Who should attend the workshop?

* Zero Linux experience
* Would like to use Linux in the future

Before you attend the workshop

* And install ANU VPN – GlobalProtect on your laptop (see tutorial here <https://servicedesk.anu.edu.au/kb_view.do?sysparm_article=KB0011644>). And make sure you have the access to the VPN by trying to connect to the ANU intranet through VPN, if you don’t have the VPN access, make an enquiry though ANU Service Now website, then the IT people can solve the issue for you.
* Windows users, use Command Prompt.
* For Mac users, use Terminal.

Contents of this workshop

Day 1 – basic commands

* Navigating through directories (ls/cd/pwd/mkdir)
* Explain ls more, bc it is very useful (ls -etc/ll)
* Remove empty directories (rmdir)
* Create, delete, move, copy files (touch/rm/mv/cp)
  + cp -r for copy folders and subfolders
* Rename files/directories (mv)
* Remove not empty directories (rm -r)
* Text editors (nano/vim, explain a bit more but not too detailed)
* Display files (cat/head/tail/more/less etc)
  + Data: LittleWomen.txt
  + more – down arrow displays one screen length
  + less – down arrow displays one more line, can scroll backwards
    - u up one screen
    - d down one screen
    - g NUM go to line NUM
  + q to exit
* Download something from the web (wget/scp)
* Redirecting output
  + >
  + <
  + >>
  + |
* Sequence of numbers (seq)
  + Example seq 1 1 100
* Command histories (history/↑)
* Kill processes (ctrl + c)
* Tab to complete the filename

Day 2 – play with file contents (txt files & fastq files ??, maybe both!)

* Finding things (grep/sed)
* Count words for text file (wc)
* Sort contents in text file (sort/shuf)
* Cut/uniq
* \*/?
* history
* Manual & Link (man/ln)
* Loops??
* basename

Day 3 – Genome Analysis?? Some useful examples

Day 4 – SLURM & batch processing

Miniconda, install things, make a new environment, never install anything in base,

Reproducibility, portability

encapsulate the environment

NCBI

References

Andrew Severin – <https://bioinformaticsworkbook.org/Appendix/Unix/unix-basics-1.html#gsc.tab=0>

Software Carpentry – <https://swcarpentry.github.io/shell-novice/>