

# Software

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## Software: Basic categories and programs

The term **software** was once used for all non-hardware components of a computer. Using today's terminology, however, the documents and photos you create are usually referred to as *data files* rather than as software. The instructions that tell a computer how to carry out a task are referred to as a *software* (a.k.a. program).

The two main categories are **system software** and **application software**. *Operating systems* are classified as *system software*. Device drivers, utilities, and programming languages are also *system software*. *Application software* categories include:

- music (AIMP, Winamp)
- graphics (Adobe Photoshop, Illustrator, Inkscape)
- mapping (Google Maps, Apple Maps)
- finance (I-Bankings)
- entertainment (Games, social networks, etc.)

*Application software* is designed to help people accomplish real-world tasks, whereas *system software* is designed for computer-centric tasks.

## OS Basics.

An **operating system** (abbreviated OS) is a type of *system software* that acts as the master controller for all activities that take place within a computer system. While you interact with *application software*, your computer's OS is busy behind the scenes with resource management tasks such as:

- manage processor resources to handle different tasks simultaneously
- allocating memory for programs and data
- keep track of storage resources
- establish basic elements of user interface

*Operating systems* are divided into *single-user* (Android, iOS) and *multiuser* (GNU/Linux, Windows, MacOS). They are also can be divided into *server* (Windows Server, macOS Server, Red Hat Enterprise Linux, etc.), *desktop* (Windows Home, macOS, Fedora Workstation), *mobile* (Android, iOS, Ubuntu Touch, etc.).

## Application and Apps: mobile, web, local.

**Web application** is *software* that is accessed with a Web browser. Instead of running locally, much of the program code for the software runs on a remote computer connected to the Internet

or other computer network. Most *Web apps* require no installation, however, you must have a Web browser and an Internet connection.

A **mobile app** is designed for a handheld device, such as a smartphone. The difference between the two is that *Web apps* run on a remote computer, whereas *mobile apps* run from the handheld device, so they have to be downloaded and installed. Games and entertainment seem to dominate *mobile apps*, whereas shopping and social apps dominate the *Web apps* category.

**Local applications** are installed on a computer's hard disk. When you install a *local application*, all of its files are placed in the appropriate folders on your computer's hard disk, and then your computer performs any *software* or *hardware* configurations necessary to make sure the *program* is ready to run.

## Buying and Installing Software.

**Software installation** is the process of placing a *program* into a computer so that it can be run or executed. You can use some software without installing (*web*, *portable*) it. Periodically, *software* publishers replace older versions of a software product with a new version that's sometimes referred to as a **software upgrade**.

Before purchasing *software*, make sure the *license* allows you to use the *software* the way you want to. Just remember that many *software programs* exist and you can find usually alternatives with similar features offered under various licensing terms.

## Software licensing.

From a legal perspective, there are two categories of *software*: **public domain** and **proprietary**. *Public domain* software is not protected by copyright because the copyright has expired, or the author has placed the program in the public domain, making it available without any restriction. Based on licensing rights, *proprietary software* is distributed as:

- commercial software (buy before use, f.e. AutoCAD)
- demoware (try some features, f.e. FaceApp)
- shareware (try all features, f.e. WinRAR)
- freeware (unlimited free usage, f.e. Google Docs)
- open source software (full access to view, edit, resell the source code, f.e. Linux).

## Software piracy.

**Software piracy** is the act of stealing *software* that is legally protected. This stealing includes copying, distributing, modifying or selling the *software*. Computer piracy is illegal and constitutes a federal crime in USA. The monetary penalties for those who break this law can reach up to \$150,000 per instance of copyright violation. **The End-User License Agreement (EULA)** is a license used for most *software*. It is a contract between the manufacturer and/or author and the end user. This agreement defines rules for software use and not every agreement is the same. One common rule in most *EULAs* prohibits users from sharing the software with others. Breaking the rules defined by *EULA* is piracy.