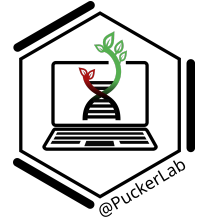# de.NBI Course 2025 - Pucker Lab
Linux cheat sheet (v1.0)
A short guide to make your life at the terminal easy!

@PuckerLab

Command	Description	Syntax
pwd	To see the folder that you are currently in from the Linux terminal	pwd
cd	Change directory - go to a particular folder from the terminal	cd <folder>
realpath	Get the full path of a file/directory	realpath <file/directory>
man	Manual command to get all the options and syntax associated with a command	<command> man
--help or -h	Similar to the man command, this can help find more information about the command	<command> --help or <command> -h
mkdir	Make a folder or directory. A folder or directory means the same	mkdir <foldername>
touch	To create files	touch <filename>
chmod	Change mode command. Used to change file/ folder permissions: r - read; w-write; x-execute Options: Octal numbers like 600, 777 representing a combination of the above permissions for user, group and others in linux	chmod [options] <permissions> <file>
ls	List contents in a folder	ls
rm	To delete a file	rm <file>

rm -r	Recursively delete a file or non-empty folder	rm -r \<file\> rm -r \<folder\>
rmdir	Delete an empty folder	rmdir \<folder\>
cat	Combine or concatenate files	cat \<file1\> \<file2\>
head	Command to look at the first few (default 10) lines of a file; n specifies the number of lines to display	head \<file\> or head -n \<file\>
tail	Command to look at the last few (default 10) lines of a file; n specifies the number of lines to display	tail \<file\> or tail -n \<file\>
less	Pager command to read through a file. Press q to come out of it.	less \<file\>
grep	Search for a specific pattern, or a regular expression, in a file	grep \<"term to search"\> \<file\>
cp	Copy file from one folder to another (similar to copy in windows)	cp \<file\> \<destination\>
mv	Move file from one folder to another (similar to cut in windows); Can also be used to rename a file	mv \<file\> \<destination\> mv \<filename\> \<newfilename\>
gzip/gunzip	Compress or uncompress files	gzip \<file\> gunzip \<file\>
&	Push a process to the background	\<command\> &
|	Direct the output of previous command as input into next command - called pipe in linux terms	\<command\> 1 | \<command\> 2
>	Direct command output to file (overwrites the file!). Also creates the file if it does not exist.	\<command\> > \<file\>
>>	Append to file	\<command\> >> \<file\>

htop	See status of jobs running	htop
wget	Downloads files from the internet	wget <link>
mount	Mounts a volume to the virtual machine	mount <device> <mountpath>

Some more tips to become a pro Linux terminal user
- SSH:
    - Secure Shell provides secure connection between two hosts over an insecure network through encryption.

Model command:

ssh -i </path/to/private/key/file> <hostname@IP_address:> -p <port_number>

- scp:
    - Secure copy. Allows secure copy of files and folders between hosts over a network.

Model command to transfer file(s):

scp -p <port_number> -i </path/to/private/key/file> </path/to/source/file> <hostname@IP_address:/path/to/destination/file/folder>

Model command to transfer folder(s):

scp -p <port_number> -i </path/to/private/key/file> </path/to/source/folder> -r <hostname@IP_address:/path/to/destination/folder>

- Ctrl+shift+c is generally the shortcut to copy content from the terminal
- Ctrl+shift+v is generally the shortcut to paste stuff in the terminal
- Ctrl+c is used to terminate a process/ program
- Ctrl+z is used to suspend a process/ program
- df -h can help you see the storage and free space you have in the system
- lscpu gives you the number of CPUs you have in the system

- The linux terminal has memory. Yes! You can use the up/ down arrows for history look up and look down respectively

Useful links to navigate the course content
- [Plant genomics guide GitHub repository](#)
- [de.NBI Wiki](#)
- [SRA Toolkit](#)
- [Docker](#)
- [HERRO](#)
- [SHASTA](#)
- [NextDenovo2](#)
- [BUSCO](#)
- [Merqury](#)
- [LAI](#)
- [HISAT2](#)
- [GeMoMa](#)
- [EDTA](#)
- [InterProScan](#)
- [tRNA-scanSE](#)
- [KIPEs](#)
- [MYB annotator](#)
- [MAFFT](#)
- [IQ-TREE3](#)
- [iTOL](#)
- [DupyliCate](#)