

Basic Office Software I

Unit 2

Criterios de Evaluación

Bloque VI: TECNOLOGÍA DE LA INFORMACIÓN Y DE LA COMUNICACIÓN

1. Distinguir las partes operativas de un equipo informático, localizando el conexasión funcional, sus unidades de almacenamiento y sus principales periféricos. CD, CMCT, CCL.
2. Utilizar de forma segura sistemas de intercambio de información. Mantener y optimizar el funcionamiento de un equipo informático (instalar, desinstalar y actualizar programas, etc.). CD, SIEP.
3. Utilizar un equipo informático para elaborar y comunicar proyectos técnicos. CMCT, CD, SIEP, CSC, CCL.
4. Aplicar las destrezas básicas para manejar sistemas operativos, distinguiendo software libre de privativo. CD, SIEP, CCL.
5. Aplicar las destrezas básicas para manejar herramientas de ofimática elementales (procesador de textos, editor de presentaciones y hoja de cálculo). CD, SIEP, CCL.
8. Valorar el impacto de las nuevas tecnologías de la información y la comunicación en la sociedad actual. CD, CSC, CEC.

Criterios de Evaluación

Instrumento-> Criterio	Observación directa en clase	Cuaderno individual de Tecnología	Memoria de proyecto.	Objetos contruidos o diseñados:	Pruebas escritas u orales individuales:	Trabajo en pizarra	Prácticas con simuladores.	Media
Bloque I - Crit1								
Bloque I – Crit2								
Bloque II – Crit3								
Bloque I – Crit4								
Bloque I – Crit5								
Bloque II – Crit8								

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3. Presentation programs.
4. Word preprocessors

Operating Systems

An operating system is the central software that allows to use and administer correctly all of the system's resources.



Operating Systems

An operating system is the software that acts as an interface between the machine and people. It contains programs that control the hardware and allows the user's applications to be launched.

Functions of the operating system

The main functions of an operating system are as follows:

- ▶ To control and direct the general actions of the computer.
- ▶ To assign resources depending on the needs (processor time, RAM and communication with peripherals). In order to do so:
 - It divides up the use of the microprocessor between the user's applications and the operating system itself.
 - It assigns RAM to programs and data.
 - It connects the processes and the peripherals from which data must be received or sent.
- ▶ To control, by means of software accessories (drivers), the input and output peripherals.

Operating Systems




WHAT MANAGES AND ADMINISTERS A COMPUTER'S O.S.?

- ▶ The processor
- ▶ Main memory
- ▶ Information stored in secondary memory
- ▶ Secondary storage devices, such as hard drives, DVDs etc.
- ▶ Input and output peripherals
- ▶ Process and user security
- ▶ A computer's communications when it is connected to other devices or the Internet
- ▶ The file system and directories for organising data

Operating Systems

Desktop and laptop operating systems	Operating systems on tablets and smart phones
Windows	Android
OSX	iOS
Linux	Windows Phone
	BlackBerry X OS
	Firefox OS

Operating Systems

Operating systems	Advantages	Disadvantages
Microsoft Windows 	<p>One of the main advantages is extensive compatibility, which allows almost any program to work on Windows.</p> <p>Technical support is widely available, making it easy to find people with the same problems you have.</p> <p>Its functionality has been proven and it is widely used.</p>	<p>It is the system that is most attacked by viruses, malware and spyware.</p> <p>The operating system uses an enormous amount of the computer's resources, which causes it to operate slowly.</p> <p>High license cost (approx. 100-200 dollars) depending on the version.</p>
Apple Mac OS 	<p>Hardly any threat of viruses and malware.</p> <p>Complete compatibility with Apple devices.</p> <p>Balanced management of computer's resources.</p> <p>Special attention to design.</p> <p>Graphics are superior to other platforms.</p>	<p>Compatibility not possible with other systems.</p> <p>High license price (above 200 dollars), although you do not have to worry about buying updates since Mac operating systems only work with Mac.</p> <p>Tightly closed systems in Apple.</p>
Operating systems based on Linux 	<p>Free distribution to be installed on any device.</p> <p>Possibility to change the operating system whilst keeping the Linux Kernel.</p> <p>Very low threat of viruses and malware.</p> <p>More direct technical support for users.</p>	<p>More complicated to use than Windows or Mac (not everything is done with a click).</p> <p>It has incompatible functions with other systems, and although their development community is constantly in the process of updating, you might not find a solution to a specific problem.</p>

O.S. Exploration

Tree structure

Windows explorer



You can see that Windows explorer offers a view of how the Users folder is set up.

- Directories-subdirectories (hierarchical tree) structure.
- Each folder can contain multiple folders that depend on it.
- When you delete a folder, you also delete any folder inside it.
- It's not allowed to save two or more files or folders with exactly the same name.

Files

They are a set of bits stored in a device that digitally code the information given by the user(s).

- They are created and edited through applications.
- Files are identified by its **name** and **extension**.
 - The name is given by the user(s).
 - The application provides the extension.
- Applications are only able to open and manage/run a limited number of extensions.

Files



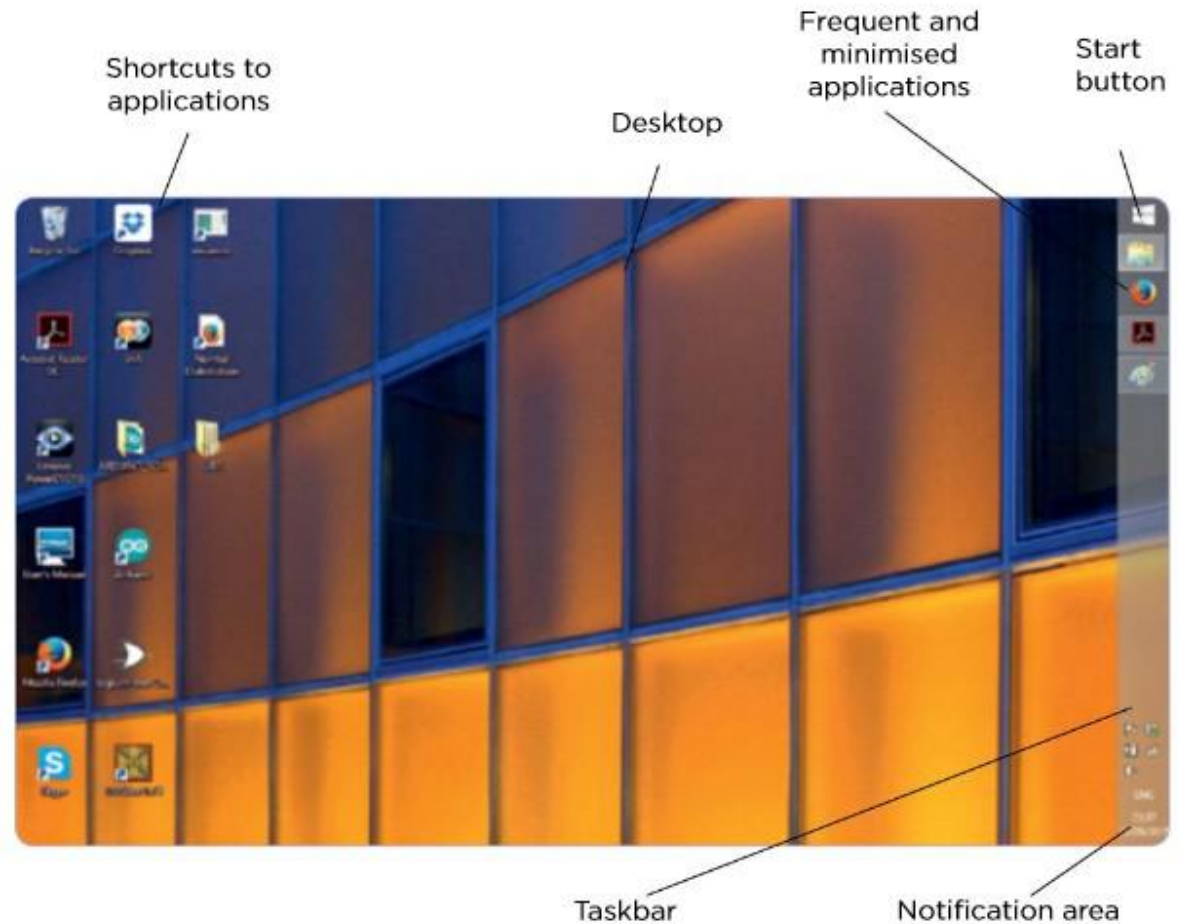
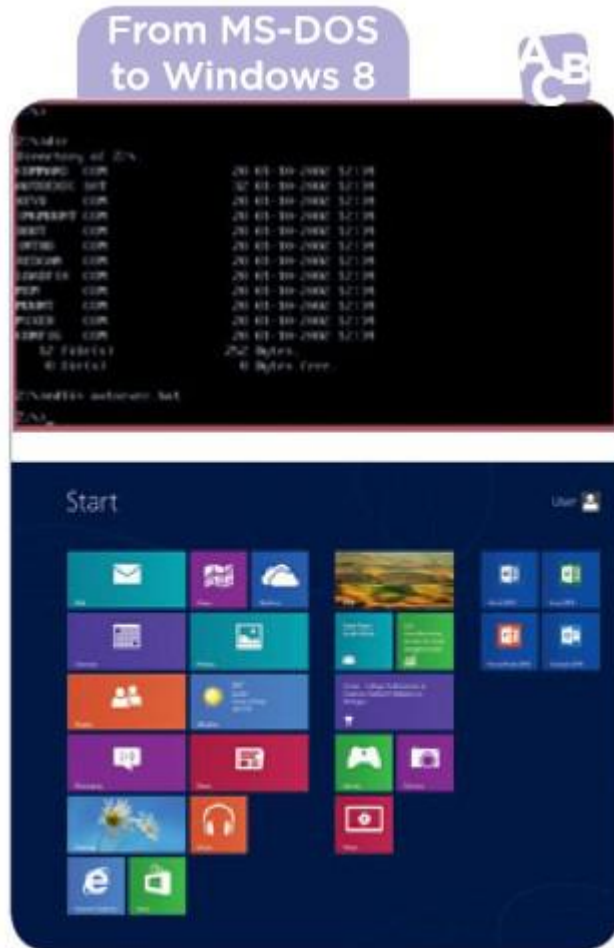
Familias de sistemas operativos

Microsoft Windows



Windows es un sistema operativo comercial desarrollado por la empresa Microsoft. Está diseñado para utilizarse indistintamente en equipos de escritorio, portátiles y dispositivos móviles. Se caracteriza por ser muy intuitivo y sencillo de utilizar.

MS-Windows O.S. Layout



MS-Windows O.S. Exploration



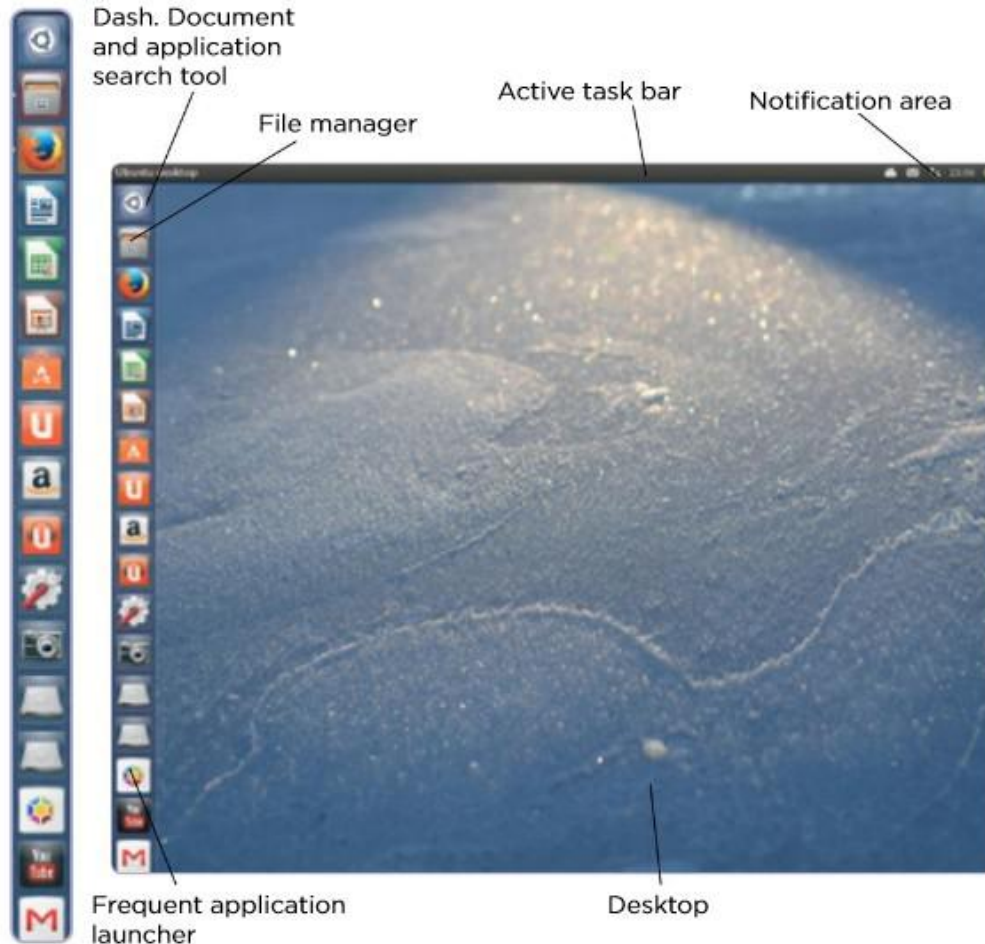
You can open the different folders by clicking on them in the bar on the left or double-clicking on the icon that appears in the work area.



GNU/Linux O.S. Layout

Understand, think and apply

Check the similarities between Windows and Linux.



Familias de sistemas operativos

Mac Os



Mac OS es el sistema operativo desarrollado y comercializado por Apple para ordenadores y portátiles Mac. Se caracteriza por tener un entorno gráfico muy atractivo y potente para la edición de gráficos, sonido y vídeo.

Familias de sistemas operativos

Sistemas operativos móviles



Los sistemas operativos móviles están diseñados para dispositivos inalámbricos con pantallas táctiles, como los las tabletas, los teléfonos y otros dispositivos inteligentes. Algunos ejemplos son Android, iOS, Windows Mobile y Symbian.

Activities

Watch this video and explain in your own words what you have understood about O.SS.

[Click here to watch the video in Youtube](#)

You can research in any other resource on the cloud

Activities

El sistema operativo

Al encender el equipo comienza a cargarse el sistema operativo que permite iniciar la sesión al usuario y desarrollar la sesión de trabajo. A continuación se describe este proceso y las familias de sistemas operativos más importantes.

Gestor de arranque

El gestor de arranque muestra todos los sistemas operativos que hay instalados en el ordenador, permitiendo que el usuario escoja aquel con el que prefiere trabajar.

Si transcurridos unos segundos no se realiza ninguna acción, el ordenador se inicia con el sistema operativo predeterminado.

Activities

Inicio de sesión

El siguiente paso es iniciar la sesión con el **usuario** y la **contraseña** correspondientes. El sistema operativo permite personalizar el idioma, el entorno y mantener la privacidad de la información de cada usuario.

El escritorio

El escritorio es el entorno gráfico que aparece una vez que el usuario inicia su sesión y le permite realizar cualquier actividad dentro del sistema. Recibe este nombre por su similitud con una mesa de trabajo que contiene diferentes objetos con los que trabajar.

Desde el escritorio se accede a todos los programas y datos del ordenador. Para ello, el usuario puede utilizar diferentes menús, botones, carpetas e iconos. Cada vez que se abre una carpeta o un programa, se hace dentro de una ventana que se puede mover sobre el escritorio para facilitar su uso.

En los dispositivos móviles, el escritorio está dividido en varias pantallas a las que se puede acceder desplazándose hacia la izquierda o hacia la derecha.

Activities

Explorador de archivos

El explorador de archivos es la aplicación que incluye el sistema operativo para acceder a los discos y gestionar los datos. Entre otras operaciones, permite realizar acciones como copiar, cortar, mover, crear y borrar archivos y carpetas.

Cada sistema operativo incluye su propio explorador de archivos. Algunos de los más populares son Explorador de Windows, Finder en Mac OS y Nautilus en Ubuntu.


Apagar el equipo

Cuando se finaliza el trabajo con el ordenador, es muy importante apagarlo correctamente para evitar que se dañe el hardware o el software instalado. Para ello, hay que utilizar el botón **Apagar** que incluye el sistema operativo.

Activities

Comprende, piensa, aplica...

Comprende lo que lees

- 1  Explica con tus palabras qué es el gestor de arranque, el escritorio y el explorador de archivos.
- 2 Enumera las familias de sistemas operativos e indica algún ejemplo de cada una.

Aplica lo aprendido

- 3 La mayoría de administraciones han creado distribuciones educativas para fomentar el uso de software libre. ¿Cómo se llama la de tu comunidad? Investiga qué sistema operativo utilizan los alumnos y alumnas de otros lugares de España.

22 Describe the main functions of an operating system.

24 Research which version of Windows first introduced the 'Start' button.

Operating system maintenance

A computer is a dynamic machine whose contents need to be updated, in order to keep the computer safe from the continuous dangers.

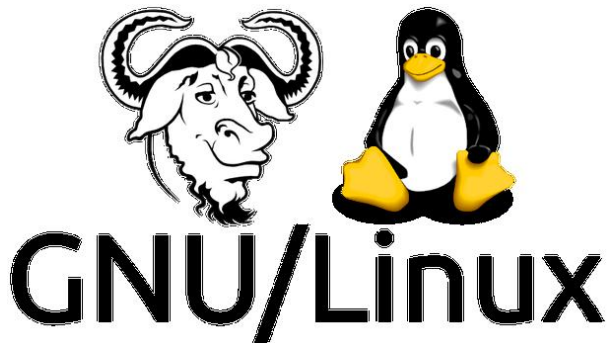
Preventative and periodic maintenance to the computer's software.

- Hard drive analysis and freeing up disk space
- Defragmentation of the hard drive.
- Registration of the system's restore points



Free operating systems

Richard Stallman



Linus Torvalds





Use Ubuntu on your computer without installing it

You surely have a computer with its own operating system (Windows, Mac, etc.). If you are not sure whether to go completely into the world of Linux and you want try the system, you can use the operating system on a USB flash drive. This means you can use your normal operating system, but you can also start up your computer from Linux on the USB. Furthermore, you will be able to use Linux on any computer to which you connect your flash drive with Linux distro.

Get a USB flash drive that has at least 2 GB of free space.

You will have to download the Ubuntu distribution from the download site. Type the following address into your browser: <http://goo.gl/Gdpsba>. A window will pop up with the option to download the 14.04 LTS version of Ubuntu or later version if released.

Then you will need to download a monitor program onto your computer to create LiveUSB. Download and install LinuxLive USB Creator on your computer from the webpage <http://www.linuxliveusb.com/en/download>

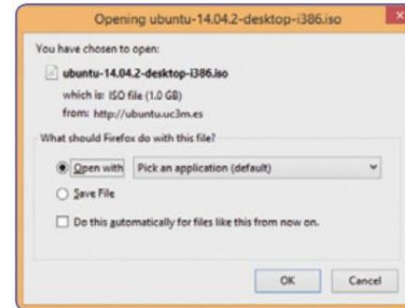
Connect the flash drive to an USB port and follow these steps:

- 1 Choose unit. In other words, select the USB flash drive as the location for the files you are going to install.
- 2 Select the ISO file that you downloaded from Ubuntu.
- 3 Select the box to format the device in FAT32 (check before that the flash drive does not have any important data on it).
- 4 Lastly, click on the lightning bolt and wait for the installation to finish.

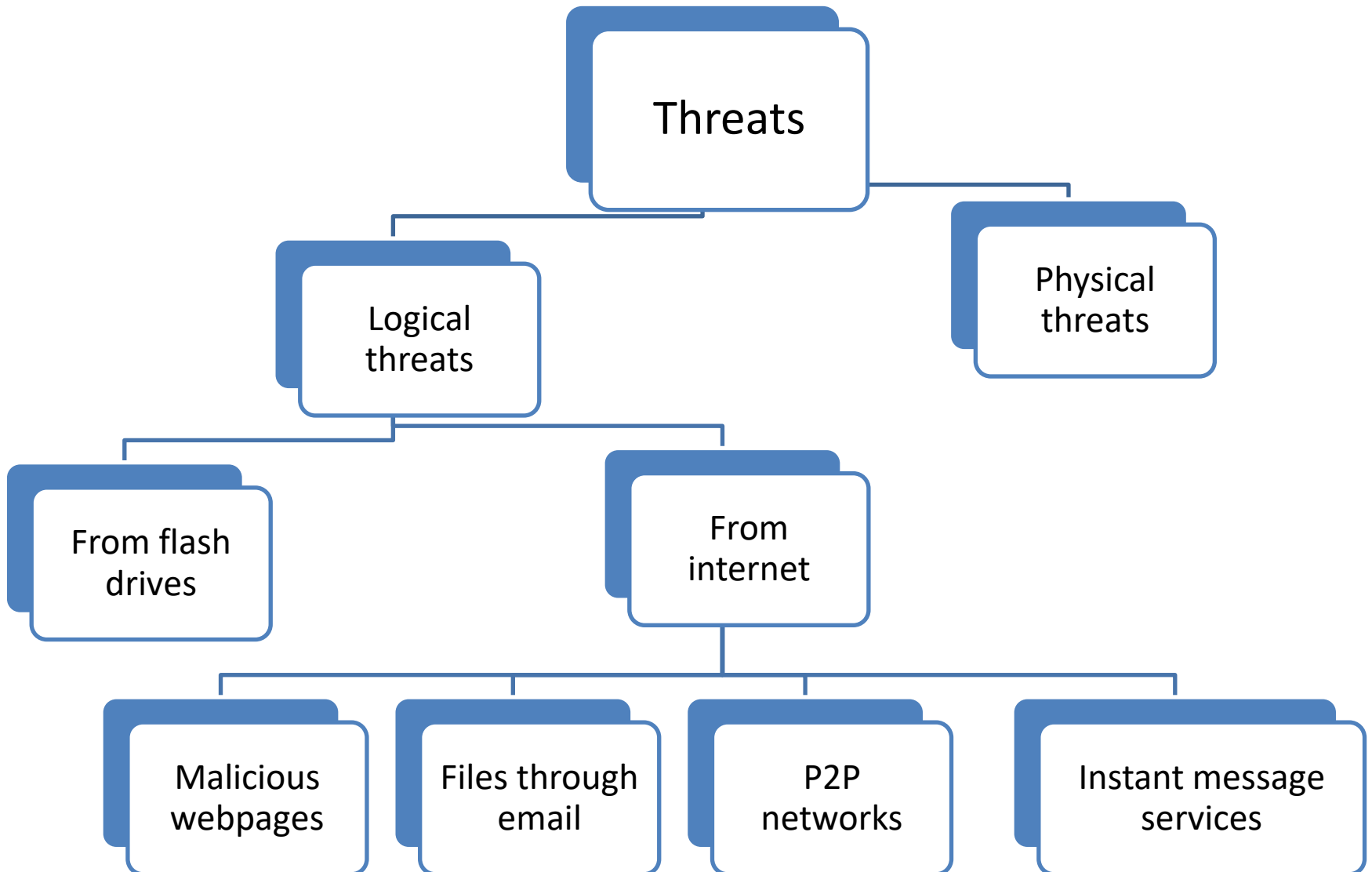
You now have Ubuntu and can use it from any computer with Windows.

Do not forget that at the start up you must select that you want to start your computer from the USB unit on which you installed Ubuntu, which must be connected to your computer's USB port.

If you eventually decide not to install Ubuntu (or any other Linux distribution) as the only operating system on your computer, remember you can always install both on your hard drive and select which one you want to use every time you start your computer.



Computer system security



Computer system security

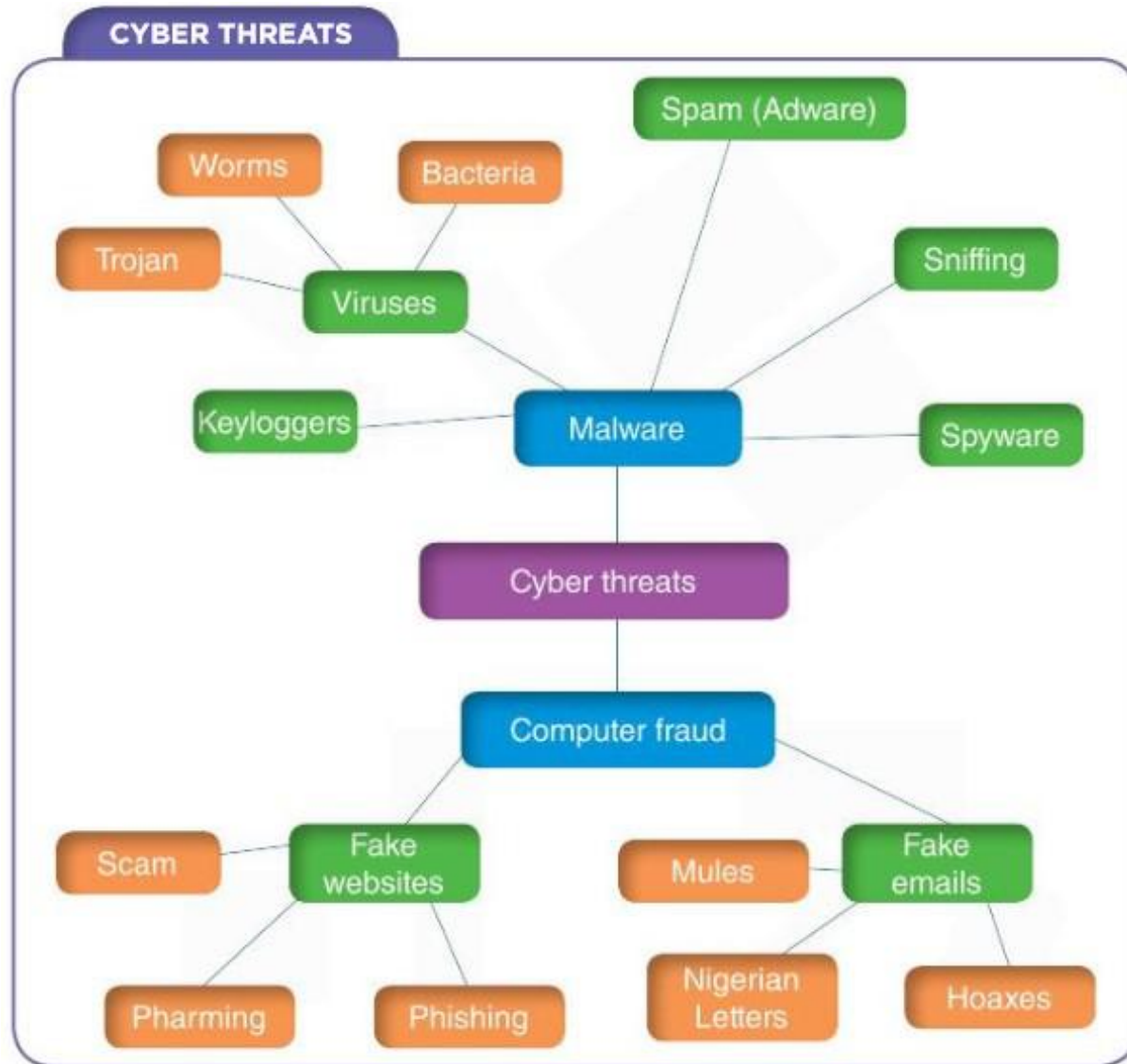
Malware

El malware es el conjunto de amenazas que pueden resultar dañinas para el ordenador, tanto por causar pérdida de datos como por disminuir su productividad. La palabra malware proviene de la contracción de las palabras inglesas *malicious software*, es decir, software malicioso. Algunos ejemplos son los virus, dialers, spam, programas espía, etc.

Es recomendable no instalar aplicaciones desde fuentes desconocidas y que el antivirus siempre esté actualizado.



Computer system security



Security measures

Passive Security measures:

- They are activated after an attack.
- Some of them requires previous actions:
 - Making backup copies.
 - Creating a disk image.
 - Storing data on external memories.
 - Scanning of the system using updated antivirus.

Security measures

Active Security measures:

- They involve the use of antimalware tools on a regular basis:
 - **Antivirus**, which have to be constantly updated.
 - **Antyspyware** (frequently added with antivirus).
 - **Web filtering software**. Access denied to a web blacklist.
 - **Firewall**: Blocker or filter of incoming or outgoing traffic.

Security measures

Understand, think, search

6 Go to the website <http://spybotmirror.com/files/spybot2.4.exe> and download the antispyware program SpyBot for free. Once you have installed the applications, do a scan of your computer's files.

What type of elements has it detected? Have you found a 'tracking cookie'? Search for information on tracking cookies and describe their main functions as spyware.