

{UNIX CHEAT SHEET}

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USER AND ENVIRONMENT

- Account information:

`passwd` – (password) change the user's login password
`quota -v` – (quota – limit) display disk space limits assigned to the account
`id` – (user identity) display information about the current user's name and group
`whoami` – display the name of the current user
`who / w` – display logged-in users (and their activity)

- Session and help:

`man polecenie` – (manual) display the manual page for a command
`history` – command history
`logout` – log out the user

- Current directory:

`pwd` – (print working directory) display the name of the current directory

- Shell configuration:

`~/.zshrc` – file with instructions executed at login (note: errors may prevent access to the account)
`alias polecenie='nowe polecenie'` – assign a new definition to a command (recommended to place in `.zshrc`)
`alias ls='ls -F'` – mark directories with `/` and executable files with `*`
`alias pico='pico -w -z' --w` (disable word wrap), `-z` (enable suspend)
`alias cp='cp -i'` – confirm file overwrite
`alias mv='mv -i'` – confirm file overwrite
`umask` – display default permissions for new files/directories
`umask ijk` – set new permission value (analogous to `chmod`)

- Running programs and PATH:

Programs not in the `PATH` variable require the full path.

`printenv PATH / echo $PATH` – display the `PATH` variable
`which polecenie` – path to the executable program (from `PATH`)

- Utility programs:

`nano` – terminal text editor (e.g. `^O` save, `^X` exit, `^W` search)
`vim` – advanced text editor (normal/insert mode, `:w` save, `:q` exit)
`g++` – C++ compiler (e.g. `g++ plik.cpp -o program`)
`make` – automate project builds based on a Makefile
`git` – version control system (e.g. `git clone`, `git commit`, `git push`)
`ssh user@host` – remote login via SSH
`tar -cvf / -xvf` – create and extract archives

FILES AND DIRECTORIES

- Navigation:

`ls` – (list) display directory contents (`ls -al` – all information)
`cd` – (change directory) go to the home directory
`cd nazwa` – go to the specified directory
 `.` – current directory
 `..` – parent directory
 `/` – root directory
 `~` – home directory
 `~user` – specified user's home directory

- File and directory operations:

`mkdir nazwa` – create a directory
`touch plik` – create an empty file (or update modification time)
`cp nazwa1 nazwa2 - (copy) copy file/directory nazwa1 to nazwa2`
`mv nazwa1 nazwa2 - (move) move/rename nazwa1 to nazwa2`
`ln nazwa1 nazwa2` – create a hard link
`ln -s cel link` – create a symbolic link
`rm nazwa` – (remove) delete a file
`rmdir nazwa` – remove an empty directory
`rm -r nazwa` – remove a directory with its contents (warning: no confirmation)

- Permissions:

`chmod ijk nazwa` – (change the permissions mode) change permissions (execute=1, write=2, read=4) for owner/group/others; also: `chmod -R`

- Disk and search:

`du -h` – (disk usage) directory size
`df -h` – filesystem usage
`find ścieżka -name 'wzorzec'` – search for files/directories

STREAMS, PIPES AND PROCESSES

- Streams and pipes (I/O):

`polecenie > plik` – write command output to a file
`polecenie » plik` – append output to the end of a file
`polecenie < plik` – read input from a file instead of the keyboard
`polecenie1 | polecenie2` – pass output of `polecenie1` to `polecenie2`
`tee plik` – write output to a file and simultaneously to the screen
`xargs` – build command arguments from a pipe

- Stream tools:

`grep tekst plik` – search for text in a file
`cat plik` – display file contents
`less plik` – view file page by page
`head plik` – beginning of file
`tail plik` – end of file
`tail -f plik` – follow appended lines (e.g. logs)
`wc plik` – (word count) number of lines, words and characters in a file
`sort plik` – sort file lines
`uniq plik` – remove adjacent duplicate lines (often used after `sort`)

- Processes:

`ps / ps aux` – process list
`top` – dynamic process viewer
`kill PID` – terminate process with given PID