

Command	Notes
pwd	Print Working Directory
cd [dirname]	Change Directory
cd ..	Up one level
cd ~	Jump to your home directory
cd /	Jump to root directory
cd -	(Advanced) Jump back to previous directory
ls	List files
ls -lh	Details (-l), human-readable size (-h)
ls -a	All files (include hidden)
cat [filename]	View a text file contents
less [filename]	(Advanced) Scroll through a text file. (q==quit)
mkdir [dirname]	Make directory
touch [filename]	Make empty text file
nano [filename]	Launch Nano text editor
vim [filename]	(Advanced) Launch Vim text editor
mv [old] [new]	Move or rename file or directory
cp [original] [copy]	Copy file or directory
rm [filename]	Remove a file (No recycle bin!)
rm *	Remove all files in the current dir
rm -r [dirname]	Remove an empty directory
rm -rf [dirname]	Remove full dir w/o confirmation (Danger zone!)
apt-get update	Check online repo for updates
apt-get install [package]	Install a new program
sudo [any command]	Run a command as administrator
sudo !!	(Advanced) Repeat previous command as sudo
man [any command]	Manual for a Linux command (q==quit)
ifconfig	View/edit network connection
ssh [username]@[computer]	Connect to a server

<code>chmod u+x [filename]</code>	Mark a file as executable
<code>./[executable filename]</code>	Run a file in the current directory
<code>[command] > [filename]</code>	Write result of command as file
<code>[command] < [filename]</code>	Read file and use it as input to command
<code>[cmd1] [cmd2]</code>	Run cmd1 then pipe its output as input into cmd2

Other notes:

Use the up/down arrow keys to scroll through previous commands

Use the Tab key to complete filenames (based on what you've already typed).
Hit Tab twice to see all possibilities.

While using less or man: type q to quit, /[word]{Return} to search, n to find next, {Shift}+n to find previous, Up/Down arrows, PgUp/PgDown

Try <http://www.webminal.org> if you don't have Linux installed

Projects:

1. Make a directory called `test`. Inside test, make a file called `hello.txt` with the contents "Hello, world!". View the contents of `hello.txt` without opening it for editing. Make 3 directories inside test: `sub1`, `sub2`, `sub3`. `sub1` contains one file called `a.txt`. `sub2` contains one file called `b.txt`. Delete the files within `sub1`, but not `sub1` itself. Delete `sub2`.
2. Install the `tree` app. View your test directory in tree.
3. Read the `man` page for the `shutdown` command to figure out how to `restart` your VM after waiting 3 minutes. Now, cancel the impending shutdown!
4. Use `ifconfig` to view your network IP address. Read the man page for `ifconfig` to figure out how to turn off the network interface off, check that you have no Internet connection, then turn it on again.
5. In a text file called `print.py`, Make the very first line `#!/usr/bin/env python3`. Type in this short Python script: `print('Hello, world!')`. Make the text file executable with `chmod`. Run it with `./print.py`
6. Make a Python script called "long.py":

```
#!/usr/bin/env python3
for x in range(0, 100):
    print('This is line #' + str(x))
```

Make the script executable. Run it. Run it again but write the results to `big.output`. Run it again, but `pipe` the output to `less`.
7. (Advanced) Connect to your CompSoc server account on `mojo.compsoc.ie`
8. (Advanced) Do #6 as a Bash shell script, `loop.sh`. Hint: `#!/bin/bash`

