

## CA170: Week 2

### Intro to Unix

#### Terminal

- Command-line keys:
  - Ctrl-C - interrupt program
  - Ctrl-A - Home
  - Ctrl-E - End
  - Command line shortcuts
  - clear - clear screen
- ls
  - ls
  - ls -l
  - echo \* (all normal, non-hidden files and dirs)
  - ls -l \* (if dir, will display contents)
  - ls -ld \* (if dir, display name not contents)
- hidden files
  - ls -a
  - ls -al
  - echo .\* (all hidden files)
  - echo .\* \* (all files)
  - ls -l .\* (don't need -a if going to actually name the hidden files)
  - ls -ld .\*
- environment variables
  - set
  - set > file.txt
  - env
  - env | sort
  - echo HOME - the string "HOME"
  - echo \$HOME - the global (environment) variable HOME
  - PATH = list of dirs searched for command when you type a command, separated by colons (:)
  - SHELL = shell we are using (default here is bash)
- Shared, multi-user, file system:
  - HOME = something like:  
/users/yourgroup/yourusername
  - My test account is here:  
/users/tutors/mhtest15
- current and parent dirs
  - . (current dir)
  - Example: When was the last change to the current dir:  
ls -ld .
  - .. (parent dir)
- cd
  - go home: cd
  - go up to parent dir: cd ..
  - go back to last dir: cd -

- command history
  - up/down arrows
  - history
  - h (alias)
  - !n - repeat command n
  - !string - repeat last command that began with string
  - !c - repeat last command that began with character c
  - !! - last command

## Disk Quota

- You have 500 M disk quota.
- quota
- quota -s
- If you get "Disk quota exceeded"
  - You need to delete some files.
  - To see which dirs are taking up room:
  - `du | sort -n`
- MetaTracker uses disk space
  - A program called MetaTracker may be using a lot of your disk space.
  - MetaTracker uses a directory \$HOME/.cache
  - This is safe to delete:
    - `cd`
    - `rm -r .cache`
  - See now instruction in default .bashrc that removes .cache for each new shell.
  - If .cache will not delete because MetaTracker is running:
    - Use ps to find "tracker" processes and kill them.
    - Then remove .cache
- Wine uses disk space
  - Another program that uses a lot of disk space is Wine.
  - `cd`
  - `rm -r .wine`

## Shakespeare

- For testing manipulation of data with Linux commands, it helps if we have some data to manipulate.
- So I have installed the works of Shakespeare to use for testing.
- I downloaded the works of Shakespeare from the free eBooks site at the University of Adelaide.
- This has now closed. There are old copies in the Internet Archive:
  - Shakespeare page
  - ZIP file
- I have a copy on the shared file system here:
  - `/users/tutors/mhtest15/share/shakespeare`
- You can "cd" to this directory.

- How to view these local web pages:
  - These web pages are not on the web.
  - You can still view these local files through a web browser, using this URL:
  - `file:///users/tutors/mhtest15/share/shakespeare/home.html`
  - You will have to paste the URL into your browser address bar. Modern browsers do not allow links from `http://` to `file://` for security reasons.
- Once you are in `file://` mode, you can follow links from `file://` to `file://`
- Or `cd` into my directory, and:  
`firefox home.html &`
- I am sharing these through the shared file system, not through `http`.
- Permissions need to be something like:
  - `drwx--x--x`      `/users/tutors/mhtest15`
  - `drwxr-xr-x`      `/users/tutors/mhtest15/share`