



# Software

The software is a group of instructions that instructing a computer to do specific tasks. It enables the user to interact with a computer. System Software and Application Software are two types of software.

## System Software

It serves as an interface between a computer user, computer hardware and application software. It is also known as background software. Four types of system software are the following.

- Operating System
- Utility Programs
- Device drivers
- Language translators.

**Operating System** - Operating system (OS) is the program that acts as an interface between the user and computer hardware and application software. After the boot program, OS manages all the other programs in a computer. Examples - Linux, Unix, Microsoft Windows XP etc.

**Utility Programs** - Utility Programs help to manage, maintain and control computer resources. They are also known as service programs. Examples of utility programs are antivirus software, backup software, disk defragment, backup, disk clean etc.

**Device Drivers** - A device driver is designed to enable interaction with hardware devices. It controls a device that is attached to your computer. Printers, Displays, CD-ROM readers, Disk drives etc are the examples of the device driver.

**Language Translator** - Language Translator translates the high-level language program (input) into an equivalent machine language program (output). It also detects and reports the error during translation. Assembler, Compiler, Interpreter are types of a Language Translator.

**Assembler** - It converts assembly language program into machine language.

**Compiler** - It converts the program in a high-level language into low-level language and reports all the errors of the program along with the line numbers. C, C++ use compilers.

**Interpreter** - It converts the programs in a high-level language to low-level language. It translates line by line and reports the error once after completing the translation process. It gives better error diagnostics than a compiler. Python, BASIC, and Ruby use interpreters.

## Application Software

Application software is a program or group of programs designed for end users. It enables the user to complete tasks, such as creating documents, spreadsheets, databases, and publications, doing online research, sending email, designing graphics etc. There are two types of application software.

- Basic application software
- Specialized application software

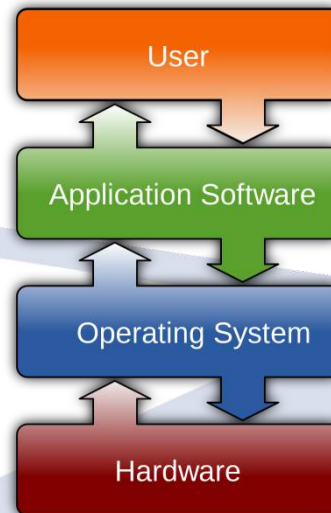
**Basic application software** - Basic application software is also known as general purpose applications and productivity applications. These programs are widely used in every discipline and occupation. Word processors, spreadsheets, database management systems, and presentation graphics are the common types of basic application software. Example - Microsoft office 2016.



**Specialized application software** - Specialized application software is designed for a specific task rather for a wide application area. Graphics programs, audio and video editors, multimedia creation programs, web authoring, and virtual reality programs are common types of specialized software.

**Firmware and BIOS:** The operating system relies on a piece of programming called the BIOS (Basic Input Output System). It is the link between the operating system software and the hardware. The BIOS is not actually software: it's a program semi-permanently stored into one of the computer's main chips, and it is known as firmware. Firmware is a combination of hardware and software.

**Mobile Device Software:** Modern smart phones use application software. Mobile device application allow users to perform specified tasks like games, networking, and messaging. They are also apps for presentation making, etc. Mobile devices use Important Computer Awareness Capsule – IBPS RRB  
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Android (Google), iOS (Apple), Windows Phone  
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both system and software or Apps social word processing, operating PO/Clerk 2017 for IBPS systems like (Microsoft),

## Software categories

**Freeware:** Software which is completely costless. The producers of this software are either public institutions such as universities or developers who do it for personal interest or advertisement or private company who do it for dumping reasons.

**Shareware:** Software which is initially costless but after a certain period the user is asked to pay a fee or delete it. Or software which has two versions a free one, but incomplete or with advertisement banners and a complete advertisement free one for which the user must pay. The most common example is WinZip compression program.

**Commercial:** Software for which the user has to pay a license to use it. Common examples are Microsoft Windows operating system and Microsoft word.

**Private:** Software uniquely built, under payment for a specific customer to fit his need. Only the customer may use it.

**Open Source:** Software may be modified by anyone, sometimes under certain restrictions. Open source software is also freeware.

**Proprietary:** Software is distributed with the explicit with the explicit legal warning not to modify it and technically locked to prevent other developers to see or modify its source.