

Helpful UNIX Commands

Files

- **ls** --- lists your files
 - **ls -l** --- lists your files in 'long format', which contains lots of useful information, e.g. the exact size of the file, who owns the file and who has the right to look at it, and when it was last modified.
 - **ls -a** --- lists all files, including the ones whose filenames begin in a dot, which you do not always want to see.

There are many more options, for example to list files by size, by date, recursively etc.
- **file** – determine file type.
- **more filename** --- shows the first part of a file, just as much as will fit on one screen. Just hit the space bar to see more or **q** to quit. You can use */pattern* to search for a pattern.
- **vi filename** --- vi is an editor that lets you create and edit a file.
- **mv filename1 filename2** --- moves a file (i.e. gives it a different name, or moves it into a different directory)
- **cp filename1 filename2** --- copies a file
- **rm filename** --- removes a file. It is wise to use the option **rm -i**, which will ask you for confirmation before actually deleting anything.
- **diff filename1 filename2** --- compares files, and shows where they differ.
- **cat filename** --- dumps a file to the screen in ascii
- **less filename** --- similar to more but allows backward as well as forward movement.
- **head filename** --- dumps first few lines of a file to the screen in ascii
- **tail filename** --- dumps last few lines of a file to the screen in ascii
- **wc filename** --- tells you how many lines, words, and characters there are in a file
- **chmod options filename** --- lets you change the read, write, and execute permissions on your files. The default is that only you can look at them and change them, but you may sometimes want to change these permissions. For example, **chmod o+r filename** will make the file readable for everyone, and **chmod o-r filename** will make it unreadable for others again. Note that for someone to be able to actually look at the file the directories it is in need to be at least executable.
- File Compression
 - **gzip filename** --- compresses files, so that they take up much less space. Usually text files compress to about half their original size, but it depends very much on the size of the file and the nature of the contents. There are other tools for this purpose, too (e.g. **compress**), but gzip usually gives the highest compression rate. Gzip produces files with the ending '.gz' appended to the original filename.
 - **gunzip filename** --- uncompresses files compressed by gzip.
 - **gzcat filename** --- lets you look at a gzipped file without actually having to gunzip it (same as **gunzip -c**). You can even print it directly, using **gzcat filename | lpr**

Directories

Directories, like folders in Windows, are used to group files together in a hierarchical structure.

- **mkdir *dirname*** --- make a new directory
- **rmdir** --- remove directory if it is empty
- **rm -r *dirname*** --- recursively remove a directory and its contents (BE CAREFUL!)
- **cd *dirname*** --- change directory. You basically 'go' to another directory, and you will see the files in that directory when you do 'ls'. You always start out in your 'home directory', and you can get back there by typing 'cd' without arguments. 'cd ..' will get you one level up from your current position. You don't have to walk along step by step - you can make big leaps or avoid walking around by specifying pathnames.
- **cp -r** --- copies directory recursively.
- **pwd** --- tells you where you currently are.

Finding things

- **find** --- find files anywhere on the system. This can be extremely useful if you've forgotten in which directory you put a file, but do remember the name.
- **grep *string filename(s)*** --- looks for the string in the files. This can be useful a lot of purposes, e.g. finding the right file among many, figuring out which is the right version of something, and even doing serious corpus work. grep comes in several varieties (**grep**, **egrep**, and **fgrep**) and has a lot of very flexible options. Check out the man pages if this sounds good to you. [and remember: `grep texttofind filetogrep` (use quotes for more than 1 word)]

Processes

- **ps** --- list the current running processes including their Process I.D.
- **ps -ef** --- list full information about each process currently running.
- **ps -u** --- displays all processes running for the current user.
- **kill -s *PID*** --- kill a process using the Process I.D.

Help Pages

- **man *apiname*** --- displays the man page for a given command/function.
- **man -k *search-term*** --- looks up the search term in man and provides suggested commands.
- **apropos *search term*** --- short-cut for man -k.