

# COMPUTER APPLICATIONS

## Introduction

The term Application refers to Software which is a set of instructions or code written in a program for executing a task or an operation in a Computer. Applications play a vital role in a Computer as it is an end-user program that enables the users to do many things in a system. The application programs are designed and developed to run in a System Software which is an Operating system. An Operating System is system software that enables all the applications programs to run and execute various tasks in a Computer system. The GUI based applications carries out various tasks in a Computer like creating documents, playing games, browsing and many more.

## Application Software Overview

Application software's are the end-user programs designed to enhance the productivity in various fields of work. The applications are used for creating documents, spreadsheets, databases, and publications, doing online research, sending email, designing graphics, running businesses, and also playing games. Application software's are designed to perform a specific task and can be as simple as a calculator application or as complex as a word processing application. The applications are designed with built-in functions and properties so to easily carry out all the operations. One of the most popular and widely used applications is Microsoft word processor where you can do calculations, copy, paste, delete, and add colours and pictures, change the appearance by using its built-in properties. Not only Word processor applications but there are several other productivity programs like Graphical software, Photo studio, Antivirus and many more that are packed as an Application software.

Application software cannot run itself as it requires system software for executing the programs. System software like Windows, Mac, Linux and many more helps the application software's to run and execute in a Computer. As a Computer needs an Operating system, an Operating system needs Application software's, so without applications the computer is nothing but a blank page. Since the system software's also integrates some built-in application programs when installed on a computer that can be used. But there are several applications like Microsoft Office which is a complete suite of programs that includes Excel, Power point, Access etc, Graphic suites like Adobe Creative suite with various applications for creating and editing images, Audio master suite for sound production, Video editing applications, Security software's and most importantly Web-browser which is also application software.

Application Software can be divided into two broad categories-

- 1. System Software**
- 2. Applications Software.**

### 1. System Software

System Software is a program designed to manage all the hardware resources and also runs the applications programs in a Computer. It is mainly of two types are the Operating system and utility software that is installed with the Operating system. The Operating system and utility programs are written in such a way to function independently because they are not user oriented. It always runs in the background and executes all the operations in a Computer. But

there are some system software's that are used by the end-users like a Device manager which is found on Control panel.

Operating systems like Windows, Mac, Linux, and UNIX are the best examples that manage all the programs in a Computer. Since there are other systems software's that help the OS to perform all the tasks like BIOS (Basic Input/output system) that manages data flow between OS and other attached devices such as keyboard, mouse, hard drives etc. Boot program loads the Operating system to RAM, an Assembler takes basic instructions and converts them to machine language to perform operations and a Device manager controls all the devices attached to Computer. The utility software's like disk derangement, system restore, compilers and debuggers are also installed on the Operating system software.

## **2. Application Software**

Application Software is a program or a group of program designed for the end-user to perform a specific task in a Computer. The user directly interacts with the application programs for performing a task in a system. Some of the applications software's are browsers, e-mail clients, word processors, spreadsheet, database programs and many more that has various built-in functions to be used. Furthermore, the Applications Software's are also broadly categorized for better productivity. Some of them are: -

Application suites are packed with multiple programs with user interfaces, features and functions to interact with the users. Some of them are Microsoft Office, Adobe Creativity suite, Security suite, Gaming apps and many more.

**Enterprise Software** labels the organization requirements and also manages data flow in a huge environment. It may be an automated billing system, e-mail marketing, business intelligence and Content management.

**Enterprise Infrastructure Software** provides the capabilities required to support enterprise software systems. It is mainly used for businesses, society or Organization for network security, surveillance system, transportation, sewage, communication, electricity and water that need high investment for the systems.

**Educational Software** includes all the contents of different subjects that can be used by a student or any individuals. There are several websites providing educational software about various topics and vast database makes it an easy to use application.

**Multimedia Software** is used for development of media in our day to day life. There are various audio, video and image editing tools, printing media that can be used to maximize the growth of a business.

**Content Access Software** is used to access the contents in a website for publishing digital contents and entertainment.

**Information Software** is used for addressing the needs of an individual by creating and managing information for individual projects within the department. It may be the word processors, spreadsheets, e-mail or blog clients etc.

## **Business**

A computer has high speed of calculation, diligence, accuracy, reliability, or versatility which has made it an integrated part in all business organizations.

Computer is used in business organizations for –

- Payroll calculations
- Budgeting
- Sales analysis
- Financial forecasting
- Managing employee database
- Maintenance of stocks, etc.

## **Banking**

Today, banking is almost totally dependent on computers.

Banks provide the following facilities –

- Online accounting facility, which includes checking current balance, making deposits and overdrafts, checking interest charges, shares, and trustee records.
- ATM machines which are completely automated are making it even easier for customers to deal with banks.

## **Insurance**

Insurance companies are keeping all records up-to-date with the help of computers. Insurance companies, finance houses, and stock broking firms are widely using computers for their concerns.

Insurance companies are maintaining a database of all clients with information showing –

- Procedure to continue with policies
- Starting date of the policies
- Next due instalment of a policy
- Maturity date
- Interests due
- Survival benefits
- Bonus

## **Education**

The computer helps in providing a lot of facilities in the education system.

- The computer provides a tool in the education system known as CBE (Computer Based Education).
- CBE involves control, delivery, and evaluation of learning.
- Computer education is rapidly increasing the graph of number of computer students.
- There are a number of methods in which educational institutions can use a computer to educate the students.

- It is used to prepare a database about performance of a student and analysis is carried out on this basis.

## Marketing

In marketing, uses of the computer are following –

- **Advertising** – With computers, advertising professionals create art and graphics, write and revise copy, and print and disseminate ads with the goal of selling more products.
- **Home Shopping** – Home shopping has been made possible through the use of computerized catalogues that provide access to product information and permit direct entry of orders to be filled by the customers.

## Healthcare

Computers have become an important part in hospitals, labs, and dispensaries. They are being used in hospitals to keep the record of patients and medicines. It is also used in scanning and diagnosing different diseases. ECG, EEG, ultrasounds and CT scans, etc. are also done by computerized machines. Following are some major fields of health care in which computers are used.

- **Diagnostic System** – Computers are used to collect data and identify the cause of illness.
- **Lab-diagnostic System** – All tests can be done and the reports are prepared by computer.
- **Patient Monitoring System** – These are used to check the patient's signs for abnormality such as in Cardiac Arrest, ECG, etc.
- **Pharma Information System** – Computer is used to check drug labels, expiry dates, harmful side effects, etc.
- **Surgery** – Nowadays, computers are also used in performing surgery.

## Engineering Design

Computers are widely used for Engineering purpose.

One of the major areas is CAD (Computer Aided Design) that provides creation and modification of images. Some of the fields are –

- **Structural Engineering** – Requires stress and strain analysis for design of ships, buildings, budgets, airplanes, etc.
- **Industrial Engineering** – Computers deal with design, implementation, and improvement of integrated systems of people, materials, and equipment.
- **Architectural Engineering** – Computers help in planning towns, designing buildings, determining a range of buildings on a site using both 2D and 3D drawings.

## Military

Computers are largely used in defence. Modern tanks, missiles, weapons, etc. Military also employs computerized control systems. Some military areas where a computer has been used are –

- Missile Control

- Military Communication
- Military Operation and Planning
- Smart Weapons

### **Communication**

Communication is a way to convey a message, an idea, a picture, or speech that is received and understood clearly and correctly by the person for whom it is meant. Some main areas in this category are –

- E-mail
- Chatting
- Usenet
- FTP
- Telnet
- Video-conferencing

### **Government**

Computers play an important role in government services. Some major fields in this category are –

- Budgets
- Sales tax department
- Income tax department
- Computation of male/female ratio
- Computerization of voters lists
- Computerization of PAN card
- Weather forecasting

### **Conclusion:**

Application software is the lifeline for a user as it creates an interface to communicate with the Computer by using various application programs. Each and Every application program is run by the system software which is the Operating system. One can run loads of applications in Computer and can perform various tasks from creating documents to playing games