HOW-TO-DO ESSENTIALS (all you need to start in one page)

Unix: You need to know about a dozen commands to function in any operating system. Unix commands are short and mnemonic and very natural. Most of them take various -flags to modify their action. In general, `command -h` shows the usage (syntax) and `man command` will tell you more than you want to know! Here is a list of the essential commands:
`ls` = list
`cp` = copy
`mv` = move, rename `cd` = change dir
`rm` = remove (delete)
`lpr` = print file
`vi` = visual editor (the standard Unix editor, see below)
`more` = display a file page-by-page
`mkdir` = make dir
`rmdir` = remove dir
`man` = manual (help) on a command
`chmod` = change mode of file (set permissions)
`logout` = log off the machine
`ssh` = log on to another machine (secure shell)
`scp` = (secure cp) copy files between machines
`~` refers to home dir, `.` to current dir, `..` to parent dir. There are hundreds of other commands, type: `xman` to see!
vi Editor: There are many commands and customizations for vi editor. These are the most essential.
`vi filename` starts vi on the file, you'll be in command mode
`ZZ` write (save) and exit `:q!` quit (exit) without saving
`h, j, k, l` move cursor left, down, up, right
`H` to top of page `L` to bottom of page
`^F` page forward `^B` page backward
`1G` to top of file `G` to bottom of file
`i` insert ...ESC `a` append (after cursor) ...ESC
`o` open new line ...ESC `O` open new line above cursor...ESC
`x` delete character `dw` delete word `dd` delete line
Zip/Unzip: Best compress/archive utility. (`zip file.zip file1 file2 file3` , `unzip file.zip`). Useful flags:
`zip -oyz file.zip file1 file2 file3` preserves date, skips links, asks for comment
`zip -oyz9mr dirname.zip dir` also -m: deletes zipped files -r: recurses into subdir's
`unzip -l file.zip` lists the zipped files
Run a Fortran / C code: The standard input/output device is the screen, unless redirected.
`gfortran code.f90` compile Fortran code.f90 and produce executable a.out (`gcc code.c` to compile code.c)
`a.out` will read and write to the screen, but
`a.out < dat` will read from "dat" and write to screen
`a.out < dat > out` will read from "dat" and write to "out".
Plotting: Simplest, nicest (and free) plotting tool ever is: gnuplot
Start gnuplot with: `gnuplot`, then do: `help plot` , `help set`
Everything is on line, nothing to remember !!! Try this:
`gnuplot> plot [-4:4] sin(pi*x), cos(pi*x/2) with points`
You can get a Windows version for your PC from `http://ftp.gnuplot.info/pub/gnuplot/`
X Windows: Each window is an "xterm", emulating a terminal. A window manager (such as gnome) manages all the windows and the mouse. Can be customized. The greatest thing about X is that you can run on a remote machine and display its output on your screen! We'll learn how...
Email: (too primitive by today's standards, but simple and always availabe) `mail <Enter>` invokes local mail. Commands within "mail" (at $ prompt):
`h` = headers (current msg is indicated by `>` in 1st column)
`p` = print current msg on the screen
`r` = reply to the current msg
`d` = delete current msg
`s` = save current msg to a file
`r` = read a file into msg (when composing a msg)
`v` = vi the current msg
`q` = quit mail
