5. SOFTWARE

Software: Software Basics: categories and programs. OS Basics. Applications and Apps: mobile, Web, local. Buying and Installing Software. Software Licenses. Software Piracy.

1. What is software? How is software categorized? The examples of system and application software
2. How are applications categorized? What are mobile, web, local applications?
3. What is Operating system? What are its main funcions?
4. What is software piracy? Do you think software piracy is a serious problem?
5. What are the main software licenses?

TYPES OF SOFTWARE

Software is a collection of instructions and data that tell a computer how to work. This is in contrast to physical **hardware**, from which the system is built and actually performs the work. The instructions that tell a computer how to carry out a task are referred to as **computer program.** These programs form the software that prepares a computer to do a specific task, such as document production, virus protection, file management, or Web browsing.

The two main categories are **system software** and **application software**. System software is meant to manage the system resources, it also serves as a kind of platform for running the application software. Operating systems, device drivers, utilities, and programming languages are classified as system software. Application software is meant to enable the user to carry out some specific tasks. Application software categories include music, graphics, mapping, finance, database and entertainment.

A type of system software called **utility software** is designed to help you monitor and configure settings for your digital gear, its operating system, or application software. Like all system software, utilities focus on computer-centric tasks such as blocking viruses or diagnosing hard disk errors. Another popular category of utility software is **system utilities** that can track down and fix disk errors, repair corrupted files, and give your device a performance-enhancing tune-up.

A **device driver** is software that helps a peripheral device establish communication with a computer. This type of system software is used by printers, monitors, sound cards, network cards, storage devices, modems, mice, and scanners. **Spreadsheet software** provides tools to create electronic spreadsheets and make simple calculations.

Database software helps you enter, find, organize, update, and report information stored in a database.

OPERATING SYSTEM (OS)

An operating system (OS) is a type of system software that acts as the master controller for all activities that take place within a computer system. Your computer's OS provides an environment for running software and controlling peripheral devices. While you interact with application software, your computer's OS is busy behind the scenes with resource management tasks. OS manages processor resources to handle simultaneous input, output, and processing tasks. It manages memory by allocating space for all the programs and data that are in use during a computing session. OS keeps track of storage resources so that files and programs can be found and manipulated. It also ensures that input and output proceed in an orderly manner by communicating with peripheral devices.

APPLICATIONS: MOBILE, WEB, LOCAL

A **Web application** (or Web app) 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.

A mobile app is designed for a handheld devices, such as a smartphone, or tablet computer. Most handheld devices can use both Web apps and mobile apps.

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.

SOFTWARE PIRACY

A **copyright** is a form of legal protection that grants the author of an original work an exclusive right to copy, distribute, sell, and modify that work. **Software piracy** is defined as illegally copying software that does not belong to you in a manner that violates the copyright. An example of software piracy is when you download a copy of Microsoft Word from a file-sharing website without paying for it. That's why software piracy may be dangerous:

✓ Increased chances that the software will malfunction or fail.
✓ No warranty and the software can't be updated.
✓ Increased risk of infecting your PC with malware, viruses, or adware.

SOFTWARE LICENSES

In addition to copyright protection, computer software is often protected by the terms of a software license. A **software license**, or license agreement, is a legal contract that defines the ways in which you may use a computer program.

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 restriction. Public domain software may be freely copied, distributed, and even resold. The primary restriction on public domain software is that you are not allowed to apply for a copyright on it. **Proprietary software** has restrictions on its use that are delineated by copyright, patents, or license agreements. Based on licensing rights, proprietary software is distributed as commercial software, demoware, shareware, freeware, and open source software. **Commercial software** is usually sold in retail stores or at Web sites. Although you buy this software, you actually purchase only the right to use it under the terms of the software license. Some commercial software is free.

Demoware is distributed for free and often comes preinstalled on new computers, but it is limited in some way until you pay for it.

Shareware is copyrighted software marketed under a try-before-you-buy policy. To use it beyond the trial period, you are supposed to pay a registration fee. Unlikefeature- or time-limited demoware, shareware is supposed to be fully- functioning software.

Open source software makes uncompiled program instructions – the source code – available to programmers who want to modify and improve the software. Open source software may be sold or distributed free of charge in compiled form, but it must, in every case, also include the source code. Linux is an example of open source software.

Freeware is copyrighted software that is available for free. It is fully functional and requires no payment for its use. A freeware license permits you to use the software, copy it, and give it away, but does not permit you to alter it or sell it. Many utility programs, most device drivers, and some games are available as freeware.