an introduction to Linux

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there’s a lot to Linux!

- it’s natural to feel overwhelmed!
  - Linux is a vast system comprised of many programs, features and modules; even advanced users do not know every aspect of the system in detail, and there’s always something new being developed or changed!
  - the best way to feel comfortable with Linux is to use it regularly; it’s the sort of activity that requires “seat time” to become adept (10000 hours to achieve “expert” status!)
- we will begin by gaining some familiarity with frequently used commands and working with the file system
- I recommend that you *use* Linux in your daily computer work; switch over to Linux (rather than Windows or Mac OS) for the duration of the class!

basic commands

- recall that the primary interface between a user and the Linux kernel is the *command line*, furnished through the Linux command-line interface (CLI) (sometimes called the command-line interpreter)
- to access the CLI, you need to open a t*erminal window*; right-click on your homescreen and select “terminal”
- when the terminal window opens, you are greeted by a *command prompt*, which is a character string, usually followed by a colon (often, the machine name and your user login will appear as part of the prompt character)
- we will use “$” to denote the command prompt in these slides

basic commands cont’d

- $ date
- $ whoami
- $ pwd
- $ ls [-la] # the -la is optional (so placed in [ ])
- $ cd
- $ touch
- $ cp
- $ rm [-r] # be careful!
- $ mv
- $ man

more commands

- $ apt --help
- $ sudo
- $ sudo apt update
- $ sudo apt install [package-name]
- $ find -name / [string] # locates filesystem objects containing “string”
- $ nano # a simple text editor
- $ ssh [IP address] -l [login name]
- $ ssh 192.168.7.2 -l debian # when your Beaglebone is connected
- $ top
- $ ps [-aux]

more commands still...

- $ chmod # used to set file permissions
  - $ cd ~/Documents
  - $ sudo touch myfile.txt
  - $ sudo echo “just a string for myfile.txt” >> myfile.txt
  - $ sudo echo “adding a bit more information” >> myfile.txt
  - $ ls -l myfile.txt
  - $ echo “let’s add a bit more data” >> myfile.txt
  - # what happens?
  - $ chmod go+rwx myfile.txt
  - # try it again… what’s different?
- $ sudo adduser [user_login] # a login is conventionally all lowercase, no whitespace! Speaking of whitespace, what is it?
- $ sudo visudo # BE CAREFUL!