

# SE3 Bash Commands

## Description

- The color code is the following: **blue** is for the command, **cyan** is for option(s), **red** is for argument(s) and **grey** is for comments
- In the following examples: `foo`, `bar`, `f`, `b` are directories; `foo.txt`, `f.txt`, `b.txt` are files
- `[command]`, `[command1]`, `[command2]` should be replaced with an actual bash command
- `login` should be replaced with your login
- `computer` should be replaced with an actual computer name like `reuze01`, `phinaert02`, `gayant04`...

## Basic Terminal Navigation

```
pwd          # print working directory
ls           # List files and directories
ls -a       # List including hidden
ls -l       # List in long form
tree        # List directory and file tree
tree -a     # List tree including hidden
tree -d     # List directory tree
tree -L X   # List tree with limit depth X
cd foo      # Go to foo sub-directory
cd /        # Go to root
cd ..       # Go to the parent folder
cd          # Go to home directory
cd ~        # Go to home directory
cd -        # Go to previous directory
```

## Creating Directories

```
mkdir f      # Create a directory f
mkdir f b    # Create f and b directories
mkdir -p f/b # Create nested directories
```

## Moving Directories

```
cp -R f b    # Copy directory f into b
mv f b       # Move directory f into b
```

## Deleting Directories

```
rmdir f      # Delete non-empty directory
rm -r f      # Delete dir including contents
rm -rf f     # Delete directory including contents, ignore nonexistent files and never prompt
```

## Creating Files

```
touch f      # Create or update file
touch f b    # Multiple files
```

## Moving Files

```
cp f.txt b.txt # Copy file
mv f.txt b.txt # Move file
rm f.txt        # Delete file
rm -f f.txt     # Delete file w/o prompt
```

## Reading Files

```
cat foo.txt # Print all contents
less foo.txt # Better print
head foo.txt # Top 10 lines
tail foo.txt # Bottom 10 lines
open foo.txt # Edit file
wc foo.txt   # num of lines, words, chars
```

## Finding Files

```
find f -name foo.txt # Find a file
find f -name "*.txt" # Find txt files
find f -type d -name b # Find b named dir
```

## Search in Files

```
grep 'foo' b.txt # search in file
grep 'foo' bar -r # search in dir
grep 'foo' b.txt -v # show not matching
grep 'foo' b.txt -c # count matching lines
```

## Sort in File

```
sort foo # sort file alphabetically
sort -n foo # sort file numerically
sort -r foo # reverse sort
```

## I/O Redirection and Chaining

```
[command] > foo.txt # writes the output of [command] in file foo.txt
[command] >> foo.txt # appends the output of [command] in file foo.txt
[command] < foo.txt # uses foo.txt as input for command
[command1] | [command2] # uses output of [command1] as input for [command2]
```

## Connexions

```
ssh login@computer
ssh arsenic
ssh login@portier.polytech-lille.fr -p 2222
```

## Shortcuts

```
Tab # auto-complete commands and files
Up/Down Arrow # navigate through history
CTRL + r/s # backward or forward search in your command history
CTRL + a/f # moves the cursor to the beginning / end of the line
ALT + b/f # moves the cursor backward / forward one word
CTRL + l # clears the screen
CTRL + u # clears the line and copies it to the clipboard
CTRL + k # clears the line after the cursor and copies it to the clipboard
```