Grade 7 ICT Review
Computers and Devices

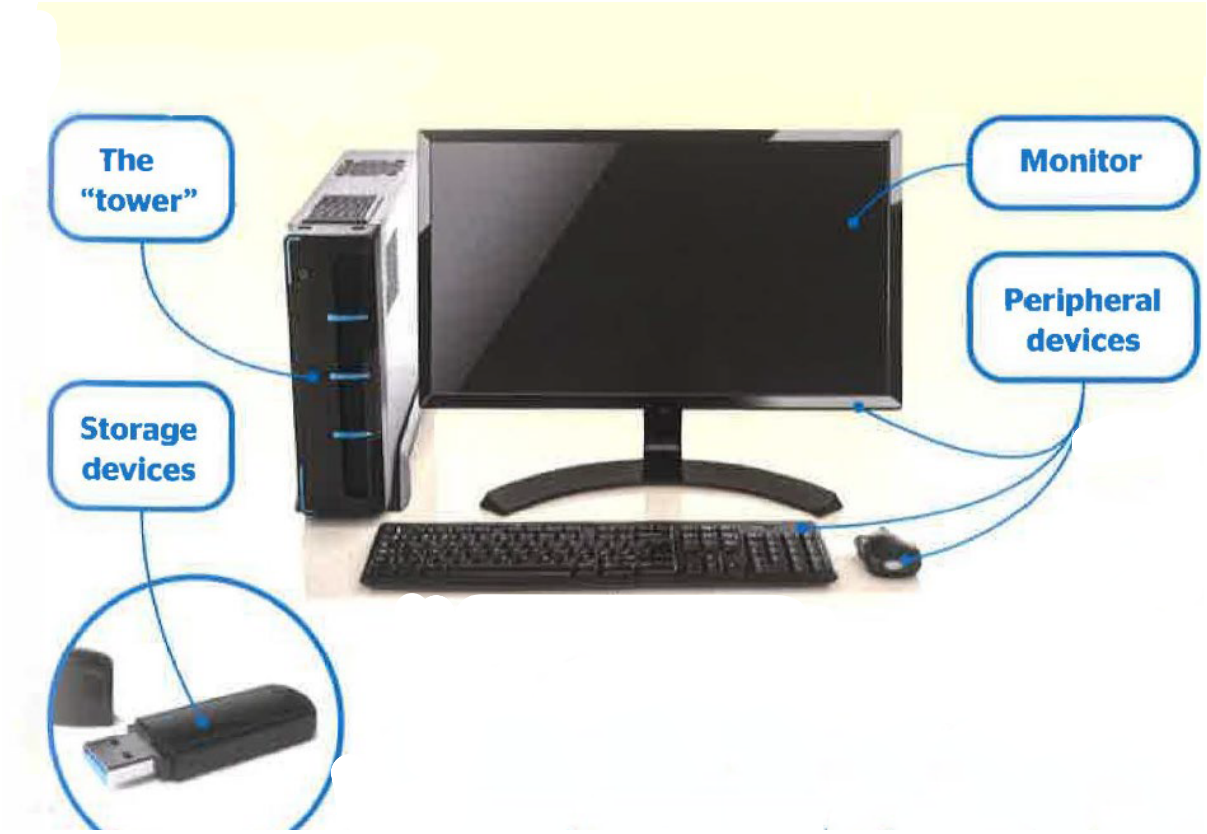
It's the 21st century and we use computers in every aspect of our lives. You can find them almost everywhere: at your school, at home and at your parents' workplace. Even smartphones are small computers

But what exactly is a computer? A computer is an electronic device that can store, retrieve and process data. You can use it to type documents, draw images, listen to music, watch movies, communicate with friends and much more. Today, different types of computers are available on the market which vary in size and power. The most common term we use for a computer is PC, which stands for Personal Computer. Personal computers are the ones that you have in your house or at school. But you can find computers almost everywhere in different forms: phones, ATMs, supermarkets, cars and even washing machines all use small computers.

Desktop computers

You can find desktop computers in every household and workplace, and they come in different sizes: small, medium or large. A desktop computer does not consist of one device, but it has parts that are connected together.

The advantage of desktop computers is that they can be upgraded. You can remove the parts that are old and replace them with new ones. This way, you can have an updated computer without having to buy a new one.



Some desktop computers have a built-in monitor. These are called all-in-one desktop computers.

Although the first automatic calculator was invented by French mathematician Pascal in 1642, the first computer was ENIAC (Electronic Numerical Integrator and Computer). It was built in 1945, was 167 square meters and weighed 30 tons.

Laptop computers or Notebooks

Laptop computers are portable PCs that you can carry almost anywhere you want because they are small, light and they use a battery. But keep in mind that the battery can last between 2 and 8 hours.

Laptop computers are so small in size that it's not easy to upgrade them. You may upgrade their memory or hard disk, but you cannot make any other changes. You can connect peripheral or storage devices to laptops.

A notebook is a type of laptop that is smaller in size.

Servers

A server is a main computer that usually provides different services to other computers. For example, a file server is a computer where all the students of a school can store their files and a web server is a computer that helps you browse the Internet. When you click a link, the web server brings the page you requested to your computer.

A web server can be a tiny computer or a high capacity server.

Other types of computers

Supercomputers are really powerful computers with high processing capacity. They are usually big in size and can perform millions of calculations at the same time.

Tablet computers are the newest members of the computer world. They usually don't have a keyboard and use a touch screen to input data. Although the concept of a tablet PC goes back to the 60's and the first one with Microsoft Windows was created in 2001, they became really popular with the release of the Apple iPad in 2010. Today, there is a variety with different operating systems, like Google Android, Microsoft Windows and Apple iOS.

Smartphones nowadays are like small computers. Of course, you can always call your friends or your grandmother, but you can also browse the Internet, send and receive email, chat with friends and play games.

Game Consoles allow you to play video games. Today, the latest consoles let you browse the Internet and play online games.

In order to avoid the possibility of losing your work or any damage to parts of the hardware due to power failure, it's important to have your computer connected to a UPS (Uninterruptible Power Supply). A UPS contains a small battery that will give you extra power for a short period of time, in order to save your work properly.

Hardware and Software

When we refer to the word "computer" as a concept and not as a device, two things come to mind: hardware and software.

Hardware is the electrical and mechanical parts of a computer. It's all the parts that make up the computer, like the monitor, the motherboard, the chips, etc.

Software is a collection of all the programs that are installed on a computer. These are programs that you need in order to operate your computer, such as the operating system or applications that you need to be able to work, like Microsoft Word or Adobe Photoshop.

Now it's time to explore the hardware, the different parts of a computer. Let's find out what's inside "the machine".

Main parts of a computer

In order to be functional, a computer needs some specific pieces of hardware: a motherboard, memory (RAM), a CPU (Central Processing Unit) and a hard disk drive. Then, you need a monitor, a keyboard and a mouse to work with your PC. Let's see what these are and how we can use them.

The **motherboard** is the main circuit of the computer, which all the other parts are connected to. The CPU, the memory, the hard disk drive and any peripheral devices are all connected to the motherboard. The motherboard's 'Job" is to make all these parts communicate and work together.

The **CPU (Central Processing Unit)** is the "brain" of your computer. It's the part that performs all of the arithmetic, logical and input/output operations, so that your computer can do many amazing things. The faster the CPU, the more data it can process in a short period of time. The speed of a CPU is calculated in Hertz (Hz). In other words, we measure the number of instructions a CPU can process in one second in Hz.

The CPU consists of two parts that work together: the ALU (Arithmetic and Logical unit), which does all the calculations and logical operations and the CU (Control Unit), which controls and decodes the data from the memory to the CPU.

All the data in the CPU and memory is stored using a form of electricity. So, when the computer is turned off or there is a power failure, all this data is lost.

The BIOS (Basic Input/Output System) is the initial program that is executed when the computer starts up. It identifies and initializes all the devices that are connected to your computer.

The main memory of the computer is called RAM (Random Access Memory). RAM is used for the information (data) that is being processed by the CPU. This data is stored for a very short period of time. The amount of memory is very important for a computer's functionality and speed. Even if a computer has a fast CPU, not having enough RAM can slow all processes down.

Apart from RAM, computers have other types of memory, like ROM or CPU cache memory. ROM is read-only memory that stores data, but you cannot change it. CPU cache memory is high speed memory that's inside the CPU and deals with the most frequently used data.

The Hard Disk Drive (HDD) is the main storage device of your computer. You use it to store and retrieve information. All the programs, including

the operating system, and all the files that you have created by yourself or copied from other devices are stored inside the hard disk drive. The main characteristic of a hard disk drive is that it can hold a lot of information. Its storage size, as we say in computer language, is very big. Nowadays, a single hard disk drive can be up to 20TB. It can hold 20,000 movies and millions of songs, pictures and documents.

The Video Card (graphics card or display adapter) turns the data that is processed by the CPU into images on the monitor. The better the video card, the better the quality of the images. This is especially evident in computer games. Modern video cards are like small computers, and they have their own CPU and fast memory, in order to offload the main CPU.

Sometimes, the video card is integrated into the motherboard. If you don't especially need a powerful video card for gaming or video editing, a computer with an integrated video card will cost you less money.

Peripheral Devices

Peripheral devices are devices that are connected to a computer, but they are not part of it. In other words, they extend the computer's capabilities, but they are not necessary for a computer to function. These devices are divided into 4 categories: input devices, output devices, input/output devices and storage devices.

Input Devices

Input devices are devices that help the user input data, such as text, photos, songs and movies, or control the computer.

The keyboard is one of the main input devices. Through the keyboard, the user can input text and give commands to a computer. It's like a typewriter, but you type on screen and not on paper.

The mouse is a pointing device that helps the user point to objects on the screen and execute commands by clicking on them. A typical mouse has two main buttons, but modern mice have more buttons that help you execute frequently used commands with one click.

A gamepad is a game controller that helps you give commands and move on the screen. If you play video games, you already know it. Usually, a gamepad has a cross pad or a controller stick and some action buttons.

A microphone helps you record your voice, save it in digital form and then make changes with audio editing programs.

The Surface Dial is a brand-new kind of peripheral that serves as a tool for the creative process. A surface Dial optimizes your digital work by bringing the most used shortcuts and tools directly to your screen by simply pressing and rotating the Dial.

Kinect 2019 was designed by Microsoft to be used as a sensor with a lot of capabilities.

Gamepads have evolved in recent years. Some are wireless, like Nintendo's Wii controller, which allows you to control your player through a stick. If you want to play a game that involves a racket, you wave your controller as if it were a real racket. But there are also controllers like Microsoft Kinect, which allow you to interact with the game console or computer without holding or touching anything. Microsoft Kinect works by "watching " your body movements and "listening" to your oral commands.

In the past, there used to be separate computer monitors and monitors for entertainment, like televisions. Today, we tend to combine these technologies. For example, a computer monitor can be used for data processing and entertainment, and televisions allow computer functions like surfing the Internet, etc.

With a digital camera, you can take photos or videos of you and your friends. Later, you can store your photos or movie clips or your computer.

With a web camera, you can make video calls and talk to your friends, no matter where you are.

Using a scanner, you can scan documents, photos or even small objects and you can store them in digital form inside your computer:

Pointing devices do the same job as a mouse, but they come in' different shapes. For example, a touch pad is a pad that you use to control the pointer on your laptop. A track ball is a mouse that has a big ball on top of it, which you roll in order to move the pointer.

HoloLens Technology HoloLens is an enhanced form of augmented reality. The transparent display of the headset allows for digital objects to be overlaid on top of the real world, instead of being placed inside a virtual world as with virtual reality headsets. The key characteristic of HoloLens is that the digital content and the real-world content are able to react to each other in real time.

Output devices

Output devices are all the devices that are connected to your computer and "show" you the results of data processing. Some types of output are text, graphics, audio, and video.

The monitor or screen or VDU (Visual Display Unit) is the main output device of a computer. It provides a visual display of the user's interaction with the computer.

Virtual reality is the simulation of a real or imaginary environment by a computer. It aims to take users into virtual worlds and has always followed the evolution of display technology.

A person using virtual reality headset is able to "look around" the artificial world, move around it and interact with virtual features or objects.

We use printers to print the results of data processing, like documents or photos, on paper. We use inkjet printers, which use liquid ink to print on paper, or laser printers, which use dry, ink (toner), like a photocopier.

We use speakers to listen to music from our compute or listen to the sound from video games or movies, You can use 2 speakers for stereo sound or you can have more speakers (5.1 or more) to listen to surround sound.

Google Glass is designed in the shape of a pair of eyeglasses. Instead of glass lenses it has a screen at the height of the right eye and offers an augmented reality experience. A touchpad is located on the side of the Google Glass, allowing the user to control the device.

Inkjet printers are cheaper than laser printers, but laser printers are faster and produce documents with better quality.

Input/Output devices

These are devices that can both input and output data into and from your computer. A few years ago, they were not so popular, but as time passed, they became more widely used.

Storage devices help us store data not only on our computer, but also on external devices, in order to move it to other computers. Storage capacity and reading/writing speed are the main characteristics of storage devices.

We measure storage capacity in bytes. Bytes are like liters for liquids. The more bytes a device can hold, the more data it can store. To make things easier, we have multiple units. So there are bytes (B), kilobytes (KB), megabytes (MB), gigabytes (GB) and terabytes (TB).

You probably know what a touch screen is and chances are you've already used one. A touch screen allows you.to input data to your computer with your fingers, but you can see the results on screen at the same time. More and more devices are using this technology nowadays, especially tablet PCs and smartphones.

Multiply by 1024:

1 KB = 1024 bytes

1 MB = 1024 kilobytes

1 GB = 1024 megabytes

1 TB = 1024 gigabytes

When you type in Notepad, every letter counts as one byte.

Hard Disk Drive (HOD): The hard disk drive is the main" storage device of a computer., It can hold up to a few terabytes. And can store thousands of movies, songs and millions of documents. Hard disk drives are able to transfer data very fast and are separated into two categories: ', internal and external. Internal drives are installed inside the computer and external drives are portable drives that you, can carry anywhere and connect to any computer.

Optical discs are another type of storage which includes CD, DVD and Blu-ray discs. To store and retrieve data from each storage disc, specific devices are used.

CD-RW Drive: CD stands for Compact Disc, a disc that appeared in the '80s. The CD became very popular because it is not expensive, it can hold about 700 MB of data and there is little possibility of data loss. Before CDs, data was stored on magnetic storage devices like floppy disks. The problem was that when you put them near a strong electromagnetic source, like cell phones or speakers, you could lose all your data. CDs prevent this because their data is not stored magnetically.

DVD-RW Drive: DVD stands for Digital Versatile Disc and it's the evolution of the Compact Disc. More data can be stored and both sides of the disc can be used. Each side can also have two layers of data. DVDs use a dual layer technology that allows the disc recorder to write data from the inside to the outside for the first layer and from the outside to the inside for the second layer. The storage capacity of a simple DVD starts at 4.7GB and can reach 17GB for a two-sided, dual layer disc.

Blu-ray Drive: Blu-ray Disc (BD) is the evolution of the DVD. More data can be stored than on a DVD and the surface of the disc is more scratch-resistant. A Blu-ray Disc can hold up to 50GB of data, 70 times more than a CD!

Memory Card/ USB Flash Drive: Memory cards and USB flash drives have totally replaced the old floppy disks. We use memory cards in digital cameras, video cameras or smartphones and we use USB flash drives (or USB memory sticks) to store data that we want to carry with us. They are SQ small that you can hang them on your keyring, but they can hold a lot of gigabytes of data! Actually, as time passes, their storage capacity is growing bigger and bigger.

The Operating System

In the previous task, we learned about hardware. Now, it's time to understand what software is. There are two major types of software: the operating system and the applications that you use every day.

What is an operating system and why is it so important? Well, as the name suggests, an operating system helps us to operate a computer. But still, what does it do? An operating system has two main tasks to perform. The first one is to control the hardware of the computer, use the computer's "resources" and to try to distribute them properly, It manages the available computer memory and allocates the required amount of memory each program needs and the time the CPU will spend on a specific process. It also manages the peripheral or storage devices, handles printing needs, etc.

But the most important task of the operating system is to create the proper environment for you, the user, to interact with the computer. In other words, the operating system provides all the tools the user needs to control the computer.

Some years ago, an operating system was just a black screen where the user had to type commands in order to get results. If he knew the right commands that is. Then, the first operating systems with a graphical user interface, known as GUI, appeared. A GUI allows you to see all your files and folders as icons and images; which you can point at with your mouse.

Start your computer

In this book, we are going to explore Microsoft Windows. Microsoft Windows is an operating system based on icons that the user can point to with his or her mouse and as the name indicates, every file, folder or program opens in a window: a square box that contains information about the file, folder or program that you clicked.

When you press the main power button, your computer will start working. After the BIOS program identifies your devices, the operating system starts. Usually, the first screen that you see is the log on screen. The log on screen allows you to open the operating system as a specific user.

Because it's not unusual for many people to work on a single computer, it's necessary for each person to work in his/her own environment and to have his/her own programs, files and folders. That's why most of the operating systems allow us to create user accounts using a user name and a password.

The most popular command operating system was MS-DOS and afterwards the appearance of GUIs, like Mac OS and Microsoft Windows followed.

After the log on screen, the main screen of Microsoft Windows appears. The main window is called the Desktop and consists of the Taskbar, the work area, some icons and the Start button, Generally,

an operating system must be as simple as possible, so that it can be used by everybody even if they only know the basics about computers. That's what is meant by "user-friendly".

Work area – Here is the space where you work when you open Windows

Icons – When you first When you first install Windows, only the Recycle Bin Icon appears on the Desktop. Double-click to open it

Taskbar - Every window that you open also appears on the Taskbar to be easily accessed anytime you want. This allows you to work with many different programs at the same time.

You can pin all the programs that you use often, here, so you can open them with Just one click.

Start Button - With this button you can access all the programs, folders, files and all the tools of the operating system.

Startup Icons - Here are all the programs that start when you switch on your PC and enter the operating system. These are programs that help you work with your PC or Icons that change Important settings, like antivirus programs, date, time and sound settings.

When you clean your computer, make sure to turn it off first. Don't wear wet gloves and keep water away from the tower.

The Main Window

Click the Start button to open the Main Window.

These are the most common folders with which you can organize your files and folders.

Here you can find all the programs and accessories that are installed on your computer.

In this area, you can see the programs that you have pinned on the Start menu, so you can access them more easily whenever you want.

Shut down a computer

Although you will only shut down your computer when you finish your work, it's one of the things you need to learn now.

To shut down your computer:

- Click the Start button.
- Click the Power button and then click Shut down

Sleep puts your computer in a power-saving state. The computer will resume in a few seconds when you press any key on the keyboard.

Restart shuts down and starts your computer again immediately afterwards.

Change account settings allows you to manage your Microsoft Account, e.g. to change sign-In options and set your User picture.

Lock locks the screen so no one can use your computer while you are away - unless they know your password.

Sign Out closes all your programs and goes to the log on screen of Windows. Use It If you want to log on as another user.

It's better to put your computer in Sleep mode if you want to take a break for 10 minutes, rather than shut it down.

Start a program

The first step you need to know in order to be able to use an operating system is to know how to start the programs, files or folders that you want to work with. Let's start by drawing something in Paint and saving it.

Another easy way to open a program is to click the Search icon and type the name of the program you want to open. When you see it, click it or press Enter.

To open Paint:

- Click the Start button O scroll down the sidebar and click Windows Accessories.
- Click Paint.
- The Paint program will open.
- Draw whatever you like!

To save your work:

- Click the File button.
- Click Save as.
- In the Save As window, type a name for your drawing in the File name text box and click Save.

Choose where you want to save your file in one of the preset folders.

This area shows you the address of the folder or where this folder is located.

This shows the contents of the folder you have chosen.

Type a name for your file.

Choose the type of file you want to save your image as.

Click SAVE to save your file or CANCEL if you have changed your mind.

To see the contents of a file in a folder without opening it:

- Click the File Explorer icon O and then click Documents. 0
- The Documents folder will open. E)
- Click the View tab O and then click the file you want to see the contents of. 8
- On the View tab, in the Panes group, click the Preview pane button.

With the back button you can go to the previous folder.

Here ls the location of the folder.

The Minimize button minimizes the window onto the taskbar so you can use It later.

The Maximize button changes the size of the window between full screen and a preset size.

The Close Button Closes the window

The documents folder is a default folder that you can use to organize and store your data. The Music and Pictures folders are used for the same thing.

The preview button allows you to see the content of a file without opening It.

A folder, whether empty or containing files, is represented by a yellow icon. All the other icons are named files.

This PC is the place where you can find all of the storage devices and the network places that are connected to your computer.

The bar next to your driver Icon shows you the free space of your storage device. The blue part Is the space of your content and the white part is your free space.

Files and folders

All of the data in your computer is organized into files and folders. But what exactly are files and folders?

A folder is a location on the hard disk drive where you can save your files, whereas a file (data file) is a collection of data such as texts, photos, videos, music, etc.

Use folders to organize your files so that you can easily find them. You can have a folder with some files inside, or you can have subfolders, that is folders inside o er folders.

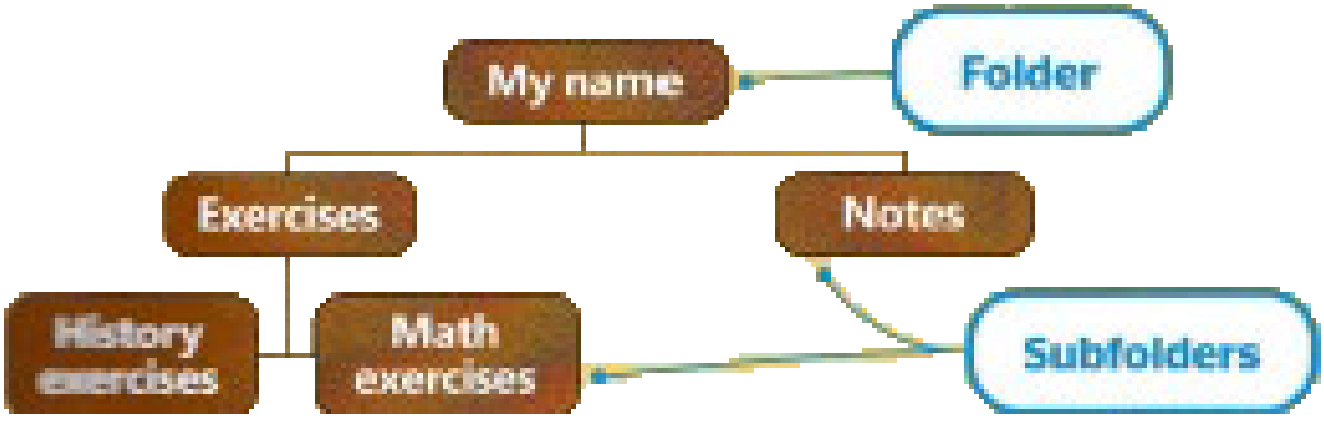
You create a file by saving It, like you did In Pant Flies are created through programs.

To Create a folder:

- Decide where you want to create a new folder, for example on the Desktop.
- Right-click an empty area on the Desktop, point to New, and then click Folder.
- Type a name for the new folder, and then press Enter

Try to give names to your file or folders that can help you recognize their content. Avoid naming your files flle1, file2, file3, etc. as this can be extremely confusing.

When you have a lot of data, it is better to organize it into folders. You know how to create a folder, and you know how to create a subfolder. The structure of the folders is like a tree with branches.



Copy/Move folders and files

If you want to rearrange the structure of your folders/files or copy them to another location, you can use the commands Copy and Cut. Copy, as the name implies, copies a folder/file to another location, whereas Cut moves it.

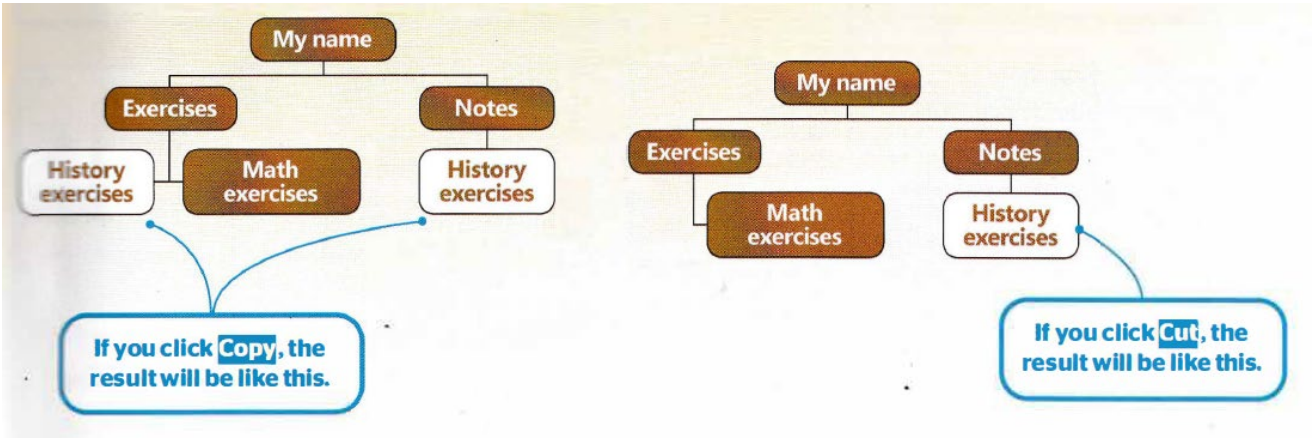
To cut/copy a folder/file:

Locate the folder/file on your hard disk.

Right-click it and click Copy or Cut or press ctrl+ C or ctrl +X

Go to the place where you want to copy the folder/file.

Right-click an empty space and click Paste or press ctrl + V



SMART TIP

Copy, Cut and Paste are the most common commands that you are going to use. Learn them well because from now on you will use them in every program in the same way. Select the item, copy or cut it, move it to where you want and paste it. That's the way!

Clever ways to copy or move files and folders

You've already learned the basic ways to copy or move a file or folder on your computer. Now let's see some other ways to do it.

Drag and drop allows you to move a file or a folder to a specific location with your mouse as you point at it.

To drag and drop (move) an item:

- Locate the folder/file you want to move.
- Open the folder you want to move the folder/file into put them close together.
- Point to the folder/File, click and hold the mouse button and move the mouse to the other window.
- Release the mouse button

In the same way you can move a folder/file to another folder in the same window.

If you press and hold ctrl while dragging instead of moving, you will copy the file/folder.

You can also copy an item directly to a storage device with a few clicks.
To send an item to a storage device:

- Locate the folder/file you want to copy.
- Right-click it and click Send to
- Click the storage device.

To delete a folder:

- Right click the folder you want to delete.
- Click delete.

To rename a folder:

- Right-click the folder you want to rename and click Rename.
- Type the new name and press Enter

Find a file or a folder

When you have a lot of files on your computer it's normal to forget exactly where and how you have saved them. If you need a file, you can search for it.

To search for a file or folder:

- In the top right corner of the window in the Search Quick Access text box, type the name of the file you want to find.
- Windows will automatically search for the files with this name and display them.

To select a folder, you click once. To select multiple objects, hold ctrl and click each of the objects one by one.

Shortcuts

Sometimes you may need to work on a file or use a program very often and you don't want to waste time looking for it every time you want to use it. That's why we create shortcuts.

A shortcut is a "link" to a folder, file or program. If there's a file or program you use very often, you can create a shortcut that takes you directly there. Let's see how you can do it.

To create a shortcut:

- Open the location of the item you want to create a shortcut to.
- Right-click it and click Create shortcut.
- A shortcut will be created in the same location as the original item.
- Move the shortcut to a new location using your mouse (drag and drop the icon).

To create a shortcut directly on the Desktop:

- Right-click the file you want to create a shortcut to and point to Send to.
- Click Desktop (create shortcut) and a shortcut will be created on the desktop.

When you right click a shortcut, you can see a list of options. One of them is the Option delete. Click it and you will delete the shortcut, Only the shortcut disappears. The original file, folder or program is not deleted.

The icon of a shortcut has a small arrow in its bottom left corner. But not always. For example, the icons on the Taskbar at the bottom of your screen are shortcuts, but there aren't small arrows to let you know! You can pin programs and files on the Taskbar when you drag and drop their Icons onto the Taskbar. To delete shortcuts from the Taskbar, just right-click them and click Unpin.

Compressed files or folders

Sometimes files or folders take up too much space on your computer and you may want to make them smaller. A compressed file takes up less storage space and you can easily copy it to other computer or send it by email. Compressed files or folders can be copied and moved as files. You can also use them as a folder. You can add more files to them, or you can delete files from them.

To compress (zip) a file or folder:

- Find the file or the folder that you want to compress, right-click it and point to Send to.
- Click Compressed (zipped) folder.
- A new compressed file is created in the same location and has the same name.

To rename a compressed folder:

- Right-click it and click Rename.
- Type a new name and press Enter

Another way to rename the file is to select the file or folder and press F2 on your keyboard

If you double click the compressed folder to open it, you will see a detailed view of how the size of the files have changed.

The amount of compression is not always the same and depends on the file type. For example, an image cannot be compressed as much as a text file. Image files like JPEG are usually already highly compressed, so you won't see much difference if you compress them.

To extract (or unzip) a file from a compressed folder:

- Find the compressed folder that contains the files or folders that you want to extract and double click it.
- Find and select the file that you want and move it to the location you want.

To uncompress all the files form a compressed folder:

- Right-click the folder icon and click Extract All.
- In the Extract window, click Browse.
- In the Select a destination window, select the desired location for your files and click Select Folder.
- Then click Extract.

HISTORY

The ZIP file format was created by Phil Katz and his company, PKWARE, in 1989. The name "zip," which means speed, was an idea of Robert Mahoney's, Phil's friend. They wanted to show that ZIP was faster than any other compression formats available at the time.

Change icon size and file details

There is a variety of ways in which a list of your files can appear in a folder.

To see the size and file details:

- Open File Explorer and click a folder (e.g. Documents) The list of files will appear.
- Click the view button
- In the layout group, open the list of view options by clicking the down arrow.
- Select the option you want to change the view to.

You can change the view to Extra large icons, Large icons, Medium icons, Small icons, List Details, Titles and Content.

To see more information about the files:

- Open the Documents folder and click View to open the Ribbon
- Click Sort by and then click Choose columns. Select the information you want to see.
- Click OK

You can change the order in which the information appears by selecting the appropriate boxes and clicking the appropriate boxes and clicking the Move Up button or the Move Down buttons.

Recycle Bin

Can you see the Recycle Bin on your desktop? When you delete something from your computer, it's not deleted forever, but rather it goes into the Recycle Bin. If you-delete something by accident or change your mind, you can find it there.

To open the Recycle Bin:

- Double-click the Recycle Bin icon on the desktop and a window will appear, containing everything you have deleted.
- Right-click a file or folder in order to Restore, Cut or Delete it.

If you want to delete all the items in your recycle bin:

- Right-click the Recycle Bin icon on the desktop.
- Click Empty Recycle Bin.
- Click Yes on the confirmation message and all the files inside the Recycle Bin will be deleted forever.

Basic settings

The operating system is the main working environment on your computer. For this reason, it's important for it to be as user-friendly as possible so it's easy and fun for you to use. All the operating systems give you the necessary tools to change their environment and settings.

Mouse settings

The first settings that you are going to learn how to change are those of your mouse. Microsoft Windows offers you a way to customize the buttons of your mouse or the movement of your cursor, which is very handy, especially if you are left-handed.

To change the mouse settings:

- Click the Start button and then click the Settings button.
- Click Devices and then click
- Mouse.

The Select your primary button box is used to adjust the mouse for right-hand or left-hand use. Until now, we have used the left button to open files and folders or select files and the right button for the pop-up menus. Click this option and the use of the buttons will be reversed.

You can choose to scroll an entire page or a number of lines with each notch of the wheel of your mouse and using the slider you can adjust the mouse wheel scrolling speed.

Programs and features

Here, you can remove a program that you have installed on your computer and that is no longer needed. But, be EXTRA careful. Once you delete a program in this way, it's permanently deleted from your computer. If you want this program again, you will have to reinstall it.

To remove a program:

- Click the Start button and then click the Settings button.
- Click Apps.
- In the Apps & features pane, find the program you want to remove and click it.
- Click the Uninstall button.
- Follow the instructions until the program is completely uninstalled.

If you want to see the status of your network or make changes, you click Network & Internet

If you want to remove a program and you just delete its files, it Is a HUGE mistake. When you install a program, its files are copied in different places and you have to uninstall it through Apps & features.

Date and Time

Click the date and time on the right side of the Taskbar and a clock and a calendar of the current month will appear.

To change the date and time of your computer:

- Right click the time in the Taskbar and then click Adjust date/time.
- Click Change.
- Change the date and time using the arrows.
- Click Change.

If you are an adventurer and travel a lot, you can change the time zone to where you are. To do that,

Click time zone and choose the country you want.

If Adjust for daylight saving time automatically is checked, then you will always have the correct time.

HISTORY

In some countries, in spring and fall, we change the time in order to save energy by using more natural light. The first person that had this idea was Benjamin Franklin in 1784. People changed the time for the first time during World War I In order to save energy and better coordinate military operations.

Screen settings

Computers use pixels to create the text and pictures that we see on the screen. The screen resolution is the number of pixels on your screen. A higher screen resolution shows text and pictures sharper, but they also appear smaller on the screen. If you use a lower screen resolution, things appear larger.

To change the screen resolution:

- Right-click an empty space on your Desktop and a pop-up menu will appear.
- Click Display settings.
- In the Settings window, in the Display pane, click the drop-down list below Display resolution and choose the screen resolution you want.
- A new window will appear. Click Keep changes to use the new resolution, or click Revert if you don't like it.

It's a common mistake to think that a higher resolution means better graphics. Every monitor works better with a specific screen resolution.

personalization

All computers have a desktop and usually each one looks different. You can have your own personal desktop with a different picture or Windows colors.

To create your own favorite Desktop:

- Right click an empty space on the Desktop and a pop-up menu will appear.
- Click Personalize.
- Click the image you like.

System sounds

Find the speaker icon on the right side of the Taskbar and click it once. You can drag the slider left or right to adjust the volume.

To adjust the volume of all active programs:

- Right click the small speaker icon and a menu window will appear.
- Click Open Volume mixer.
- The Volume Mixer window will appear.

You can adjust the volume for the programs, as well as for the entire device by dragging the sliders.

Hints and tips

Customize your desktop

You have already learned how to change the appearance of your operating system. Now, let's see some new tricks.

To unlock and move your taskbar:

- Right-click the Taskbar and click Lock all taskbars.
- Drag and drop the Taskbar on one of the four sides of the screen.

To rearrange the desktop icons, select the one you want and drag and drop it anywhere you like.

To change the size of the icons:

- Right click an empty space on your Desktop.
- Click View and then click Large, Medium or Small icons.

Auto arrange Icons puts all the icons next to or below each other.

Align Icons to grid always aligns the icons to an invisible grid on the screen.

Show desktop Icons makes the desktop icons appear or disappear.

Multitasking

Microsoft Windows allows you to work with many programs simultaneously and have many files and folders open. You can arrange them in a way that makes working easy.

To arrange your windows:

- Right-click an empty space on your Taskbar.
- Click Cascade. windows, Show windows stacked, or Show windows side by side to arrange your windows accordingly.

Cascade windows puts the windows one behind the other.

Show windows stacked arranges your windows one above the other

Show windows side by side arranges your windows into columns.

Task manager

The Task Manager helps you manage all the programs that are running and it's very useful when a program is not responding to your commands.

Be careful. Close only the program that is not responding. Don 't close anything else, because you might lose unsaved work.

. To close a program that is not responding:

- Right-dick an empty space on your Taskbar.
- Click Task Manager.
- Click the program that is not responding and click End task.

Remove a storage device

As noted earlier, all the storage devices appear on This PC. When you connect a memory stick or an external hard disk drive for the first time, you have to wait a little bit until your computer "recognizes" the new device. Most storage devices are connected through a USB port. After your computer recognizes your device, you can open the This PC window and find it there. Sometimes, you think you have finished with the files on your storage device but the computer is still writing data to it. To be sure, you need to virtually "disconnect" the device before you pull it out.

To “disconnect” a storage device:

- In the File Explorer window open This PC.
- Right-click your storage device and click Eject.
- Wait until the confirmation message appears and pull it out.
- The device will disappear from the This PC window.

Help

If you need information on how to do something on your computer, you can search for help through the Web. Any user can find any aspect or topic they want using the search icon.

To look for help:

- Click the Search icon.
- In the window that will appear, click Web.
- In the text box, write the topic you want more information about (for example, create a new folder) and click the result with the best match.
- A Microsoft Bing window will appear with a preview of the results.
- Click Open results in browser.
- Click a web page from the list to find the information you are looking for.

SMART TIP

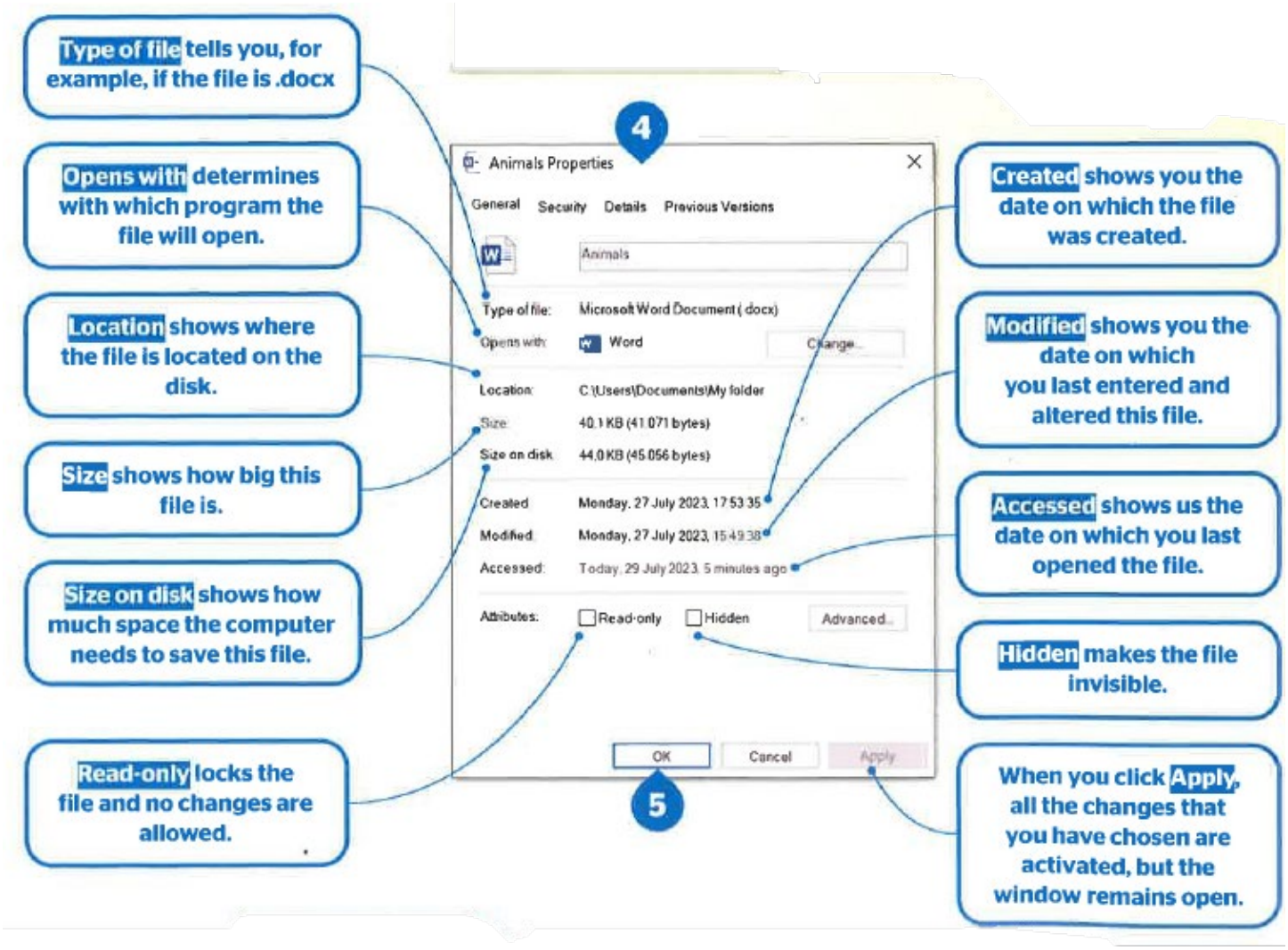
When you use Help in programs, try to type keywords instead of whole phrases. For example, type "Create a new folder" or "Create folder" and not "I want to know how to create a new folder". The same goes for every search program.

File properties

You already know how to create files and folders. Now it's time to see some more advanced features. Every file or folder has some information, like the date when it was created, where it is located on the hard disk, etc.

To access file properties:

- Locate the file on your hard disk, e.g. in Documents.
- Right-click it and click Properties.
- The Properties window will appear.
- See the information you want or apply any changes and click OK.



Be safe:

It's annoying when there is a huge thunderstorm in your town, and you cannot go out and play. Well, it's better not to switch on your PC also. Thunderstorms affect electricity and the last thing you want is a fried PC. So, unplug your PC to be on the safe side.

To see all hidden folders and files:

- Open the Documents window and click View. The Ribbon will appear.
- In the Show/hide group, click Hidden items.
- All the hidden files and folders will appear.

When a file or a folder is hidden, It will look transparent.