Useful commands Phil taught me

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Once upon a time, in a happy land called the IoA, there was a PhD student called Phil. He was a very grumpy PhD student, but he had a heart of gold. Often would be heard, echoing around the walls of H27, the plainted cries of: 'read the ****ing man page', 'its in the b****y user guide' (although never the unutterable statement of despair 'ask helpdesk'). As his memory fades into legend, we pause to remember him and I pass on this, his legacy, of useful commands he taught me.

1   Variations on ls

ls -l	lists in long format (useful to alias this as ll)
ls -l | sort -n -k5	list everything in order of increasing size
find . -type d	list everything of type directory in current and sub directories
find . ! -name '*.'	find all files with no extension
find . -name '*.bib'	find all the .bib files in current and sub directories
find . -perm -0001	find all files with the +x permission

2   Unix stuff

man -s1	gets the *real* man page for a command, not the fortran/c library routine, if there are two things by the same name
docrap >& file	put *all* the output from program docrap (including error messages) into file.
ssh -C	turns on compression when using ssh (much faster)

3   Printing etc

lp -d hp4 crap.ps	print crap.ps on printer hp4
lpq -Php4	lists things you have sent to the print queue of hp4
lprm -Php4 11123	deletes the job 11123 from the print queue
mpage -2 -Php4 crap.ps	print crap.ps with 2 pages per A4 page (to print pdf files like this, use 'print to file' which produces a postscript, then use mpage on the postscript. If mpage tells you a ridiculous number of pages, *cancel* the print job (using lprm) as this means it has hacked up
psnup -2 crap.ps | lp -d hp4	same as previous command (use when mpage has hacked up)
a2ps crap.txt	'pretty print' a text file (try it)

4   LaTex etc

dvips -p 1 -l 4 crap.dvi	convert the file crap.dvi to a postscript, but only pages 1 to 4
ps2pdf crap.ps	create a pdf file crap.pdf from a postscript (use with caution, often gets things wrong)
detex | wc	count the number of words in a latex file (nb: thesis < 60000)

5   Things about you and other users

jobs	list all the jobs running from the current shell
kill %1	kill job number 1
kill -9 %1	axe murderer kill, die, destroy job number 1
top	lists all things hogging your cpu
kill 11123	kill job with PID 11123 (PID from top or ps -fu)
ps -fu dprice	lists all the processes being run by dprice on your machine
finger dprice	tells you what dprice is up to
finger @cass77	tells you who is logged onto cass77
last | head	list the last few logins to your machine
prtdiag	tells you diagnostics about your machine

6   Things to do with files

diff file1 file2	tells you the differences between two files
gdiff -u file1 file2	same
grep crap *.f	list all the times the word crap appears in all .f files
tail -100 crap.output	list the last 100 lines from crap.output
tail -f crap.output	list continually any new data written to crap.output

7   How to check whether you have enough disk space

quota -v	tells you your disk quotas and usage. Often broken.
du -s -k *	tells you space occupied by everything (including subdirectories) in current directory

8   Fortran compiler switches (although Phil would never teach such things)

f77 -C	finds all those subscript out of range errors
-O4	optimises your code
-ftrap=overflow	catches floating point overflow errors (try man f77 ftrap for more)
-xtypemap=real:64,double:64,integer:32	compile in double precision

9   The most wonderful commands of all

yes Daniel is a legend	just try it
fortune	print a quote
fortune -m thesis	print all quotes containing the word 'thesis'
banner hello	print hello as a banner (www.figlet.org gives a much better version)

10   Some useful aliases

The format of the alias commands here is for tcsh (something else Phil would never use - try man alias for bash/sh versions).

alias rm rm -i	'safe' rm. To stop it doing this type 'unalias rm'
alias rmtex 'rm *.dvi *.aux *.log *.blg'	get rid of useless LateX files
alias xdvi xdvi -s 14	so xdvi opens with a reasonable size window
alias ls ls -F	
alias ks ls -F	common typo
alias ll 'ls -l'	
alias lstree 'find . -type d'	list all sub- and sub-sub- etc directories
alias lsd 'ls -F | grep '/' '	list all subdirectories
alias lsdir 'ls -l -F | grep '/' '	same but in long format
alias f90pg 'f90 -o \!* \!*\.f -lpgplot -lX11 -lF77'	compile using PGPLOT
alias f77pg 'f77 -o \!* \!*\.f -lpgplot -lX11'	same but for f77
alias vol '/usr/dt/bin/sdtaudiocontrol'	turn the volume down
alias ss xlock -mode random	screen saver
alias xt 'xterm +ls -sb -geometry 80x48 -title crap -n crap'	better xterm
alias lbtex 'latex \!*; bibtex \!*; latex \!*; latex \!*'	when using bibtex