To dual-boot Ubuntu and Windows :

We're assuming that you have a fully functional W10 system, so you can start

-First create a bootable Linux drive:

- Make sure you have a USB stick with at least 3gb
- Download the rufus software
- Install a version of ubuntu, be careful to install a .iso file
- Next launch the rufus software
- Choose your USB stick from the Device tab
- Choose disk or ISO image from the Boot Type tab
- You will need to click on the selection button, then select the ISO of the Linux distribution
- On "Partition Diagram": choose either GPT if you have a motherboard with a UEFI firmware, or MBR in our case for motherboards with a BIOS firmware
- In the "file" section, select file system FAT32
- Next, in the allocation unit file, select "default"
- Click start
- Select writing on ISO mode then click OK
- Wait until iso files end
- Once finished, eject the USB driver and Linux is ready to be installed on a computer in dual boot
- Open the disk manager if there's only one hard drive (in our case)
- Press right click on the disk that you want and reduce the volume
- Click on "New Simple Volume"
- Select the size of the volume to allocate (at least 15GB in order to avoid storage issues) then click next
- Assign a letter for the new partition created
- Leave the case "quick formatting" and click the case "Activate file and folder compression"
- Click next and then finish this step

-Step segment :

- Insert the USB stick in the machine you want to install Linux on.
- Turn on the computer et press several times on
either F8,F10 or Suppr, it depends on computers and the type of motherboard installed
- Once in the BIOS, look for the section where you can find boots.
- Remove the Secure boot if it exists
- Find the USB stick in "boot" section and press enter
- Next click on Ubuntu
- Click install Ubuntu

- Set keyboard to French
- Do the normal installation, not the minimal one
- Make sure that you are connected to internet
- Click "other"
- You can check the installation of third-party software and updates
- Install Ubuntu on the allocated space defined earlier
- Choose the time zone if asked
- Fill in the required data
- Then click on reboot now
- You should see that Linux is successfully installed in dual boot on your machine and ready to use
- You can eject the USB stick

To run Ubuntu inside of a virtual machine :

We assume that you have a PC with minimal configuration such as: dual-core CPU, 4GB RAM and 50GB free disk. So you may begin.

- To start accessing your PC's BIOS by pressing either F8,F10,Del or F2 it depends on the computers and motherboards
- Once in BIOS, find virtualization (VT-x and AMD-V) in BIOS
- Exit the BIOS by saving the changes
- Then download and install Virtualbox on your PC
- Also install the Oracle VM Virtualbox Extension pack
- Then click on tools then settings. Click on the +
- Select the .vbox-extpack file from the expansion package.
- Validate the extension package installation by clicking on Installation
- Return to the VirtualBox main window.
- To create a virtual machine, select Tools and click the New button
- Then give the virtual machine a name (eg : Ubuntu)
- Select the amount of RAM to be assigned to the VM. (VirtualBox displays a recommended quantity. It recommends assigning a minimum of 1024 MB (1 GB) for an Ubuntu virtual machine. Be careful to leave enough RAM to the host machine. Here, by assigning 2 GB to the virtual machine, 2 GB will remain at the host machine on a PC with 4 GB of RAM)
- Add a virtual disk to the virtual machine (This virtual disk will be saved as a disk file (ex: Ubuntu.vdi) on your PC. VirtualBox displays the recommended size for the virtual disk)
- Select Create Virtual Hard Drive now and click Create
- File Type for Virtual Disk: If you only use VirtualBox as virtualization software, choose VDI. Select another format if you want compatibility with another virtualization software (VHD is the format used by Windows Virtual PC, VMDK is the format used by VMWare)

- Type of storage on your PC disk :
  Dynamically allocated (the .vdi file representing the virtual disk will automatically grow based on the amount of data you save on it in the virtual machine. If you choose a 50 GB disk size, the .vdi file representing the virtual disk will occupy 0 GB on your PC, then 10 GB after installing Windows, then 11 GB after installing multiple software, etc)
  Fixed size (the file representing the virtual disk will occupy exactly the maximum size of the virtual disk on your PC. If you choose a disk size of 50 GB, the .vdi file representing the virtual disk will always occupy 50 GB on your PC)
- Finally choose the size of the virtual disk and click on create
- To start the virtual machine, select it and click the start button
- Boot disk (to be able to install the operating system in the virtual machine, you must boot it from a boot disk, for example the ISO image of the operating system to be installed) click the folder button then select the ISO image of the operating system you want to install in the virtual machine and finally click the start button to boot the virtual machine from the ISO image
- Finally the virtual machine starts from the ISO image and the installation on the linux interface has to be finished