

## LINUX CHEETSHEET :::: RUN ALL THE COMMANDS AND SEE THE OUTPUT

### Basic Commands

#### 1. pwd

When you first open the terminal, you are in the home directory of your user. To know which directory you are in, you can use the “**pwd**” command. It gives us the Absolute Path, which means the path that starts from the root. The root is the base of the Linux filesystem. It is denoted by a forward slash( / ). The user directory is usually something like /home/username.

#### 2. ls

The “ls” command is used to know what files are there in the directory you are in. You can see all the hidden files by using the command “**ls -a**”.

#### 3. cd

“cd” is the command used to go to a directory. For example, if you are in the home folder, and you want to go to the Downloads folder, then you can type in “**cd Downloads**”. Remember, this command is case sensitive and you have to type in the name of the folder exactly as it is. But there is a problem with these commands. Imagine you have a folder named “Raspberry Pi”. In this case, when you type in “cd Raspberry Pi”, the shell will take the second argument of the command as a different one, so you will get an error saying that the directory does not exist. Here, you can use a backward slash. That is, you can use “cd Raspberry\ Pi” in this case. Spaces are denoted like this: If you just type “cd” and press Enter, it takes you to the home directory. To go back from a folder to the folder before that, you can type “cd ..” . The two dots represent back.

#### 4. mkdir & rmdir

The mkdir command is used when you need to create a folder or a directory. For Example, if you want to make a directory called “DIY”, then you can type “**mkdir DIY**”. Remember, as told before, if you want to create a directory named “DIY Hacking”, then you can type “mkdir DIY\ Hacking”.

rmdir is the command used for deleting a directory. But, rmdir can only be used to delete an empty directory. To delete a directory containing files, rm is used.

#### 5. rm

The rm command is used to delete files and directories. rm cannot simply delete a directory. “**rm -r**” is used to delete a directory. In this case, it deletes both the folder and the files in it.

#### 6. touch

The touch command is used to create a file. It can be anything, from an empty txt file to an empty zip file. For example – “**touch new.txt**”

#### 7. man & -help

To know more about a command and on how to use it, the man command is used. It shows the manual pages of the command. For Example, “**man cd**” shows the manual pages of the cd

command. Typing in the command name and the argument helps it show which ways the command can be used (Example – `cd -help`).

## 8. **cp**

The **cp** command is used to copy files through the command line. It takes two arguments, the first one is location of the file to be copied, the second is where to copy.

## 9. **mv**

The **mv** command is used to move files through the command line. We can also use the **mv** command to rename a file. For example, if we want to rename the file “text” to “new”, we can use “**mv text new**”. It takes the two arguments just like the **cp** command.

## 10. **locate**

The **locate** command is used to locate a file in a Linux System, just like the search command in Windows. This command is useful when you don’t know where a file is saved or the actual name of the file. Using the **-i** argument with the command, helps to ignore the case (it doesn’t matter if it is Capital or Small). So, if you want a file that has the word “hello”, it gives the list of all the files in your Linux System containing the word “hello” when you type in “**locate -i hello**”. If you remember two words, you can separate it using asterisk (\*). For example, to locate a file containing the words “hello” and “this”, you can use the command “**locate -i \*hello\*this**”

## Intermediate Commands

### 1. **echo**

“echo” is a command that helps us move some data, usually text into a file. For example, if you want to create a new text file or add into an already made text file, then you just need to type in “**echo hello, my name is alok >> new.txt**”. You do not need to separate the spaces by using the backward slash here because we put in two triangular brackets when we finish what we need to write.

### 2. **cat**

The **cat** command is used to display the contents of a file, usually used to easily view programs.

### 3. **nano, vi, jed**

nano and vi are already installed text editors in the Linux command line. nano is a good text editor which denotes keywords with color and can recognize most of the languages. Vi is simpler than nano. You can create a new file or modify one using this editor. For example, if you need to make a new file named “check.txt”, you can create it by using the command “**nano check.txt**”. You can save your files after editing by using the sequence, **Ctrl+X**, then **Y** (or **N** for no). In my experience, using nano for HTML editing doesn’t seem so good, because of its color, so I recommend jed text editor. We will come to installing packages soon.

#### 4. **sudo**

sudo is a widely used command in the Linux command line. sudo stands for “SuperUser Do”. So, if we want any command to be done with administrative or root privileges, then you can use the sudo command. For Example, if you want to edit a file like viz. alsa-base.conf which needs root permissions, you can use the command – sudo nano alsa-base.conf . You can enter the root command line using the command “sudo bash”, then type in your user password. You can also use the command “su” to do this, but you need to set a root password before that. For that, you can use the command “**sudo passwd**”(it wasn’t misspelled, it is passwd). Then type in the new root password.

#### 5. **df**

The df command is used to see the available disk space in each of the partitions in your system. You can just type in df in the command line and you can see each mounted partition and their used/available space in % and in KBs. If you want it shown in megabytes, you can use the command “**df -m**”

#### 6. **du**

du is a command to know the disk usage of a file in your System. If you want to know the disk usage for a particular folder or file in Linux, then you can type in the command df and the name of the folder or file. For example, if you want to know the disk space used by the folder Documents in Linux, you can use the command “**du Documents**”. You can also use the command “ls -lah” to view the file sizes of all the files in a folder.

#### 7. **tar**

tar is a command used to work with tarballs (or files compressed in a tarball archive) in the Linux Command Line. It has a long list of uses. It can be used to compress and uncompress different types of tar archives like .tar, .tar.gz, .tar.bz2.etc. It works on the basis of the arguments given to it. For example, tar -cvf for creating a .tar archive, -xvf to untar a tar archive, -tvf to list the contents of the archive.etc.

#### 8. **zip, unzip**

zip is a command used to compress files into a zip archive, unzip is used to extract files from a zip archive.

#### 9. **uname**

uname is a command used to show the Information about the system your Linux distro is running. Using the command “**uname -a**” prints most of the information about the system. This prints the Kernel release date, version, processor type. etc.

#### 10. **apt-get**

apt is a command used to work with packages in the Linux command line. apt-get is a command used to install packages. This requires root privileges, so we use the sudo command with it. For example, if we want to install the text editor jed (as I mentioned earlier), we can type in the

command “**sudo apt-get install jed**”. Similarly, any packages can be installed like this. It is good to update your repository each time you try to install a new package. You can do that by typing “**sudo apt-get update**”. You can upgrade the system by typing “**sudo apt-get upgrade**”. We can also upgrade the distro by typing “**sudo apt-get dist-upgrade**”. The command “**apt-cache search**” is used to search for a package. If you want to search for one, you can type in “**apt-cache search jed**”(This doesn’t require root).

## 11. **chmod**

chmod is the command used to make a file executable and to change the permissions granted to it in Linux. Imagine you have a python code named numbers.py in your computer, you’ll need to run “python numbers.py” every time you need to run it. Instead of that, when you make it executable, you’ll just need to run “numbers.py” in the terminal to run the file. To make a file executable, you can use the command “**chmod +x numbers.py**” in this case. You can use “**chmod 755 numbers.py**” to give it root permissions or “**sudo chmod +x numbers.py**” for root executable.

## 12. **hostname**

hostname is a command used to know your name in your host or your network. Basically, it displays your hostname and IP address. Typing just “hostname” gives the output, your hostname. Typing in “**hostname -I**” gives you your IP address in your network.

## 13. **ping**

ping is a command used to check your connection to a server. Wikipedia says that “Ping is a computer network administration software utility used to test the reachability of a host on an Internet Protocol (IP) network”. Simply, when you type in, for example, “**ping google.com**”, it checks if it can connect to the server and come back. It measures this round-trip time and gives you the details about it. The use of this command for simple users like us is to check your internet connection. If it pings the Google server (in this case), you can confirm that your internet connection is active!

## Tips and Tricks in Using Linux Command Line

- You can use **clear** command to clear the terminal if it gets filled up with too many commands!
- **TAB** can be used to fill up in Terminal. For example, You just need to type “cd Doc” and then TAB and the terminal fills the rest up and makes it “cd Documents”.
- **Ctrl+C** can be used to stop any command in terminal safely. If it doesn’t stop with that, then **Ctrl+Z** can be used to force stop it.
- You can exit from the terminal by using the **exit** command.
- You can power off or reboot the computer by using the command **sudo halt** and **sudo reboot**.