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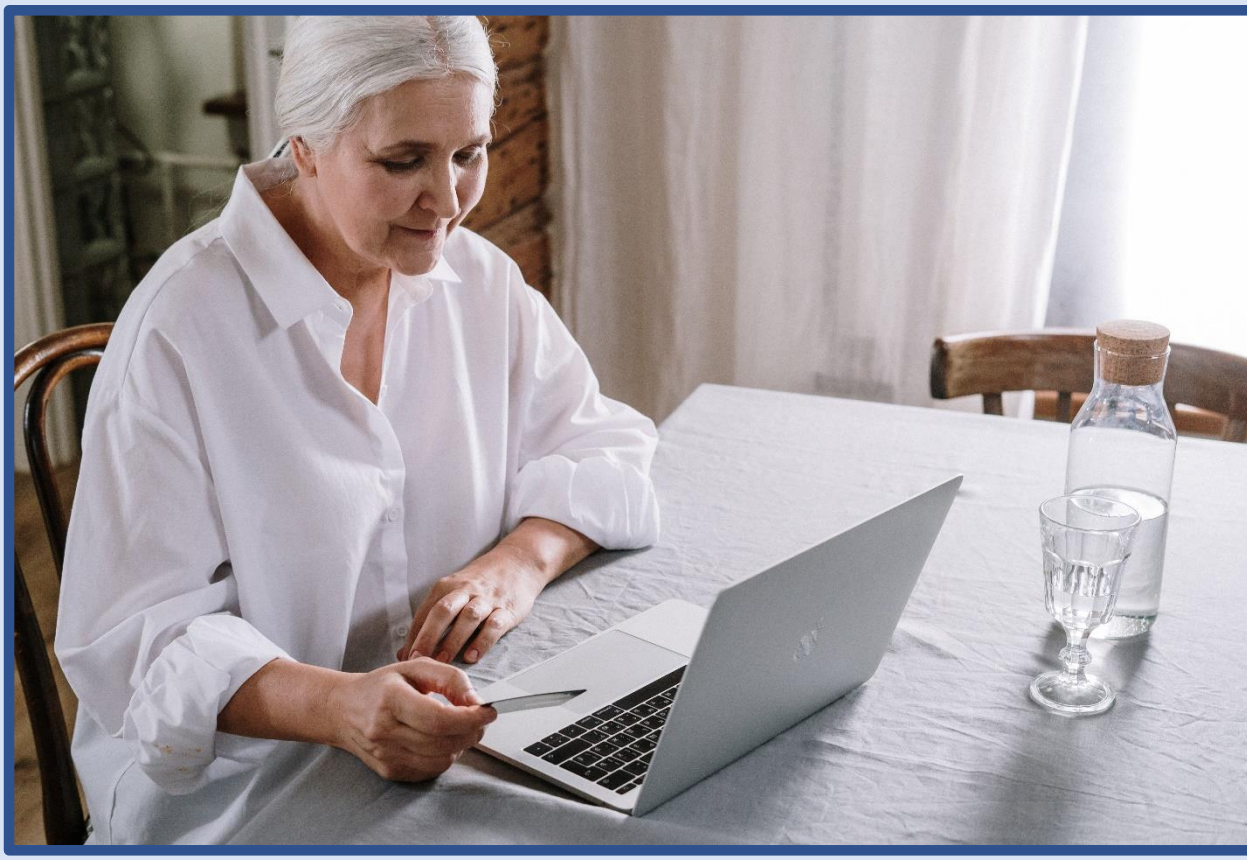

Educational Pack - Module 1

Computer Hardware and Basic Functions

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Author:	RUTIS
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Introduction

In todays society having a computer/laptop is essential. It is almost impossible to get through the day without using some kind of computer in one's daily activities, being them personal or professional. A desktop computer is a specific type of computer that generally sits in one place, as opposed to a laptop or tablet, both of which are portable.

"Computer hardware and basic functions" module provides information regarding the main physical components of a computer and laptop as well as the basic functions.

Bellow are the main outcomes of this module.

Learning Outcomes:

- You will be able to identify the computer's hardware and components;
- You will be able to turn on and off the computer and navigate the computer;
- You will be able to connect the internet using WIFI;
- You will be able to search information online;
- You will be able to save important information and webpages as well as recognize valid and credible information.

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Topic 1: Computer hardware and components

In this topic it will be addressed all information regarding computer hardware and its components. Bellow is a list of what will be taught to you:

- List of the hardware components such as processor, memory, disk, main board, etc.
- Explanation of the features (speed, capacity, etc.) of the hardware components of a computer.
- Explanation of the relationships between the components of a computer and how data are transferred among the components.
- Identification of the peripheral devices outside a computer.
- Using computer input devices, such as a keyboard and a mouse.
- Transferring data outside the computer using output devices, such as screen and printer.
- Saving files to removable devices and loading files from removable devices.

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“Opening a computer: what’s inside?” - Easy
Duration: 90 minutes

In this activity, trainees will experience the opening of a desktop computer, and with the support of the trainer, they will be able to know and learn to identify different components and the specific features of each one of them, as well as the influence they have on the performance and behavior of the computer system.

Opening a computer: what’s inside?

Today computers are indispensable machines for human beings and are present in our daily lives, both at a private and professional level, with playful and labor production functions.

In order for us to manage our computer in the best way and even to be able to make the best possible purchase, it is important to know its components and in today's activity we will try to do so.

So, let's open a desktop computer and try to explore, learn and identify the influence that each component has on the computer system.

To open the computer, first of all, we need a screwdriver:

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What we have to do next is to remove the screws on the back of the computer and then remove the side door:

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What we will find inside the computer is a set of parts and components that we will try to identify:

The first component we find is the motherboard. The **motherboard** is the computer's **main circuit board**. It's a thin plate that holds the CPU, memory, connectors for the hard drive and optical drives, expansion cards to control the video and audio, and connections to your computer's ports (such as USB ports). The motherboard connects directly or indirectly to every part of the computer.

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The central processing unit (CPU), also called a **processor**, is located inside the **computer case** on the motherboard. It is sometimes called the brain of the computer, and its job is to carry out commands. Whenever you press a key, click the mouse, or start an application, you're sending instructions to the CPU.

The CPU is usually a **two-inch ceramic square** with a **silicon chip** located inside. The chip is usually about the size of a thumbnail. The CPU fits into the motherboard's **CPU socket**, which is covered by the **heat sink**, an object that absorbs heat from the CPU.

A processor's **speed** is measured in **megahertz (MHz)**, or millions of instructions per second; and **gigahertz (GHz)**, or billions of instructions per second. A faster processor can execute instructions more quickly. However, the actual speed of the computer depends on the speed of many different components—not just the processor.

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RAM is your system's **short-term memory**. Whenever your computer performs calculations, it temporarily stores the data in the RAM until it is needed.

This **short-term memory disappears** when the computer is turned off. If you're working on a document, spreadsheet, or other type of file, you'll need to **save** it to avoid losing it. When you save a file, the data is written to the **hard drive**, which acts as **long-term storage**.

RAM is measured in **megabytes (MB) or gigabytes (GB)**. The **more RAM** you have, the more things your computer can do at the same time. If you don't have enough RAM, you may notice that your computer is sluggish when you have several programs open. Because of this, many people add **extra RAM** to their computers to improve performance.

The **hard drive** is where your software, documents, and other files are stored. The hard drive is **long-term storage**, which means the data is still saved even if you turn the computer off or unplug it.

When you run a program or open a file, the computer copies some of the data from the **hard drive** onto the **RAM**. When you

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save a file, the data is copied back to the **hard drive**. The faster the hard drive, the faster your computer can **start up** and **load programs**.

The power supply unit in a computer **converts the power** from the wall outlet to the type of power needed by the computer. It sends power through cables to the motherboard and other components.

If you decide to open the computer case and take a look, make sure to **unplug** the computer first. Before touching the inside of

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the computer, you should touch a grounded metal object—or a metal part of the computer casing—to discharge any static buildup. Static electricity can be transmitted through the computer circuits, which can seriously damage your machine.

Most computers have **expansion slots** on the motherboard that allow you to add various types of **expansion cards**. These are sometimes called **PCI (peripheral component interconnect) cards**. You may never need to add any PCI cards because most motherboards have built-in video, sound, network, and other capabilities.

However, if you want to boost the performance of your computer or update the capabilities of an older computer, you can always add one or more cards. Below are some of the most common types of expansion cards.

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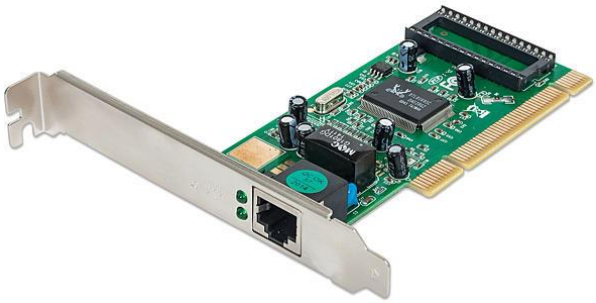
The **network card** allows your computer to communicate over a network and access the Internet. It can either connect with an **Ethernet** cable or through a **wireless** connection (often called **Wi-Fi**). Many motherboards have built-in network connections, and a network card can also be added to an expansion slot.



Bluetooth is a technology for wireless communication over short distances. It's often used in computers to communicate with wireless **keyboards**, **mice**, and **printers**. It's commonly built into the motherboard or included in a **wireless network card**. For computers that don't have Bluetooth, you can purchase a USB adapter, often called a **dongle**.

The value of a computer depends on the quality of these components. Therefore, we can find computers with more affordable prices:

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Or with less affordable prices but with more capable components, these computers will last longer, since the components have more memory, more processing speed and will better resist the evolutions that the software (programs and applications) will have in the future.

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In portable computers, we find exactly the same components as in a fixed computer. What happens is that these components are conditioned in a smaller space on the computer.

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"Information input and output peripherals in a computer system" -Medium
Duration: 90 minutes

In this activity, after a demonstration on the peripheral components of input and output of information, the trainees will experience a videoconference, using the computer and mobile phone, in order to recognize the importance of these elements in the digital communication process.

Information input and output peripherals in a computer system

a) Input and output peripherals

A peripheral device is generally defined as any auxiliary device such as a computer mouse or keyboard, that connects to and works with the computer in some way. Other examples of peripherals are expansion cards, graphics cards, image scanners, tape drives, microphones, loudspeakers, webcams, and digital cameras. RAM—random access memory—straddles the line between peripheral and primary component; it is technically a storage peripheral, but is required for every major function of a modern computer and removing the RAM will effectively disable any modern machine. Many new devices such as digital watches, smartphones and tablet computers have interfaces which allow them to be used as a peripheral by a full computer, though they are not host-dependent as other peripheral devices are. According to the most technical definition, the only pieces of a computer *not* considered to be peripherals are the central

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processing unit, power supply, motherboard, and computer case.

Usually, the word peripheral is used to refer to a device external to the computer case, like a scanner, but the *devices located inside the computer case are also technically peripherals.* Devices that exist outside the computer case are called external peripherals, or auxiliary components, Examples are: “Many of the external peripherals I own, such as my scanner and printer, connect to the peripheral ports on the back of my computer.” Devices that are inside the case such as internal hard drives or CD-ROM drives are also peripherals in technical terms and are called internal peripherals, but may not be recognized as peripherals by laypeople.

17 In a system on a chip, peripherals are incorporated into the same integrated circuit as the central processing unit. They are still referred to as “peripherals” despite being permanently attached to (and in some sense part of) their host processor.

Common Peripherals:

- Input
  - Keyboard:
    - As the name implies, a keyboard is basically a board of keys. Along with the mouse, the keyboard is one of the primary input devices used with a computer. The keyboard's design comes from the original typewriter keyboards, which arranged letters and numbers in a way that prevented the type-bars from getting jammed when typing quickly. This keyboard layout is known as the QWERTY design, which

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gets its name from the first six letters across in the upper-left-hand corner of the keyboard.

- Computer mouse:
  - While most people don't want to see a mouse running around in their home, they typically don't have a problem seeing one sitting by their computer. This is because, along with the keyboard, , the mouse is one of the primary input devices used with today's computers. The name comes from the small shape of the mouse, which you can move quickly back and forth on the mouse pad, and the cord, which represents the mouse's tail. Of course, if you are using a wireless mouse, the analogy does not work so well.

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- Graphic tablet:
  - A **graphics tablet** (also known as a **digitizer**, **drawing tablet**, **drawing pad**, **digital drawing tablet**, **pen tablet**, or **digital art board**) is a computer input device that enables a user to hand-draw images, animations and graphics, with a special pen-like stylus, similar to the way a person draws images with a pencil and paper. These tablets may also be used to capture data or handwritten signatures. It can also be used to trace an image from a piece of paper which is taped or otherwise secured to the tablet surface. Capturing data in this way, by tracing or entering the corners of linear poly-lines or shapes, is called digitizing.

- Touchscreen:
  - A **touchscreen**, or **touch screen**, is both an input and output device and normally layered on the top of an electronic visual display of an information processing system. The display is often an LCD or OLED display while the system is usually a laptop, tablet, or smartphone. A

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user can give input or control the information processing system through simple or multi-touch gestures by touching the screen with a special stylus or one or more fingers. Some touchscreens use ordinary or specially coated gloves to work while others may only work using a special stylus or pen. The user can use the touchscreen to react to what is displayed and, if the software allows, to control how it is displayed; for example, zooming to increase the text size.

- Barcode reader:
  - A **barcode reader** (or **barcode scanner**) is an optical scanner that can read printed barcodes, decode the data contained in the barcode and send the data to a computer. Like a flatbed scanner, it consists of a light source, a lens and a light sensor translating for optical impulses into electrical signals. Additionally, nearly all

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barcode readers contain *decoder* circuitry that can analyze the barcode's image data provided by the sensor and sending the barcode's content to the scanner's output port.

- Image scanner:
  - A scanner is an input device that scans documents such as photographs and pages of text. When a document is scanned, it is converted into a digital format. This creates an electronic version of the document that can be viewed and edited on a computer. Most scanners are flatbed devices, which means they have a flat scanning surface. This is ideal for photographs, magazines, and various documents. Most flatbed scanners have a cover that lifts up so that books and other bulky objects can also be scanned. Another type of

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scanner is a sheet-fed scanner, which can only accept paper documents. While sheet-fed scanners cannot scan books, some models include an automatic document feeder, or ADF, which allows multiple pages to be scanned in sequence.

- Microphone:
  - A microphone is a device that captures audio by converting sound waves into an electrical signal. This signal can be amplified as an analog signal or may be converted to a digital signal, which can be processed by a computer or other digital audio device.

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- Webcam:
  - The term webcam is a combination of "Web" and "video camera." The purpose of a webcam is, not surprisingly, to broadcast video on the Web. Webcams are typically small cameras that either attach to a user's monitor or sit on a desk. Most webcams connect to the computer via USB, though some use a Firewire connection. Webcams typically come with software that allows the user to record video or stream the video on the Web. If the user has a website that supports streaming video, other users can watch the video stream from their Web browsers.

- Game controller:
  - A **game controller**, **gaming controller**, or simply **controller**, is an input device used with video games or entertainment systems to provide input to a video game, typically to control an object or character in the game. Before the seventh generation of video game consoles,

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plugging in a controller into one of a console's controller ports were the primary means of using a game controller, although since then they have been replaced by wireless controllers, which do not require controller ports on the console but are battery-powered. USB game controllers could also be connected to a computer with a USB port. Input devices that have been classified as game controllers include keyboards, mouses, gamepads, joysticks, etc. Special purpose devices, such as steering wheels for driving games and light guns for shooting games, are also game controllers.

- Digital camera:
  - A digital camera is a similar to a traditional film-based camera, but it captures images digitally. When you take a picture with a digital camera, the image is recorded by a sensor, called a "charged coupled device" or CCD. Instead of

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saving the picture on analog film like traditional cameras, digital cameras save photos in digital memory. Some digital cameras have built-in memory, but most use an SD or Compact Flash card.

- Output
  - Computer display:
    - The term "monitor" is often used synonymously with "computer screen" or "display." The monitor displays the computer's user interface and open programs, allowing the user to interact with the computer, typically using the keyboard and mouse. Older computer monitors were built using cathode ray tubes (CRTs), which made them rather heavy and caused them to take up a lot of desk space. Most modern monitors are built using LCD technology and are commonly referred to as flat screen displays. These thin monitors take up much less space than the older CRT displays.

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This means people with LCD monitors have more desk space to clutter up with stacks of papers, pens, and other objects.

- Printer:
  - A printer is an output device that prints paper documents. This includes text documents, images, or a combination of both. The two most common types of printers are inkjet and laser printers. Inkjet printers are commonly used by consumers, while laser printers are a typical choice for businesses. Dot matrix printers, which have become increasingly rare, are still used for basic text printing. The printed output produced by a printer is often called a hard copy, which is the physical version of an electronic document. While some printers can only print black and white hard copies, most printers today can produce color prints. In fact, many home printers can now produce high-quality photo prints that rival professionally

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developed photos. This is because modern printers have a high DPI (dots per inch) setting, which allows documents to printed with a very fine resolution.

- Projector:
  - A projector is an output device that projects an image onto a large surface, such as a white screen or wall. It may be used an alternative to a monitor or television when showing video or images to a large group of people. Projectors come in many shapes and sizes though they are commonly about a foot long and wide and a few inches tall. They can be mounted on ceilings or may be freestanding and portable. Ceiling-mounted projectors are typically larger, especially ones that project a long distance (such as 30 feet or more). These projectors are

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commonly found in classrooms, conference rooms, auditoriums, and places of worship.

- Speaker:
  - Speakers are one of the most common output devices used with computer systems. Some speakers are designed to work specifically with computers, while others can be hooked up to any type of sound system. Regardless of their design, the purpose of speakers is to produce audio output that can be heard by the listener. Speakers are transducers that convert electromagnetic waves into sound waves. The speakers receive audio input from a device such as a computer or an audio receiver. This input may be either in analog or digital form. Analog speakers simply amplify the analog electromagnetic waves into sound waves. Since sound waves are produced in analog form, digital speakers must first convert the digital

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input to an analog signal, then generate the sound waves.

- Storage devices:
  - A computer storage device is any type of hardware that stores data. The most common type of storage device, which nearly all computers have, is a hard drive. The computer's primary hard drive stores the operating system, applications, and files and folders for users of the computer. While the hard drive is the most ubiquitous of all storage devices, several other types are common as well. Flash memory devices, such as USB keychain drives and iPod nanos are popular ways to store data in a small, mobile format. Other types of flash memory, such as compact flash and SD cards are popular ways to store images taken by digital cameras.

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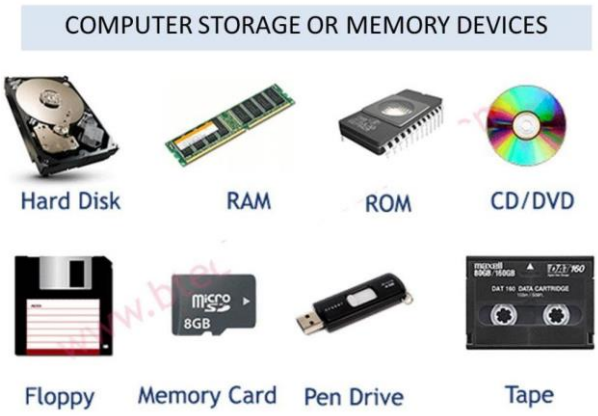

- Floppy disk drive:
  - Floppy disks have an interesting name, considering they do not appear to be "floppy." However, if you take the actual disk out of the protective casing, you will discover that the disk is, in fact, rather flexible. It is coated with iron oxide and stores data magnetically, just like a hard disk. The first floppy disks were created in 1969.

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- Flash drive:
  - Flash drives have many names — jump drives, thumb drives, pen drives, and USB keychain drives. Regardless of what you call them, they all refer to the same thing, which is a small data storage device that uses flash memory and has a built-in USB connection.
    Flash drives are usually small. Their size and shape may resemble a thumb or a small pen (which is where the names "thumb drive" and "pen drive" come from). Flash drives are also very thin, often having a depth of less than a centimeter. Because of their small form factor, they are highly portable and can easily fit in a pocket or on a keychain (hence the name "keychain drive").

- Disk drive:
  - A disk drive is a device that reads and/or writes data to a disk. The most common type of disk drive is a hard drive (or "hard disk drive"), but several other types of disk drives exist as well. The most common disk drives are HDD's and SSD's. HDD stands for "Hard Disk Drive." "HDD"

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is often used interchangeably with the terms "hard drive" and "hard disk." However, the term "hard disk drive" is technically the most accurate, since "hard drive" is short for "hard disk drive" and the "hard disk" is actually contained within the hard disk drive.SSD stands for "Solid State Drive." An SSD is a type of mass storage device similar to a hard disk drive (HDD). It supports reading and writing data and maintains stored data in a permanent state even without power. Internal SSDs connect to a computer like a hard drive, using standard IDE or SATA connections.

- Smartphone or Tablet computer storage interface:
  - A smartphone is a mobile phone that includes advanced functionality beyond making phone calls and sending text messages. Most smartphones have the capability to display photos, play videos, check and send e-mail, and surf the Web. Modern smartphones, such as the iPhone and Android based phones can run

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third-party applications, which provides limitless functionality. A tablet, or tablet PC, is a portable computer that uses a touchscreen as its primary input device. Most tablets are slightly smaller and weigh less than the average laptop. While some tablets include fold out keyboards, others, such as the Apple iPad and Motorola Xoom, only offer touchscreen input.

- Optical disk drive (CD/DVD):
  - In computing, an **optical disc drive** (**ODD**) is a disc drive that uses laser light or electromagnetic waves within or near the visible light spectrum as part of the process of reading or writing data to or from optical discs. Some drives can only read from certain discs,

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but recent drives can both read and record, also called burners or writers (since they physically burn the organic dye on write-once CD-R, DVD-R and BD-R LTH discs). Compact discs, DVDs, and Blu-ray discs are common types of optical media which can be read and recorded by such drives.

b) Videoconferencing

What is Google Meet?

Google Meet is an enterprise video-conferencing service from Google that supports chat, one-on-one video calls and group video meetings. Google Meet users can chat with other participants, share videos, presentations and slides from their desktop in real-time, as well as stream live events.

Thus, Google offers the possibility of holding videoconferences to Google users. Anyone with a Google Account can create an online meeting with a maximum of 100 participants and hold a meeting that can go up to 60 minutes per meeting.

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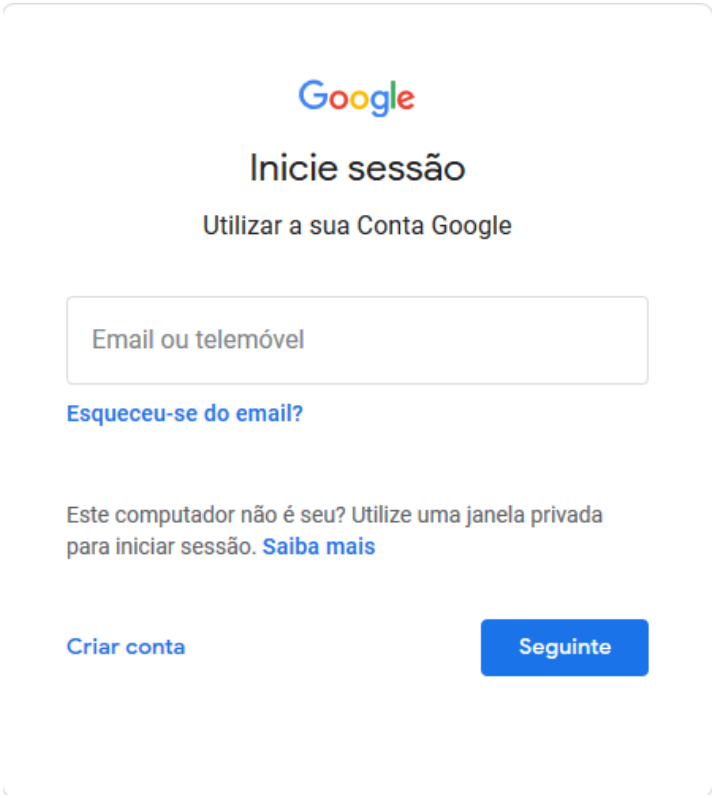
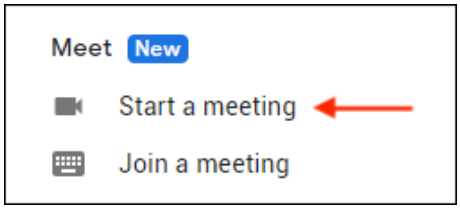
Google Meet is available via web browser at meet.google.com and can also be accessed from within G Mail, G Suite and through a mobile app. Google Meet is compatible with Windows, Mac, Chrome OS, Linux and Android and iOS devices.

If you already use Gmail, Google Photos, YouTube or another Google product, you only need to sign in with your existing Google Account.



Then click 'Start a meeting' in sidebar. Once you're in the meeting, you add other people by sharing the meeting code or by adding someone by email address or phone call from the 'Add people' section.



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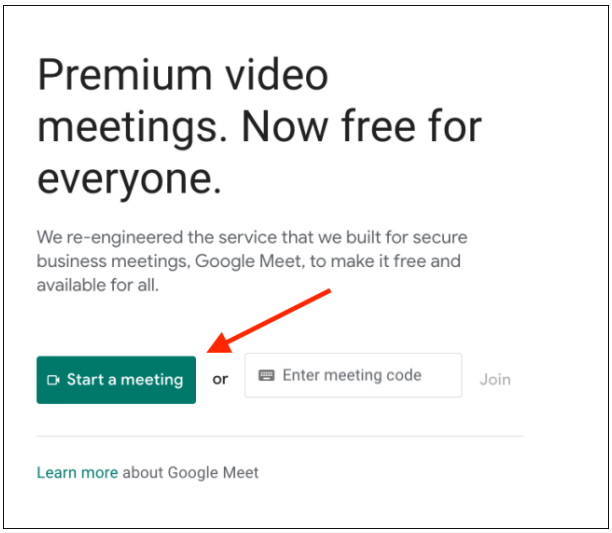
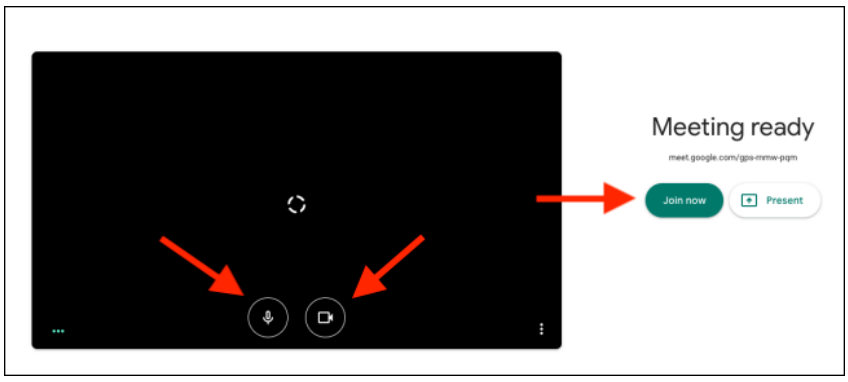
To develop a meeting, is very importante that you have the proper software required for the meeting: a microfone, a webcam and speakers. We've seen some information about these items on the past chapter. Without these components, the meeting will not run in the best way. Laptop computers already have this hardware in most cases.



From the next page, you can check your video and microphone audio. You can also click the Mic and Video icons to disable them for the call. Once you're ready, click the "Join Now" button.



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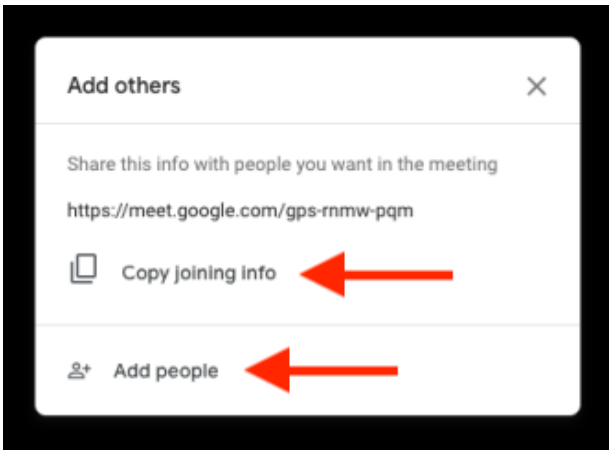
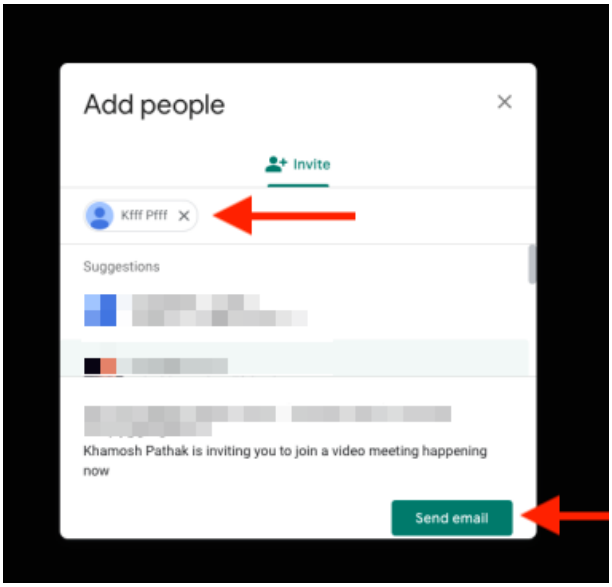
Google Meet video conference will now begin. You'll get a prompt for adding people. You can either click "Copy Joining Info" to copy the text and the link to the call, or you can click the "Add people" button to invite Google users.



From the "Add People" window, search and add contacts you want to invite. Then click the "Send Email" button to send the invite.



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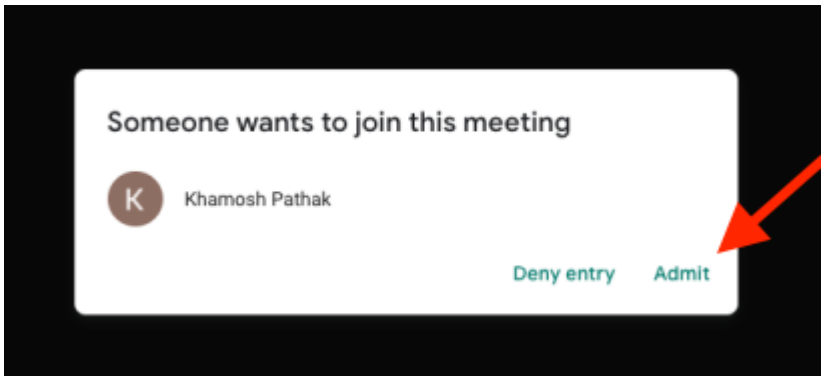
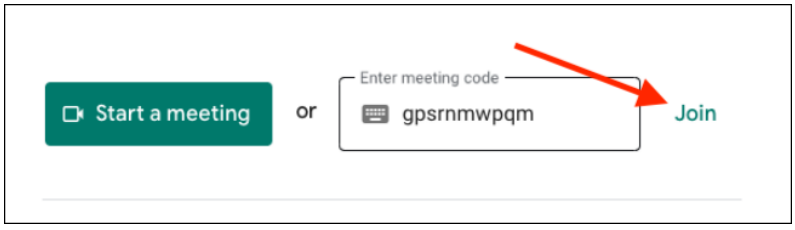
Once the user opens the link and clicks on the “Ask to Join” button, you’ll get a prompt asking if you want to invite them in. You’ll see the name associated with their Google Account. Click the “Admit” button to add them to the call.



It’s just as simple of a process if you’re on the other side. All you need to join a Google Meet is a valid Google account. (It doesn’t have to be a G Suite account.)

You might have received either a meeting code or a link for joining a Google Meet.

If you received a meeting code, go to the Google Meet website, enter the meeting code in the text box, and click the “Join” button.



If you received a link, all you have to do is open the link in your browser.

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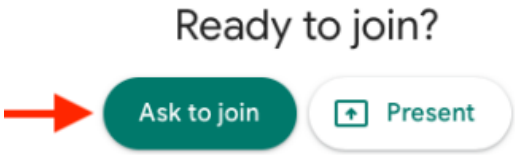
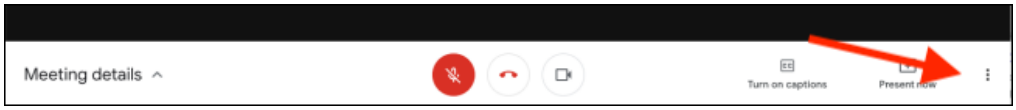
Google Meet will now show you a preview of your camera on the left-hand side. You can also test your microphone by speaking into it and watching the green waveform in the bottom-left corner. If you don't want to join with your camera or microphone enabled, click the "Video" or "Microphone" buttons.

Once you're ready, click the "Ask To Join" button.



Once the host lets you in, you'll be able to join the video conference.

If you want to switch to a different view, click the "Menu" button.



Here, choose the "Change Layout" option.

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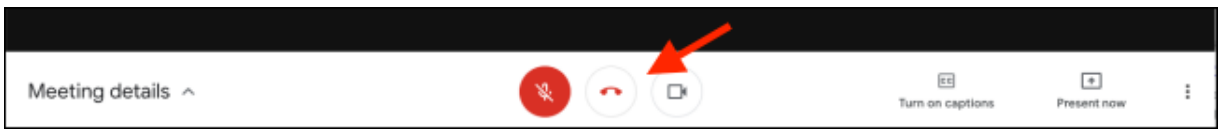
From here, you can switch to the Sidebar, Spotlight, or the Tiled layout.

From the menu, you can also switch to the fullscreen mode, change the audio and video settings, and use the Present feature to share your screen.

You'll find all the meeting options in the bottom row. You can click the Microphone or the Video button to disable the microphone or the camera, respectively. You can mute others in a Google Meet call as well.

Once you're done with the call, click the red "End Call" button.



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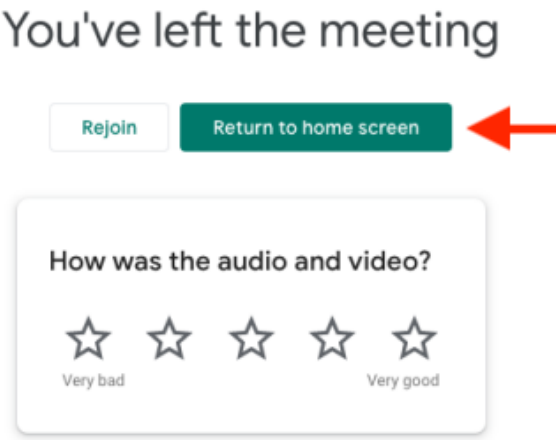

Have a great meeting!

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#Note: There are many other platforms where videoconferencing can be made.

Zoom is one of them, for example, which has gained popularity due to the Covid pandemic (lock down/ confinement).

Check it out: https://zoom.us/signin

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"My printer: what can I do with it?" - Hard

Duration: 90 minutes

In this activity, trainees will experience the printing, copying and scanning processes on a multifunction printer, using software compatible with the equipment used and some software that compiles scans in image and pdf formats. They will also install a printer on a computer, using the internet as a resource.

My printer: what can I do with it?

a) Install a printer

First of all, to be able to use properly your printer, you must install it. Let's find out if we can install a printer under Windows 10.

When you connect a printer to your PC or add a new printer to your home network, you can usually start printing right away. Windows 10 supports most printers, so you probably won't have to install special printer software. Additional printer drivers and support might be available if you update Windows 10.

If your printer is on and connected to the network, Windows should find it easily. Available printers can include all printers on a network, such as Bluetooth and wireless printers or printers that are plugged into another computer and shared on the network. You might need permission to install some printers. To install or add a local printer, just follow the same procedure.

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1. Select the Start button, then select Settings > Devices > Printers & scanners.
2. Select Add a printer or scanner. Wait for it to find nearby printers, then choose the one you want to use, and select Add device.

If your printer isn't in the list, select **The printer that I want isn't listed**, and then follow the instructions to add it manually using one of the options.

Notes:

- If you use wireless access points, extenders or multiple wireless routers with separate SSIDs, you'll need to ensure that you're connected to the same network as the printer for your PC to find and install it.
- If you have a new wireless printer that hasn’t been added to your home network, read the instructions that came with the printer, and check the printer manufacturer’s website to learn more and to get up-to-date software for your printer.

b) Print a document

To this exercise, we ask you to go to Microsoft Word and grab a document with some contento on it. We will try to work on that and find out if we can print that content.

Once you've created your document, you may want to **print** it to view and share your work **offline**. It's easy to preview and print a document in Word using the **Print** pane.

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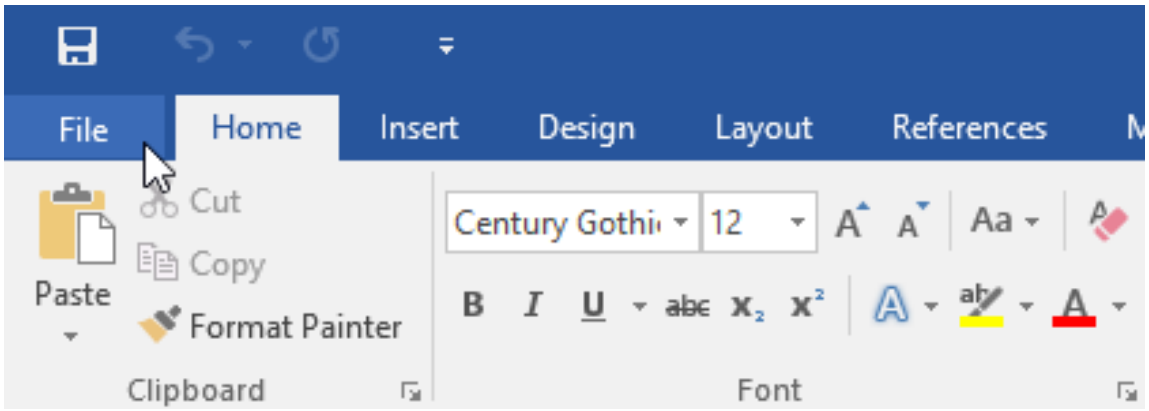
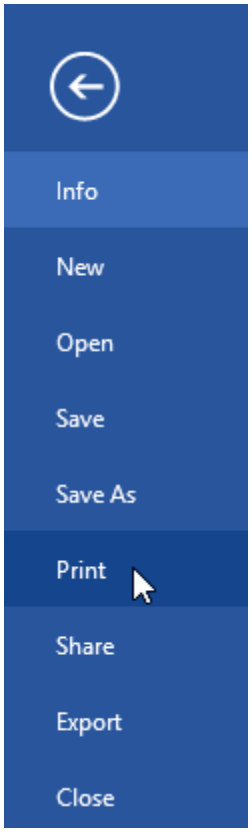
1. Select the **File** tab. **Backstage view** will appear.



2. Select **Print**. The **Print** pane will appear.



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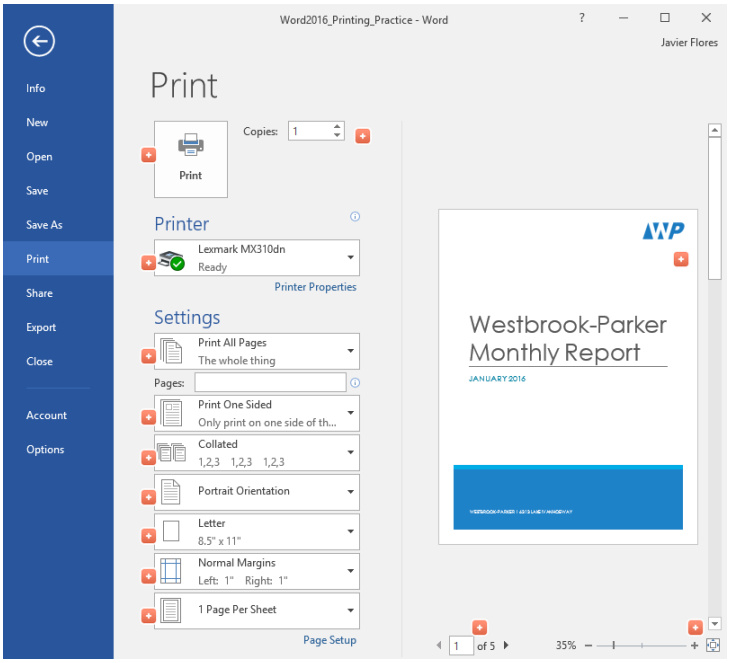
The print Pane:



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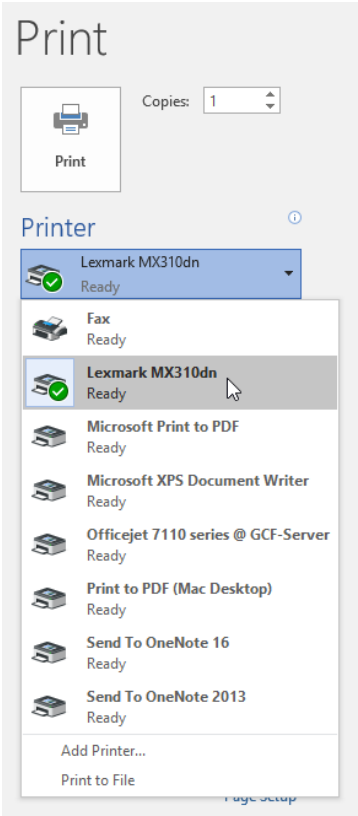
3. Navigate to the **Print** pane, then select the desired **printer**.



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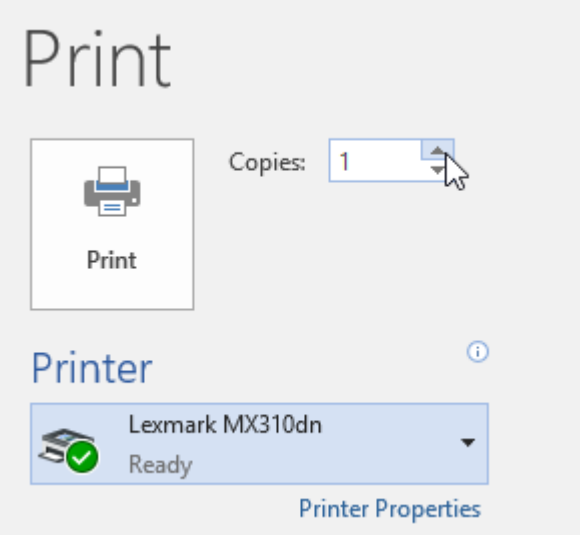
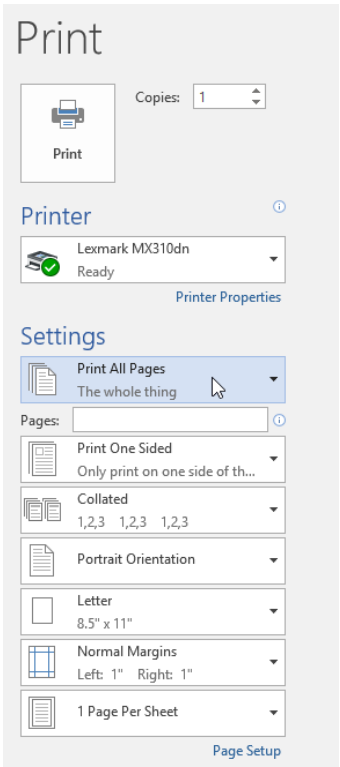
4. Enter the number of **copies** you want to print.



5. Select any additional **settings** if needed.



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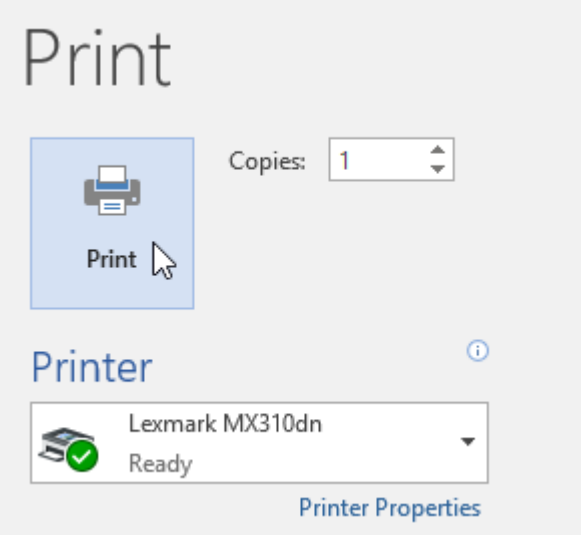
6. Click **Print**.



You're done with it!

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c) Make a copy on your printer

Let's make a try on na HP Printer. The copying process may vary slightly, depending on your printer. If this happens, we advise you to observe the printer's instruction manual.

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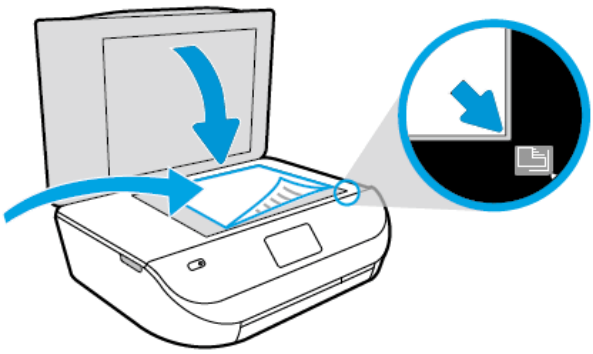
1. Place the original with the print side down on the scanner glass, position it according to the engraved guides around the glass, then close the scanner lid.



2. After loading the original, change the copy settings such as paper size, paper type, and lightness/darkness level, then copy the document or photo.
3. From the Home screen on the printer control panel, touch the Copy icon .
4. Swipe to the desired number of copies, or touch the keypad icon , then input a number.
5. Touch the Settings icon , then specify the desired advanced copy settings.
6. 2-sided: Select On or Off.
7. If you select On for the 2-sided copy option from the scanner glass, make sure to load the second page on the scanner glass when prompted.
8. Paper Size and Type: Make sure the input tray is loaded with the correct paper size and paper type.
9. note:

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10. To change the paper size and paper type settings, open and close the input tray door. The printer prompts you to confirm or change the paper size and paper type.
11. Resize: Select the size of the image of the photo or document that you want to copy.
12. Actual: Make a copy that is the same size as the original. The margins of the copied image might be clipped.
13. Fit to page: Make a copy that is centered with a white border around the edges. The resized image is either enlarged or reduced to fit the size of the selected output paper.
14. The 2-sided copy option does not work if the Fit to page option is selected.
15. Custom: Increase the size of the image by selecting values greater than 100% or reduce the image size by selecting values less than 100%.
16. Lighter/Darker: Slide the button to select the lightness/darkness level, and then touch OK.
17. ID Card Copy: Make a copy of both sides of an ID card from the scanner glass.
18. Touch Back to return to the Copy screen.
19. Touch Start Black or Start Color to start the copy job.
20. The printer prints the copy job.

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d) Scanning a document with NAPS2 (Not Another PDF Scanner)

System Requirements

- Windows: Windows XP SP3, Vista, 7, 8, 8.1, or 10.

On Windows 7 and earlier, you may need to install the .NET Framework 4.0 first.

- Linux: You will need to install the following packages.

Older versions of Mono may work with some issues. Follow these instructions to install the recommended version.

  - mono-devel (5.17 or later)
  - sane-utils
  - tesseract-ocr for OCR
  - tesseract-ocr-LANG where LANG is the 3-letter language code (reference)

- **Creating a Profile**

  To scan with NAPS2, you need to create at least one profile. A profile stores a reference to a particular scanning device, and all the settings used to scan with it.

  To create a profile, click the Profiles menu button, then click Add. Type a name for your profile, e.g. "Canon MP495 (color)".

  There are two types of drivers: WIA and TWAIN. If you don't know the difference, try WIA. If you encounter problems (e.g. you can't find your device), try TWAIN

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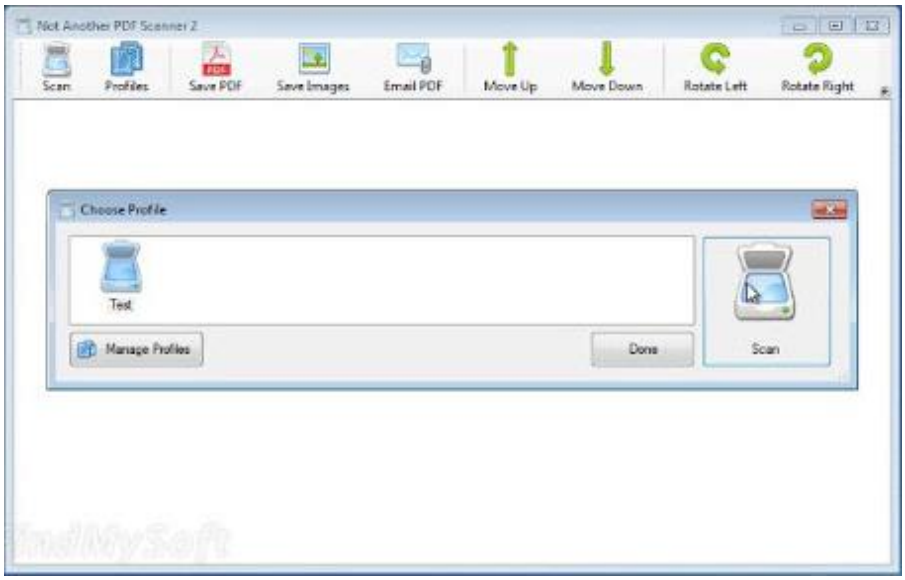
instead. Once you've selected a driver, click Select Device and select the scanner you want to use.

Once you've selected a device, you can change the settings used to scan.

When you're done, click OK to save your profile. You can then create more profiles if you want, or press Done to go back to the main window.



- **Scanning**

  Once you've created a profile, you can now scan. Click the Scan menu button. If you want to choose a different profile, click the dropdown arrow instead. That's it! If you selected "Use native UI" in your profile, a TWAIN/WIA window will pop up allowing you to scan.

  If you want to scan more pages, click the Scan button again.

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- **Organizing Scanned Images**

  Once you've scanned one or more pages, they will appear as thumbnails in the main window. You can select thumbnails by clicking on them, and use the menu buttons to rotate/flip/reorder/delete them as required. You can also clear all scanned images and start over.

- **Saving**
  - Save PDF: The Save PDF button will prompt you to save your pages as a .pdf file. If you only want to save some pages, select them then click the dropdown arrow beside the Save PDF button and choose "Selected". You can choose "PDF Settings" in the dropdown menu to configure how the PDF is saved.
  - Save Images: The Save Images button will prompt you to save your pages as .png, .jpeg, .tiff, or other image file formats. TIFF files can store multiple pages, but for all other formats a separate file will be saved for each page. If you only want to save some pages, select them then click the dropdown arrow beside the Save Images button and choose "Selected". You can choose "Image Settings" in the dropdown menu to configure how the images are saved.

  - Email PDF: The Email PDF button lets you start composing an email with a PDF attachment with a single click. If you only want to email some pages, select them then click the dropdown arrow beside the Email PDF button and choose "Selected". When

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you first press the Email PDF button, you will be prompted to choose which email application or provider you want to use. If you have an email application like Microsoft Outlook or Mozilla Thunderbird installed, those will be listed. You can also choose to use a Gmail or Outlook Web Access account. Once you've selected a provider, you can change it later by clicking the dropdown arrow beside the Email PDF button and choosing "Email Settings".

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Topic 2: Working with a computer/laptop/tablet

This topic in dedicated to the use of a computer, its operating systems and their peripheral and software. Bellow you can find the main subjects that will be addressed in this topic:

- Understand the key concepts relating to ICT, computers, devices, and software.
- Identify the different settings and options of an operating system and use the built-in help.
- Recognise good practice in file management and be able to organise files and folders efficiently
- Recognise considerations relating to green IT, accessibility, and user health

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"Operating with my system: the OS" - Easy
Duration: 90 minutes

In this activity, the trainees will get to know some types of operating systems, realizing their importance for the computer system, using some structural tools and learning how to look for help in the system itself in situations of need. They will get to know better the computer and its characteristics through the operating system.

Operating with my System: the OS

Your computer's Operating System (OS) manages all of the software and hardware on the computer. Most of the time, there are several different computer programs running at the same time, and they all need to access your computer's central processing unit (CPU), memory, and storage. The operating system coordinates all of this to make sure each program gets what it needs.

Operating systems usually come pre-loaded on any computer you buy. Most people use the operating system that comes with their computer, but it's possible to upgrade or even change operating systems. The three most common operating systems for personal computers are Microsoft Windows, macOS, and Linux.

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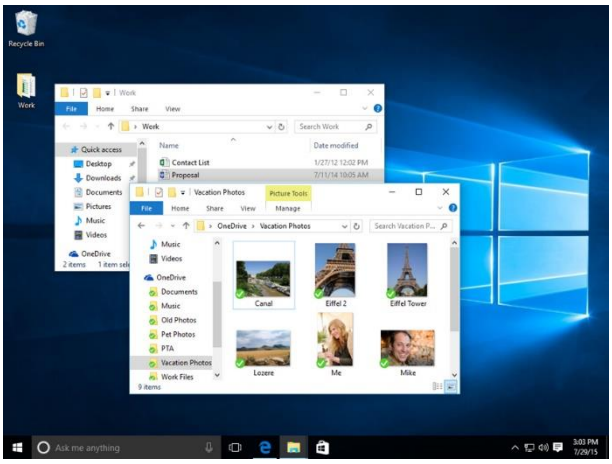
Modern operating systems use a graphical user interface, or GUI (pronounced gooey). A GUI lets you use your mouse to click icons, buttons, and menus, and everything is clearly displayed on the screen using a combination of graphics and text.



Each operating system's GUI has a different look and feel, so if you switch to a different operating system it may seem unfamiliar at first. However, modern operating systems are designed to be easy to use, and most of the basic principles are the same.

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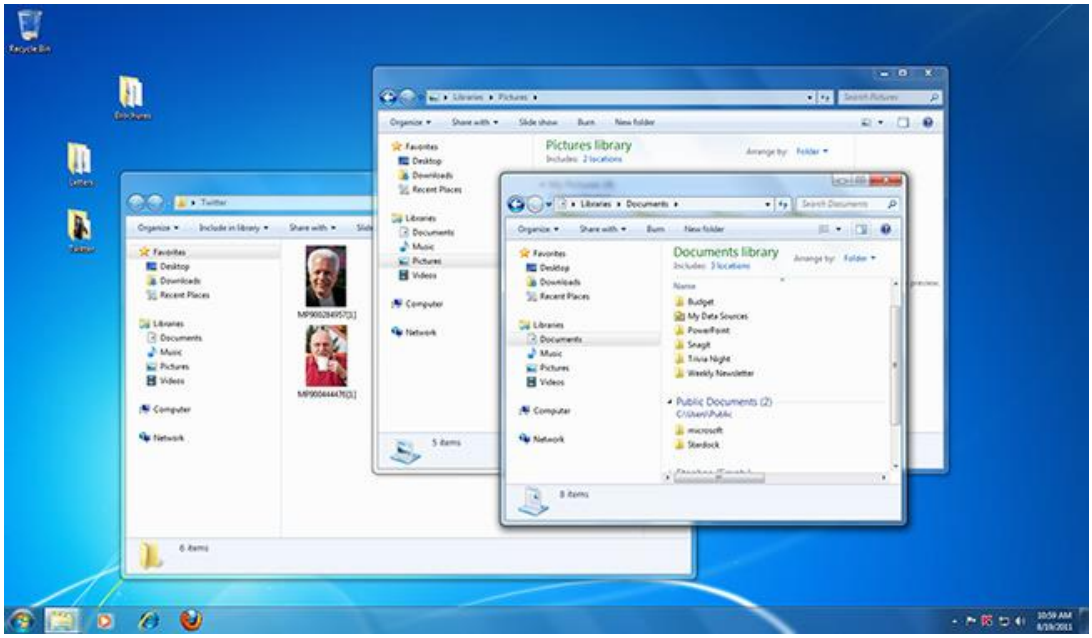
a) Microsoft Windows

Microsoft created the Windows operating system in the mid-1980s. There have been many different versions of Windows, but the most recent ones are Windows 10 (released in 2015), Windows 8 (2012), Windows 7 (2009), and Windows Vista (2007). Windows comes pre-loaded on most new PCs, which helps to make it the most popular operating system in the world.



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b) macOS

macOS (previously called OS X) is a line of operating systems created by Apple. It comes preloaded on all Macintosh computers, or Macs. Some of the specific versions include Mojave (released in 2018), High Sierra (2017), and Sierra (2016).

According to StatCounter Global Stats, macOS users account for less than 10% of global operating systems—much lower than the percentage of Windows users (more than 80%). One reason for this is that Apple computers tend to be more expensive. However, many people do prefer the look and feel of macOS over Windows.

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c) Linux

Linux is a family of open-source operating systems, which means they can be modified and distributed by anyone around the world. This is different from proprietary software like Windows, which can only be modified by the company that owns it. The advantages of Linux are that it is free, and there are many different distributions—or versions—you can choose from.

According to StatCounter Global Stats, Linux users account for less than 2% of global operating systems. However, most servers run Linux because it's relatively easy to customize.

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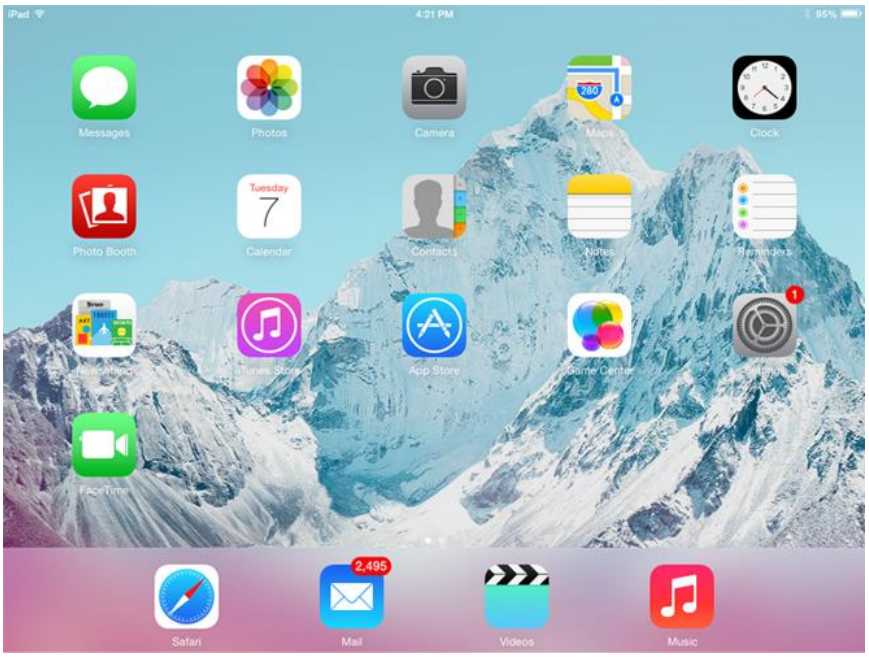
d) Operating systems for mobile devices

The operating systems we've been talking about so far were designed to run on desktop and laptop computers. Mobile devices such as phones, tablet computers, and MP3 players are different from desktop and laptop computers, so they run operating systems that are designed specifically for mobile devices. Examples of mobile operating systems include Apple iOS and Google Android. In the screenshot below, you can see iOS running on an iPad.



Operating systems for mobile devices generally aren't as fully featured as those made for desktop and laptop computers, and they aren't able to run all of the same software. However, you can still do a lot of things with them, like watch movies, browse the Web, manage your calendar, and play games.

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“Computer information management” - Medium

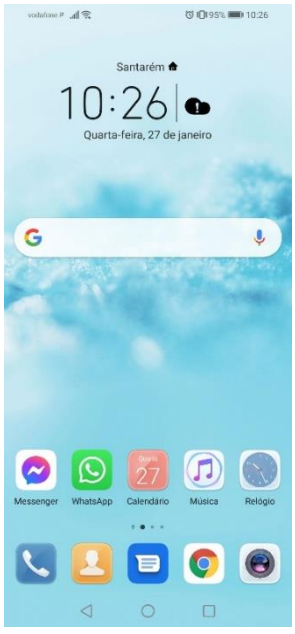
Duration: 90 minutes

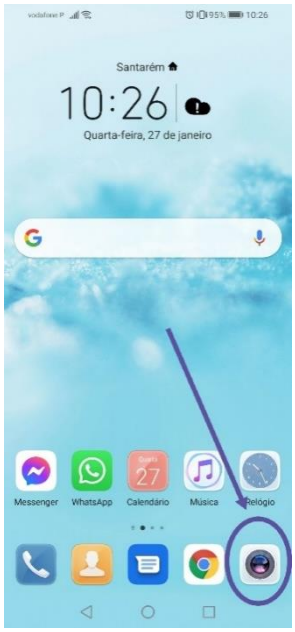
In this activity, the trainees will take pictures using smartphones, later transferring these multimedia records to permanent data storage such as disk units. They will also organize a small folder and file system, experimenting file storage by subject or theme criteria.

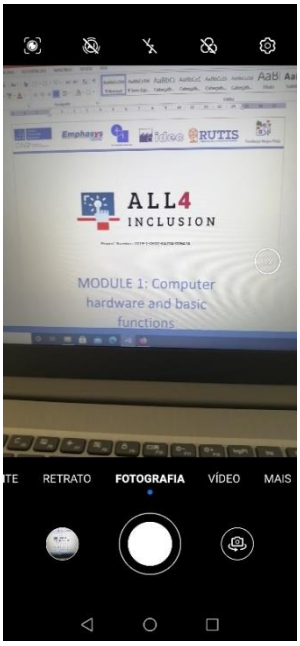
Computer information management

Let's start by taking some pictures with the phone, in a process where afterwards we will have to store them on folders in the computer and with a certain criteria.

a) Take your phone and let's do it:
b) Start the Camera app;







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c) Ensure that the camera mode is set to single shot. The Camera app shoots both still images and video. To snap a picture, you must choose single-shot mode. In the figure, the Single Shot icon is shown. If another icon appeared in that spot, you'd touch that icon and choose Single Shot as the camera mode;
d) Point the camera at the subject;
e) Touch the Shutter icon. The phone makes a noise when the picture is snapped;
f) After the image is snapped, it appears on the screen as a thumbnail. Touch that thumbnail to review the image. If the thumbnail disappears, swipe the screen to the left to review previous images. You can also review any photos taken by the phone by using the Gallery app.

So, now you have new pictures on your phone and now it's time to transfer them to your computer.

If you prefer to have as much control as possible over how your photos are organized, you'll want to import everything manually.

Conect your phone with an USB cable to your computer.

Then, make sure your phone is in the correct mode and ready to transfer images. From there, open Windows Explorer and head to "This PC."

Your phone should be listed as a device. Depending on how the USB transfer option is set, the icon may look like a camera, a portable media player, or maybe even another drive. The icon isn't that important, though—just pay attention to the name.

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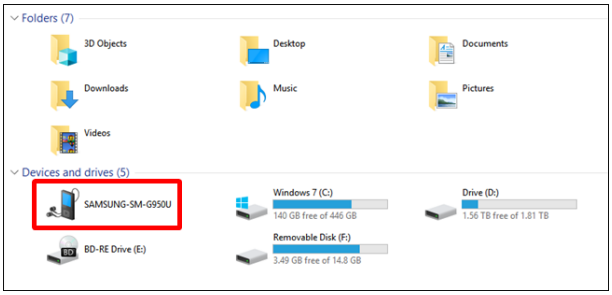
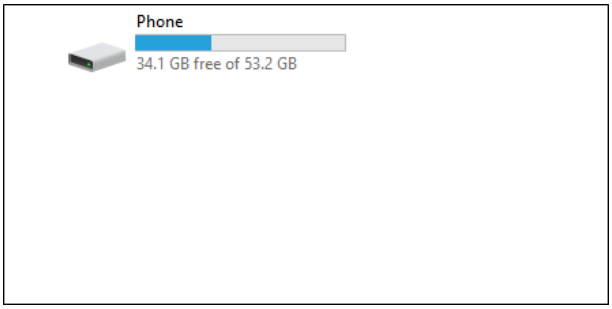
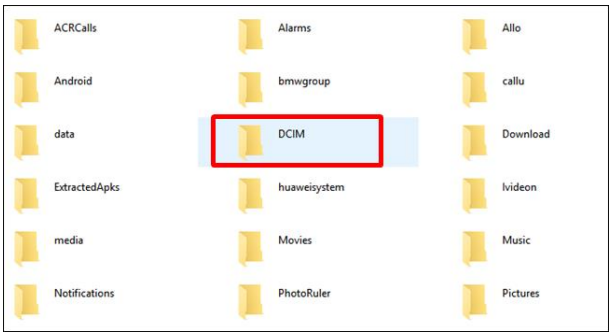


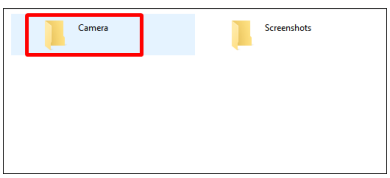
Once you open the device, you'll see a drive named "Phone." Open that.



To find the images, look for the DCIM folder.



In the DCIM folder, open the "Camera" folder.



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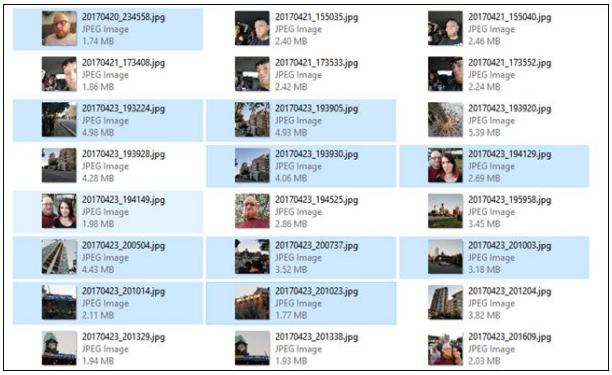
Select all the images you'd like to transfer. Just as in other Windows folders, you can select a range of photos by clicking the first photo you want, and then Shift+clicking the last photo in the range. Or, you can select multiple photos one at a time by Ctrl+clicking them.



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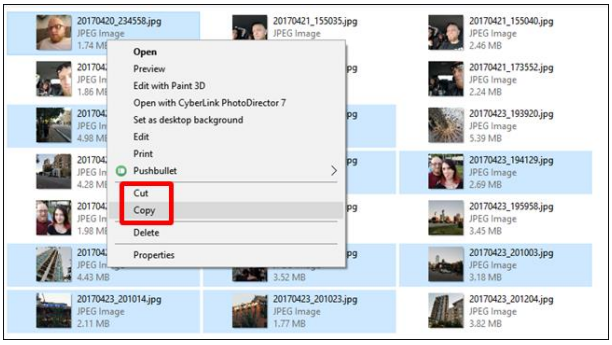
After selecting your photos, right click on one of the selected images, and then select the "Copy" command (you can also just hit Ctrl+C). If you'd like to move photos instead of copying them (which removes them from the phone), use the "Cut" command instead.



Navigate to the folder where you'd like the pictures to go, right click any empty space in the folder, and then choose the "Paste"

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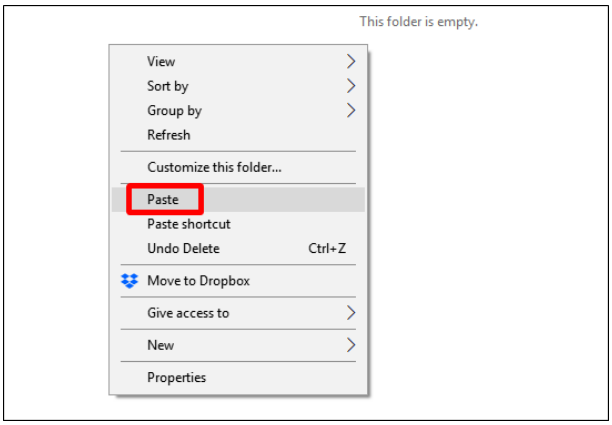
command (or hit Ctrl+V). If you want to, you can create a new folder, giving it a name that makes sense to you and that can be easily recognised when you search for these photos some months from now.



After a few seconds (or minutes, depending on how many images you're transferring) all the pictures should be in their new home. And of course, if you prefer dragging and dropping rather than copying and pasting, you could can also open a couple of File Explorer windows and just drag the photos the way you would any other files.

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"From ergonomics to cloud computing" - Hard
Duration: 90 minutes

In this activity, trainees will explore the concepts defined above, in a logic of theoretical understanding and relationship with everyday practices in organizations and in digital work contexts. They will try to store information on cloud media, later trying to access it through other equipment.

From ergonomics to cloud computing

a) Ergonomics

If you sit behind a desk for hours at a time, you're not doomed to a career of neck and back pain or sore wrists and fingers. Proper office ergonomics — including correct chair height, adequate equipment spacing and good desk posture — can help you and your joints stay comfortable at work.

Ready to give your work space a makeover? Get started making your sitting workstation comfortable with this visual guide to sitting workstation ergonomics.

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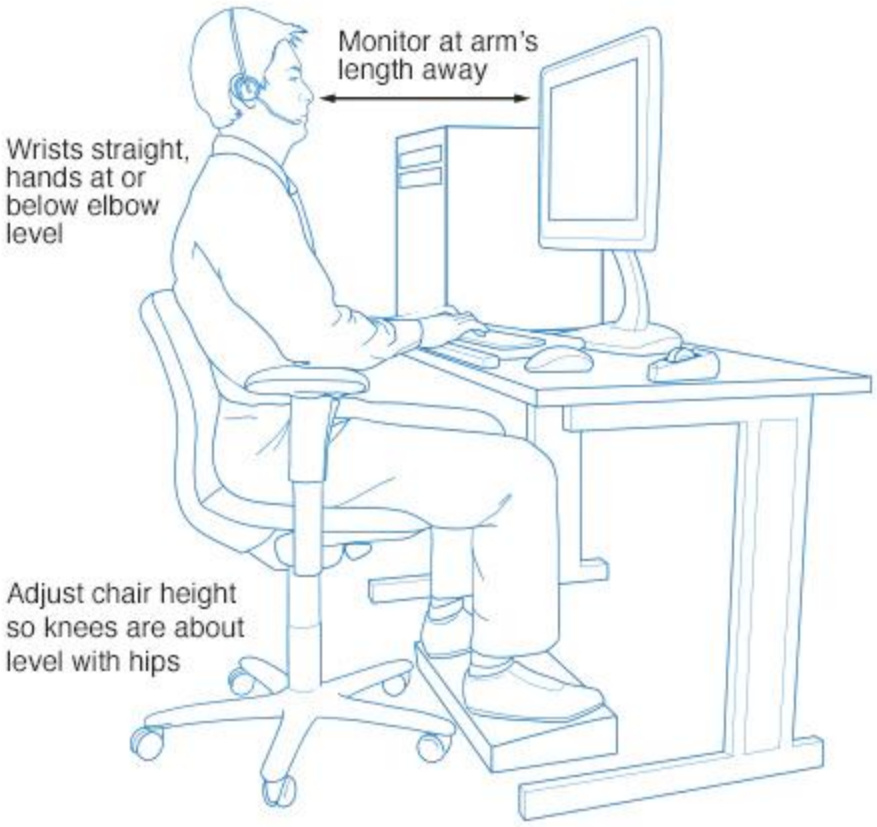

1) Chair

Choose a chair that supports your spinal curves. Adjust the height of your chair so that your feet rest flat on the floor or on a footrest and your thighs are parallel to the floor. Adjust armrests so your arms gently rest on them with your shoulders relaxed.

2) Key objects

Keep key objects — such as your telephone, stapler or printed materials — close to your body to minimize reaching. Stand up

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to reach anything that can't be comfortably reached while sitting.

3) Keyboard and mouse

Place your mouse within easy reach and on the same surface as your keyboard. While typing or using your mouse, keep your wrists straight, your upper arms close to your body, and your hands at or slightly below the level of your elbows. Use keyboard shortcuts to reduce extended mouse use. If possible, adjust the sensitivity of the mouse so you can use a light touch to operate it. Alternate the hand you use to operate the mouse by moving the mouse to the other side of your keyboard.

4) Monitor

Place the monitor directly in front of you, about an arm's length away. The top of the screen should be at or slightly below eye level. The monitor should be directly behind your keyboard. If you wear bifocals, lower the monitor an additional 1 to 2 inches for more comfortable viewing. Place your monitor so that the brightest light source is to the side.

b) Cloud Computing

What is the cloud? Where is the cloud? Are we in the cloud right now? These are all questions you've probably heard or even asked yourself. The term "cloud computing" is everywhere.

In the simplest terms, cloud computing means storing and accessing data and programs over the internet instead of your computer's hard drive.

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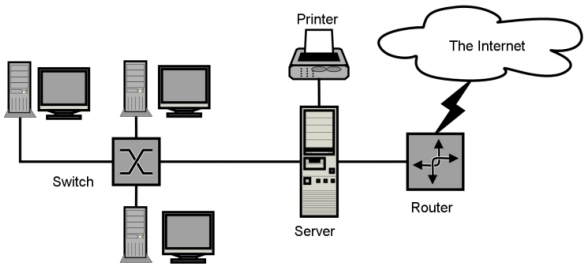
Ultimately, the "cloud" is just a metaphor for the internet. It goes back to the days of flowcharts and presentations that would represent the gigantic server-farm infrastructure of the internet as nothing but a puffy cloud, accepting connections and doling out information as it floats.



For it to be considered "cloud computing," you need to access your data or your programs over the internet, or at the very least, have that data synced with other information over the web. In a big business, you may know all there is to know about what's on the other side of the connection; as an individual user, you may never have any idea what kind of massive data processing is happening on the other end in a data center that uses more power in a day than your whole town does in a year. The end result is the same: with an online connection, cloud computing can be done anywhere, anytime.

1) Common Cloud Examples

When it comes to home use, the lines between local computing and cloud computing sometimes get blurry. That's because the cloud is part of almost everything on our computers these days. You can easily have a local piece of software (for instance, Microsoft Office) that utilizes a form of cloud computing for storage (Microsoft OneDrive). Microsoft also

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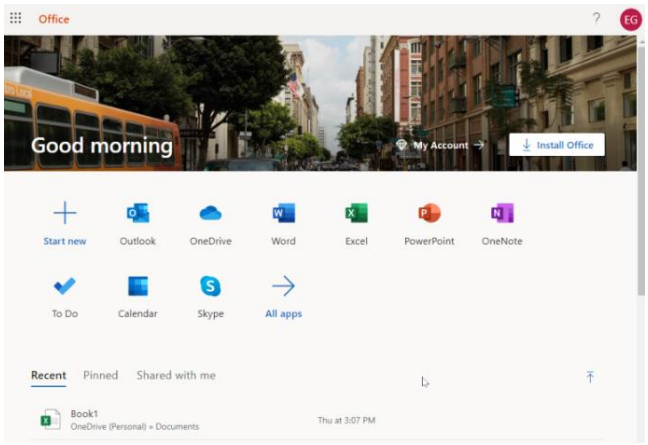
offers a set of web-based apps, Office (aka Office for the Web), that are web-only versions of Word, Excel, PowerPoint, and OneNote accessed via your web browser without installing anything. That makes them a version of cloud computing (web-based=cloud).



Some other major examples of cloud computing you're probably using:

- Google Drive: This is a pure cloud computing service, with all the storage found online so it can work with the cloud productivity apps: Google Docs, Sheets, and Slides. Google Drive is also available on more than just desktop computers; you can use it on tablets like the iPad or on smartphones, which have separate apps for Docs and Sheets, as well. In fact, most Google services could be considered cloud computing: Gmail, Google Calendar, Google Maps, and so on.
- Apple iCloud: Apple's cloud service is primarily used for online storage, backup, and synchronization of your mail, contacts, calendar, and more. All the data you need is available to you on your iOS, iPadOS, macOS, or Windows

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devices (Windows users have to install the iCloud control panel). Naturally, Apple won't be outdone by rivals: it offers cloud-based versions of its word processor (Pages), spreadsheet (Numbers), and presentations (Keynote) for use by any iCloud subscriber. iCloud is also the place iPhone users go to utilize the Find My iPhone feature when the handset goes missing.

- Dropbox: This service has been a simple, reliable file-sync and storage service for years, but is now enhanced with lots of collaboration features (which will cost you and your business, as the free version has gotten a bit skimpy).
- Slack: Yes, it's considered cloud computing if you have a community of people with separate devices that need instant messaging/communication. The poster child for that is Slack, but you get the same from Microsoft Teams, Workplace by Facebook, and more. (Warning: after some time you need pay to keep the files uploaded and available on the channels).

The aforementioned file-synchronization/backup service, and others like Box, IDrive, and SugarSync all work in the cloud because they store a synced version of your files online, but they also sync those files with local storage. Synchronization is a cornerstone of the cloud computing experience, even if you do access the file locally.

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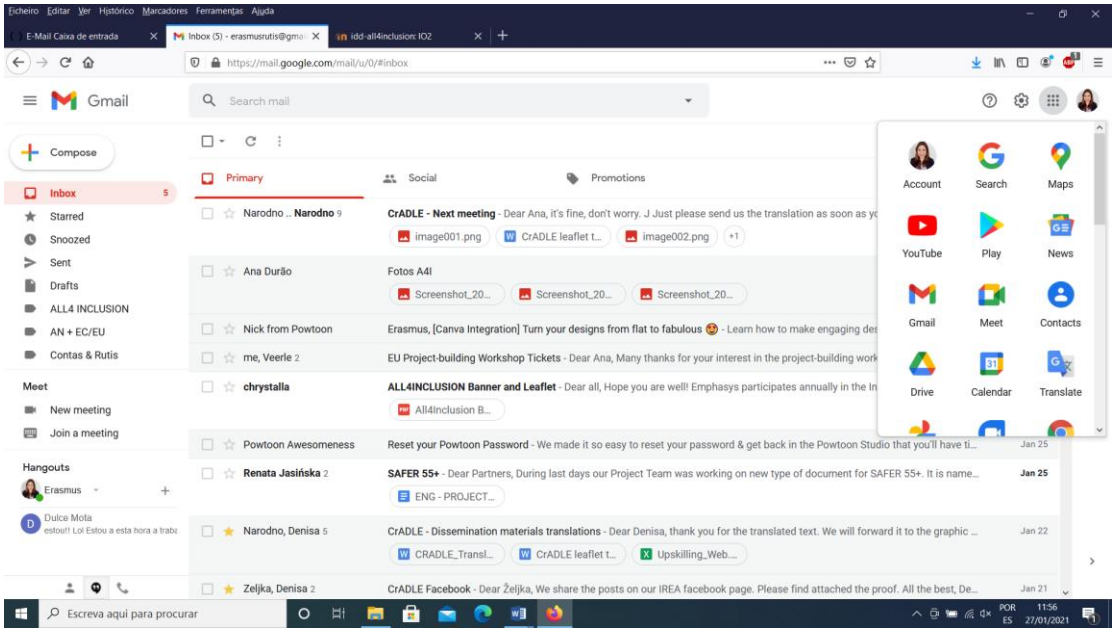
2) Let's try to use Google Drive:

So, Google Drive is a cloud-based storage service that allows you to download and upload files. With Google Drive, files can be accessed by you or others at different locations and from different devices. Google Drive is a safe place to keep any file– there are no file type restrictions and all data is encrypted, requiring you to grant permission for others to access, edit, or view the files.

If you have a Google account, then you already have access to Google Drive. If you do not have a Google account, you can sign up easily by creating a new account from the accounts.google web page. Consumer accounts are free and business or enterprise accounts may be provided by your employer.

To use Google Drive from any modern web browser, simply open the browser of your choice. Navigate to drive.google.com. If you are not already signed into Google, you will be asked to enter your Google account credentials to sign in.



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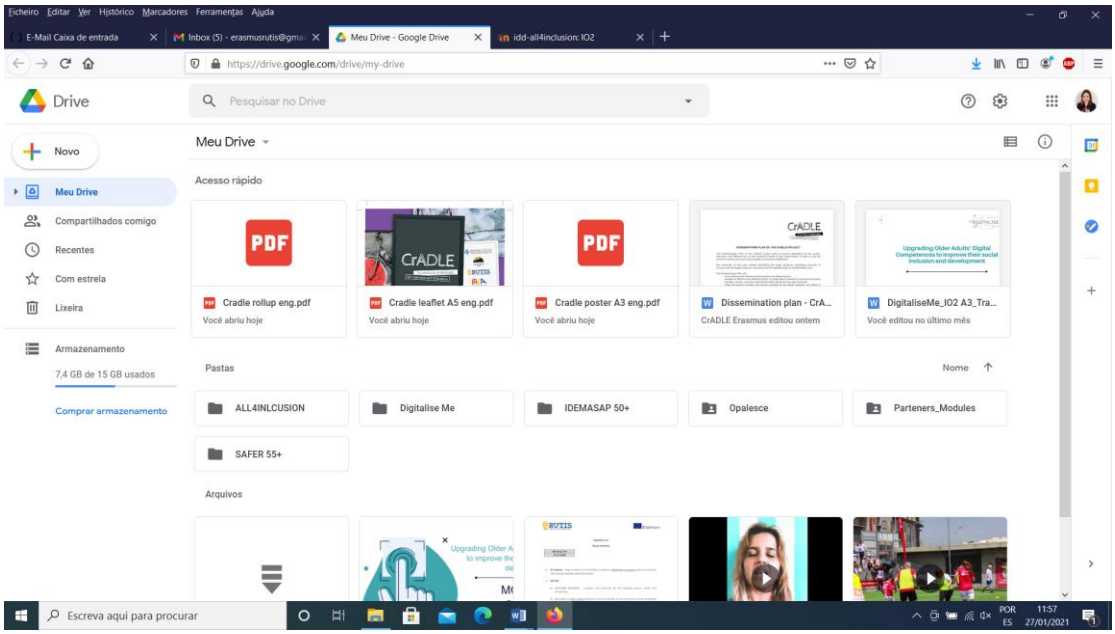
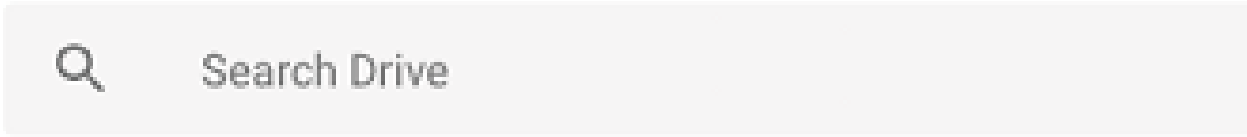


- The Google Drive homepage has a simple user interface (UI). The Dashboard along the top of the browser window allows you to adjust settings, perform Google Drive content searches, and manage or share files. To use the dashboard:
- Click or tap the Search box and enter in keywords to perform a search of your Google Drive content.



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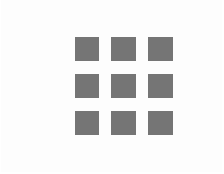
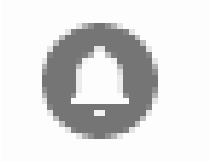
- Click or tap the Google Apps icon to access other Google services, like Gmail or YouTube.



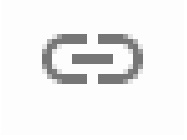
- Click or tap the Notifications icon to view account notifications.



- Click or tap the Google Account icon to sign in and out of your account.

- Click or tap the New button to create a new file with one of the connected apps, create new folders, and upload files and folders to your cloud.

- Click or tap the link icon to get a shareable link to your file which allows you to grant access to others.



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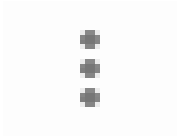
- Click or tap the share icon to send a shareable copy of your file directly via email.

- Click or tap the remove icon to move a file or folder from your cloud to the trash.

- Click or tap the more actions icon for more file management options (folder colors, open files with connected apps, file/folder sorting, and file/folder downloads).



- Click or tap the View/Layout icon to change the file and folder arrangement from list view to grid view.

- Click or tap the View Details icon to view file details such as size, type, previews, and shared status.

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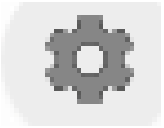
- Click or tap the Settings icon for Google Drive settings.



- Along the left hand side of the browser window is a sidebar that organizes the content and features in an easy-to-digest layout. To use the sidebar:
- Click or tap My Drive to view and manage the files stored on your cloud.
- Click or tap Computers to view and manage all the computers and mobile devices synced to your Google Drive account.
- Click or tap Shared with me to view and manage other's files stored on other Google Drive accounts that have been shared with you.
- Click or tap Recent to view all recent Google Drive activity.
- Click or tap Google Photos to view and manage your photo storage.
- Click or tap Starred to view all of your favorite or important files.
- Click or tap Trash to view or empty items you placed in the trash for removal.
- Click or tap Backups to view and manage backups of device and app data.
- Click or tap Upgrade Storage to be routed to a web page containing larger tier storage price plans.

Explore a little more and familiarize yourself with this cloud service.

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Topic 3: Connecting and surfing the internet

In this topic all relevant information regarding the internet and surfing the internet will be addressed. You can find bellow what will be taught to the students:

- Describing briefly the development of Internet and the World Wide Web.
- Understanding network concepts and connection options and be able to connect to a network.
- Identifying core Internet services.
- Using browser functions to surf on the Internet.
- Recognizing generally the meaning of Internet addresses;
- Creating and organizing a list of favourites.
- Identifying the measures that have to be taken to protect one's privacy when accessing information on the Internet.
- Configure browser functions to surf safely on the Internet.
- Learning and adopting safe Internet browsing behaviour.
- Searching information on the Internet.
- Learning the basic functions of a search engine and implementing search criteria definition strategies for filtering the results obtained.
- Exploring information from different sources and in different formats (text, image, sound and video).
- Analysing information on the Internet
- Assessing the quality of the information collected by checking different sources, authorship and up-to-datedness.

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"Navigating through loads of information!" - Easy
Duration: 90 minutes

In this activity, trainees will experience browsing the internet, knowing and using the tools provided by the browser interface. They will get to know and experiment research procedures that allow more accurate and faster access to information.

During the session, trainees will learn what the address bar is and what it is for, as well as how to enter a url to access a site. During navigation, they will learn what a link is and how to use it and also how to use tabs in browsers. They will also learn how to use their browser history and bookmarks, and how to download files to their computer.

Saving images, managing plugins and using effective ways to search for content on the Internet are still tasks to be developed in this learning situation.

Navigating through loads of information

A web browser is a type of software that allows you to find and view websites on the Internet. Even if you didn't know it, you're using a web browser right now to read this page! There are many different web browsers, but some of the most common ones include Google Chrome, Internet Explorer, Safari, Microsoft Edge, and Mozilla Firefox.

No matter which web browser you use, you'll want to learn the basics of browsing the Web. In this lesson, we'll talk about

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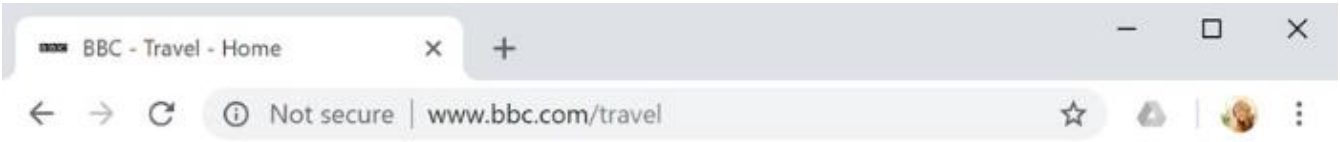
navigating to different websites, using tabbed browsing, creating bookmarks, and more.

a) URLs and the address bar

Each website has a unique address, called a URL (short for Uniform Resource Locator). It's like a street address that tells your browser where to go on the Internet. When you type a URL into the browser's address bar and press Enter on your keyboard, the browser will load the page associated with that URL.

In the example below, we've typed www.bbc.com/travel into the address bar.



b) Links

Whenever you see a word or phrase on a website that's blue or underlined in blue, it's probably a hyperlink, or link for short. You might already know how links work, even if you've never thought about them much before. For example, see the look of the link below.

Hey, I'm a link! Click me!

Links are used to navigate the Web. When you click a link, it will usually take you to a different webpage. You may also notice that

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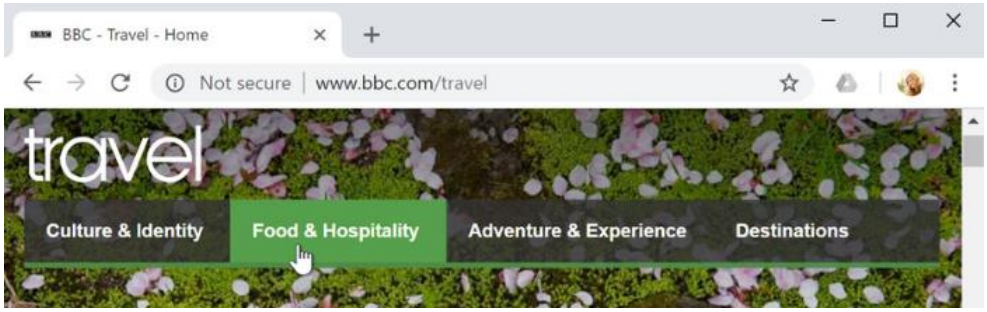
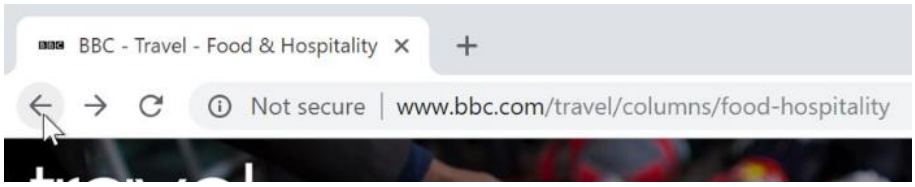
your cursor changes into a hand icon whenever you hover over a link.



If you see this icon, it means you've found a link. You'll find other types of links this way too. For example, many websites actually use images as links, so you can just click the image to navigate to another page.

c) Navigation buttons

The Back and Forward buttons allow you to move through websites you've recently viewed. You can also click and hold either button to see your recent history.



The Refresh button will reload the current page. If a website stops working, try using the Refresh button.

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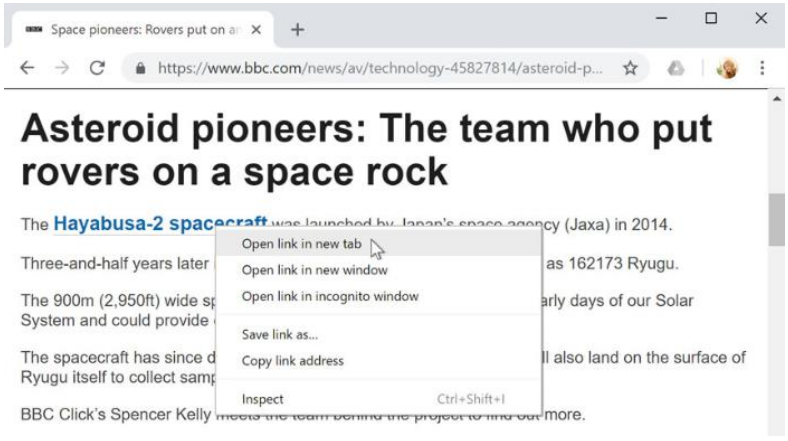
d) Tabbed browsing

Many browsers allow you to open links in a new tab. You can open as many links as you want, and they'll stay in the same browser window instead of cluttering your screen with multiple windows.

To open a link in a new tab, right-click the link and select Open link in new tab (the exact wording may vary from browser to browser).



To close a tab, click the X.

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To create a new blank tab, click the button to the right of any open tabs.

e) Bookmarks and history

If you find a website you want to view later, it can be hard to memorize the exact web address. Bookmarks, also known as favorites, are a great way to save and organize specific websites so you can revisit them again and again. Simply locate and select the Star icon to bookmark the current website.

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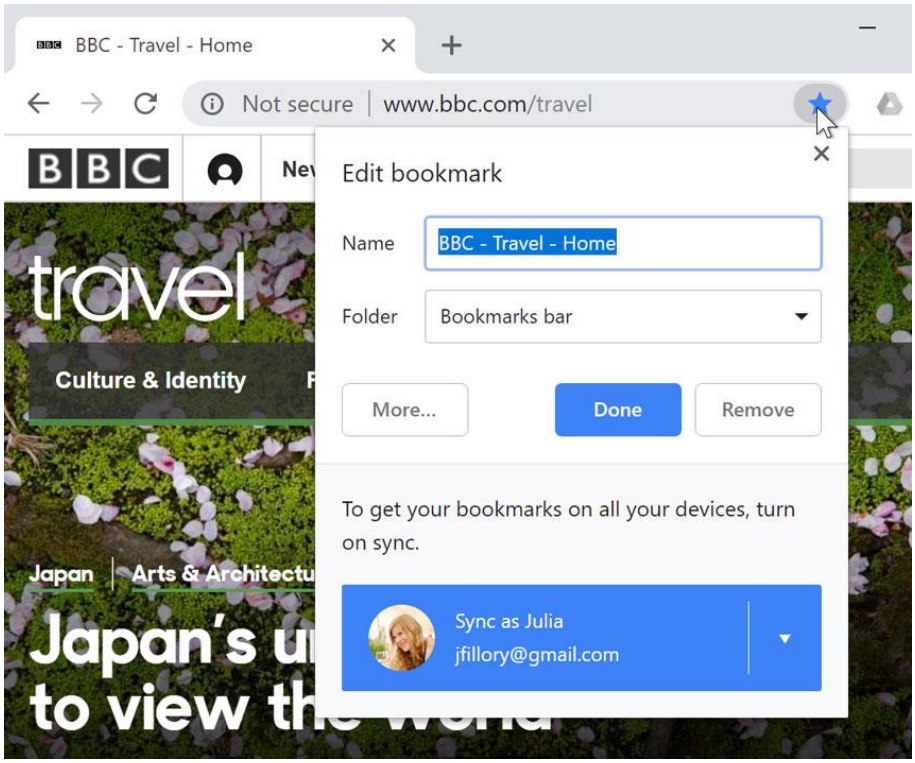
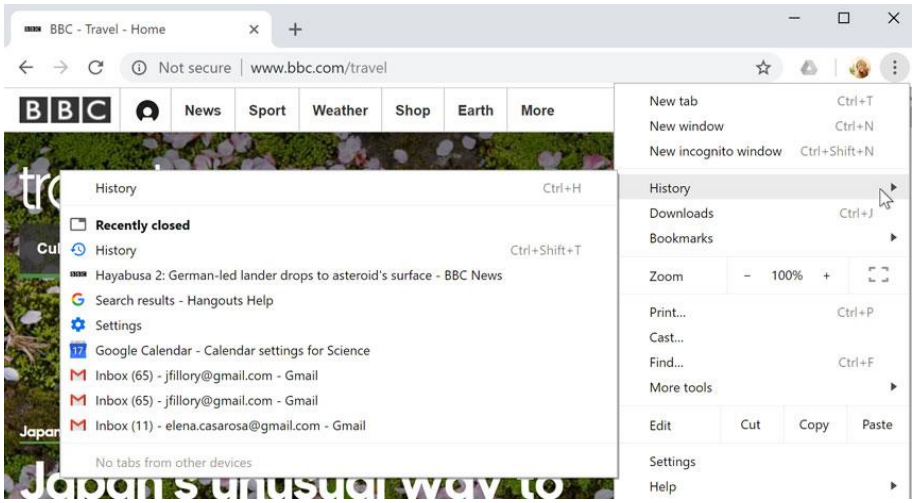


Your browser will also keep a history of every site you visit. This is another good way to find a site you visited previously. To view your history, open your browser settings—usually by clicking the icon in the upper-right corner—and select History.



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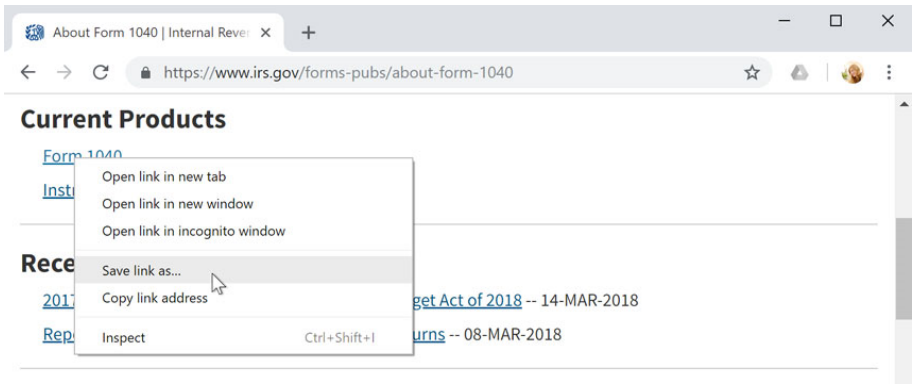
f) Downloading files

Links don't always go to another website. In some cases, they point to a file that can be downloaded, or saved, to your computer.

If you click a link to a file, it may download automatically, but sometimes it just opens within your browser instead of downloading. To prevent it from opening in the browser, you can right-click the link and select Save link as (different browsers may use slightly different wording, like Save target as).



g) Saving images

Sometimes you may want to save an image from a website to your computer. To do this, right-click the image and select Save image as (or Save picture as).

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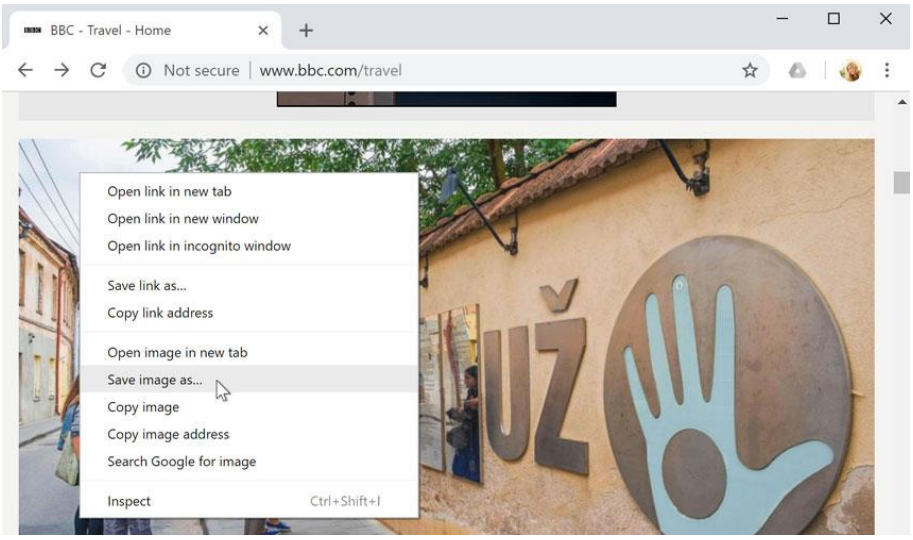

h) Plug-ins

Plug-ins are small applications that allow you to view certain types of content within your web browser. For example, Adobe Flash and Microsoft Silverlight are sometimes used to play videos, while Adobe Reader is used to view PDF files.

If you don't have the correct plug-in for a website, your browser will usually provide a link to download it. There may also be times when you need to update your plug-ins.

Well, these are some of the information needed to start browsing the internet. But, in order for you to become experienced in this process, you will have to try it several times. Practice makes the master!

i) How to search the Web

There are many different search engines you can use, but some of the most popular include Google, Yahoo!, and Bing. To perform a search, you'll need to navigate to a search engine in your web browser, type one or more keywords—also known as

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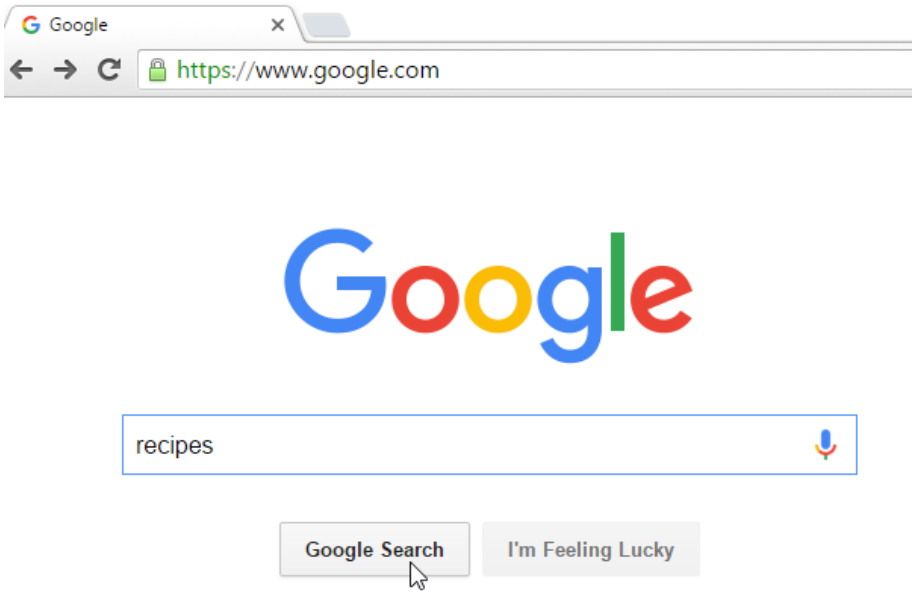
search terms—then press Enter on your keyboard. In this example, we'll search for recipes.



After you run a search, you'll see a list of relevant websites that match your search terms. These are commonly known as search results. If you see a site that looks interesting, you can click a link to open it. If the site doesn't have what you need, you can simply return to the results page to look for more options.

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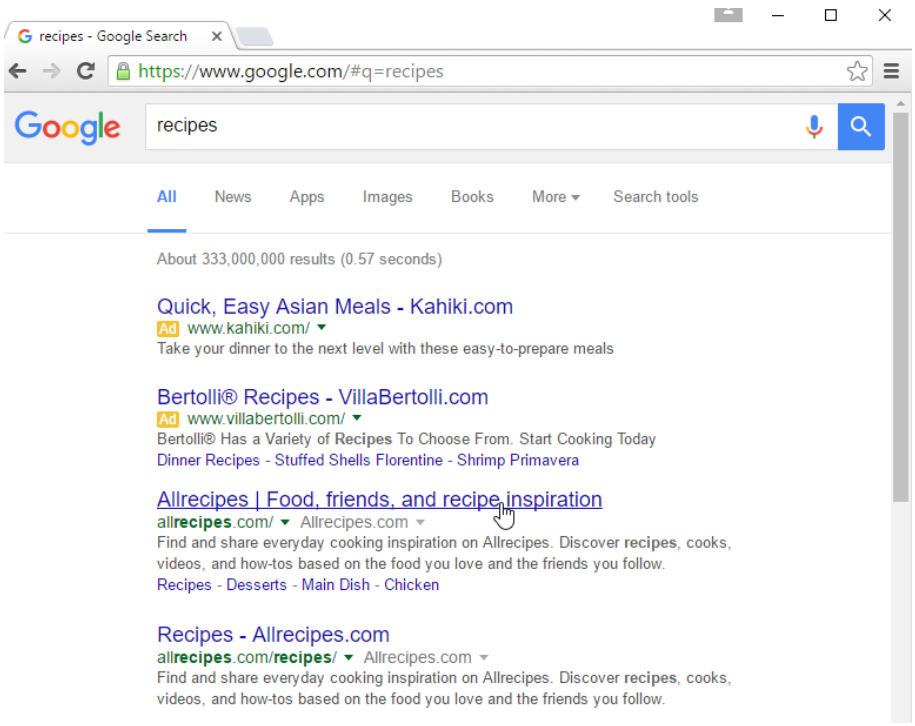
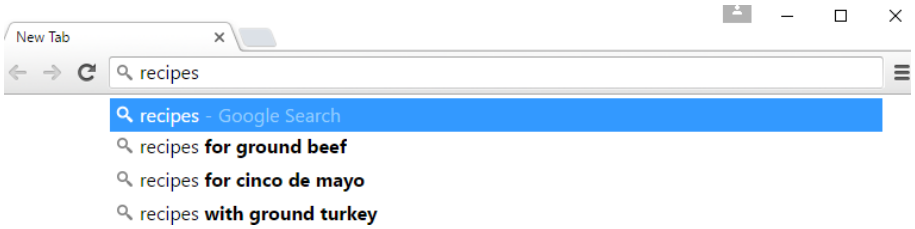


87

Most browsers also allow you to perform a web search directly from your address bar, although some have a separate search bar next to the address bar. Simply type your search terms and press Enter to run the search.



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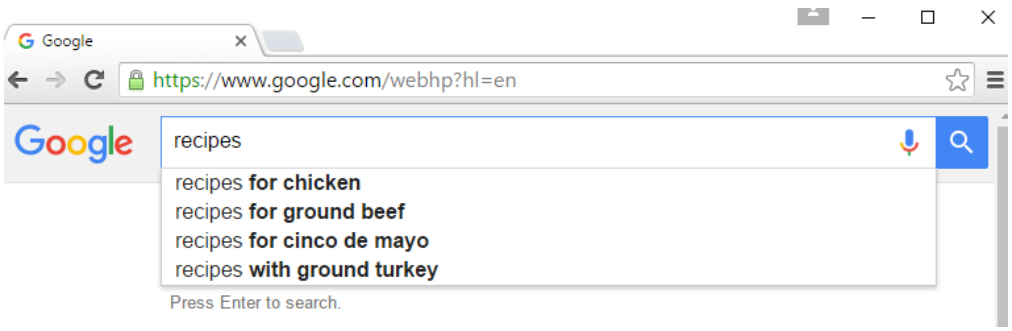
j) Search suggestions

If you don't find what you're looking for on the first try, don't worry! Search engines are good at finding things online, but they're not perfect. You'll often need to try different search terms to find what you're looking for.

If you're having trouble thinking of new search terms, you can use search suggestions instead. These will usually appear as you're typing, and they're a great way to find new keywords you might not have tried otherwise. To use a search suggestion, you can click it with your mouse, or select it with the arrow keys on your keyboard.



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"Surfing safe on the internet!" - Medium
Duration: 90 minutes

In this activity, trainees will use an internet browser, creating and managing bookmarks, saving it in folders and toolbars. Some examples of common methods of virtual abuse and collection of unauthorized information from the users will be shown. Security and content filtering instruments will be demonstrated and tried during the navigation process.

Surfing safe on the internet

a) Bookmarks (in Firefox browser)

1) How do I bookmark a page?

To bookmark a page, just click on the star in the address bar.

The star will turn blue when the page is bookmarked and a window will pop up so you can name, move or tag your bookmark.

Note: If the star is missing from the address bar, click on the Page actions (3-dot) menu button.

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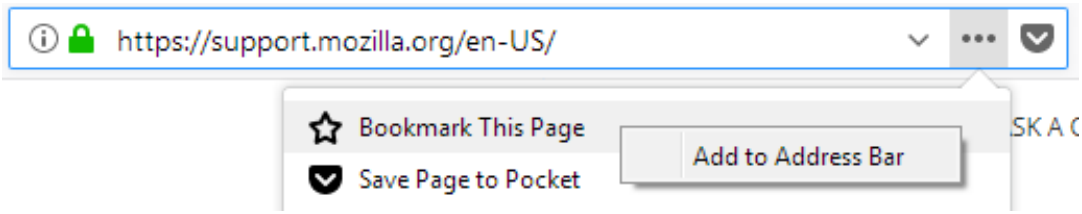

Right-click on the menu entry for Bookmark this Page and then click on Add to Address Bar.

To bookmark all open tabs at once: Right-click on any of the tabs, choose Select All Tabs from the context menu, then right-click on any tab and select Bookmark Tabs…. Give the new bookmarks folder a name and choose which folder to store it in. Click Add Bookmarks to finish.

You can also use the keyboard shortcut Ctrl + Shift + D to bookmark all open tabs.

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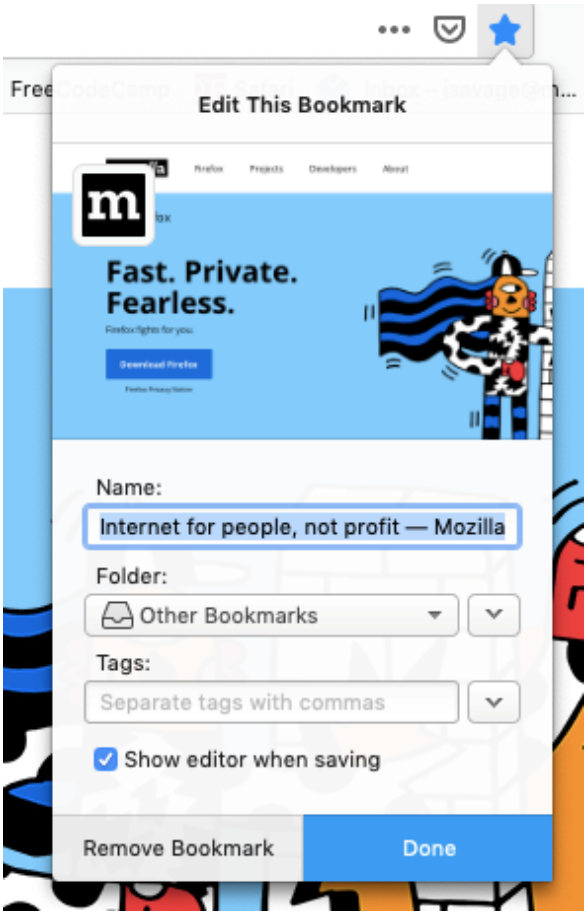
2) How do I change the name or location of a bookmark?

To edit the details of your bookmark, click the star a second time to open the Edit This Bookmark dialog box.



In the Edit This Bookmark box you can change any of these details:

Name: This is the name that Firefox displays for the bookmark in menus.

Folder: Choose what folder to store your bookmark in by picking one from the drop-down menu (for example, the Bookmarks

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Menu or Bookmarks Toolbar). In that drop-down menu you can also select Choose... to display a list of all bookmarks folders.

Tags: You can use tags to help you search through and organize your bookmarks. For more information, see Bookmark Tags - Categorize bookmarks to make them easy to find.

When you are finished editing, click Done to close the box.

If you don't want to see this editor when saving a bookmark, remove the checkmark from Show editor when saving.

3) How do I find my bookmarks?

To find a page that you've bookmarked, just start typing its name in the address bar. As you type, a list of web pages that you've bookmarked, tagged and visited will appear. Bookmarked pages will have a star next to them. Simply click one of the pages and you'll be taken there instantly. To learn more, see Address bar autocomplete in Firefox - Search your bookmarks, history and tabs.

You can view and access all of your bookmarks from the Firefox Sidebar, the Bookmarks Menu button on the toolbar, if you added it, and from the Menu bar Bookmarks menu, if the Menu bar is enabled.

4) How do I organize my bookmarks?

The Library window lets you view and organize all of your bookmarks. To open the Bookmarks Library window: Click the

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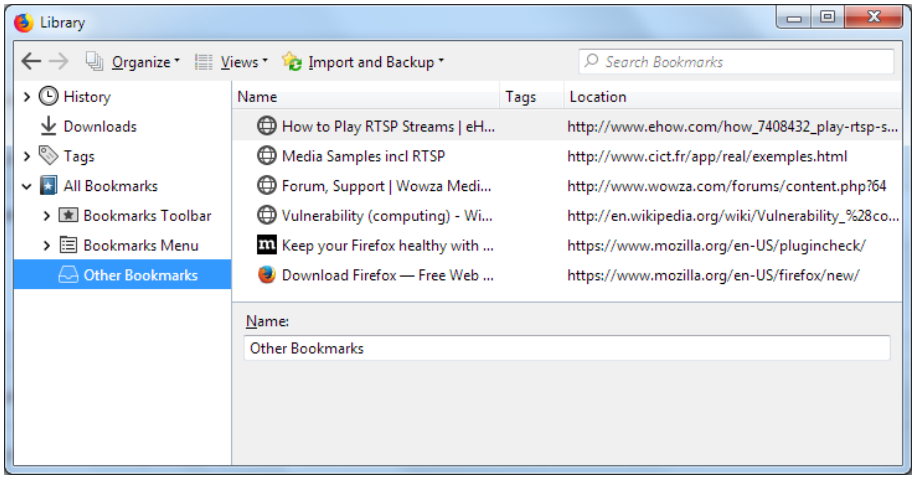
Library button on your toolbar. (If you don't see it there, click the menu button then click Library.) Click Bookmarks and then click the Show All Bookmarks bar at the bottom.

Note: You can also use a keyboard shortcut to quickly open your Bookmarks Library.

By default, the bookmarks you make will be located in the Other Bookmarks folder. Select it in the sidebar of the Library window to see the bookmarks you've made. Double-clicking a bookmark will open it.



See these articles for details on how to manage a giant list of bookmarks:

Sort your bookmarks to quickly find the ones you want

Use bookmark folders to organize your bookmarks

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5) How do I delete a bookmark?

While you are in the Library window you can drag bookmarks into other folders, such as the Bookmarks Menu folder. Those bookmarks will then appear in the Firefox Sidebar and Menu bar or toolbar Bookmarks menu. Bookmarks in the Bookmarks Toolbar folder will appear in the Bookmarks Toolbar, if it's turned on.

6) How do I add the Bookmarks Menu button to the toolbar?

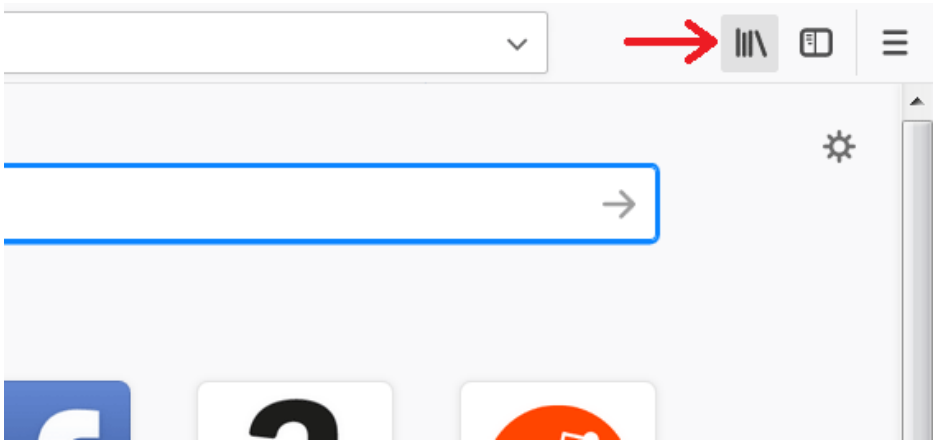
The Bookmarks Menu button is not shown by default but you can add it to the toolbar using the Library button:

Click the Library button , then click Bookmarks.

Click Bookmarking Tools.

Click Add Bookmarks Menu to Toolbar.

The Bookmarks Menu button should appear next to the Library button.



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To remove the button, repeat the steps above and, after clicking Bookmarking Tools, click Remove Bookmarks Menu from Toolbar.

7) How to turn on the Bookmarks Toolbar

The Bookmarks Toolbar is a handy place to add your favorite bookmarks.

To enable the Bookmarks Toolbar:

Click the menu button ☰ and choose Customize.

Select Toolbars from the dropdown menu at the bottom of the screen.

Select Bookmarks Toolbar.

Click the Done button when you're finished.

How to use Keywords with Bookmarks

Another way to access your bookmarks is by using keywords.

Assign a keyword to a bookmark

Open the library window and select the bookmark.

Click the keyword field at the bottom of the window.

Type your desired keyword.

The keyword may contain letters, digits and special characters (for example: - _ ' " , . : ; = / \ ( ) [ ] { } ! & @ ~). It must not contain

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spaces and must not start or end with these characters: ? * ^ $ % # +

The keyword must not be the same as a search engine's keyword. For instance, if a search engine has the keyword @g, the bookmark's keyword cannot be @g, but it can be g.

If the chosen keyword was already assigned to another bookmark the old bookmark will be replaced by the new one.

Note: Outside of the library, you can access the keyword field from the context menu by right-clicking the bookmark, and then selecting Properties.

Use a keyword to open a bookmark

Simply type the keyword into the address bar and press Enter.

8) Additional Resources

Learn more about how to get the most out of your bookmarks:

- Bookmark Tags - Categorize bookmarks to make them easy to find
- Share bookmarks, tabs and more with another computer or mobile device with Sync

Switching between different browsers? These article will help you take your bookmarks with you:

- Import data from another browser
- Restore bookmarks from backup or move them to another computer

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b) Safe Browsing

According to Wikipedia,

> *"Internet security is a branch of computer security specifically related to not only Internet, often involving browser security and the World Wide Web[citation needed], but also network security as it applies to other applications or operating systems as a whole. Its objective is to establish rules and measures to use against attacks over the Internet.[1] The Internet represents an insecure channel for exchanging information, which leads to a high risk of intrusion or fraud, such as phishing,[2] online viruses, trojans, worms and more.*
>
> *Many methods are used to protect the transfer of data, including encryption and from-the-ground-up engineering. The current focus is on prevention as much as on real time protection against well known and new threats. "*

There's almost no limit to what you can do online. The Internet makes it possible to access information quickly, communicate around the world, and much more. Unfortunately, the Internet is also home to certain risks, such as malware, spam, and phishing. If you want to stay safe online, you'll need to understand these risks and learn how to avoid them.

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1) Adopting a safer mindset

Computers can often give us a false sense of security. After all, no one can physically harm you through a computer screen. But to stay safe online, you'll want to take a more cautious approach. Here's one way to think about it: Treat the Internet as you would a shopping mall.

Most people don't consider a mall to be an especially dangerous place. You can go there to shop and meet up with friends. But there are also small things you may do to stay safe, even if you don't think about them very often. For example, you probably wouldn't leave your car unlocked or give your credit card number to a stranger.

Apply this same mindset whenever you're online. You shouldn't be afraid to use the Internet, but remember that it comes with many of the same risks you'd face in the real world. Find out how can you prepare for these risks so you can be online without putting yourself in danger.

2) Creating strong passwords

You'll need to create a password to do just about everything on the Web, from checking your email to online banking. And while it's simpler to use a short, easy-to-remember password, this can also pose serious risks to your online security. To protect yourself and your information, you'll want to use passwords that

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are long, strong, and difficult for someone else to guess while still keeping them relatively easy for you to remember.

3) Your browser's security features

Your computer faces different threats whenever you browse the Web, including viruses, malware, and spyware. The good news is your web browser has a lot of built-in security features to help protect your computer. Let's take a look at some of the most important features you should know about, as well as some simple tips you can use to stay safe online.

4) Avoiding spam and phishing

From email to instant messaging to social media, the Internet is an essential communication tool. Unfortunately, it's also popular among scammers and cybercriminals. To protect yourself from email scams, malicious software, and identity theft, you'll need to understand how to identify and avoid potentially dangerous content in your inbox, including spam and phishing attempts.

5) Avoid malware

Malware is one of the most common hazards to your computer when you're online, but it's easy to avoid. Developing safe and smart browsing habits can protect you from malware and other threats, like viruses. Securing your computer and learning how

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to identify and avoid suspicious links are the fundamentals of safe browsing habits.

6) Understanding browser tracking

Whenever you use the Internet, you leave a record of the websites you visit, along with each and every thing you click. To track this information, many websites save a small piece of data—known as a cookie—to your web browser. In addition to cookies, many websites can use your user accounts to track browsing activity. While this type of browser tracking doesn't pose a serious risk to your online security, it's important to understand how your online data is tracked and used.

7) Understanding social media privacy

Social media sites like Facebook, Instagram, and Twitter have made it easier than ever to share things online. But sharing something on social media is a bit different from other types of online communication. Unlike email or instant messaging, which are relatively private, the things you share on social media are more public, which means they'll usually be seen by lots of other people.

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"Searching the web!" - Hard

Duration: 90 minutes

In this activity, trainees will experience online searches through advanced research and procedures. They will also explore multimedia content, making downloads to their computers and organizing that data in folder structures.

Trainees will learn how to use fast facts on Google, how to customize this search engine and what it is and how to use the Autocomplete functionality. You will use tools to refine their search, filtering it by criteria and also using automatic correction to avoid spelling errors in the search process.

You will also learn how to use the search engine to find services and goods near their location and how to make simple calculations and conversions between converging units of measure.

Synonyms, antonyms, meanings, grammar, weather forecast and distance between locations will also be explored.

Searching the Web

a) Searching and searching and searching…

These days, search engines have become incredibly effective at getting you the results you want. However, there are rare occasions when you may need to search for very specific information that a normal search can't find. That's where Google's Advanced Search comes in.

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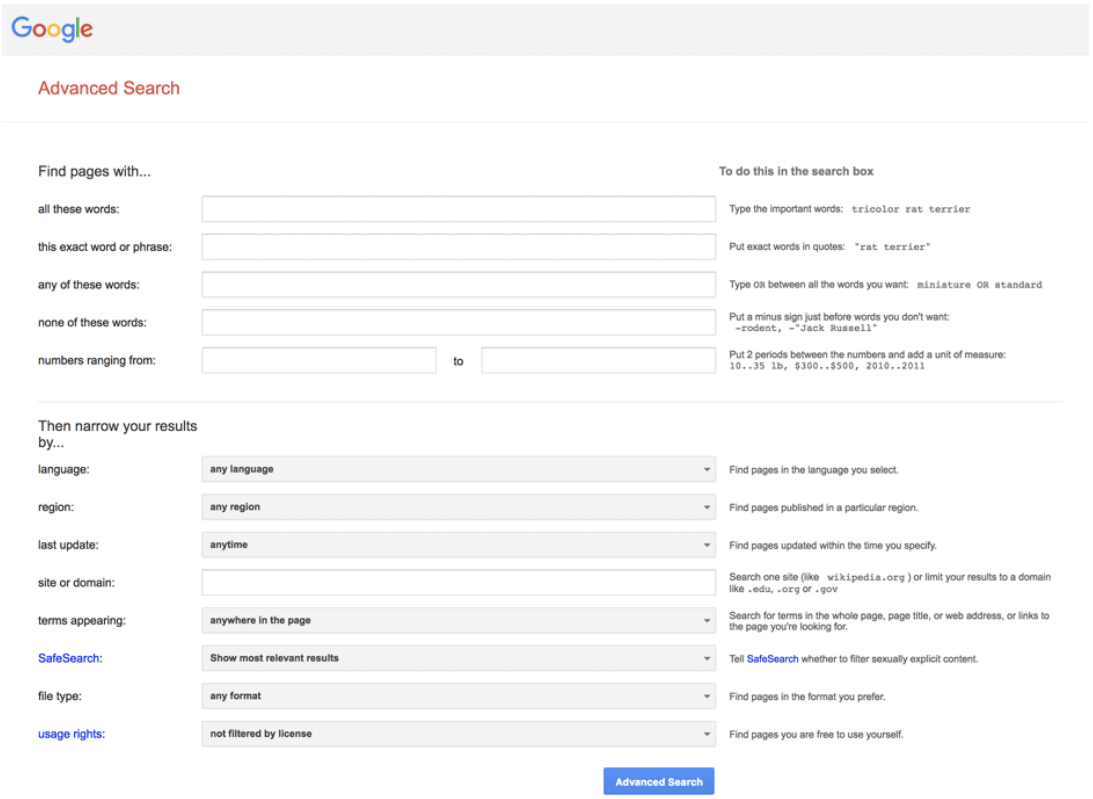
You can access it from the Google search results page by clicking Settings and selecting Advanced Search. From there, you can search in a multitude of ways, from finding results that contain an exact word or phrase to narrowing down your results by language or reading level.



1) Using fast facts with Google

Fast facts are tricks you can use to get answers to common questions, like solving math problems, looking up sports scores, or converting measurements. Simply type your query in the search box, such as 5 miles to km or 79 + 481, and the answer will appear at the top of the results page. To learn more about

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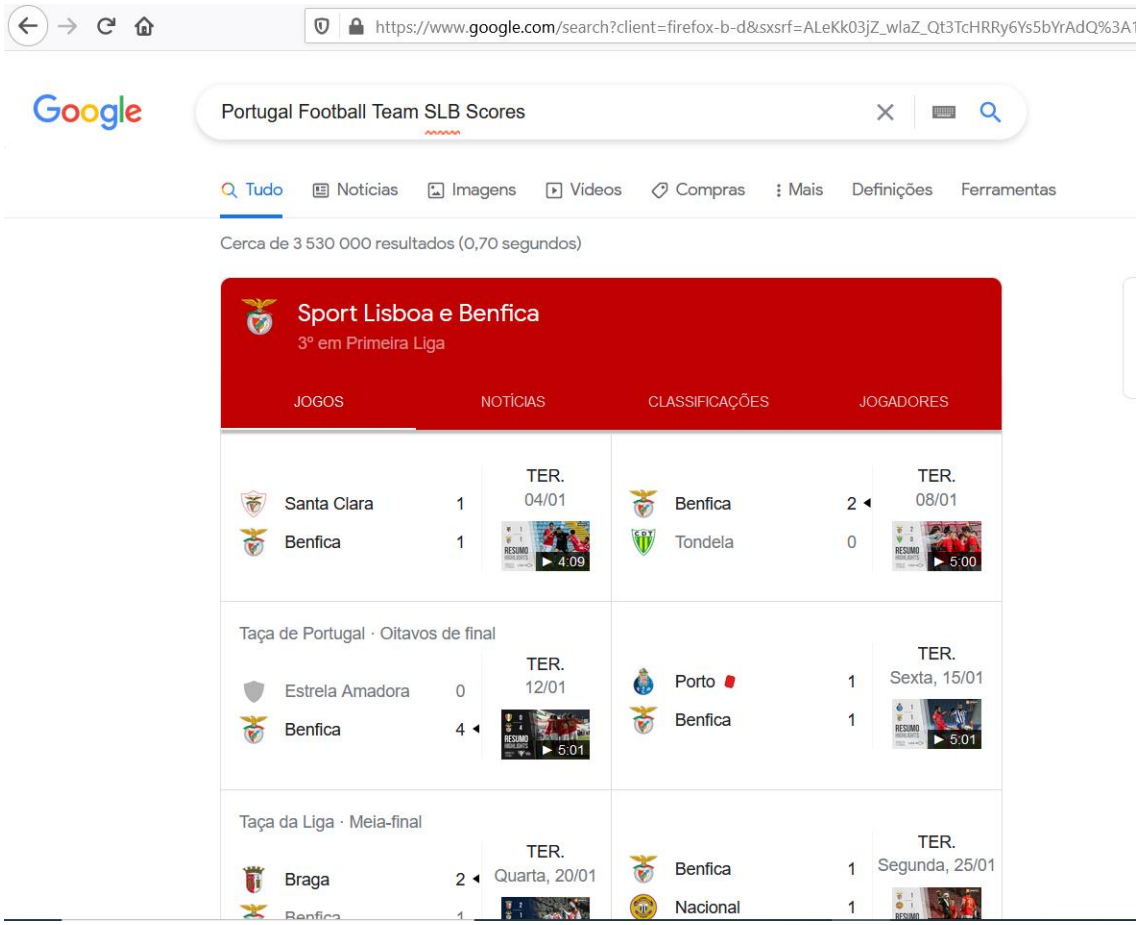
these powerful searches, review our lesson on the hidden features of Google Search.



2) Ways to customize Google

If you really like Google, there are several things you can do to make your experience more personal.

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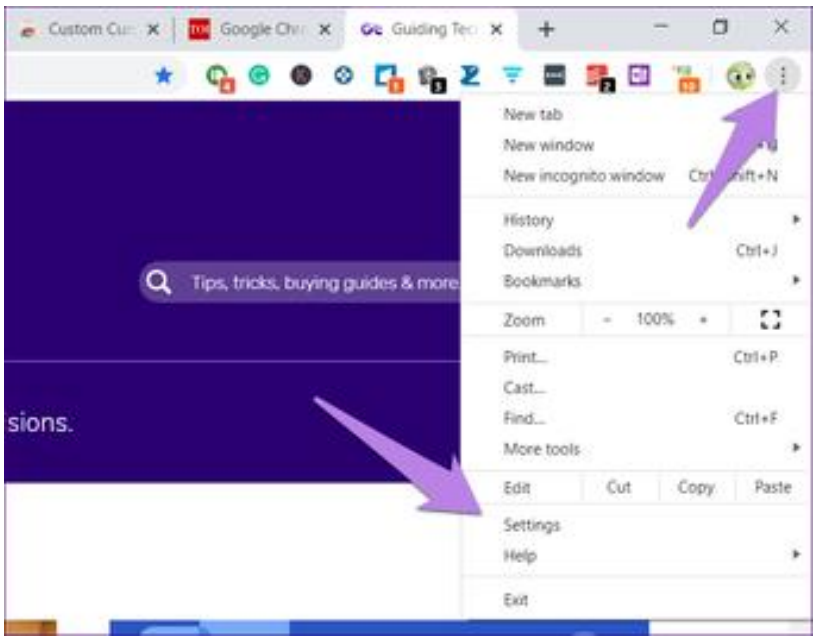
Example:



Set your location. The location you have on file with Google (your city, state, and zip code) will help it find search results that are more relevant to where you live. Google is pretty good at auto-detecting your location each time you perform a search; however, if this fails you can set your location yourself. For more information on this feature, visit the Update your location on Google page.

Make Google your homepage. Your homepage is the first thing you see when you open your browser (or when you click your browser's Home button). If you want, you can make Google your homepage, which is a great option if you find yourself visiting the

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site throughout the day. To find out how, visit Google's Make Google your homepage article.

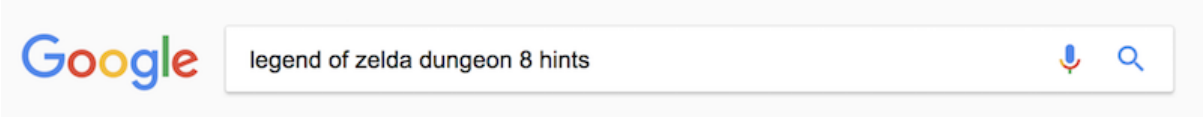
Create a Google account. Signing up for your own Google account is not required to conduct a Google search. However, it's something you should consider if you're interested in any of the many services Google has to offer. For example, did you know that Gmail, YouTube, and Blogger are all part of Google accounts? If you sign up, you can even customize your Google homepage.

Search engines aren't as delicate and cumbersome as they once were. That's why you shouldn't worry about confusing Google Search because it will try its best to help you out, even if you give it less-than-stellar information.

3) Keep things simple

Whenever you search for something, always keep things simple. Try to only search for keywords, and be specific to keep results relevant.

Let's say you needed help getting through a video game, so you type out its name and the part that's giving you trouble. If this search isn't enough, add one or more keywords until you find what you need. You can use complete sentences, but they're not necessary because Google does fine with only keywords.



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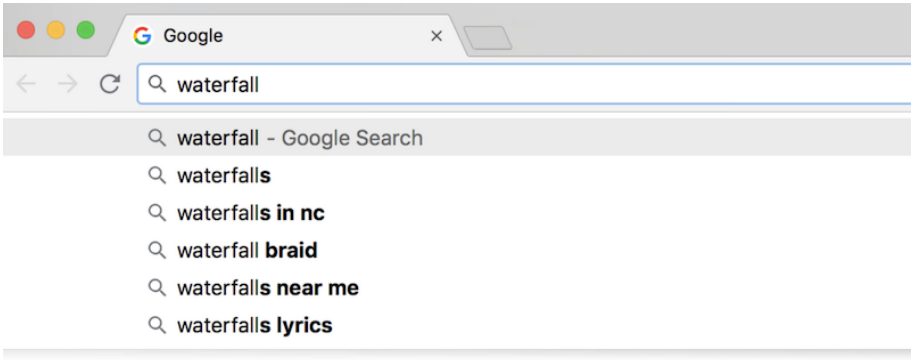
4) Utilize Autocomplete

As you type in the search bar, Google automatically uses a feature called Autocomplete, which suggests the most popular results involving your search term. You can pick one of these new ideas with the mouse or arrow keys, or you can keep typing to get different suggestions.



5) Use the Tools function

To refine your search results, try the Tools function. Let's say you're searching for images of acoustic guitars, but you only want to see green guitars. After you click Tools, select Color and then the green square to filter the results. In addition to sorting by size or publication date, you can click other tabs like News and Videos to sort these results in similar ways.

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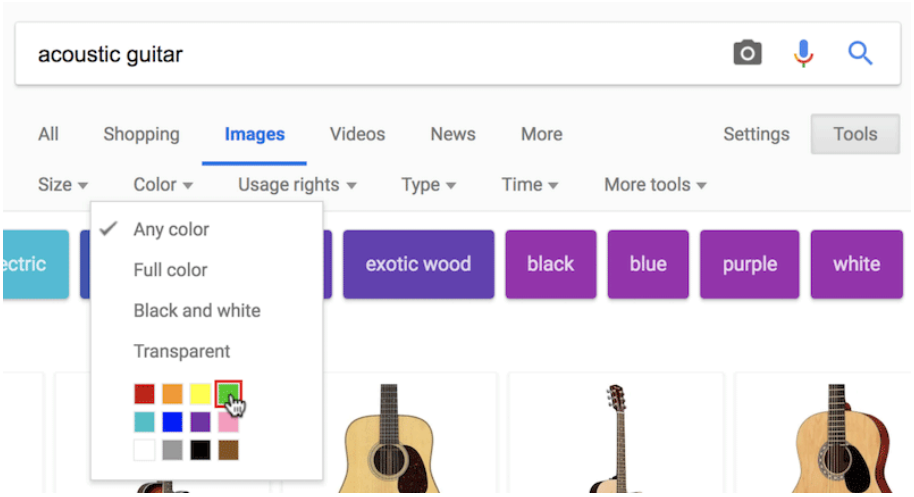
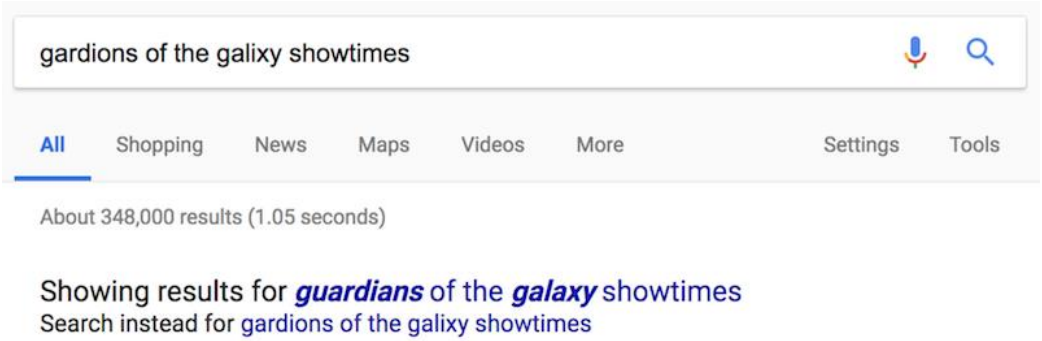


6) Watch out for spelling mistakes

If your spelling isn't perfect, don't worry. As long as it's close, search engines will try to correct your mistakes. However, if you want to search for an incorrect or unusual spelling, all you have to do is click the misspelled link below the corrected spelling. Also, most search engines ignore capitalization, punctuation, and grammar, so you don't need to worry about making things perfect.



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Remember that if you make a mistake, it's fine! A single search usually takes less than a second to complete, so search for whatever you want, even if you're not sure you'll get the desired results.

Google Search is a tool that's meant to be used as often as you need, and it can handle almost anything you throw at it. Just remember these tips, and you'll be fine.

7) Hidden features of Google Search

Google can do much more than find a website. In fact, the search engine has numerous features that can simplify your online experience, and you may not know these easy-to-use tricks even existed until now.

8) Near me

Including the phrase near me in your searches can provide all sorts of information. Just type something like food near me, coffee near me, or gas near me, and Google will look for nearby examples. Even a phrase like cool places near me delivers unique results, so don't hesitate to try new ideas.

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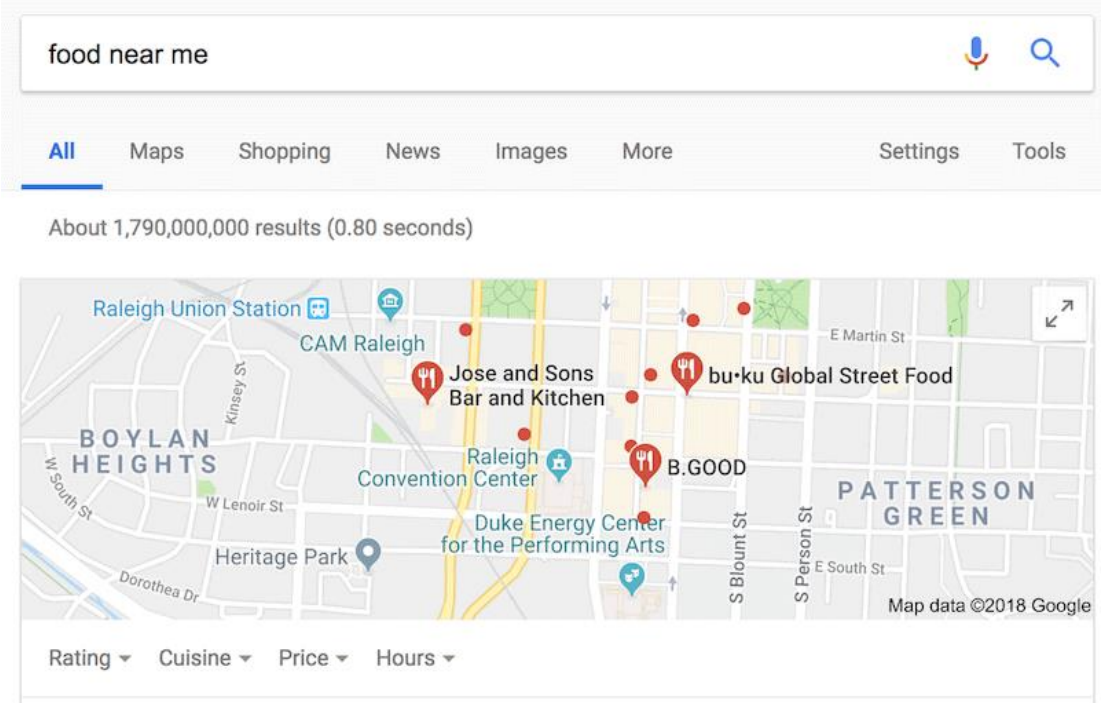

9) Math and geometry calculators

To get help with math, enter a problem into the search bar, like 42 divided by 11 or 19*8, and Google will provide both the answer and a calculator.

If geometry is giving you trouble, type solve along with a shape such as triangle or rectangle. This will bring up the geometry calculator, from which you can solve for numerous aspects of a shape.

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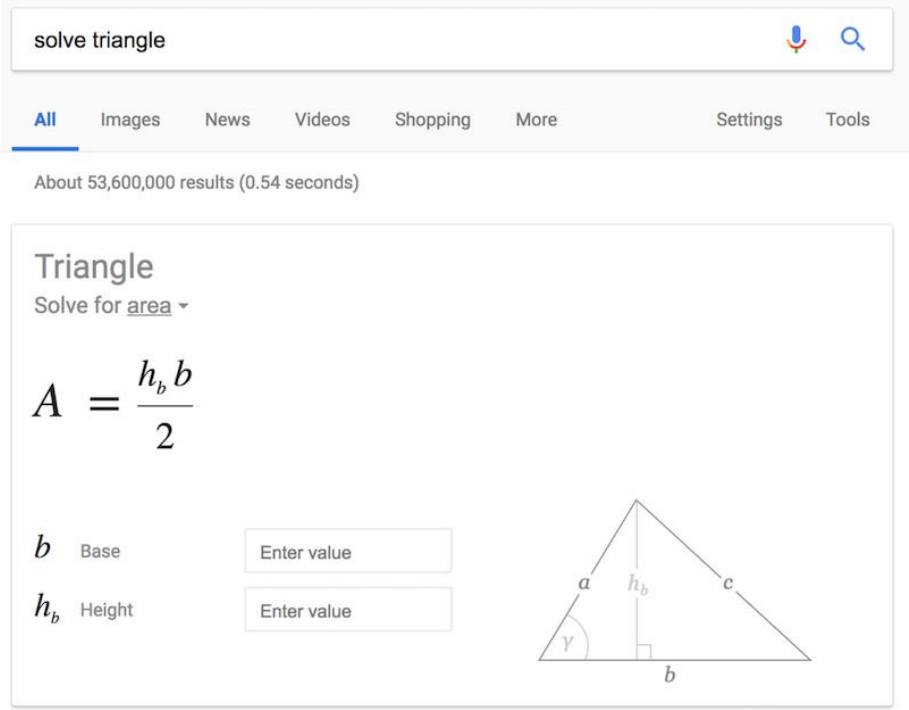
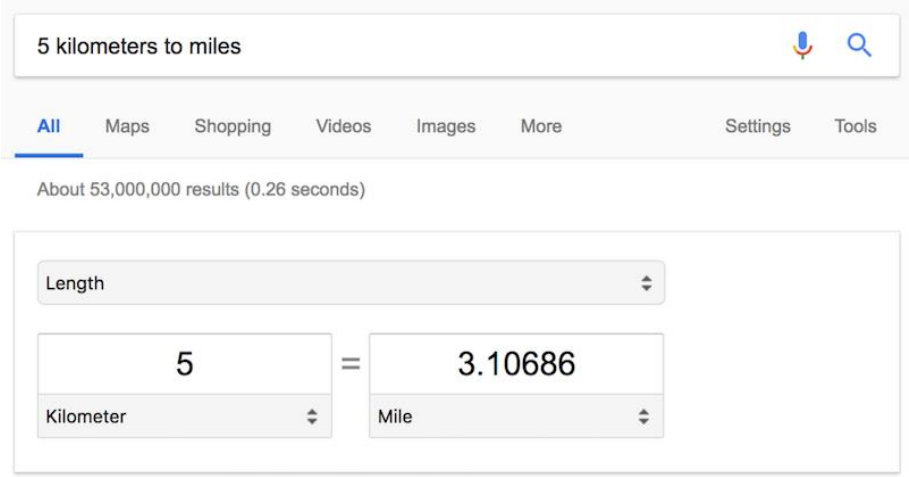


10) Conversions

You can convert many types of measurement, including distance, weight, and temperature. For example, type 5 kilometers to miles, or 30 quarts to gallons to get an instant conversion. You can also use abbreviations, like f for Fahrenheit or kg for kilograms, to keep your typing to a minimum.



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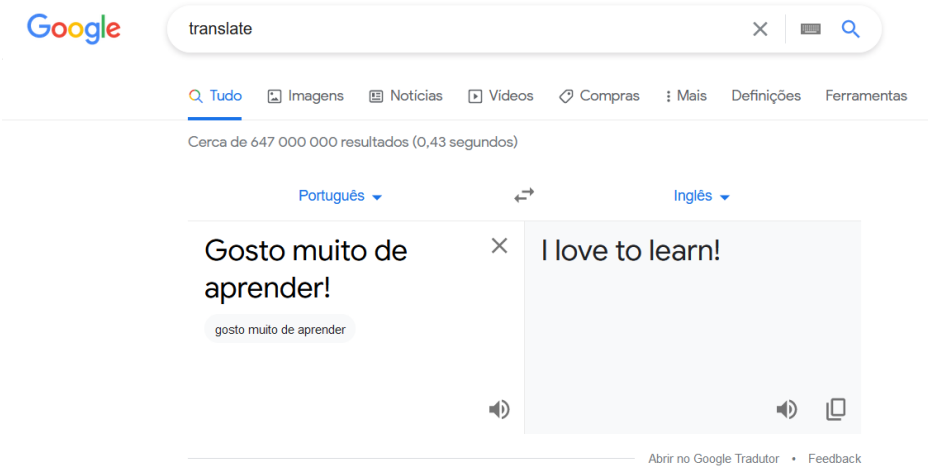
11) Definitions and translations

For help with language and vocabulary, type define and any word to get a definition sourced from the Oxford Dictionary, along with any common synonyms and antonyms.

If you need a language translator, simply type translate. You can also add a word or phrase to the search and immediately get the English version. Keep in mind that these translations are not always perfect, so keep things simple to ensure you get more accurate results.



12) Weather

Whenever you need your local weather, type weather, or add a place name to get the forecast for almost any place on Earth, from Phoenix to Mount Everest.

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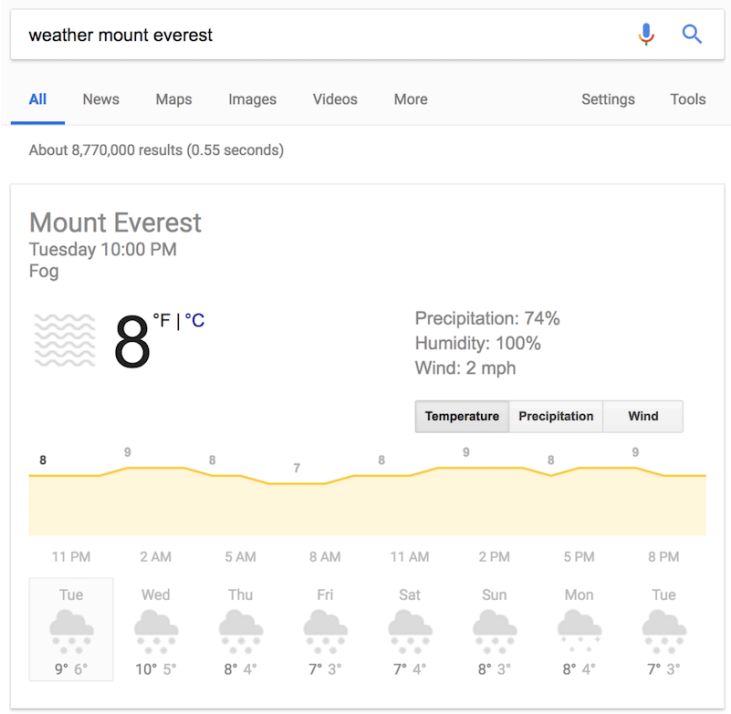

13) Distance between places

To find the distance between places, enter two different locations with the word to in between them, for example raleigh to asheville.

If you want driving directions for this route, just click the Directions icon in the corner.

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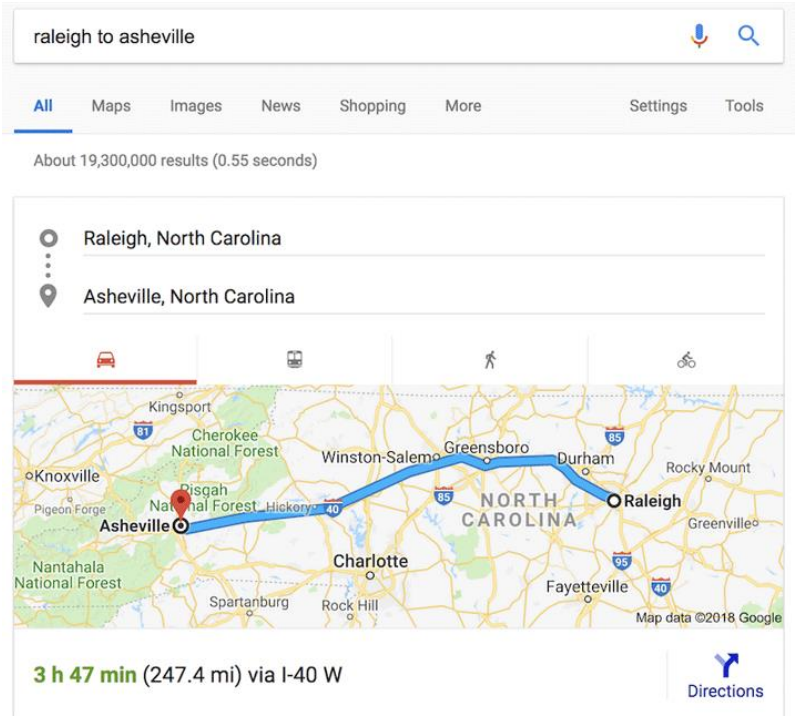

b) Downloading

While exploring the Internet, you've probably encountered the terms **downloading** and **uploading**. **Downloading** means receiving data or a file from the Internet on your computer. **Uploading** means sending data or a file from your computer to somewhere on the Internet.

These terms describe activities you may have already learned how to do. If you've ever opened an example document in one of our tutorials, you've downloaded that file. If you've ever shared a photo you took on Facebook or another social media site, you've uploaded that photo.

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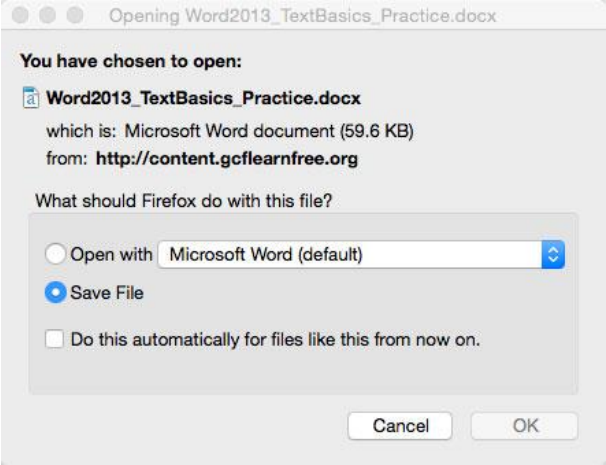
Usually, when you download a file you will start the download by clicking a link to that file. Many of our tutorials contain links to files, like this:

I am a link

If you click the link, your browser should prompt you to select one of two methods for downloading the file.

- Open with will download the file and load it immediately in the specified program.
- Save File will download it and save it to your hard drive.



Either way, once you click OK, the download begins. Your browser will indicate the progress and time remaining on the download.

Once the download is complete, either the file will be saved to your computer or it will open in the program you selected.

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Some browsers don't always start this download process when you click the link to a file. In these cases, you can right-click the link, then click Save Link As, then select a location to download the file.

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Conclusion

Participating in this training cycle will certainly be enriching for the trainees. They will try a set of activities that will allow them to see, hear and talk about technology and the main technological tools that are available to society today. It is therefore important to combat the generational gap in the context of access to technology and knowledge, from a perspective of social inclusion, with the view that access to the advantages that technology allows us is a right of all citizens in inclusive societies.

Of course, the consolidation of the skills worked here will happen with the daily repetition of these processes. But this formative stimulus will be certainly a facilitating process for inclusion into technology.

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Extra Material:

- https://docente.ifrn.edu.br/marcelojunior/disciplinas/apostilas/introducao-a-informatica-hardware-software (PT language)
- https://openlab.citytech.cuny.edu/com-basics/hardware-guide/ (Eng language)
- https://www.iseg.ulisboa.pt/aquila/getFile.do?fileId=8602&method=getFile (PT language)
- https://www.maistecnologia.com/dicas-como-adicionar-uma-impressora-no-windows-10/ (PT language)
- https://www.doc-developpement-durable.org/file/Projets-informatiques/cours-&-manuels-informatiques/LeMateriel-Hardware/Hardware%20Basics.ppt (Eng language)
- https://certificadocursosonline.com/cursos/curso-de-informatica/ (PT language)

Instructions/tips for teachers (General):

- Meet your students and see how you can make a parallel of the subjects with their life experiences/ needs
- Respect the rhythm of each student: the response times (verbal and task execution) of each student
- Adapt the speech/ have a perceptible language
- Speak slowly
- Support material with large and strong characters
- Be practical and direct
- Be able to adjust (to students' requirements)
- Build their self-confidence with small awards (small victories)
- Explain the value of learning *computer hardware and basic functions* and how useful can be in daily life.

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