DOWNLOAD PDF USING COMPUTERS AND INFORMATION

Chapter 1 : Advantages and Disadvantages of Using Computers | MIS

Computer information technology (CIT) is the use and study of computers, networks, computer languages, and databases within an organization to solve real problems. The major prepares students for applications programming, networking, systems administration, and internet development.

In this report, we take advantage of a particularly large survey to conduct a unique exploration not only of technology use between Americans ages 65 or older and the rest of the population, but within the senior population as well. Two different groups of older Americans emerge. The first group which leans toward younger, more highly educated, or more affluent seniors has relatively substantial technology assets, and also has a positive view toward the benefits of online platforms. The other which tends to be older and less affluent, often with significant challenges with health or disability is largely disconnected from the world of digital tools and services, both physically and psychologically. As the internet plays an increasingly central role in connecting Americans of all ages to news and information, government services, health resources, and opportunities for social support, these divisions are noteworthyâ€”particularly for the many organizations and individual caregivers who serve the older adult population. Among the key findings of this research: Six in ten seniors now go online, and just under half are broadband adopters In April the Pew Research Center found for the first time that more than half of older adults defined as those ages 65 or older were internet users. But despite these gains, seniors continue to lag behind younger Americans when it comes to tech adoption. Younger, higher-income, and more highly educated seniors use the internet and broadband at rates approachingâ€”or even exceedingâ€”the general population; internet use and broadband adoption each drop off dramatically around age 75 Seniors, like any other demographic group, are not monolithic, and there are important distinctions in their tech adoption patterns, beginning with age itself. Internet use and broadband adoption among seniors each fall off notably starting at approximately age In addition, affluent and well-educated seniors adopt the internet and broadband at substantially higher rates than those with lower levels of income and educational attainment: Older adults face a number of hurdles to adopting new technologies Older adults face several unique barriers and challenges when it comes to adopting new technologies. Physical challenges to using technology: Many seniors have physical conditions or health issues that make it difficult to use new technologies. Skeptical attitudes about the benefits of technology: Older adults who do not currently use the internet are divided on the question of whether that lack of access hurts them or not. Difficulties learning to use new technologies: A significant majority of older adults say they need assistance when it comes to using new digital devices. Once seniors join the online world, digital technology often becomes an integral part of their daily lives Despite some of these unique challenges facing the older adult population when it comes to technology, most seniors who become internet users make visiting the digital world a regular occurrence. These older internet users also have strongly positive attitudes about the benefits of online information in their personal lives. Few older adults are smartphone owners: Among older adults, tablets and e-book readers are as popular as smartphones: Among the general public, smartphones are much more common than either tablet computers or e-book readers, such as Kindles or Nooks. In fact, the proportion of older adults who own either a tablet or an e-book reader is actually larger than the proportion owning a smartphone.

DOWNLOAD PDF USING COMPUTERS AND INFORMATION

Chapter 2 : Minnesota State - Acceptable Use of Computers and Information Technology Resources

Generally, the use of computer is restricted to typing and storage of information, in most of the business organizations. This may be due to the lack of complete knowledge regarding the use of computer on the part of the user.

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 : Computer and Information Ethics (Stanford Encyclopedia of Philosophy)

Computer and information systems managers, often called information technology (IT) managers or IT project managers, plan, coordinate, and direct computer-related activities in an organization. They help determine the information technology goals of an organization and are responsible for.

What is an Information System? Now we can add on to this to get information systems. Information systems are much the same. There are elements and procedures to work to complete a task. The difference is information systems are used to generate information for the users on a need basis. They can also be used for long term planning or just the day to day work. While systems are great and can ease your life, they are static, which means someone will need to change the systems when new needs arise. This is called system development. While it could be costly, there really is a need for system development since things change constantly, such as any time there are new laws or a new policy within the company. Management Pyramid Some information systems are meant to be used by all levels of employees while others are specifically designed to handle the needs of employees with certain responsibilities. As one goes higher up the company ladder, it can be seen how responsibilities may increase relative to position. It is for this reason that some information systems are designed to hone in on the needs of certain level employees. At the ground level, employees generally make job-related decisions that are based on "on-the-job" input without having to consider how those decisions will affect other departments or employees in other positions. These usually involve transaction systems such as point-of-sales or warehouse systems that record stock and inventory. Operational managers such as supervisors or foremen use separate information systems designed to meet short term goals and gains. Middle managers are a step up from this and use information systems that house a broader range of information to make more tactical decisions. These decisions are usually aimed at a farther sighted goal than those of Operational managers and often need more intelligence pulled from data systems in order to reach these objectives. Middle managers might be more concerned with how to improve yearly gains and may use systems that will deliver more detailed information about specific locations of factories or retailers in certain states. Executive managers think in terms of the future and the direction of a company related to their peer corporations. They make very strategic decisions to ensure the survival of the entire company as a whole in relation to the economy and competition. The systems they use might include the stock market, which tracks the progress of a lot of businesses. Because the needs of each position increases, the decision support systems needed to make well judged verdicts must increase as well. Statement of cash flows can be created by accounting system There are many different types of information systems. Even though there are many systems, the four that will be elaborated are the following: Transaction processing systems are used for processing and output functions for the core operations of a business, storage, and data collection. The purpose of this system is to collect input and then produce the output. An online air ticket booking system is an example of a TPS. Customer relationship management systems are usually used by business owners for sales and marketing efforts. This system helps businesses keep record of customer activities, purchasing trends, product defects, and customer inquiries. CRM systems also allow business partners to communicate with each other which contributes to a successful business. Business intelligence systems are essential for businesses to predict sale patterns for their company. BIS are essential in collecting data from different companies. Financial Institutions are an example of this type of system; it is used to create credit risk models that study the number and amount of lending given to the sectors. Knowledge management systems organize the knowledge within an organization and then share it. KMS brings innovation, top quality performance, integration, and knowledge to an organization. Small and large enterprises can benefit from this type of system. Business owners view this system as a valuable attribute to their company because it provides quick responses to their customers and partner questions. Universities, hospitals, corporations that help users in everyday tasks including the creation of documents and other content through applications as well as communication. These systems are one of the oldest and simple types of systems that have been created when institutions started going towards paperless solutions. Often these systems include software applications such

as Microsoft Office or Apple iWork and hardware such as scanners. Document Management Systems are systems that both store and organize the documents. The goal of these types of systems is to make documents easier to find by placing them in one centralized repository. A Content Management System is essentially the same as a Document Management System except that it also manages multimedia documents such as pictures or videos rather. These can be any sort of software that allows users within an institution to communicate. Common communication software includes email, videoconferences, and messaging. Transaction Processing Systems[edit] Any computer application that helps process business transactions is called a transaction processing system TPS. Order entry systems, payroll systems, and accounting systems are three main types of TPSs. Order entry systems simply record order data. There are also order entry systems that work with physical transactions, called point-of-sale systems. For instance, if someone were to purchase a product at Wal-Mart not online , the order would be processed at a register using a point-of-sale system. A payroll system is another type of a TPS that is used by almost every employer. Payroll systems basically organize, compute, and issue paychecks. Accounting systems are a type of TPS that records financial transactions. Three types of widely used accounting systems are accounts payable systems, accounts receivable systems, and general ledger systems. Accounts payable systems keep track of how much a seller owes a buyer, while accounts receivable systems keep track of how much a buyer owes a consumer. General ledger systems are systems capable of putting together account data to form financial reports. Its main function is to coordinate all of the major processes of an organization and integrate those processes into the different departments of the organization. Some of these application processes may include sales and distribution, financial accounting, investment management, materials management, production planning, maintenance, and human resources. Because it is integrates, it allows data to be used for several purposes. So, once data is given by one processes, then all the processes have access to that data. An example would be a university or college that uses an enterprise system to manage all student records, enrollment applications and acceptance, finances, human resources, etc. It is an easy way because the enterprise system is a single software architecture that fuses all the core processes of a business to function as one unit. The synchronized functioning of the processes makes it easier and more efficient to for multiple departments to work together and it is also helpful for managers as they can better oversee multiple tasks and project at one time. Most companies have so much information stored in so many different areas that when information needs to be retrieved, it becomes a hassle. Whenever someone changes information in any area, the system will then update it throughout and make the information up to date. The amount of productivity and speed can really increase when a company begins using this system. This also gives them the ability to be organized and function on a larger level. Inside of an enterprise system there are modules. Some modules are used universally by all companies and other such as human resources are specific to each company. Configuration tables are also part of what makes an enterprise system. These are how a company can make their system unique to their business. They can change certain parts of the system such as not only having an inventory, but instead having inventory accounting. They also might change the prices of items slightly on certain days when those items are more commonly purchased, and they stock items close to one another that are often purchased together. There are many other uses of data mining besides just these which are examples that have actually occurred, not just hypothetical ones , but in general, data mining is most frequently used via corporations to cut costs or increase revenues. The process consists of three stages: Begins with data preparation which may involve the cleaning and transformation of data, selecting subsets of records, or performing preliminary feature selection operations to bring the number of variables or fields to a manageable range. Model building and validation. Involves considering various models and choosing the best one based on their predictive performance offering stable results across samples. Many techniques Bagging, Boosting, Stacking, and Meta-Learning developed to achieve this are based on so-called "competitive evaluation of models," which uses different models on the same data, analyzing their performance, and choosing the best. Using the model selected as best in the previous stage and applying it to new data in order to generate predictions or estimates of the expected outcome. It is used to increase the productivity, improve the quality, improve communications through documentation, and to create a database for manufacturing. It is used in many applications such as automotive, shipbuilding, and aerospace industries,

industrial and architectural design, prosthetics, and many more. Also, CAD is used to produce computer animation for special effects in movies, advertising and technical manuals. CAM can also assist in all operations of a manufacturing plant, including planning, management, transportation and storage. The primary purpose of CAM is to create a faster production process and components. Decision Support Systems[edit] A specific type of support system often used by businesses is known as a decision support system. A decision support system enables a user to make decisions on demand, and interactively. These systems use both internal and external data to provide a user the tools to organize the decision-making information. The concept of decision-making is to primarily allow the user needed information to make particular decisions. The system is not necessarily making the decision for a user; it is simply retrieving relevant information that will assist them in their decision. With that being said, DSS systems are primarily used to uncover unstructured information regarding issues middle and executive managers may face. Once the data is retrieved from either internal or external sources, the system allows human-friendly access to retrieve the data. Examples of prospective data gathered would be: This system is indeed relatively simple to use through its interaction with the user of the system. DSS systems also allow great flexibility for the program, appealing to various ranges of information. At a center, flight data information such as weather, weight, passenger information, and gate availability are all put together and interpreted to make a safe flight. United Airlines is a good example of this. They consolidated their dispatching center to one location, the 27th floor of the Sears Tower in Chicago. Their facility takes up an entire floor of the building and brings everything for a flight together.

Chapter 4 : 3 Ways to Check Your Computer's System Information - wikiHow

Computer and Internet Use in the United States: This report is an update to the report. It highlights computer and Internet use data for various demographic and geographic characteristics.

Keeping Your Personal Information Secure Offline Lock your financial documents and records in a safe place at home, and lock your wallet or purse in a safe place at work. Keep your information secure from roommates or workers who come into your home. Limit what you carry. When you go out, take only the identification, credit, and debit cards you need. Leave your Social Security card at home. Make a copy of your Medicare card and black out all but the last four digits on the copy. Destroy the labels on prescription bottles before you throw them out. Take outgoing mail to post office collection boxes or the post office. Promptly remove mail that arrives in your mailbox. Consider opting out of prescreened offers of credit and insurance by mail. You can opt out for 5 years or permanently. To opt out, call or go to optoutprescreen. The 3 nationwide credit reporting companies operate the phone number and website. Prescreened offers can provide many benefits. If you opt out, you may miss out on some offers of credit. Know who you share your information with. Store and dispose of your personal information securely. Be Alert to Impersonators Make sure you know who is getting your personal or financial information. Instead, type the company name into your web browser, go to their site, and contact them through customer service. Or, call the customer service number listed on your account statement. Ask whether the company really sent a request. Safely Dispose of Personal Information Before you dispose of a computer , get rid of all the personal information it stores. Use a wipe utility program to overwrite the entire hard drive. Remove the memory or subscriber identity module SIM card from a mobile device. Remove the phone book, lists of calls made and received, voicemails, messages sent and received, organizer folders, web search history, and photos. Encrypt Your Data Keep your browser secure. To guard your online transactions, use encryption software that scrambles information you send over the internet. Look for the lock before you send personal or financial information online. Keep Passwords Private Use strong passwords with your laptop, credit, bank, and other accounts. Substitute numbers for some words or letters. Consider limiting access to your networking page to a small group of people. Never post your full name, Social Security number, address, phone number, or account numbers in publicly accessible sites. Keep a close hold on your Social Security number and ask questions before deciding to share it. Ask if you can use a different kind of identification. Sometimes you will have to share your number. Your employer and financial institutions need your SSN for wage and tax reporting purposes. A business may ask for your SSN so they can check your credit when you apply for a loan, rent an apartment, or sign up for utility service. Set your preference to update these protections often. Protect against intrusions and infections that can compromise your computer files or passwords by installing security patches for your operating system and other software programs. Be Wise About Wi-Fi Before you send personal information over your laptop or smartphone on a public wireless network in a coffee shop, library, airport, hotel, or other public place, see if your information will be protected. If you use an encrypted website, it protects only the information you send to and from that site. If you use a secure wireless network, all the information you send on that network is protected. Lock Up Your Laptop Keep financial information on your laptop only when necessary. That way, if your laptop is stolen, it will be harder for a thief to get at your personal information. Read Privacy Policies Yes, they can be long and complex, but they tell you how the site maintains accuracy, access, security, and control of the personal information it collects; how it uses the information, and whether it provides information to third parties.

Chapter 5 : The Easiest Way to Use a Computer - wikiHow

Note. Information returned by some WMI classes can be very detailed, and often include metadata about the WMI class. Because most of these metadata properties have names that begin with Cim, you can filter the properties using Select-Object.

How can computers and the Internet help me as a classroom literacy teacher? Teachers can find suggestions, lesson plans, practical support, information, and materials through the Internet. This list of links covers most of the types of websites discussed below. Here are some of the many ways in which teachers can make computer and Internet technology work for them. One particularly practical feature of many of the new teacher websites currently available on the Internet is the provision of ready-made lesson plans and suggested activities on a broad array of topics. Listservs and bulletin boards also allow teachers from all over the world to share their best lesson plans and suggestions with each other. Books and materials for teachers and students can also be located and purchased online, saving teachers the time used to send away for catalogs or go to the teacher store. Make sure to be careful that you make purchases online only with well-known companies through secure connections. Listservs and bulletin boards are useful for more than just sharing lesson plans with other teachers. All members of the education field can easily communicate with each other through these forums. Teachers who want to know how someone else handled a situation, where to go to get some particular resource, what the latest news is on a particular subject, how to help a child with a specific type of need, or any other education-related question can find colleagues to talk with through listservs and bulletin boards. And there is the additional bonus of feeling like a part of a larger profession, a member of a group with common goals and circumstances. As well as offering many helpful resources to teachers, these organizations help teachers keep current with the field and the research. Of course, the websites for these organizations are not the only source for finding research and information. A variety of other websites provide research on any topic about which a teacher might be interested. For instance, perhaps the teacher has a student with a particular special need or wants to know how to use a particular strategy or teach a particular lesson. Maybe a teacher wants to learn more about using technology to meet the needs of learning disabled students. Perhaps a teacher needs resources for working with English Language Learners. The Internet is an easy way of finding information without having to make a trip to the library. For teachers who are not familiar with the ins and outs of Internet use, online training is available which teaches how to get around on the Internet. Search engines can be particularly helpful to teachers in finding almost any kind of information on the Internet. Teachers might want to try some of the following education-related and generalized search engines: This skill is useful to students not only for accomplishing their homework, but also as a survival skill in the modern workplace. In addition, there are some websites that offer online help from teachers for students who need assistance with their homework. Teachers should make sure they investigate the quality of this homework help before recommending a website. There are also a vast array of online resources specifically tailored to the needs of parents. Teachers who are aware of these resources can recommend useful websites to the parents of their students, thus creating a positive school-home interaction. Literacy games are also available online and for downloading, as well as reviews of educational software programs. Another wonderful resource is a large variety of online books, often organized by subject, with the text and pictures of each page easily viewed on the screen by the student, who can click on the arrow to turn the page. For students who may not be interested in reading but love computers, online books can be a helpful teaching tool, as well as providing an easy way for a teacher to expand the classroom library. One particularly exciting feature of going online is the ability to e-mail anyone in the world. Teachers and students worldwide are beginning to use this ability to talk to each other. They can even do projects together and help each other learn about their different cultures. E-mailing back and forth with another classroom also provides excellent opportunities for students to practice writing skills for a real-life purpose. Word processing can be used before documents are pasted into e-mails, so that students not only practice this essential skill of word processing but also can edit much more easily to produce a well-crafted piece of writing. So the Internet is an exciting resource for teachers. The Internet is a way for

students and teachers to learn and to connect with others. Last but not least, the Internet can be just plain fun for students and teachers alike.

Chapter 6 : How to Keep Your Personal Information Secure | Consumer Information

How to Use a Computer. There's a lot you can do with a computer, and if you're just getting started it can seem pretty daunting. Luckily, computers have gotten simpler over the years, and you can be up and running in just a few minutes.

Computers and Nursing Practice Science has bestowed health care delivery system with excellent technological innovations. One such innovation is the computerization of the entire health care delivery system. Computerization has contributed enormously towards the reduction of medical errors and the problems associated with such errors Gan et. The implementation of voice recognition technology in mobile healthcare settings is yet another recent innovation Chang et. Success of computerization in nursing practice lies in utilization of features, functions, input and output modalities that nurse would find most useful Mihailidis et. Electronic Medical Record keeping facilitates access of patient data by nurses at any given location, building automated checks for drug and allergy interactions, clinical notes and laboratory reports. The term Electronic Medical Record can be expanded to include systems which keep track of other relevant medical information. The Automated Medical Record, which is a paper-based record with some computer-generated documents. The Electronic Medical Record EMR which restructures and optimizes the documents of the previous levels ensuring inter-operability of all documentation systems. The Electronic Patient Record EPR which is a patient-centered record with information from multiple institutions and 5. The development of standards for EMR interoperability is vital because of the fact that without interoperable EMRs, practicing nurses, physicians, pharmacies and health care institutions cannot share patient information, which is necessary for timely patient-centered care. There are many software programs specially developed for Electronic Record Keeping with integrated appointment scheduling billing, prescription writer, transcription module, document management and workflow management Ringold et. Electronic Prescriptions Nurse Practioners have prescriptive authority in the United States Galewitz, and prescription error is a problem in current nurse practice. Communication has been cited as the single biggest block in such prescription errors leading to wrong reading by the pharmacist. Errors seem to be more in the dose of the medicines prescribed. Electronic prescription systems have been designed as a total remedy to this problem Laerum et. The PDA can also be used for billing and updating patient visits. The utility of personal digital assistant resources in healthcare practice of course presents new challenges due to changing device capabilities and software availability Kuiper, The ThinPrep System has been found to be especially effective for detecting low-grade squamous intraepithelial lesions known as SILs and severe lesions. PAPNET is another innovation that uses neural net computer technology, where, the computer provides guidelines for identifying abnormal cells from a series of digital images of PAP smears fed priori. AutoPap QC is another Pap test re-screening system that uses image interproduction and pattern recognition techniques for identifying abnormal cells Heuther et. Computerized Theatre Management Application Theatre Management Applications automatically record patient information like demographic and financial data, visit history with dates, procedures, performing and attending providers, care records with clinical highlights and patient status, surgical data including proposed, type, actual, severity and risks stored for reference in the event of future surgical procedures Hillestad, The most important aspect of such applications is that they facilitate the management of patient supplies with associated refill lists. These systems help to monitor and track the use of implant and surgical items utilized during operative procedures. The applications allow the theatre nurses to create lists which give full information on the necessary equipments and surgical instruments required in the operating theatre for a surgery specific to a surgeon or specialty. Conclusion Computerization has contributed enormously towards the reduction of medical errors and the problems associated with such errors by providing timely access to client information and by assisting nurses with client monitoring, decision making and bedside documentation. But, the real challenge lies in utilization of features, functions, input and output modalities that nurse would find most useful. Hallvard Laerum, Tom H. Karlsen and Arild Faxvaag Journal of the American Medical Informatics Association. Computer Attitude and Computer Anxiety in Nursing. American Journal of Health-System Pharmacy.

Chapter 7 : Top Ten Safe Computing Tips | Information Systems & Technology

Examples of information systems include transaction processing systems, customer relationship systems, business intelligence systems and knowledge management systems. Successful organizations use information technology to collect and process data to manage business activities, revenue, customer service and decision-making.

If this is your first visit, use these tips as a security checklist. An unpatched machine is more likely to have software vulnerabilities that can be exploited. Turn on automatic updates: Once installed, schedule Sophos to regularly scan and update your virus definitions automatically. Create a unique password for each account. Back up on a regular basis. Scheduling routine backups can protect you from the unexpected. Control access to your machine. This includes Athena clusters and Quickstations. The physical security of your machine is just as important as its technical security. Use email and the internet safely. Learn more about dealing with spam at MIT. When connected to the internet, your data can be vulnerable while in transit. Use remote connectivity and secure file transfer options when off campus. Securely remove sensitive data files from your hard drive, especially when recycling or repurposing your computer. Protect sensitive files using the encryption tools built into your operating system. Make sure they are properly configured. Most importantly, stay informed. Stay current with the latest developments: Related Pages and How To.

Chapter 8 : Information technology - Wikipedia

Information technology (IT) is the use of computers to store, retrieve, transmit, and manipulate data, or information, often in the context of a business or other enterprise. IT is considered to be a subset of information and communications technology (ICT).

The founder of this new philosophical field was the American scholar Norbert Wiener, a professor of mathematics and engineering at MIT. During the Second World War, together with colleagues in America and Great Britain, Wiener helped to develop electronic computers and other new and powerful information technologies. Even while the War was raging, Wiener foresaw enormous social and ethical implications of cybernetics combined with electronic computers. When the War ended, Wiener wrote the book Cybernetics in which he described his new branch of applied science and identified some social and ethical implications of electronic computers. Two years later he published The Human Use of Human Beings , a book in which he explored a number of ethical issues that computer and information technology would likely generate. The issues that he identified in those two books, plus his later book God and Golem, Inc. See Bynum , , , a, b. These terms came into use decades later. See the discussion below. His thinking, however, was far ahead of other scholars; and, at the time, many people considered him to be an eccentric scientist who was engaging in flights of fantasy about ethics. Apparently, no one â€" not even Wiener himself â€" recognized the profound importance of his ethics achievements; and nearly two decades would pass before some of the social and ethical impacts of information technology, which Wiener had predicted in the late s, would become obvious to other scholars and to the general public. In The Human Use of Human Beings, Wiener explored some likely effects of information technology upon key human values like life, health, happiness, abilities, knowledge, freedom, security, and opportunities. The metaphysical ideas and analytical methods that he employed were so powerful and wide-ranging that they could be used effectively for identifying, analyzing and resolving social and ethical problems associated with all kinds of information technology, including, for example, computers and computer networks; radio, television and telephones; news media and journalism; even books and libraries. In laying down a foundation for information ethics, Wiener developed a cybernetic view of human nature and society, which led him to an ethically suggestive account of the purpose of a human life. These powerful ethical concepts enabled Wiener to analyze information ethics issues of all kinds. While explaining human intellectual potential, he regularly compared the human body to the physiology of less intelligent creatures like insects: Cybernetics takes the view that the structure of the machine or of the organism is an index of the performance that may be expected from it. The fact that the mechanical rigidity of the insect is such as to limit its intelligence while the mechanical fluidity of the human being provides for his almost indefinite intellectual expansion is highly relevant to the point of view of this book. The human species is strong only insofar as it takes advantage of the innate, adaptive, learning faculties that its physiological structure makes possible. Wiener concluded that the purpose of a human life is to flourish as the kind of information-processing organisms that humans naturally are: I wish to show that the human individual, capable of vast learning and study, which may occupy almost half of his life, is physically equipped, as the ant is not, for this capacity. Everything in the world is a mixture of both of these, and thinking, according to Wiener, is actually a kind of information processing. Information is information, not matter or energy. No materialism which does not admit this can survive at the present day. Living organisms, including human beings, are actually patterns of information that persist through an ongoing exchange of matter-energy. Thus, he says of human beings, We are but whirlpools in a river of ever-flowing water. We are not stuff that abides, but patterns that perpetuate themselves. This is the purpose of a human life. It is possible, nevertheless, to lead a good human life â€" to flourish â€" in an indefinitely large number of ways; for example, as a diplomat, scientist, teacher, nurse, doctor, soldier, housewife, midwife, musician, tradesman, artisan, and so on. Society, therefore, is essential to a good human life. For this reason, Wiener explicitly adopted a fourth principle of justice to assure that the first three would not be violated. Sometimes ethical relativists use the existence of different cultures as proof that there is not â€" and could not be â€" an underlying ethical foundation for

societies all around the globe. Those principles offer a cross-cultural foundation for ethics, even though they leave room for immense cultural diversity. The one restriction that Wiener would require in any society is that it must provide a context where humans can realize their full potential as sophisticated information-processing agents, making decisions and choices, and thereby taking responsibility for their own lives. Wiener believed that this is possible only where significant freedom, equality and human compassion prevail. Instead, he plunged directly into his analyses. In any given society, there is a network of existing practices, laws, rules and principles that govern human behavior within that society. In this way, he achieved a very effective method for analyzing information ethics issues. Identify an ethical question or case regarding the integration of information technology into society. Typically this focuses upon technology-generated possibilities that could affect or are already affecting life, health, security, happiness, freedom, knowledge, opportunities, or other key human values. Clarify any ambiguous or vague ideas or principles that may apply to the case or the issue in question. If ethically acceptable precedents, traditions and policies are insufficient to settle the question or deal with the case, use the purpose of a human life plus the great principles of justice to find a solution that fits as well as possible into the ethical traditions of the given society. Note that this way of doing information ethics does not require the expertise of a trained philosopher although such expertise might prove to be helpful in many situations. So those who must cope with the introduction of new information technology â€" whether they are computer professionals, business people, workers, teachers, parents, public-policy makers, or others â€" can and should engage in information ethics by helping to integrate new information technology into society in an ethically acceptable way. Information ethics, understood in this very broad sense, is too important to be left only to information professionals or to philosophers. It would affect every walk of life, and would be a multi-faceted, on-going process requiring decades of effort. Sometimes the addition of computers, it seemed to Maner, actually generated wholly new ethics problems that would not have existed if computers had not been invented. He concluded that there should be a new branch of applied ethics similar to already existing fields like medical ethics and business ethics. He developed an experimental computer ethics course designed primarily for students in university-level computer science programs. His course was a success, and students at his university wanted him to teach it regularly. It contained curriculum materials and pedagogical advice for university teachers. It also included a rationale for offering such a course in a university, suggested course descriptions for university catalogs, a list of course objectives, teaching tips, and discussions of topics like privacy and confidentiality, computer crime, computer decisions, technological dependence and professional codes of ethics. Meanwhile Maner continued to conduct workshops and teach courses in computer ethics. As a result, Maner and Johnson began discussing ethics cases that allegedly involved new problems brought about by computers. The resulting Maner-Johnson discussion initiated a fruitful series of comments and publications on the nature and uniqueness of computer ethics â€" a series of scholarly exchanges that started with Maner and Johnson and later spread to other scholars. I have tried to show that there are issues and problems that are unique to computer ethics. For all of these issues, there was an essential involvement of computing technology. Except for this technology, these issues would not have arisen, or would not have arisen in their highly altered form. The failure to find satisfactory non-computer analogies testifies to the uniqueness of these issues. The lack of an adequate analogy, in turn, has interesting moral consequences. Normally, when we confront unfamiliar ethical problems, we use analogies to build conceptual bridges to similar situations we have encountered in the past. Then we try to transfer moral intuitions across the bridge, from the analog case to our current situation. Lack of an effective analogy forces us to discover new moral values, formulate new moral principles, develop new policies, and find new ways to think about the issues presented to us. For some example publications, see Johnson , , , ; Maner , , ; Gorniak-Kocikowska ; Tavani , ; Himma ; Floridi and Sanders ; Mather ; and Bynum , She incorporated them into a textbook, Computer Ethics, which was published in Johnson For more than a decade, her textbook set the computer ethics research agenda on topics, such as ownership of software and intellectual property, computing and privacy, responsibilities of computer professionals, and fair distribution of technology and human power. They are not, she insisted, wholly new ethics problems requiring additions to traditional ethical theories, as Maner had claimed Maner There Moor provided an account of the nature of computer ethics that was broader and

more ambitious than the definitions of Maner or Johnson. He went beyond descriptions and examples of computer ethics problems by offering an explanation of why computing technology raises so many ethical questions compared to other kinds of technology. Computers are logically malleable in that they can be shaped and molded to do any activity that can be characterized in terms of inputs, outputs and connecting logical operations â€¦. Because logic applies everywhere, the potential applications of computer technology appear limitless. The computer is the nearest thing we have to a universal tool. Indeed, the limits of computers are largely the limits of our own creativity. Moor, , The logical malleability of computer technology, said Moor, makes it possible for people to do a vast number of things that they were not able to do before. Since no one could do them before, the question may never have arisen as to whether one ought to do them. In addition, because they could not be done before, perhaps no laws or standards of good practice or specific ethical rules had ever been established to govern them. A typical problem in computer ethics arises because there is a policy vacuum about how computer technology should be used. Computers provide us with new capabilities and these in turn give us new choices for action. Often, either no policies for conduct in these situations exist or existing policies seem inadequate. A central task of computer ethics is to determine what we should do in such cases, that is, formulate policies to guide our actions â€¦. One difficulty is that along with a policy vacuum there is often a conceptual vacuum. Although a problem in computer ethics may seem clear initially, a little reflection reveals a conceptual muddle. What is needed in such cases is an analysis that provides a coherent conceptual framework within which to formulate a policy for action. He added additional ideas in the s, including the important notion of core human values: According to Moor, some human values â€” such as life, health, happiness, security, resources, opportunities, and knowledge â€” are so important to the continued survival of any community that essentially all communities do value them. Identify a policy vacuum generated by computing technology. Eliminate any conceptual muddles. Use the core values and the ethical resources of just consequentialism to revise existing â€” but inadequate â€” policies, or else to create new policies that justly eliminate the vacuum and resolve the original ethical issue. The third step is accomplished by combining deontology and consequentialism â€” which traditionally have been considered incompatible rival ethics theories â€” to achieve the following practical results: If the blindfold of justice is applied to [suggested] computing policies, some policies will be regarded as unjust by all rational, impartial people, some policies will be regarded as just by all rational, impartial people, and some will be in dispute. This approach is good enough to provide just constraints on consequentialism. We first require that all computing policies pass the impartiality test. Clearly, our computing policies should not be among those that every rational, impartial person would regard as unjust. Then we can further select policies by looking at their beneficial consequences. We are not ethically required to select policies with the best possible outcomes, but we can assess the merits of the various policies using consequentialist considerations and we may select very good ones from those that are just. Moor, , 68 2. Thus, most of the specific issues that Wiener dealt with are cases of defending or advancing such values. For example, by working to prevent massive unemployment caused by robotic factories, Wiener tried to preserve security, resources and opportunities for factory workers. Similarly, by arguing against the use of decision-making war-game machines, Wiener tried to diminish threats to security and peace.

Chapter 9 : Collecting Information About Computers | Microsoft Docs

computer-aided design: A general term applied to the use of computer technology to automate design functions. data mart: A collection of data related to a particular subject or department in a company.

Read this article to learn about the advantages and disadvantages of using computers. Advantages of Using Computer: The usage of computer gives following advantages in comparison to manual MIS: The speed of carrying out the given instruction logically and numerically is incomparable between a computer and human being. Computer can perform and give instructions in less than a millionth of a second. The speed of the computer is specified in terms of Nano seconds and in Pico seconds, whereas human beings require most time to perform these functions. Computer calculates very accurately and computer never does mistake although we often hear about the false results of computers. This may be due to the error in data entry or due to poorly designed program. Since, human beings do data entry and programming; hence, the error may make the results false. Otherwise, computer never does mistake. Previously, the computer was thought as only a calculating machine, but a computer cans also carryout logical operations. Any job can be computerized with the help of appropriate software. Limited sets of instructions are enough to carry out a computer processing. Generally, the use of computer is restricted to typing and storage of information, in most of the business organizations. This may be due to the lack of complete knowledge regarding the use of computer on the part of the user. The information stored in computer is in digital forms. The information can be stored for long time and have long life. If maintained properly, at least data processing and storage components are guaranteed for several years. A user may feel comfortable and be reliable, while using information stored in computer. Previously, a digital form of information was not accepted in Government departments and the information stored in the floppies was not accepted in the court as evidence. However, after the establishment of Ministry of Information Technology by Government of India, efforts are taken by the Government to provide the legal status to the information stored in the digital form. Human brain can store a piece of information to some limitation of numbers and up to some extent of time. When he is asked to reproduce the information after a long period, he may find himself in a difficult situation to recall the information. Human being generally distorts the information. A computer performs automatically in user friendly and menu driven program. Electronic equipment like tape recorder, television, and calculator, VCR etc. In the same manner with some basic knowhow technique, a computer can be operated. Now a day, the size of the computer has reduced drastically. The modern computers are laptop and tabletop computers. They do not occupy more space. Moreover, laptop has provided mobility to the computer. Now we can carry computer with us and through remote accessing, we may be in touch with our office. With the advancement of technology, the benefit of this device has been multiplied. Internet and video conferencing facilities have made it possible for the business executives to control, direct, and monitor the functioning of the office even when they are not present in the office. Computer can be used repetitively to process information. It does not feel mental fatigue as in case of human being. There will be no difference in the speed and accuracy of the information presentation if a computer operates continually even for 1, 2 or any number of days. We can understand the importance of the unique features when company is sending information to its shareholders. Generally, the number of shareholders in any company is very large. To send the information to them manually is very tiresome and time consuming. However, through mail merging, thousands of letters can be prepared and dispatched in a day. For this, the company has to do only three things: Computer will automatically type the addresses to the letter to be sent to the individual shareholder and the work, which is supposed to be done in month manually; now can be performed in a day. A computer is an electronics device. It does not suffer from the human traits of lack of concentration. So, the results will be continuously of the same standard. Computers are devoid of emotions. They have no feelings and no instincts because they are machine. Although men have succeeded in building a memory for the computer, but no computer possesses the equivalent of a human heart and soul. Based on our feelings, taste, knowledge and experience, we often make certain judgments in our day to day life. But computers cannot make such judgements on their own. Their judgement is based on the instructions given to

them in the form of programs that are written by us. They are only as good as man makes and uses them. Disadvantages of Using Computer: The usage of computer gives following disadvantages in comparison to manual MIS: Lack of common sense 2. Memory without brain 3. Lack of common sense: Computer is only an electronic device. If we provide an incorrect data, it does not have the commonsense to question the correctness of the data. For overcoming this problem, several Software Specialists are engaged in the project of developing intelligence to the computer. To it, they have given name as Artificial Intelligence. They are willing to develop the feeling and inhumation in this device. We hope that in near future the artificial intelligence will help this device to function in more interactive way. This is the beginning of an era where computer may be quite interactive with human beings. In addition, to execute the function, operator will give verbal instructions. Computer can store data in its memory. However, if a wrong instruction is provided, it does not have a brain to correct the wrong instructions. A computer is a slave; it cannot execute the program by itself. It requires instructions to execute the program and generate information. Thus, we see that the computer cannot do anything by itself. It has a relationship of master and slave. Until master is not instructing, slave will not perform any function. In the same way computer does.