**EXAMPLES OF COMPUTER USAGE. COMPUTER APPLICATIONS IN SOCIETY**

**I.** Every day, people around the world rely on different types of computers for a variety of applications. There is a wide range of uses for computers. One can name five categories of users: a home user, a small office/home office (SOHO) user, a mobile user, a power user, and a large business user.

Home User

In an increasing number of homes, the computer is a basic necessity. Each family member, or home user, spends time on the computer for different reasons. These include budgeting and personal finance management, Web access, communications, and entertainment.

On the Internet, home users access a huge amount of information, take college classes, pay bills, manage investments, shop, listen to the radio, watch movies, read books, play games, file taxes, book airline reservations, and make telephone calls. They also communicate with others around the world through e-mail, blogs, instant messaging, and chat rooms. Home users share ideas, interests, photos, music, and videos on social networking Web sites, or online social networks.

Many home users have a portable media player, so they can listen to downloaded music and/or podcasts at a later time through earphones attached to the player. They also usually have one or more game consoles to play video games.

Today’s homes typically have one or more desktop computers. Some home users network multiple desktop computers throughout the house, often wirelessly. These small networks allow family members to share an Internet connection and a printer.

Home users have a variety of software. They type letters, homework assignments, and other documents with word processing software. Personal finance software helps the home user with personal finances, investments, and family budgets. Other software assists with preparing taxes, keeping a household inventory, and setting up maintenance schedules.

Reference software, such as encyclopedias, medical dictionaries or a road atlas, provides valuable information for everyone in the family. With entertainment software, the home user can play games, compose music, research genealogy, or create greeting cards. Educational software helps adults learn to speak a foreign language and youngsters to read, write, count and spell.

**Small Office/Home Office User**

Computers assist small business and home office users in managing their resources effectively. A small office/home office (SOHO) includes any company with fewer than 50 employees, as well as the self-employed who work from home. Small offices include local law practices, accounting firms, travel agencies, and florists. SOHO users typically use a desktop computer. Many also use PDAs.

SOHO users access the Internet – often wirelessly – to look up information such as addresses, directions, postal codes, flights, and package shipping rates or to make telephone calls. Nearly all SOHO users communicate through e-mail. Many are entering the e-commerce arena and conduct business on the Web. Their Web sites advertise products and services and may provide a means for taking orders.

To save money on hardware and software small offices often network their computers. For example, the small office connects one printer to a network for all employees to share.

SOHO users often have basic business software such as word processing and spreadsheet software to assist with document preparation and finances. They are likely to use other industry-specific types of software. A candy shop, for example will have software that allows for taking orders and payments, updating inventory, and paying vendors.

**Mobile User**

Today, businesses and schools are expanding to serve people across the country and around the world. Thus, increasingly more employees and students are mobile users, who work on a computer while away from a main office or school. Some examples of mobile users are sales representatives, real estate agents, insurance agents, meter readers, package delivery people, journalists, and students.

Mobile users often have a notebook computer, Tablet PC, Internet-enabled PDA, or smart phone. With these computers and devices, the mobile user can connect to other computers on a network or the Internet, often wirelessly accessing services such as e-mail and the Web. Mobile users can transfer information between their mobile devices and another computer.

The mobile user works with basic business software such as word processing and spreadsheet software. With presentation graphics software, the mobile user can create and deliver presentations to a large audience by connecting a mobile computer or device to a video projector that displays the presentation on a full screen.

Power User

Another category of user, called a power user, requires the capabilities of a powerful desktop computer, called a workstation. Examples of power users include engineers, scientists, architects, desktop publishers, and graphic artists. Power users typically work with multimedia, combining text, graphics, audio, and video into one application. These users need computers with extremely fast processors because of the nature of their work.

The power user’s workstation contains industry-specific software. For example, engineers and architects use software to draft and design floor plans, mechanical assemblies, or vehicles. A desktop publisher uses software to prepare marketing literature such as newsletters, brochures, and annual reports. A geologist uses software to study the earth”s surface. This software usually is expensive because of its specialized design.

Power users exist in all types of businesses. Some also work at home. Their computers typically have network connections and Internet access.

**Large Business User**

A large business has hundreds or thousands of employees or customers that work in or do business with offices across a region, the country, or the world. Each employee or customer who uses a computer in the large business is a large business user.

Many large companies use the words, enterprise computing, to refer to the huge network of computers that meets their diverse computing needs. The network facilitates communications among employees at all locations. Users access the network through desktop computers, mobile computers, PDAs, and smart phones.

Large businesses use computers and the computer network to process high volumes of transactions in a single day. Although they may differ in size and in the products or services offered, all generally use computers for basic business activities. For example, they bill millions of customers or prepare payroll for thousands of employees. Some large businesses use blogs to open communications among employees and/or customers.

Large businesses typically have e-commerce Web site, allowing customers and vendors to conduct business online. The Web sites showcases products, services, and other company information. Customers, vendors, and other interested parties can access this information on the Web.

The marketing department in a large business uses desktop publishing software to prepare marketing literature. The Accounting department uses software for accounts receivable, accounts payable, billing, general ledger, and payroll activities.

Large business users work with word processing, spreadsheet, database, and presentation graphics software. They also may use calendar programs to post their schedules on the network. And, they might use PDAs or smart phones to maintain contact information. E-mail and Web browsers enable communications among employees, vendors, and customers.

Many employees of large businesses today telecommute. Telecommuting is a work arrangement in which employees work away from a company”s standard workplace and often communicate with the office through the computer. Employees who telecommute have flexible work schedules so they can combine work and personal responsibilities, such as child care.

**II.** The computer has changed society today as much as the industrial revolution changed society in the eighteenth and nineteenth centuries.

People interact directly with computers in fields such as education, finance, government, health care, science, publishing, travel, and manufacturing. In addition, they can reap the benefits from breakthroughs and advances in these fields. The following pages describe how computers have made a difference in people”s interactions with these disciplines.

**Education**

Education is the process of acquiring knowledge. In the traditional model, people learn from other people such as parents, teachers, and employers. Many forms of printed material such as books and manuals are used as learning tools. Today, educators also are turning to computers to assist with education.

Many schools and companies equip labs and classrooms with computers. Some schools require students to have a notebook computer or PDA to access the school”s network or Internet wirelessly.

Students use software to assist with learning or to complete assignments. To promote education by computer, many vendors offer substantial student discounts on software.

Sometimes, the delivery of education occurs at one place while the learning occurs at other locations. For example, students can take a class on the Web. More than 70 percent of colleges offer some type of distance learning classes. A few even offer entire degrees online.

**Finance**

Many people and companies use computers to help manage their finances. Some use finance software to balance checkbooks, pay bills, track personal income and expenses, manage investments, and evaluate financial plans. This software usually includes a variety of online services. For example, computer users can track investments and do online banking. With online banking, users access account balances, pay bills, and copy monthly transactions from the bank’s computer right into their computer.

Investors often use online investing to buy and sell stocks and bonds – without using a broker. With online investing, the transaction fee for each trade usually is much less than when trading through a broker.

**Government**

A government provides society with direction by making and administering policies. To provide citizens with up-to-date information, most government offices have Web sites. People access government Web sites to file taxes, apply for permits and licenses, pay parking tickets, buy stamps, report crimes, apply for financial aid, and renew vehicle registrations and driver”s licenses.

Employees of government agencies use computers as part of their daily routine. Military and other agency officials use the U.S. Department of Homeland Security”s network of information about domestic security threats to help protect our nation. Law enforcement officers have online access to the FBI’s National Crime Information Center (NCIC) through in-vehicle computers, fingerprint scanners, and PDAs. The NCIC contains more than 52 million missing persons and criminal records, including names, fingerprints, parole/probation records, mug shots, and other information.

**Health Care**

Nearly every area of health care uses computers. Whether you are visiting a family doctor for a regular checkup, having lab work or an outpatient test, or being rushed in for emergency surgery, the medical staff around you will be using computers for various purposes:

* hospitals and doctors use computers to maintain patient records;
* computers monitor patients’ vital signs in hospital rooms and at home;
* doctors use the Web and medical software to assist with researching and diagnosing health conditions;
* doctors use e-mail to correspond with patients;
* pharmacists use computers to file insurance claims;
* computers and computerized devices assist doctors, nurses, and technicians with medical tests;
* surgeons implant computerized devices, such as pacemakers, that allow patients to live longer;
* surgeons use computer-controlled devices to provide them with greater precision during operations, such as for laser eye surgery and robot-assisted heart surgery.

An exciting development in health care is telemedicine, which is a form of long-distance health care. Through telemedicine, health-care professionals in separate locations conduct live conferences on the computer. For example, a doctor at one location can have a conference with a doctor at another location to discuss a bone X-ray. Live images of each doctor, along with the X-ray, are displayed on each doctor’s computer.

**Science**

All branches of science, from biology to astronomy to meteorology, use computers to assist them with collecting, analyzing and modelling data. Scientists also use the Internet to communicate with colleagues around the world.

Breakthroughs in surgery, medicine, and treatments often result from scientists’ use of computers. Tiny computers now imitate functions of the central nervous system, retina of the eye, and cochlea of the ear. A cochlear implant allows a deaf person to listen. Electrodes implanted in the brain stop tremors associated with Parkinson’s disease. Cameras small enough to swallow – sometimes called a camera pill – take pictures inside your body to detect polyps, cancer and other abnormalities.

Travel

Many vehicles manufactured today include some type of onboard navigation system. Some mobile users prefer to carry specialized handheld navigation devices.

In preparing for a trip, you may need to reserve a car, hotel or flight. Many Web sites offer these services to the public. For example, you can order airline tickets on the Web. If you plan to drive somewhere and are unsure of the road to take to your destination, you can print directions and a map from the Web.

**Manufacturing**

Computer-aided manufacturing (CAM) refers to the use of computers to assist with manufacturing processes such as fabrication and assembly. Often, robots carry out processes in a CAM environment. CAM is used by a variety of industries, including oil drilling, power generation, food production, and automobile manufacturing. Automobile plants, for example, have an entire line of industrial robots that assemble a car.

**I. Answer the following questions:**

1. What are the main categories of computer users?
2. How can a computer be used at home?
3. Give examples of home software.
4. What is SOHO?
5. What can you say about mobile users?
6. Define power user. Give examples.
7. Define large business user.
8. What is telecommuting?
9. What was the equivalent of the computer in the 18th century? (in point of the large influence exerted)
10. What are the fields in which computers are used?
11. What is the part played by computers in education?
12. How are used computers in finance?
13. What is the purpose of computers in government offices?
14. How are computers used in medicine?
15. What is the part played by computers in the field of travelling?
16. Define CAM.

**II. Say whether the following statements are true (T) or false (F):**

1. One can not renew his/hers permit by accessing government Web sites.
2. Any desktop computer is called workstation.
3. By networking their computers, small offices waste money on hardware and software.
4. With a media player you can listen to downloaded music.
5. There is only a small number of computer applications in society.
6. In the traditional educational model, people learnt by using computers.
7. One can access a huge amount of information on the Internet.
8. Only small businesses have e-commerce Web sites.
9. Telecommuting implies that employees commute everyday to their workplace.
10. Power users need very fast processors.

**Translate into English:**

**A.**

Ele sunt calculatoare de dimensiuni medii, compuse din module structurale cu funcţii precise, sunt uşor de instalat şi utilizat, se pot conecta la reţeaua electricã fãrã restricţii. Au putere şi capacitate de stocare mai mare, UCP complex, sistemul de intrare/ieşire foarte dezvoltat în sensul comunicãrii prin reţeaua de periferice, în sistem multiutilizator.  
 - Calculatoarele "mainfraime" constituie o categorie aparte, situatã între supercalculatoare şi minicalculatoare, operând cu viteze ridicate şi administrând un volum foarte mare de date. Au procesorul foarte complex, volum mare de stocare în DM, S I/O complex, orientat pe gestionare de staţii de lucru, permit acces multiutilizator (pot suporta sute şi chiar mii de utilizatori simultan).  
 - Calculatoarele "mainframe" necesitã instalaţii speciale şi proceduri de menţinere în functiune, neputând fi cuplate direct la reţeaua de înaltã tensiune; de aceea au costuri foarte ridicate. Ele funcţioneazã, de regulã, fãrã întrerupere, ceea ce presupune accesul controlat la date şi un sistem de protecţie adecvat. Se utilizeazã în spitale, bănci,etc.;