

Chapter 04 : Applications and Uses of Computer

4.1 Uses of Computers in Different Fields

Q : 04-01-01 : Describe Uses of Computers in Business ?

Answer :

Uses of Computers in Business : The computer technology is vital for every functional area of an organization and IT systems are integral to every functional area.

Marketing : Marketing applications provide information about organization's products, its distribution system, its advertising and personal selling activities, and its pricing strategies. Marketing applications help managers to develop strategies that combine the four major elements of marketing: Product, Promotion, Place, and Price.

Stock Exchanges : Stock markets around the world are in transition. The papers and trading floor itself is disappearing because many stock markets launched the computerized system for online trading.

Banks : Computerized banking have provided several benefits. The cheques are read by MICR (Magnetic Ink Character Reader). Banks use mainframe computer / server to maintain their customer accounts, withdrawals and deposits. Networks of ATMs (Automated Teller Machine) provide 24 hour services. Credit card number eases the shoppers.

Departmental Store : Point of sale terminal with bar-code readers speeds the sales. The prices of items are set in the server and accessible to all sale clerks. Record of sales can be used for accounting restocking store inventory. Security VCR (video cassette recorder) is widely used in departmental stores to record the activities of visitors

Office Automation : Office Automation (OA) refers to the movement towards automating office tasks. An office where workers perform different tasks. The categories of activities in an office are decision-making, data manipulation, document handling, communication, and storage.

Document Management Systems (DMS) : DMS include word processing, desktop publishing, reprographic, image processing, and archival storage applications.

Word processing enable documents to be created and edited electronically.

Desktop publishing enables to make documents in attractive form by the use of photos artwork, graphical illustrations etc.

Spreadsheet is used to create a table of columns and rows used by people responsible for tracking revenues, expenses, profits, losses, statistical, mathematical and logical processing etc.

Reprographics is the process of reproducing multiple copies of a document.

Image processing allows documents to be scanned and stored in image oriented databases.

Message-handling systems : It enables to send messages or documents from one location to other location through facsimile (Fax), electronic mail (e-mail), Voice Mail etc.

Office Support Systems : It enables to coordinate and manage the activities of a work group. Groupware and desktop organizers are some examples of office support systems.

Q : 04-01-02 : Explain E-Commerce ?

Answer :

E-Commerce : Electronic-Commerce describes the buying, selling, and exchanging of products, services, and information via computer network (e-commerce is describe as transactions conducted between business partners via computers). Application of e-commerce are home, banking, shopping in electronic malls, buying stocks, finding a job, conducting an auction etc. E-Commerce services frequently used in e-business are :

Electronic Mail (E-mail) : It is a service that transports text messages (includes voice messages) from a sender to one or more receivers via computer.

Video Conferencing : It is a type of conferencing in which video cameras and microphones capture sight and sound for transmission over networks. It is advance form of teleconferencing. It provides complete simulation of a normal meeting environment, enabling both parties to see, hear and present material, just as if they were in the same room. This saves cost of travel and time.

Electronic-Shopping (E-Shopping) : Online shopping from home, work or cyber cafe is possible from anywhere in the world 24 hours a day.

Electronic Banking : Electronic / cyber / online banking includes various banking activities conducted from home, business, or on the road instead of a physical bank location.

Q : 04-01-03 : Describe Use of Computers in Industry ?

Answer :

Use of Computers in Industry : Computers are used to control manufacturing system and continuous running of the machinery. These also help in monitoring temperature, pressure, check the quality and accuracy and measure in the manufacturing process.

Robots : A robot is an automatic programmable machine that moves and performs mechanical tasks. Robots are used for assembling and spray-painting cars, carrying maintenance on overhead power cables, to test blood samples, out space experimental programs, artificial satellites, and radioactive environments etc. Robots can work in environment that are hazardous for humans, can perform repetitive and boring task continuously at high level of accuracy.

Q : 04-01-04 : Describe Computer Aided Design (CAD) and Computer Aided Manufacture (CAM) ?

Answer :

Computer Aided Design (CAD) : CAD are used for display designs and build production prototypes in software, test them as a computer object according to given parameters :

Compile parts and quantities lists.

Outline production and assembly procedures.

Transmit the final design directly to machines.

CAD has many different applications like designing new car or aircraft, bridge and building. CAD is capable of displaying three-dimensional object and speedily rotating it.

Computer Aided Manufacture (CAM) : CAM is used to control manufacturing process. CAM software uses digital design output to directly control production machinery. CAM systems can manufacture accurately and consistently, round the clock and cheaper.

Q : 04-01-05 : Describe Computer Simulation ?

Answer :

Computer Simulation : Computer model which recreates a system that might exist outside the computer. Simulations are often used to train people how to deal with expensive or dangerous situations, to recreate and practice for real. Flight simulation is used to train pilots to deal with situation that would be expensive and dangerous to practice using a real aircraft.

Q : 04-01-06 : Describe Use of Computers in Medical Field ?

Answer :

Use of Computers in Medical Field : The computers are used in medical laboratories, researches, scanning, monitoring, pharmacy etc.

Patient Monitoring : To monitor critically ill patients in intensive care units. The patients have sensors attached to them, which detect changes in heart rate, pulse rate, blood pressure, breathing and brain activity. Computer activates alarming device to sound and alerts the medical staff if needed.

Patient Records : Computerized databases store information about patients, doctors, medicines, chemicals and equipments. Storing information in proper order and organized records saves time and effort.

Diagnosis : One common use of computer is to scan the body of the patient. A scanner sends electromagnetic rays through a patient's body and sensors detect patient's body affected by cancer. CAT scanner passes rays over the patient; displays images that enable physicians to look beneath the patient's skin. As scanner passes over the patient, it displays an image of bone and tissue structure on a computer screen.

Q : 04-01-07 : Describe Use of Computers in Airline System ?

Answer :

Use of Computers in Airline System : Computers are used to control passenger aircrafts and vehicles. Electronic signals from the cockpit are sent that adjust the flight surfaces. Computer is embedded in the pilot's or driver's controls. It is linked up among different cities and gives full information about its flight and seat reservation.

Q : 04-01-08 : Describe Use of Computers in Education and Explain Computer Based Training (CBT) ?

Answer :

Use of Computers in Education : Computers are used in many colleges to provide the methods of teaching in different ways. The computer education is very familiar and rapidly increasing the graph of computer students. Many computer-based educational program software are available, which students can learn to read, count, or speak a foreign language. Software that combines the thrills of games with real information content is becoming more popular. Organizations are using information technology in their employee training programs.

Q : 04-01-10 : Describe or Explain Computer Aided Learning (CAL) ?

Answer :

Computer Aided Learning (CAL) : CAL is the use of information technology to assist in the teaching and enhance learning process. Information Technology may be able to aid us in reducing the time spent on creation and maintenance of teaching materials (one document for lecture materials / reference notes / study aids). It is also reducing the administrative load associated with teaching and research.

Q : 04-01-11 : Describe or Explain Computer Based Training (CBT) ?

Answer :

Computer-Based Training (CBT) : [An interactive learning experience between the learner and computer in which the computer provides the majority of the stimulus, the learner must respond, and the computer analyzes the response and provides feedback to the learner]. It can bring many additional benefits to any organization, their training department and their students :

Students can readily acquire new skills at their own pace and at times.

Training times can usually be reduced.

Retention of course material is usually greater.

Interactive, visually stimulating, easily absorbed and available material encourages students to undertake training.

Planning and time tabling problems can be reduced or eliminated.

Essential skills can be taught and refreshed whenever and wherever needed.

The quality and consistency of the training material is maintained throughout.

It is a highly cost-effective way to train large number of students locally or at remote places.

Timely and high-quality training on demand leads to increased efficiency.

Students absorb study material faster and retain more of information they are taught.

Q : 04-01-12 : Describe or Explain Use of Computer in Weather Forecasting ?

Answer :

Use of Computer in Weather Forecasting : Computer based weather forecasting depends on accurate collection of data from weather stations, airports, satellites, different sensitive devices (which are situated on huge towers and buildings etc.) all around the world. The data is collected on atmospheric phenomena over a region. The computer then generates a forecast of how the air will change. SPARCO Weather forecasting department offers analysis of live weather data, and provide help to make business decisions based on weather forecasting.

Q : 04-01-13 : Describe or Explain Use of Computer at Homes ?

Answer :

Use of Computer at Homes : Children play games, keep track of the stamp collections, draw pictures, play music, view movies and do some sort of reading and writing according to their needs. People can utilize computers for keeping records, making home budgets, using electronic mail and Internet services to learn and increase their knowledge. The uses of microprocessor technology in manufacturing of electronic home appliances air-conditioning, washing machine, sewing machine etc., have completely changed our way of life.

Q : 04-01-14 : Describe or Explain The Assistance Computers provide us to simplify our work practices ?

Answer :

Computer Assistance Simplifying Our Work Practices : Reasons for using computers are :

Computers can work faster than human's work.

Computers never get tired / bored or need rest.

Computers can do jobs that are dangerous for human to do.

Computers can store large amounts of information.

Computers can retrieve information very quickly.

Computers never loose or misplace information.



Q : 04-01-15 : Describe or Explain The Major Personal or Business Benefits provided to users by Computers ?

Answer :

Benefits To Computer Users : Computers linked through communications systems offer major personal and business benefit to users :

Speed : Computer can perform calculations or process at a very high speed in nano second or pico second. Computer can perform complex calculations, recall stored information, transmit information from one location to another and move objects around on a computer screen.

Consistency : People often have difficulty repeating their actions. Computer excels at repeating actions consistently. Whether using a spell checker built into a word processor or playing multimedia animation for training purposes, a computer will carry out the activity the same way every time.

Precision : Computers are extremely precise and can detect minute differences that people cannot. Computers excel in managing the smallest differences in being precise.

Reliability : Speed, consistency, and precision bring reliability. When we know that the same procedure will be followed rapidly, consistently, and precisely, we can expect reliability of result. We can depend on getting the same result again and again without any error.

