For more information about how to download updates from the Windows Update Catalog, click the following article number to view the article in the Microsoft Knowledge Base: For more information, click the following article number to view the article in the Microsoft Knowledge Base:

Chapter 7 : calendrierdelascience.com: software to make your life better

CNET calendrierdelascience.com is your best guide to find free downloads of safe, trusted, and secure Windows software, utilities, and games.

Share on Facebook Computer software consists of a series of instructions in a programming language; the programmer complies those statements into a form that a computer processor can understand. Building software requires knowledge of computer languages, syntax and logic to complete the process from start to finish. In addition to the technical knowledge required, a programmer must be familiar with the specialized software tools needed in the form of an editor, a compiler and a debugger. A computer cannot function without software telling it what action to take. Control statements process data, make decisions and repeat groups of instructions. The sequence structure describes program statements executed one after the other. The programmer inserts branching statements into a program wherever the program needs to follow two or more courses of execution based upon the evaluation of a piece of data. The final group of control structures repeats a statement or group of statements a specified number of times or until a certain event occurs. Video of the Day Programming Instructions A key concept that a programmer must understand holds that the computer will only do what she tells it to do. All program instructions must accomplish a task in a step-by-step manner. For example, adding two numbers requires a number of steps: Get one number and then get the other, add the first number to the second and place this sum in a new memory location. The programmer cannot assume any portion of the arithmetic statement. Repeating this addition problem requires that the programmer place it within a construct called a loop. The loop adds some new variables to the problem such as how many times to repeat the addition statements. Without the consideration of this requirement, the program can enter an infinite loop that crashes the computer. Many programming operations will follow one sequence of instructions if a condition is true e. Branching control structures enable this capability within a program. Choosing a Programming Language Programmers must choose a language in which to work from among the hundreds of languages available. If the developer wants to target her software to the Internet environment, PHP and Ruby make excellent choices. Each of these languages is relatively complex, and the programmer should plan on spending some time learning the specific syntax of the chosen language before setting out to build a piece of software. Choosing Development Tools The most important tool the programmer must select to build software is the compiler. Modern development environments combine all of the software tools needed to develop a program into a single suite. The programmer will use an editor to write the program statements and save them into a file. A compiler will read this file, checking the syntax as it does, and then convert the programming statements into instructions a specific computer processor and operating system can understand. The result is an executable file that the programmer can use or sell. Programmers can use individual tools editor, compiler, etc. Preparing to Program Building computer software requires the proper tools, an understanding of a computer language and the ability to think logically. Software operates with hard logical constraints with no gray areas; the computer processor will not guess or make decisions on its own. The programmer should prepare to think through what he wants to accomplish with his design before sitting down at the keyboard to create a software masterpiece.

Chapter 8 : Introduction to Computers: Hardware and Software

Cell Phone To Computer Software - Buy prepaid calling card with the lowest rates, instant recharging and secure online purchase. You will have an online account management and customer support.

Malicious software or malware which is software that is developed to harm and disrupt computers. As such, malware is undesirable. Malware is closely associated with computer-related crimes, though some malicious programs may have been designed as practical jokes. Nature or domain of execution Desktop applications such as web browsers and Microsoft Office , as well as smartphone and tablet applications called " apps ". There is a push in some parts of the software industry to merge desktop applications with mobile apps, to some extent. Windows 8 , and later Ubuntu Touch , tried to allow the same style of application user interface to be used on desktops, laptops and mobiles. JavaScript scripts are pieces of software traditionally embedded in web pages that are run directly inside the web browser when a web page is loaded without the need for a web browser plugin. Software written in other programming languages can also be run within the web browser if the software is either translated into JavaScript, or if a web browser plugin that supports that language is installed; the most common example of the latter is ActionScript scripts, which are supported by the Adobe Flash plugin. Server software , including: Web applications , which usually run on the web server and output dynamically generated web pages to web browsers, using e. NET , or even JavaScript that runs on the server. In modern times these commonly include some JavaScript to be run in the web browser as well, in which case they typically run partly on the server, partly in the web browser. Plugins and extensions are software that extends or modifies the functionality of another piece of software, and require that software be used in order to function; Embedded software resides as firmware within embedded systems , devices dedicated to a single use or a few uses such as cars and televisions although some embedded devices such as wireless chipsets can themselves be part of an ordinary, non-embedded computer system such as a PC or smartphone. However, some embedded systems run embedded operating systems , and these systems do retain the distinction between system software and application software although typically there will only be one, fixed, application which is always run. Microcode is a special, relatively obscure type of embedded software which tells the processor itself how to execute machine code, so it is actually a lower level than machine code. It is typically proprietary to the processor manufacturer, and any necessary correctional microcode software updates are supplied by them to users which is much cheaper than shipping replacement processor hardware. Thus an ordinary programmer would not expect to ever have to deal with it. Programming tools Main article: Programming tool Programming tools are also software in the form of programs or applications that software developers also known as programmers, coders, hackers or software engineers use to create, debug , maintain i. Software is written in one or more programming languages; there are many programming languages in existence, and each has at least one implementation, each of which consists of its own set of programming tools. These tools may be relatively self-contained programs such as compilers , debuggers , interpreters , linkers , and text editors , that can be combined together to accomplish a task; or they may form an integrated development environment IDE , which combines much or all of the functionality of such self-contained tools. IDEs may do this by either invoking the relevant individual tools or by re-implementing their functionality in a new way. An IDE can make it easier to do specific tasks, such as searching in files in a particular project. Many programming language implementations provide the option of using both individual tools or an IDE. Software architecture Users often see things differently from programmers. People who use modern general purpose computers as opposed to embedded systems , analog computers and supercomputers usually see three layers of software performing a variety of tasks: Platform software The Platform includes the firmware , device drivers , an operating system , and typically a graphical user interface which, in total, allow a user to interact with the computer and its peripherals associated equipment. Platform software often comes bundled with the computer. On a PC one will usually have the ability to change the platform software. Application software Application software or Applications are what most people think of when they think of software. Typical examples include office suites and video games. Application software is often purchased separately

from computer hardware. Sometimes applications are bundled with the computer, but that does not change the fact that they run as independent applications. Applications are usually independent programs from the operating system, though they are often tailored for specific platforms. Most users think of compilers, databases, and other "system software" as applications. User software include spreadsheet templates and word processor templates. Even email filters are a kind of user software. Users create this software themselves and often overlook how important it is. Depending on how competently the user-written software has been integrated into default application packages, many users may not be aware of the distinction between the original packages, and what has been added by co-workers. Once the software has loaded, the computer is able to execute the software. This involves passing instructions from the application software , through the system software, to the hardware which ultimately receives the instruction as machine code. Each instruction causes the computer to carry out an operationâ€"moving data , carrying out a computation , or altering the control flow of instructions. Data movement is typically from one place in memory to another. Sometimes it involves moving data between memory and registers which enable high-speed data access in the CPU. Moving data, especially large amounts of it, can be costly. So, this is sometimes avoided by using "pointers" to data instead. Computations include simple operations such as incrementing the value of a variable data element. More complex computations may involve many operations and data elements together. Quality and reliability Main articles: Software quality , Software testing , and Software reliability Software quality is very important, especially for commercial and system software like Microsoft Office , Microsoft Windows and Linux. Faults and errors are called " bugs " which are often discovered during alpha and beta testing. Software is often also a victim to what is known as software aging , the progressive performance degradation resulting from a combination of unseen bugs. Many bugs are discovered and eliminated debugged through software testing. Software can be tested through unit testing , regression testing and other methods, which are done manually, or most commonly, automatically, since the amount of code to be tested can be quite large. For instance, NASA has extremely rigorous software testing procedures for many operating systems and communication functions. Many NASA-based operations interact and identify each other through command programs. This enables many people who work at NASA to check and evaluate functional systems overall. Programs containing command software enable hardware engineering and system operations to function much easier together. Proprietary software can be divided into two types: As the name suggests, freeware can be used free, although in the case of free trials or freemium software, this is sometimes only true for a limited period of time or with limited functionality. Open source software , on the other hand, comes with a free software license , granting the recipient the rights to modify and redistribute the software. Software patent and Software patent debate Software patents, like other types of patents, are theoretically supposed to give an inventor an exclusive, time-limited license for a detailed idea e. Ideas for useful things that software could do, and user requirements, are not supposed to be patentable, and concrete implementations i. So software patents are supposed to cover the middle area, between requirements and concrete implementation. In some countries, a requirement for the claimed invention to have an effect on the physical world may also be part of the requirements for a software patent to be held validâ€"although since all useful software has effects on the physical world, this requirement may be open to debate. Meanwhile, American copyright law was applied to various aspects of the writing of the software code. One of the sources of controversy is that the aforementioned split between initial ideas and patent does not seem to be honored in practice by patent lawyersâ€"for example the patent for Aspect-Oriented Programming AOP , which purported to claim rights over any programming tool implementing the idea of AOP, howsoever implemented. Another source of controversy is the effect on innovation, with many distinguished experts and companies arguing that software is such a fast-moving field that software patents merely create vast additional litigation costs and risks, and actually retard innovation. In the case of debates about software patents outside the United States, the argument has been made that large American corporations and patent lawyers are likely to be the primary beneficiaries of allowing or continue to allow software patents. Design and implementation Main articles: Software development , Computer programming , and Software engineering Design and implementation of software varies depending on the complexity of the software. For instance, the design and creation of

Microsoft Word took much more time than designing and developing Microsoft Notepad because the latter has much more basic functionality. Libraries APIs can be categorized by their purpose. For instance, the Spring Framework is used for implementing enterprise applications , the Windows Forms library is used for designing graphical user interface GUI applications like Microsoft Word , and Windows Communication Foundation is used for designing web services. When a program is designed, it relies upon the API. For instance, if a user is designing a Microsoft Windows desktop application, he or she might use the. Without these APIs, the programmer needs to write these functionalities entirely themselves. Companies like Oracle and Microsoft provide their own APIs so that many applications are written using their software libraries that usually have numerous APIs in them. Data structures such as hash tables , arrays , and binary trees , and algorithms such as quicksort , can be useful for creating software. Computer software has special economic characteristics that make its design, creation, and distribution different from most other economic goods. Industry and organizations Main article: Software industry A great variety of software companies and programmers in the world comprise a software industry. Software can be quite a profitable industry: Bill Gates , the co-founder of Microsoft was the richest person in the world in , largely due to his ownership of a significant number of shares in Microsoft, the company responsible for Microsoft Windows and Microsoft Office software products - both market leaders in their respective product categories.

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An alternative is to put the software CD into your old computer, copy the application to a temporary directory, copy that to a flash drive, then install it on your new computer.