

Bash Cheatsheet

1 Navigation

- **ls** — “list storage”; list files in current directory
- **pwd** — “print working directory”; print absolute path to your current working directory
- **cd** — “change directory”; change your working directory
- **pushd <dir>** — put **<dir>** on the directory stack (save current dir, change to **<dir>**)
- **popd** — change directory to last dir in directory stack and “pop” it from the stack
- **file <file>** — prints file information (e.g. type of file) of **<file>**
- **locate <file/dir>** — search for file on system using filename or part of filename
- **sudo updatedb** — update **locate** database
- **which <cmd>** — display path to program that executes when **<cmd>** is run
- **history** — display list of recently used commands

2 Getting Help

- **whatis <cmd>** — print out a short description of **<cmd>**
- **apropos <search_term>** — print a list of commands relating to **<search_term>**
- **man <cmd>** — display the manual page for **<cmd>**

3 Files and Directories

- **mkdir <dirname>** — create a directory
- **touch <filename>** — create empty file or update modification timestamp of existing file
- **cp <src> <dst>** — copy a file/directory (**-r** for directories)
- **mv <src> <dst>** — move a file/directory and/or rename it
- **rm <file/dir>** — delete a file/directory (**-r** for directories, **-f** to ignore errors and not ask)
- **rmdir <dirname>** — delete an empty directory

4 Text Files

- **cat [file ...]** — “catenate”; print the contents of each **file** (if given) or stdin (if not given) to stdout (terminal output)
- **more <file>** — paginate **<file>**; cannot go back in pager
- **less <file>** — paginate **<file>**; more features/flexibility than **more**
- **nano [file]** — edit **file** (if provided) or open new file (if not provided)
- **grep <pattern> [file]** — search for **<pattern>** in **[file]** if specified, stdin if not

5 Users

- **sudo <cmd>** — “switch user do”; execute **<cmd>** as a different user (by default, **root**)
- **sudo su** — Switch to another user as root
- **sudo -s** — become root using the invoking user’s shell
- **su <user>** — become **<user>**, but don’t change your environment (home directory, etc.)
- **su - <user>** — become **<user>** while changing to login environment of **<user>**; (change to their home directory)
- **users** — display a list of currently logged-in users
- **who** — display information about logged-in users
- **whoami** — print effective user ID (current user)
- **last** — show a list of last logged in users
- **w** — see who is logged in and what they are doing
- **id** — print real/effective group/user ids (prints entry from **/etc/passwd**)

6 File Permissions

- **Files:**
 - **r** — allows the affected user to read file contents
 - **w** — allows the affected user to create, rename, or delete file
 - **x** — allows the affected user to execute file
- **Directories:**
 - **r** — allows the affected user to list the files within the directory
 - **w** — allows the affected user to create, rename, or delete files within the directory, and modify the directory’s attributes
 - **x** — allows the affected user to enter the directory, and access files and directories inside
- **chmod** — “change mode”; change permissions of file
 - **chmod +x <file>** — symbolic way
 - **chmod 755 <file>** — numeric way
 - **755**: common for directories and executable files
 - **644**: common for non-executable files

7 Processes

- **watch <cmd>** — run **<cmd>** and view output every (by default) 2 seconds
- **pgrep <name/pattern>** — look up process(es) **<name/pattern>** and return its/their process ID (PID)
- **kill <pid>** — kill the process identified by **<pid>**
- **killall <name>** — kill any process(es) with exact match **<name>**
- **ps** — list a selection of current running processes by your user
- **ps aux** — list all running processes