

UNIX cheat sheet

Miscellaneous

Keyboard Shortcuts

"Ctrl-c" - send SIGINT signal to running process. (usually kills process)
"Ctrl-d" - send EOF or EOT signal to process. (usually terminates process)
"Ctrl-l" - clear screen. (form-feed)
"Ctrl-z" - send SIGTSTP signal to running process. (usually suspends process, resume with fg or bg)
up-arrow - previous command(s) in history.
down-arrow - next command(s) in history.
tab - shell auto-complete.
(commands/filenames/directories)

Directories

"~" - current user's home directory.
"." - current working directory.
".." - one directory above the current working directory.
"*" - all files in a directory.

Shell

"!" - previous command.
"!\$" - previous command arguments.
"\$([command])" - use output of command in-line.

Redirecting Input

```
$ [program] < [input filename]
```

Redirecting Output

```
$ [program] > [output filename]
```

Appending Output

```
$ [program] >> [output filename]
```

Piping Output

```
$ [output program] | [input program]
```

Manuals

man

an interface to the system reference manuals.
\$ man [man options] [[section] page ...]
\$ man 1 man
\$ man 7 ascii
\$ man mv

Navigation

cd

change the working directory.
\$ cd [directory]
\$ cd (change to home directory)
\$ cd some/new/directory
\$ cd - (change to previous working directory)

ls

list directory contents.
\$ ls [flags]
\$ ls -la
\$ ls -lfh

pwd

print name of current/working directory.
\$ pwd

pushd

push the current working directory onto the stack, then change directories.
\$ pushd [dir | +N | -N] [-n]
\$ pushd some/new/directory/

popd

pops the top directory off the stack, and changes to it.
\$ popd [+N | -N] [-n]
\$ popd

dirs

list the directories currently on the stack.
\$ dirs [+N | -N] [-clpv]
\$ dirs

Processes

top

display Linux processes.
\$ top

ps

report a snapshot of the current processes.
\$ ps [options]
\$ ps
\$ ps -aux

fg

run jobs in the foreground.
\$ fg [job_id]
\$ fg (resume suspended process)

bg

run jobs in the background.
\$ bg [job_id...]

kill

terminate a process.
\$ kill [signal] [process id]
\$ kill 68966 \$ kill -SIGKILL 78015

Files

mv

move (rename) files.
\$ mv [OPTION]... [-T] SOURCE DEST
\$ mv oldfilename newfilemane
\$ mv file directory/

cp

copy files and directories.
\$ cp [OPTION]... [-T] SOURCE DEST
\$ cp file newfile
\$ cp -r directory/ newdirectory/

rm

remove files or directories.
\$ rm [OPTION]... [FILE]...
\$ rm filename
\$ rm emptydirectory/
\$ rm -r nonemptydirectory/

mkdir

make directories.
\$ mkdir [OPTION]... DIRECTORY...
\$ mkdir directoryname/

rmdir

remove empty directories.
\$ rmdir [OPTION]... DIRECTORY...
\$ rmdir directoryname/

find

search for files in a directory hierarchy.
\$ find [starting-point...] [expression]
\$ find . -name filename

touch

create file, or update it's timestamp.
\$ touch [OPTION]... FILE...
\$ touch filetocreateorupdate

file

determine file type.
\$ file [filename]
\$ file somefile

which

shows the full path of (shell) commands.
\$ which [options] -- programname
\$ which mv

cat

concatenate files and print on the standard output.
\$ cat [OPTION]... [FILE]...
\$ cat filename

diff

compare files line by line.
\$ diff [OPTION]... FILES
\$ diff file1 file2

echo

display a line of text.
\$ echo [SHORT-OPTION]... STRING
\$ echo hello
\$ echo "hello world!"

grep

print lines that match patterns
\$ grep [OPTION]... PATTERNS [FILE...]
\$ grep "string" filename

chmod

change file mode bits.
\$ chmod [OPTION]... MODE[,MODE]... FILE...

chown

change file owner and group
\$ chown [OPTION]... [OWNER][:[GROUP]] FILE...

Editors

vi

screen oriented (visual) display editor based on ex.
\$ vi [command-line switches] [files ...]
\$ vi filename

emacs

GNU project Emacs editor.
\$ emacs [command-line switches] [files ...]
\$ emacs filename

vim

Vi IMproved, a programmer's text editor
\$ vim [options] [file ..]
\$ vim filename

nano

Nano's ANOther editor, inspired by Pico.
\$ nano [options] [file ..]
\$ nano filename