

COMPUTER SOFTWARE

Software is a collection of computer programs and related data that provide the instructions for telling a computer what to do and how to do. A software is an interface between the user and the computer hardware. It is responsible for controlling, integrating and managing the hardware components of a computer system and for accomplishing specific tasks.

Types of Software

1. System software
2. Application software

System Software

It consists of several programs, which are directly responsible for controlling, integrating and managing the individual hardware components of a computer system. System software also provides the interface between the user and components of the computer.

Depending on the functionality, the system software can be further divided into following categories

1. **Operating System** It consists of programs which control, coordinate and supervise the activities of various components of a computer system. Its function is to provide link between the computer hardware and the user. It provides an environment to run the programs. *For example*, MS-DOS, Windows XP/2000/98, Unix, Linux, etc.

Operating system performs the following functions

- (i) It recognises input from keyboard and sends output to the display screen.
- (ii) It makes sure that programs running at the same time do not interfere with each other.
- (iii) It is also responsible for security and ensures that unauthorised users do not access the system.

BIOS

The Basic Input/Output System (BIOS) is commonly known as **System BIOS**. BIOS controls various electronic components within the main computer system. The initial function of BIOS is to initialise system devices such as RAM, hard disk, CD/DVD drive, video display card and other hardwares.

2. **Device Driver** A software, which is written with the objective of making a device functional when it is connected to the computer is called device driver. It is a system software that acts like an interface between the device and the user.

Every device, whether it is a printer, monitor, mouse or keyboard has a driver program associated with it for its proper functioning.

3. **Language Translator** It helps in converting programming language to machine language. The translated program is called object code. There are three different kinds of language translator : Assembler, Compiler and Interpreter.

Linker

It is a system program that links together several object modules and libraries to form a single and coherent program (executable). The main purpose of linker is to resolve references among files.

Loader

It is a kind of system software which is responsible for loading and relocation of the executable program in the main memory. It is a part of operating system that brings an executable file residing on disk into memory and starts its execution process.

Application Software

It is a computer software designed to help the user to perform single or multiple tasks. It is a set of instructions or programs designed for specific use or application, that enable the user to interact with a computer.

Application softwares are also called the end-user programs. These programs do the real work for users.

There are two types of application software

General Purpose Software

These types of software are used for any general purpose. They allow people to do simple computer tasks.

Some of the general purpose softwares are as follows

1. **Word Processing Software** A word processor is a software program capable of creating, storing and printing of documents.

Word processors have the ability to create a document and make changes anywhere in the document.

For example, Microsoft Word, WordPerfect (Windows only), AppleWorks (Mac only), OpenOffice.org Writer, etc.

2. **Electronic Spreadsheets** Spreadsheet applications are the computer programs that accept data in a tabular form and allow you to create and manipulate spreadsheets electronically.

For example, Microsoft Excel, Corel Quattro Pro, Lotus 1-2-3, OpenOffice.org Calc, etc.

3. **Presentation Software** This software is used for creation of the slides and to display the information in the form of presentation of slides.

For example, Microsoft PowerPoint, Corel Presentations, Lotus Freelance Graphics, OpenOffice.org Impress, etc.

4. **Database Management System (DBMS)** A DBMS refers to the software that is responsible for sorting, maintaining and utilising a database.

For example, Microsoft Access, Corel Paradox, MySQL, OpenOffice.org Base, etc.

5. **Desktop Publishing (DTP) Software** It is a tool for graphic designers and non-designers to create visual communications for professional or desktop printing as well as for online or on screen electronic publishing.

For example, Quark XPress, Adobe PageMaker, 3B2, CorelDraw, Corel Ventura, Illustrator, etc.

6. **Graphics Software (Image Editing)** It enables a person to manipulate visual images on a computer system. Most graphics softwares have the ability to import and export one or more graphics file formats.

For example, DirectX, Adobe Photoshop, piZap, Microsoft Publisher, Picasa, etc.

7. **Multimedia Software** Multimedia includes a combination of text, audio, still images, animation, video or interactivity content forms.

For example, Macro-Media Flash, Xilisoft Video Converter, VLC Media Player, Nimbuzz, etc.

Specific Purpose Software

These softwares are designed to perform specific tasks. This type of application software generally has one purpose to execute.

Some of the specific purpose application softwares are described below

1. **Inventory Management System and Purchasing System** Inventory is a list of goods and materials available in a stock. Inventory management system is generally used in departmental stores or in an organisation to keep the records of the stock of all the physical resources.
For example, Fishbowl, AdvancePro, etc.
2. **Payroll Management System** It is used by all modern organisations to encompass every employee of the organisation who receives a regular wages or other compensation.
For example, Namely, UltiPro, etc.
3. **Hotel Management System** It refers to the management techniques used in the hotel sector. These can include hotel administration, accounts, billing, marketing, housekeeping, front office or front desk.
For example, Djubo, Aatithya HMS, Hotelogix PMS, etc.
4. **Reservation System** A reservation system or Central Reservation System (CRS) is a computerised system used to store and retrieve information and conduct transactions related to air travel, hotels, car rental or other activities. Today, number of websites like www.yatra.com, www.makemytrip.com provide online booking for tourists.
5. **Report Card Generator** It is an application software which is commonly used in schools by the examination department to prepare and generate the report cards of the students.
For example, E-report card.
6. **Accounting Software** It is an application software that records and processes accounting transactions within functional modules such as accounts payable, accounts receivable, payroll and trial balance.

For example, Tally. ERP9, HDPOS, MARG, Profit book etc.

7. **Billing System** It refers to the software that is used to perform the billing process. It handles the tracking of labeled products and services delivered to a customer or set of customers.
For example, Billing Manager, Billing Tracker, kBilling, etc.

System Utilities

These programs perform tasks related to the maintenance of the computer system. These are the packages which are loaded into computer during the time of installation of operating system.

They are used to support, enhance, expand and secure existing programs and data in the computer system.

System utility mainly consists of the following functions

1. **Disk Compression** It increases the amount of information that can be stored on a hard disk by compressing all information stored on it.
For example, DiskDoubler, SuperStor Pro, DoubleDisk Gold, etc.
2. **Disk Fragmenter** It detects computer files whose contents are broken across several locations on the hard disk and moves the fragments to one location to increase efficiency. It can be used to rearrange files and unused space on your hard disk.
For example, MyDefrag, Diskeeper, Defraggler, etc.
3. **Backup Utilities** It can make a copy of all information stored on a disk and restore either the entire disk or selected files.
4. **Disk Cleaners** It is used to find files that have not been used for a long time. This utility also serves to increase the speed of a slow computer.
For example, Bleach Bit cleaner, etc.
5. **Anti-virus** It is the utility which is used to scan computer for viruses and prevent the computer system and files from being corrupt.
For example, Kaspersky, AVG, McAfee, Avira, etc.

6. **Text Editor** It is a program that facilitates the creation and correction of text. A text editor supports special commands for text editing, i.e. you can write, delete, find and replace words, lines, paragraphs, etc.
For example, MS-Word, WordPad, Notepad, etc., in which Notepad is the most popular text editor.

Open Source Software

Open source refers to something that can be modified and shared as its designed are publicly accessible.

Open Source Software (OSS) is any computer software that is distributed with its source code available for modification.

Examples of Open Source Software are Linux, Unix, MySQL, etc. To be considered as open source software by the software development industry, *certain criteria must be met are as follows*

- Software must be available free or at a low cost.
- Source code must be included.
- Anyone must be allowed to modify the source code.
- Modified versions can be redistributed.

Criteria for the Distribution of OSS

Open source software is normally distributed with the source code under an open source license. The distribution terms of open source software must comply with the following criteria

1. **Free Redistribution** The license shall not restrict any party from selling or giving away the software distribution containing programs from several different sources. The license shall not require a royalty or other fee for such sale.
2. **Source Code** The program must include source code and allows distribution with source code as well as a compiled form. The

source code must be in the preferred form in which a programmer would modify the program.

3. **Integrity of the Author's Source Code** The license may restrict source code from being distributed in modified form only if the license allows the distribution of "patch files" with the source code for the purpose of modifying the program at build time.

Proprietary Software

It is a software that is owned by an individual or a company. There are always major restrictions on it to use and its source code is always kept secret. Proprietary software is copyrighted and bears limits against use, distribution and modification that are imposed by its publisher, vendor or developer.

Main Barriers for Using Proprietary Software

1. Licenses and maintenance of proprietary software is very expensive.
2. It is developed for a single purpose, applications are separately packaged.
3. Vendor support is conditional to maintenance subscription.
4. Users have to dependent on the developer of proprietary software for all updates, support and fixes.
5. Low level of customisation and adaptability.

Tit-Bits

- **Adobe Page Maker** is a typesetting tool which is used for desktop publishing.
- **Fully Backup** contains a copy of every program, data and system file on a computer.
- is a combination of software and hardware. e.g. ROMs, PROMs and EPROMs.
- **Freeware** is commonly used for copyrighted software that is given away for free by its owner.

QUESTION BANK

1. Which one of the following is defined as “a set of instructions, data or programs used to operate computers and execute specific tasks”? [SSC CGL 2018]
(1) Processor (2) Hardware
(3) Malware (4) Software
2. The term used to describe the intangible instructions that tell the computer what to do is [IBPS Clerk 2015]
(1) hardware (2) software
(3) storage (4) input/output
(5) None of these
3. Software refers to
(1) the physical components that a computer is made of
(2) firmware
(3) programs
(4) people ware
4. Which of the following is software? [IBPS Clerk 2014]
(1) Keyboard (2) Internet Explorer
(3) Scanner (4) Mouse
(5) Printer
5. The primary purpose of software is to turn data into [RBI Grade B 2014]
(1) information (2) programs
(3) objects (4) charts
(5) websites
6. Computer software is [SBI Clerk 2015]
(1) used only for output
(2) a computer peripheral
(3) used for input
(4) a set of instructions
(5) used only in operating systems
7. The steps and tasks needed to process data, such as responses to questions or clicking an icon, are called
(1) instructions
(2) the operating system
(3) application software
(4) the system unit
8. The two broad categories of software are
(1) word processing and spreadsheet
(2) transaction and application
(3) Windows and Mac OS
(4) system and application
9. System software
(1) allows the user to diagnose and troubleshoot the device
(2) is a programming language
(3) is a part of productivity suite
(4) helps the computer manage internal resources
10. A collection of various programs that helps to control your computer is called [SBI Clerk 2015]
(1) system software
(2) application software
(3) Microsoft Excel
(4) Microsoft Word
(5) Microsoft Outlook
11. This type of software works with end-users, application software and computer hardware to handle the majority of technical details. [RBI Grade B 2014, IBPS PO 2012]
(1) Communication software
(2) Application software
(3) Utility software
(4) System software
(5) None of the above
12. It is a set of programs that enables your computer’s hardware device and application software to work together.
(1) Management
(2) Processing
(3) Utility
(4) System software
13. A(n) is a software that helps a computer control to operate efficiently and keep track of data.
(1) application system
(2) hardware system
(3) software system
(4) operating system

- 14.** A computer cannot 'boot' if it does not have the
(1) compiler (2) loader
(3) operating system (4) assembler
- 15.** The tells the computer how to use its components.
(1) utility (2) application
(3) operating system (4) network
- 16.** Operating system is a
(1) application software
(2) system software
(3) hardware
(4) language
- 17.** The manual tells you how to use a software program. [RBI Grade B 2012]
(1) documentation (2) programming
(3) user (4) technical
(5) None of these
- 18.** What does the acronym BIOS stand for? [SBI Clerk 2014, RBI Grade B 2013]
(1) Basic Input/Outer System
(2) Basic Internal Output System
(3) Basic Inner/Output System
(4) Basic Input/Output Systemisation
(5) Basic Input/Output System
- 19.** includes boot firmware and power management. [SBI Clerk 2015]
(1) CD-ROM (2) Internal buses
(3) BIOS (4) Chip Set
(5) RAM
- 20.** Which category does best describe the BIOS? [UPSSSC 2016]
(1) Hardware (2) Malware
(3) Firmware (4) Utility
- 21.** In computer terminology, which of the following best describes a device driver? [UGC NET 2019]
(1) Software that allows the user to control the operating system
(2) Hardware that allows the user to control the operating system
(3) Hardware that allows interaction between peripheral devices and the operating system
(4) Software that allows interaction between peripheral devices and the operating system
- 22.** helps in converting programming language to machine language.
(1) Operating system (2) Device driver
(3) Language translator (4) Linker
- 23.** A linker program
(1) places the program in the memory for the purpose of execution
(2) relocates the program to execute from the specific memory area allocated to it
(3) links the program with other programs needed for its execution
(4) interfaces the program with the entities generating its input data
- 24.** The main purpose of is to resolve references among files.
(1) text editor (2) loader
(3) antivirus (4) linker
- 25.** Which of the following system software resides in main memory always?
(1) Text editor (2) Assembler
(3) Linker (4) Loader
- 26.** A kind of system software, which is responsible for loading and relocating of the executable program in the main memory
(1) loader
(2) linker
(3) translator
(4) presentation software
- 27.** Specialised program that allows user to utilise in specific application is classified as [IBPS RRB PO Mains 2017]
(1) relative program
(2) application program
(3) appropriate program
(4) replicate program
(5) logical program
- 28.** is a software which is used to do particular task. [IBPS Clerk Mains 2017]
(1) Operating system
(2) Program
(3) Data software
(4) Data
(5) Application software

- 29.** Software designed for a specific purpose/ application such as pay calculations, processing of examination result, etc. are known as
- (1) utility software
 - (2) system software
 - (3) application software
 - (4) customised software
- 30.** Application software
- (1) is used to control the operating system
 - (2) is designed to help programmers
 - (3) performs specific task for computer users
 - (4) is used for making design only
- 31.** The software that is used to create text-based documents are referred to as [SBI PO 2013]
- (1) DBMS
 - (2) suites
 - (3) spreadsheets
 - (4) presentation software
 - (5) Word processors
- 32.** Which of the following general purpose softwares allow you to do mathematical or financial calculation?
- (1) Word processing program
 - (2) Spreadsheet program
 - (3) Presentation program
 - (4) Database program
- 33.** Spreadsheet software is used
- (1) to keep simple company accounts
 - (2) calculate employee commission payments
 - (3) as simple stock control system
 - (4) All of the above
- 34.** Which software is used to create presentations to show to customers or staff members?
- (1) Report generation
 - (2) Graph generator
 - (3) Presentation software
 - (4) Picture generator
- 35.** Database software is used to
- (1) discard sales records
 - (2) store contacts list
 - (3) keep customer records
 - (4) generate report
- 36.** DTP is a tool for graphic designers and non-designers to create visual communications for professional. DTP stands for
- (1) Device Transfer Protocol
 - (2) Desktop Publishing
 - (3) Device Transfer Programs
 - (4) All of the above
- 37.** Corel Ventura, Illustrator are examples of
- (1) Word Processing
 - (2) Graphic
 - (3) Multimedia
 - (4) DTP
- 38.** DirectX is a/an [RBI Grade B 2013]
- (1) computer part
 - (2) user interface
 - (3) operating system
 - (4) software that drives graphic software
 - (5) None of the above
- 39.** Which among the following is not an example of system software?
- (1) Operating system
 - (2) Debugger
 - (3) Software Driver
 - (4) Adobe Photoshop
- 40.** Which application software is used for a special purpose? [IBPS RRB PO Mains 2018]
- (1) General purpose software
 - (2) Special purpose software
 - (3) Important software
 - (4) System software
 - (5) None of the above
- 41.** Which types of software is used in organisations to keep track of products in stocks?
- (1) Enterprise Resource Planning (ERP) software
 - (2) Payroll Software
 - (3) Human resource planning software
 - (4) Inventory management software
- 42.** A software program that adds functionality to your computer or help your computer perform better is called as [IBPS RRB PO Mains 2017]
- (1) utility program
 - (2) function program
 - (3) specialised program
 - (4) manufacturer program
 - (5) compiling program

- 43.** Which of the following techniques can be used to store a large number of files in a small amount of storage space?
(1) File adjustment
(2) File copying
(3) File compatibility
(4) File compression
- 44.** What type of software creates a smaller file that is faster to transfer over the Internet?
[IBPS Clerk Mains 2017]
(1) Compression (2) Fragmentation
(3) Unzipped (4) Abstraction
(5) Encapsulation
- 45.** is a Windows utility program that locates and eliminates unnecessary fragments and rearranges files and unused disk space to optimise operations.
[SBI PO 2013]
(1) Backup (2) Disk cleanup
(3) Disk defragmenter (4) Restore
(5) Disk restorer
- 46.** When files are broken up into small parts on a disk they are said to be
(1) fragmented (2) contiguous
(3) sectorised (4) disbursed
- 47.** It can make copies of all information stored on a disk or either restore the entire disk
(1) Restore utility
(2) Disk cleaner
(3) Backup software
(4) Defragmenter
- 48.** What is backup?
(1) Connect the user's network to more component
(2) Copy to save a data from original source to other destination
(3) Filter on old data from new data
(4) Access data from tape
- 49.** A(n) backup contains a copy of every program, data and system file on a computer.
[Allahabad Bank Clerk 2011]
(1) restoration (2) bootstrap
(3) differential (4) full
(5) None of these
- 50.** Disk cleaner helps to free
(1) data (2) recycle bin
(3) space (4) information
- 51.** They can find files that are unnecessary to computer operation, or take up considerable amounts of space.
(1) Antivirus
(2) Sweep
(3) Disk cleaner
(4) Disk Formatting
- 52.** Which of the following Windows utilities erase unneeded files?
(1) Backup or Restore Wizard
(2) Disk Cleanup
(3) Disk Defragmenter
(4) Antivirus
- 53.** Text editor is a/an [RBI Grade B 2013]
(1) application software
(2) system software
(3) utility software
(4) all purpose software
(5) None of the above
- 54.** Which of the following is not related to a utility software?
(1) Text editor
(2) Antivirus program
(3) Disk compression software
(4) Railway reservation system
- 55.** Utility programs include
(1) virus scanning software
(2) backup software
(3) disk defragmenter
(4) All of the above
- 56.** Which of the following is not related to an application software?
(1) Word processor
(2) DBMS
(3) Operating system
(4) Railway reservation system
- 57.** disk encryption is a technology (hardware or software) where data is encrypted before storage. [SCC CGL 2017]
(1) Half (2) Whole
(3) Double (4) Triple

