Linux dual boot installations guide

Step 1: download your Linux distro

For this workshop we will be using Linux mint, but you are welcome to find and download the ISO file for your favorite distro.

You can find Linux Mint here: http://bit.ly/1goidRP

Step 2: create bootable USB

The next step is to get your ISO file on a USB. We cannot simply put the file on the USB, we need to format the USB so that the computer treats it as a 'Live USB'

If you are on Windows you will find the software to do this here:

http://www.pendrivelinux.com/universal-usb-installer-easy-as-1-2-3/

I have not tested it but this program should work if you are on mac:

http://unetbootin.github.io/

Step 2.5 (optional)

If you want to test your distro, or simply run Linux from your USB, you can boot from your USB.

To do this restart your computer, and when the very first screen appears you should be able to press a key to access your computer's BIOS (basically the structural base of your computer)

In the BIOS you will see an option called something like "boot option". You can choose to boot with your hard drive or using your USB. Boot using your USB and you will be running your brand new Linux distro!

Step 3: Shrinking partitions to make space for Linux (using windows)

Next we need to format your hard drive so that it will allocate space to Linux. You do not need to install any additional software to do this. Boot into Windows, and go to the control panel. Either type 'partition' in the search bar or just click around until you find the "create and format disk partition" option. This should be in "Administrative tools".

Once in the disk management window you will see a graphical representation of your storage devices. Right click on the partition you wish to shrink and select "shrink volume" from the menu.

Here are the recommended size for your Windows system:

1.1 GB for the system partition (Do not shrink this one)

300 GB for the Windows Partition (This is what I use, the size you want depends on how many programs you want installed on your Windows system. By googling around I found that 20GB is the minimum space you need for a 64 bits system but I would not rely on it, give it a healthy margin.)

There is two types of partition: Logical and Primary. Windows needs to run from primary partitions but Linux can run from Logical partitions.

This is useful because some computers do not allow more than 4 partitions on your hard drive. Windows only need 2 primary partitions to Run, one with the System Files and one with your files. However, some companies (such as HP) like to create extra partitions for their own bloatware (useless programs) or for their legacy BIOS (custom useless BIOS, also something HP does). Sometimes a partition will also be dedicated to system backup.

You can delete all partitions as you wish except the system and Windows partition (if you want to dual boot). You only need 1 partition to run Linux, but 2 is better.

Step 4: Partitioning for Linux

We will now partition the hard drive for Linux. Boot your computer using the USB (Step 2.5).

Start the Linux installer (which should be on the desktop of your USB booted Linux)

You will be asked where you want to install Linux. Choose the 'Something else' option to create your own partitions, this is safer and gives you more control over your installation.

Here are the recommended partition size for a Linux system:

Root: 9.2 GB minimum, 40 GB recommended
Partition type: 'logical'
Use as = 'Ext4 Journaling file system'
mount point= '/'
Purpose: Hold system files

Home: 71 GB (in my setup).This is where your files will be, so size accordingly.
Partition type: 'logical'
Use as= 'Ext 4'
mount point= '/home'
Purpose: Hold user files

Swap: 4 GB, 1.5 times RAM recommended but 4GB is enough.
Partition type: 'logical'
Use as ='swap area'
mount point= none
Purpose: Enable hibernation

Once you created all those partitions using the free space left from shrinking the window partition we can move on to actually installing Linux. The following steps should be straightforward and explained through the installer.

Step 5: restart your computer to choose your system.

Restart your computer and you will be sent to GNU GRUB, in which you will be able to select the operating system you want to start.