



## **CHAPTER # 04**

# **APPLICATION & USES OF COMPUTERS**

### **COMPUTER LITERACY:**

That encompasses three aspects of the computer's universal appeal.

### **THE KNOWLEDGE OF COMPUTER & ITS STUDY:**

#### **Awareness:**

Studying about computers will make you more aware of their importance and their versatility.

#### **Knowledge:**

Learning what computers are and how they work requires coming to terms with some technical terminology.

#### **Interaction:**

There is no better way to understand computers than through interacting with one. So being computer literate also means being able to use a computer for some simple applications.

### **IMPORTANCE OF COMPUTER IN DAILY LIFE:**

Computers have been getting a lot of attention now-a-days. We hear about them almost every day and we see them all around every day and we see them all around us. In fact, every time we cash a cheque, go through a supermarket checkout or listen to a compact disk player, computers are involved. Simply we can say that computer is very importance in our daily life, some of them are given below.

### **LEARNING:**

Computer affect our lives, whether we realize it or not. They are used in banks, offices, stores, factories, schools, government agencies, military installations, and just about and other organization you think of Tiny specialized computers are built into many modern appliances, machines and vehicles. All kinds of advanced equipment from cameras to jet aircraft depend utterly on computer technology. Unless we learn a few fundamental computer concepts, it will be difficult to understand many of today's and tomorrow's technological issues.

### **EMPLOYMENT:**

Since most businesses and other organizations routinely use computers, employers need workers who are at least familiar with them. Knowing how to use a computer certainly won't guarantee you a job, but it can help you to be more competitive in today's labour market.

### **PRODUCTIVITY:**

A compelling reason for learning to use a computer is that it can help it can help us to do certain jobs more efficiently. For example, word processing, a common computer application allows you to produce documents such as letters and reports, with a computer.

### **CAPABILITY:**

Computers not only let you perform everyday tasks more efficiently, but they also allow you to tackle jobs you otherwise would not be able to do at all. One example is a computer-simulated chemistry lab. Actually, students do not mix real chemicals; they just tell the computer what they would mix. The computer then displays on a screen prerecorded video sequences of the results that would occur.



**FUN:**

Once they learn to use a computer, most people find that they enjoy it. There are many computer games available from simulations of traditional board games such as chess and monopoly to much exciting games such as Need for Speed, Pac Man, Dark Castle and Brian Lara's Cricket. The computer opens whole new worlds of information, communication, productivity and entertainment.

**RESOURCES OF COMPUTER SYSTEM:**

Computers are tools; they help people perform many different kinds of tasks. The places where computer can be used are as follows:

**Information Management:**

Computers are excellent tools for managing large quantities of information. We combine hardware, software, people, procedures and data to create an information system. A computer-based information system provides an organization with data processing capabilities and the knowledge workers in the organization with the information they need to make better, more informed decision.

**Personal Productivity:**

A variety of domestic and business applications forms applications form the foundation of personal computing. Domestic applications include everything from personal finance to education to entertainment.

These are some of the most popular productivity tools:

- ★ Word processing
- ★ Desktop processing
- ★ Spreadsheet
- ★ Database
- ★ Graphics
- ★ Communications

**APPLICATIONS OF COMPUTER IN FIELD:****Communication:**

The telephone and the computer are two of our most useful tools. Combine them and you end up with a powerful communication system. Many people use their computers together with their telephones to communicate electrically with another and with other computers.

**SCIENCE, RESEARCH & ENGINEERING:**

Engineers and scientists routinely use the computer as a tool in experimentation, design and development. There are at least as many science and research applications for the computer as there are scientists and engineers. One of these applications is computer-aided design (CAD).

Computers can simulate environments, emulate physical characteristics. Many monkeys, mice, cats and dogs have been spared since computers have been added to the research.

Computers are also used to generate models of DNA, the molecule that houses the genetic instructions that determine the specific characteristics of organisms.

**EDUCATION & REFERENCE:**

Computers can interact with students to enhance the learning process. The most common use of personal computers in the education environment takes place in computer labs. Computers are now being applied to the tasks of accelerating and enhancing the learning process.

The combination of interactive computer technology and videodisk images be used to present materials. Computer-based education will not replace, but educators agree that computer-based training (CBT) is having a profound impact on traditional modes of education.



## **ENTERTAINMENT & EDUTAINMENT**

Personal computers have reinvented the concept of entertainment. You can buy a computer chess opponent in the form of a board, chess pieces, and a miniature robotic arm that moves the pieces.

### **ART:**

Artists are using personal computers to generate and manipulate experimental images. Film industry makes extensive use of personal computers to control camera movements for special effect sequences in movies such as those in the Star Wars series. With a Musical Instrument Digital Interface (MIDI), personal computers can be used to control synthesizers to produce music.

### **ENERGY:**

Energy companies use computers to locate oil, coal, natural gas and uranium. Electric companies use computers to monitor vast power networks.



### **BUSINESS & E-COMMERCE:**

Many companies are redefining the customer-salesperson relationship by arming their sales reps can also perform analyses on pricing, to help customers determine the most cost-effective products to buy. Orders can be printed and given to the customer immediately, which helps reduce later disputes about what was ordered.

On stock exchange, brokers are replacing older terminals with personal computers that help them monitor trending, look for trends and order trades.

### **MONEY:**

Computers have revolutionized the way we handle money. Computers speed up record keeping and allow banks to offer some-day services, banking over the phone and remote transactions via automated taller machines (ATMs). Computers have evolved cashless economy, enabling the widespread use of credit cards and instantaneous credit cheques by banks, departmental stores and other retailers. Some banks now provide ATM card reader.

### **AGRICULTURE:**

Computers have penetrated to farms. Farmers now use small computers purchased for less than the price of a tractor to help with billing, crop information, cost per acre, feed combinations and market price checks.

Cattle ranchers can also use computers for information about livestock breeding and performance.

### **GOVERNMENT:**

The largest single user of computer is the federal government. The NADRA, for example, produces millions of tax documents, voter lists, national identify cards etc. a month with the help of computers. Computers are also used for forecasting weather, for servicing parts, for processing immigrants, for imparting justice and of course for collecting taxes.

### **TRAINING:**

Computers are being used as training devices in industry and government. It is much cheaper.

### **HEALTH & MEDICINE:**

Personal computer applications in science and medicine are also beginning to appear. The highly Magnetic Resonance Imaging (MRI) uses magnetic fields and radio waves to create electronic pulses that can be amplified and analyzed by computer to produce images of the spinal cord and brain. Computers help monitor a serious patient in intensive care units.



Personal computers help neurosurgeons locate within a millimeter, the area of the brain needing surgery.

## **ROBOTICS:**

Computers have paved the way for robots to take many of the jobs that place human life at risk. These robots are performing tasks too unpleasant, too dangerous, or too critical for humans. Clearly, these robots have eliminated many jobs for factory workers.

Finally the amount of computing capacity in the world is doubling every two years.

## **THE IMPACT OF COMPUTERS ON PEOPLE:**

The technological advances in the field of computer have made it one of the most powerful forces in society today. No one can doubt that use of computers has had a strong impact on many people. Here some of the positive and negative effects that computer usage may have on individuals.

### **Positive Impact:**

People may benefit from computers in many ways. Among the benefits are the following:

#### **New Job Opportunities:**

Hundreds of thousands of new jobs have been created in such areas as programming, computer operations and information systems management.

#### **Greater Job Satisfaction:**

Scientists and engineers can tackle can interesting problems that they could not have considered without computer's help.

#### **Use By Business:**

The use of computers by business to avoid waste and improve efficiency may result in lower product prices and/or better service to individuals.

## **USE BY PUBLIC ORGANIZATIONS:**

Avoiding waste and improving efficiency in government agencies. Colleges and hospital units can also result in better service.

### **Use In The Home:**

Millions of microcomputers have been acquired for home use. Personal systems are used for entertainment and hobby purposes, for education uses, for family financial applications.

### **Negative Impact:**

In spite of the countless benefits unit people receive form computer usage, such usage can also lead to potential dangers and problems. Some of these problem areas are:

#### **The Threat Of Unemployment:**

The greater efficiency made possible by computer usage can result in job obsolescence and displacement for some workers.

#### **The Use Of Questionable Data Processing Practices:**

In other cases, inaccurate and incomplete data about people have been placed in computer system files. Finally, human errors in preparing input data and in designing and preparing programs.



### **The System Security Issue:**

The lack of control over data security in a computer system has resulted in the destruction of an individual's records in some cases.

### **The Privacy Issue:**

Lack of control over data storage, retrieval and communication has led to abuses of a person's legitimate. The records of patients hospitalized for psychiatric treatment may be made available to insurance companies, police departments, the motor vehicle department and all other licensing agencies.

### **THE IMPACT OF COMPUTER ON ORGANIZATIONS:**



The uses of computers are having both positive and negative effects on the organizations that use them. A few of these effects are outlined below.

### **Positive Impact:**

We have seen that organizations any benefit from computers. Those benefits include the following:

#### **Better Planning & Decision Making:**

Planning is deciding in advance on a future course of action. Computer-based information systems that are quicker-responding and broader in scope than those previously available can have a positive impact on the planning and decision making that occurs in a business or non-profit organization.

#### **Better Control of Resource:**

Control is a follow-up to planning. It is the check on performance to see if planned goals are being achieved. Computer systems can be used to measure actual performance levels, compare these levels against planned standards and then carry out pre-programmed decisions.

#### **Greater Efficiency of Operations:**

You have seen how greater efficiency may benefit individuals. But greater efficiency resulting from computer usage also benefits organizations. PIA and other small airlines have also gained a larger share of the market by permitting travel agents to tap into their systems.

### **Negative Impact:**

The following brief listing identifies some of the challenges that computer-using organizations may face:

#### **The Problems in Information System Design:**

The design of new computer-based information systems can be a very complex and challenging tasks.

#### **The System Security Issue:**

The failure to secure the information systems being used has threatened organizations as well as individuals. Assets have been stolen from organizations through system manipulation. Secrets have been copied and sold to competitors.

### **THE CHALLENGE TO ORGANIZATIONAL STRUCTURE:**

When new computer systems are introduced, work group in an organization may be created, disbanded.

### **THE ACCESS TO INFORMATION ISSUE:**

Organizations with limited computing resources may have difficulty competing against organizations with much greater sophistication in the use of computers.