

**CIS-350**  
**Infrastructure Technologies**  
**Lab 4 Report**

**Student Name: Jacob Forcht**

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 *pico* 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 *Prog2.c* with the command *cc Prog2.c*, what will the default name of the object code be if compilation is successful?

- a. *a.out*
- b. *out.a*
- c. *Prog2.out*
- d. *./a.out*
- e. *Prog2.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 ascending 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 > LastNames > LastNamesSorted`
- b. `sort < LastNames > LastNamesSorted &`
- c. `sort < LastNames > LastNamesSorted`
- d. `sort < LastNames < LastNamesSorted`
- e. `sort < LastNames >> LastNamesSorted &`

7. Which of the following commands would you use to sort in the descending 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 deny write and 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-r+wx 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. `banner Mary`
- b. `display Mary`
- c. `show Mary`
- d. `demonstrate 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 = 1 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 1 hour?

- a. *sleep 1*
- b. ***sleep 3600***
- 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?

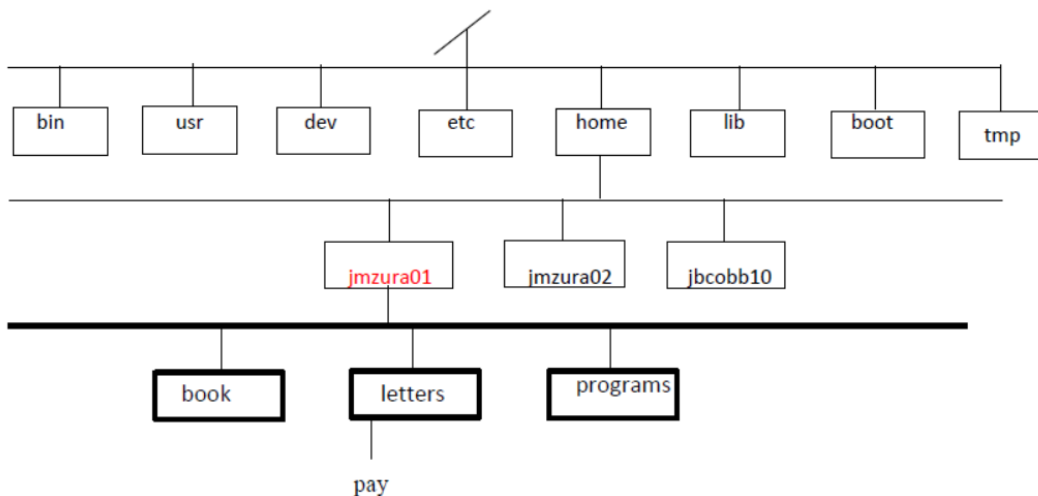
- a. *who am i*
- b. ***who***
- c. *date*
- d. *ls*
- e. *ps*

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. Linux is an essential component of the course. By putting my full name below, I testify that I actually logged in to the Ubuntu Linux and worked the commands on the Ubuntu Linux system, not just answered the above questions on paper. I acknowledge that I will lose points for not working the lab in Linux.

Jacob William Forcht

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

It worked fine