


CIS-350
Infrastructure Technologies
Group Lab 4 Report




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Though this is a Group Lab 4 Report, you must work this hands-on Lab 4 individually.

After you do that, get in groups, discuss and provide answers to the following problems, and submit this report, one per group, to Blackboard. When you work Lab 4 hands-on, you are likely to do better on Test 3 which will cover the operating systems part of the course.

You must login to your Ubuntu Linux account on the Mercury server and work all of the commands in file  [CIS-350-Lab4-Linux Command Prompt.pdf](#). If you follow the Lab 4 instructions carefully, you should have all the required directories and files stored in your Linux home directory (/home/your_login_name; for example, /home/jmzura01). After you submit Group Lab 5 Report (the last one), I will log in to the Linux account of every student to check if the hands-on work was done for Labs 3-5. If I do not see any activity you will get 0 out of 50 points. If I see partial activity, you will earn between 0 and 50 points. If I see full activity, you will get 50 points. No excuses please and no makeup work.

NOTE 1: Linux commands, filenames, options, etc. are **case sensitive**. The vast majority of them is written in **lower case**. For example, filenames John, JOHN, and john represent three different files.

NOTE 2: You should find the answers to all questions below in the documents named  [CIS-350-Lab3-Linux Command Prompt.pdf](#),  [CIS-350-Lab4-Linux Command Prompt.pdf](#),  [CIS-350 Unix-Linux Features, Commands and Utilities.pdf](#), and the recorded demo of Labs 3-5 and on Panopto and/or MS Teams.

Circle the correct answer.

1. Which of the following commands would you use to create a new file named *LastNames* using a *nano* editor?

- a. *pico lastnames*
- b. *pico LastNames*
- c. ***nano LastNames***
- d. *emacs LastNames*
- e. *vi LastNames*

2. Which of the following commands would you use to modify a file named *FirstNames* using a *vi* editor?

- a. *pico firstnames*
- b. *pico FirstNames*
- c. *nano FirstNames*
- d. *emacs FirstNames*
- e. ***vi FirstNames***

3. If you compile a C program named *Prog5.c* with the command *cc Prog5.c*, what will the default name of the object code be if compilation is successful?

- a. ***a.out***
- b. *out.a*
- c. *Prog5.out*
- d. *./a.out*
- e. *Prog5.c*

4. Which of the following commands would you use to compile program *Prog1.c* written in C language?

- a. *cc Prog2.c*
- b. ***cc Prog1.c*** or ***gcc Prog1.c***

- c. `c Prog1.c`
- d. `./Prog1.c`
- e. `cc Prog1.cc`

5. Which of the following commands would you use to display the directory in a long form, including invisible files? Use piping to prevent the listing to scroll off the screen.

- a. `ls`
- b. `ls | more`
- c. `ls -al`
- d. `ls -al | more`
- e. `ls -l | more`

6. Which of the following commands would you use to sort in the descending order the data coming from a file named *LastNames* and redirect (route) the output to a file named *LastNamesSorted*? Execute the command in foreground.

- a. `sort -r > LastNames > LastNamesSorted`
- b. `sort -r < LastNames > LastNamesSorted &`
- c. `sort -r < LastNames > LastNamesSorted`
- d. `sort < LastNames > LastNamesSorted`
- e. `sort < LastNames >> LastNamesSorted &`

7. Which of the following commands would you use to sort in the ascending order the data coming from a file named *LastNames* and append the output to a file *LastNamesSorted*? Execute the command in background.

- a. `sort > LastNames >> LastNamesSorted`
- b. `sort < LastNames >> LastNamesSorted &`
- c. `sort -r < LastNames > LastNamesSorted &`
- d. `sort < LastNames < LastNamesSorted`
- e. `sort -r < LastNames >> LastNamesSorted &`

8. Which of the following commands would you use to grant yourself (the owner) the read authority and write authority and deny execute authority to a file named *LastNames*?

- a. `chmod u+rwX LastNames`
- b. `chmod u+r-wX LastNames`
- c. `chmod a+r-wX LastNames`
- d. `chmod o+r-- LastNames`
- e. `chmod u+rw-x LastNames`

9. How would you use the *alias* command to change the name of the *ls* command to the name *list* for the current log in session?

- a. `alias ls=list`
- b. `alias list=ls`
- c. `ls=list`
- d. `list=ls`
- e. `change ls to list`

10. What is the sequence of the two commands/keys that you would use to start (record) and end your interactive session with Linux, and save it in a file named *LinuxLab4*?

- a. Type `script LinuxLab4` (to start) and hit `CTRL-D` to end.
- b. Hit `CTRL-D` (to start) and type `LinuxLab4` to end.

11. Which of the following commands would you use to display the terminal control-key settings?

- a. `stt -a`
- b. `st -a`
- c. `stty -a`

- d. `a -stty`
- e. `script -a`

12. Which of the following commands would you use to display a banner for *Mary*?

- a. `demonstrate Mary`
- b. `display Mary`
- c. `show Mary`
- d. `banner Mary`
- e. `present Mary`

13. What command would you use to compile a C program named *Prog3.c* and save an object file (if compilation is successful) in a file named *Prog3.out*?

- a. `cc -o Prog3.out Prog3.c`
- b. `cc Prog3.c`
- c. `gcc Prog3.c`
- d. `./Prog3.c`
- e. `cc Prog3.cc -o Prog3.out`

14. What sequence of the following steps/commands is needed to move a task/process already running in foreground to background?

- a. hit `Ctrl-C` (to kill) and type `bg`
- b. type `bg` and hit `Ctrl-Z` (to suspend)
- c. hit `Ctrl-Z` (to suspend) and type `bg`
- d. hit `Ctrl-U` (to kill) and type `bg`
- e. type `bg` and hit `Ctrl-C` (to kill)

15. Say, that Linux assigned a job/task id number = 3 to the task running in background. What command would you use to move that task/process from background to foreground?

- a. `fg 2`
- b. `fg 1`
- c. `fg 3`
- d. `fg 4`
- e. `fg 5`

16. Which of the following combination of keys would you press to erase (kill) the entire command on the command line?

- a. `Ctrl-S`
- b. `Ctrl-Q`
- c. `Ctrl-Z`
- d. `Ctrl-U`
- e. `Ctrl-X`

17. Which of the following commands displays the process status?

- a. `sp`
- b. `ls`
- c. `man`
- d. `ps`
- e. `cp`

18. Which of the following commands would you use to put a shell to sleep for 30 minutes hour?

- a. `sleep 1`
- b. `sleep 1800`
- c. `sleep 60`

- d. sleep
- e. sleep 40

19. Which of the following commands identifies and displays users currently logged on into the Linux system?

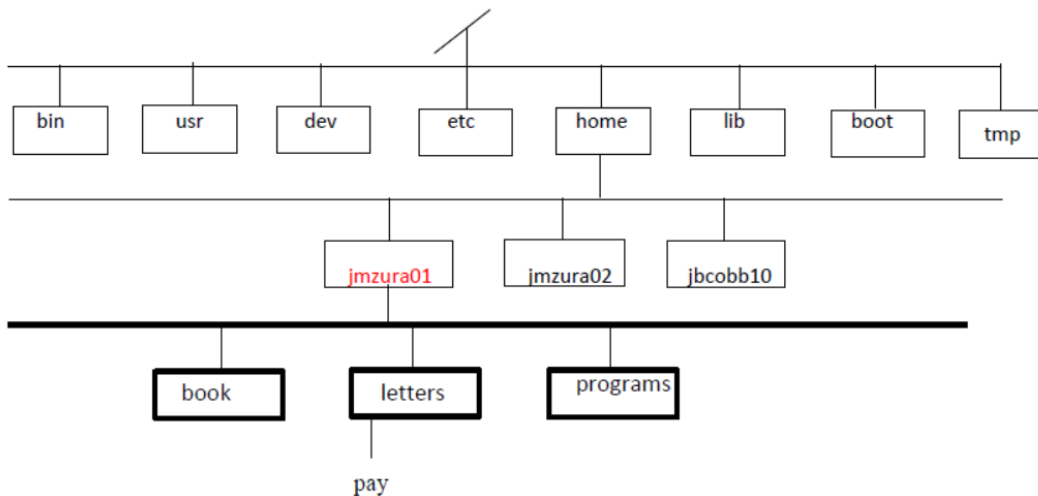
- a. *who am i*
- b. **who**
- c. *date*
- d. *ls*
- e. *ps*

20. The root directory in Linux is denoted by _____.

- a. \ (backslash)
- b. \$
- c. &
- d. / (slash)
- e. %

21. Look at the Linux directory diagram below. The correct absolute path leading to a file named *pay* residing in the *letters* directory is _____.

- a. */programs/pay*
- b. */home/jmzura01/programs/pay*
- c. *letters/pay*
- d. */home/jbcobb01/programs/pay*
- e. ***/home/jmzura01/letters/pay***



22. Look at the Linux directory diagram above. The correct relative path leading to a file named *pay* residing in the *letters* directory is _____. (Assume that you are already in directory *jmzura01*.)

- a. */programs/pay*
- b. */home/jmzura01/programs/pay*
- c. ***letters/pay***
- d. */home/jbcobb01/programs/pay*
- e. */home/jmzura01/letters/pay*

23. Which of the following Linux directories stores device drivers?

- a. *tmp*
- b. *bin*
- c. *lib*
- d. *dev*
- e. *etc*

24. Which of the following are the features of Unix/Linux?

- a. device independence
- b. portability
- c. powerful interface
- d. asynchronous I/O
- e. All the above

25. UNIX/Linux distinguishes between upper case and lower case, so "A" and "a" are different.

- a. True
- b. False

26. The get to the C shell you need to type *ksh* and press Enter.

- a. True
- b. False

27. What commercial or open version of Linux you have been using in this lab?

- a. RedHat
- b. Debian
- c. Ubuntu
- d. Gentoo
- e. X Windows

28. What is the name of the default shell that you have logged into in this lab?

- a. Korn shell
- b. C shell
- c. Bourne shell
- d. Bourne Again shell or Bash shell
- e. Joy shell

29. What is the name of the server on which Ubuntu Linux is running?

- a. Mercury
- b. Virtual Desktop
- c. PuTTY
- d. Horizon
- e. VMWare

30. Describe briefly which commands did not work and/or which places in the tutorial need improvement/clarification.
