

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`

