CST 334 (Operating Systems)

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# Lab: How bash works

Get access to a Linux machine (mlc104, your own machine, cloud9, etc.), and then answer the following questions.

1. Is the ls command part of bash itself?
2. What happens if you type ‘which ls’?
3. Is the ‘cd’ command part of bash itself? What happens if you type ‘which cd’?
4. Try moving around on the command line:
   * at the command prompt, type ‘mar bash’, but don’t hit enter
   * go to the beginning of your command, using ctrl-a
   * go the end of the command, using ctrl-e
   * go back to the beginning, then move forward using ctrl-f
   * replace the ‘r’ in ‘mar’ with ‘n’, and hit enter
5. If you create a new command ‘my\_cmd’, can it be invoked through bash?
6. Name a command-line interpreter you’ve used besides bash.
7. Try command line completion:
   * at the command prompt, type ‘ls /usr/b’, but don’t hit enter
   * hit tab to complete the directory name, then hit enter
   * type ‘cd /usr/’, but don’t hit enter
   * hit tab -- what happens?
   * type ‘l’, then hit tab -- what happens?
8. Is ‘bash’ itself a command? Try running command ‘bash’ while using bash. What happens?
9. Run command ‘ps’. What processes are shown?
10. Try using the command line history:
    * change to the root directory (which is just ‘/’)
    * type ‘cd’ and hit enter -- where are you now in the directory tree?
    * type ctrl-p -- what do you see?
    * type ctrl-p a few more times and notice what happens
    * now type ctrl-n and notice what happens
    * keep typing ctrl-n until nothing changes -- where are you in the command history now?
    * type ctrl-r, then type ls (don’t hit enter)
    * now type ctrl-r a few more times -- what happens?
11. If you still have time, check out 'Bash Guide for Beginners' at tldp.org. You may also lie vikingcodeschool.com. If you already have lots of bash experience, you can check out the 'Advanced Bash Scripting Guide' at tldp.org, or the bash man page.