CIS-350
Infrastructure Technologies
Solution to Lab 4 Report

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/Highlight 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 <u>append</u> the output to a file *LastNamesSorted*? Execute the command in <u>background</u>.
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 <u>yourself</u> (the owner) the <u>read</u> authority and <u>deny</u> <u>write</u> and <u>execute</u> 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 <u>current</u> 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 <u>start</u> (record) and <u>end</u> 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?
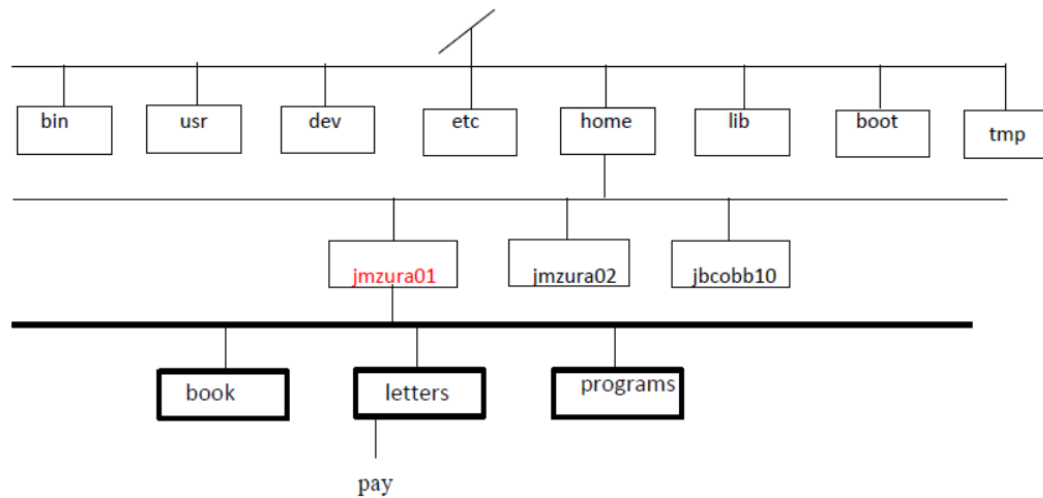a. *who am i*
b. *who*
c. *date*
d. *ls*
e. *ps*

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 underline 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
<mark>*e. /home/jmzura01/letters/pay*</mark>

22. Look at the Linux directory diagram above. The correct <u>relative</u> 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
<mark>c. letters/pay</mark>
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
<mark>*d. dev*</mark>
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
<mark>e. All the above</mark>

25. UNIX/Linux <u>distinguishes</u> between upper case and lower case, so "A" and "a" are different.
<mark>a. True</mark>
b. False

26. The get to the C shell you need to type *ksh* and press Enter.
a. True
<mark>b. False</mark>

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