Quick Unix guide

Unix Conventions

Unix is **case-sensitive**! Unless indicated otherwise type all commands in lower-case. File names and directories are also case-sensitive. Use **CTRL-C** to exit from a running program.

Command-line options.

Command line options are usually of two types:

1. A single – followed a single letter, e.g. `ls - l`
2. Double - followed by 2 letters or more, e.g. `ls --color`

Also command options are case-sensitive.

Help and Documentation

`man` *command* to get help about a command
`man -k keyword` to get a list of commands related to the keyword.

Moving, copying, viewing and deleting files and directories

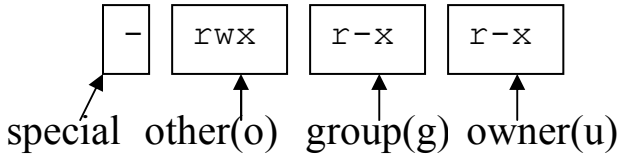
Command	Description	Examples
`ls` or **`dir`**	lists files or directories	`ls -l`
`mv` *filename1 filename2* **`mv`** *filename1 directory*	moves or renames files/directories	`mv prova.pl test.pl` `mv *.txt textdir`
`cp` *filename1 filename2* **`cp`** *filename directory*	copies files or directories	`cp prog1.pl backup.pl` `cp *.pl perl-dir`
`rm` *filename*	deletes files (NO UNDO!)	`rm *.bak`
`rmdir` *directory*	deletes a directory	`rmdir test`
`less` *filename*	views a file	`less blast.txt`
`cd` *directory* **`cd`**	changes to a directory changes to home directory	`cd perl/ex1` `cd`
`mkdir` *directory*	creates a directory	`mkdir datadir`
`pwd`	shows current directory	`pwd`
`wc`	word count; shows no. of words, chars (-c)or lines (-l) in a file	`wc -l output`

Finding files and text within files

Command	Description	Examples
`grep` *string filename*	finds text within a file	`grep ">" gb.fasta`
`find` *directory* –name *filename*	finds a file starting from a specified directory	`find . -name "*.txt"`
`which`	shows pathname of command	`which perl`

File permissions

```
ls -l blast.tar
-rwxr-xr-x  1 aem0 cineca  720 Mar 10:47 blast.tar
```



Change with **chmod**;

chmod u+x *filename*	add execute permission for owner
chmod +w *filename*	add write permission for everyone
chmod u+rw, og-w *filename*	add read, write for owner, remove write for everyone else

Running programs and job control

Command	Description	Examples
perl *filename* *./filename*	-runs a perl program -runs a program assuming it has executable permission	`perl myprog.pl` `./myprog.pl`
jobs	shows programs launched in this shell	`jobs`
ps **ps** -u *username*	-processes running in this shell -all processes running by user *username*	`ps` `ps -u $USER`
kill *pid*	kill job with process id *pid*	`kill 109782`

Redirection and piping

program > *filename*	Direct standard output to *filename*
program < *filename*	Read standard input from *filename*
program < *infile* > *outfile*	Read from *infile* , write to *outfile*
program1 | *program2* e.g **ls -l |wc -l**	*pipe* output of *program1* into input of *program2*

Miscellaneous

Command	Description	Examples
gzip filename **gunzip** *filename*	Compress (“zip”), decompress (“unzip”) files	`gzip -v *.out`
tar <*options*> *filename*..	Create an archive Extract an archive	`tar cvf archive files` `tar xvf` *archive*
date	Current date and time	`date`
exit	logs out	`exit`