# **Index of commands**

# Basic commands

* man [command]
  + command --help
  + An interface to the on-line reference manuals.
* pwd
  + Print name of current/working directory.
* cd
  + Changes the shell working directory.
  + cd => brings you back to /home
  + cd /to/this/path => Change the working directory to PATH
  + cd ../ => return in the parental directory
* ls
  + List working directory contents.
    - ls [/to/a/path] => list PATH directories contents
    - option -a do not ignore entries starting with (hidden files)
    - option -h print sizes of files
    - option -l use a long listing format
    - ls -hla
* echo [string]
  + Display a line of text.

# Handling files and directories

* mkdir [directory]
  + Make directories.
* touch [file]
  + Change file timestamps. Update the access and modification times of each FILE to the current time. If the FILE does not exist, it will be created empty.
* cp [/path/to/file.txt] [/where/to/copy/]
  + Copy files and directories.
  + cp file.txt . => copy FILE in the working directory
* mv [file] [new name]
  + Move (rename) files.
* rm [file]
  + Remove files.
  + rm -r [directory] => remove directories and their contents recursively
* head [file]
  + Output the first par of files. By default, output the first 10 lines.
  + head -n50 => output the first 50 lines
* tail [file]
  + Output the last part of files. By default, output the last 10 lines.
  + head -n100 => output the last 100 lines
* more [file]
  + Filter for paging through test one screenful at a time.
* less [file]
  + Opposite of more. Allows backward movement in the file. No wrap-up line.
* cat [file] [file]
  + Concatenate files and print on the standard output.
* wc [file]
  + Print newline, word, and byte counts for each file.
  + wc -l [file]: line count
  + wc -w [file]: word count

# Manipulating files

* gzip [file]
  + Compress files.
  + gzip -d [file.gz] => extract file
* gunzip [file.gz]
  + Expand files.
  + gunzip -c [file.gz] => extract file in STDIN. The actual file stays compressed.
* zcat [file.gz]
  + Extract files.
* cut [file]
  + Remove sections from each line. Print selected parts of lines from each file to standard output.
  + cut -f2 -d”,” => Print element #2 (column #2) of the file. The delimiter is “,”. By default, the delimiter is “\t”.
* grep [pattern] [file]
  + Print lines matching a pattern.
  + grep -v [pattern] [file] => Invert the sense of matching, to select non-matching lines.
* sort [file]
  + Sort lines of text files.
* uniq [file]
  + Report only unique lines (omit repeated lines).
  + uniq -c [file]: prefix lines by the number of occurrences
  + uniq -d [file]: only print duplicated lines
* comm [file1] [file2]
  + Compare two sorted files line by line. Output 3 columns: 1/ Unique lines in the first file, 2/ Unique line of the second file, 3/ Lines in common.
  + comm -1 -2 [file1] [file2] => print only the lines in common
  + comm -2-3 [file1] [file2] => print only the lines uniquely found in file 1
  + comm -1 -3 [file1] [file2] => print only the lines uniquely found in file 2
* tr [file]
  + Translate or delete characters.
  + cat [file] | tr “,” “ “ => replace every comma into a space
* sed [file]
  + Stream editor for filtering and transforming text.
  + sed 1d [file] => delete the first line
  + sed 's/day/night/' [file] => replace the first occurrence of “day” by “night”
  + sed 's/[a-z]/[A-Z]/g' [file] => replace every lower case by an upper case.
* awk '{}' [file]
  + Pattern scanning and processing language.
  + awk '{print $1}' [file] => print first element of each line
  + awk '{if($3 < $2) print $0}' [file] => print the line if the value of the third element is inferior to the second element

# Regular Expressions

|  |  |  |
| --- | --- | --- |
| | | OR | gray|grey |
| () | Grouping | gr(a|e)y |
| ? | Zero of one occurrence of the preceding item | Colou?r => color, colour |
| \* | Zero or more occurrences | ab\*c => ac, abc, abbc, abbbc... |
| + | One or more occurrences | ab+c => ab, abbc, abbbc NO ac |
| {n} | The preceding item is matched n times | ab{2}c => abbc |
| {min,} | The preceding item is matched at least min times | ab{2,}c => abbc, abbbc... |
| {min,match} | The preceding item is matched between min and max times | ab{1,2}c => abc, abbc only |
| . | Matches any character | a.b => axb, arb, apb.. |

|  |  |
| --- | --- |
| \t | Tabulation |
| \s | Whitespace character |
| \n | Zero of one occurrence of the preceding item |
| [a-z] | Range of character in lowercase |
| [A-Z] | Range of character in uppercase |
| [0-9] | Range of numbers |
| [a-zA-Z] | Range of characters |