**CIS-350  
Infrastructure Technologies  
Lab 3 Report**

**Student Name**: **\_\_\_\_\_\_\_\_\_\_Jon McCarrick\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**The total number of points granted for this lab is 50. The answers to 25 questions in this Lab 3 Report are worth 25 points. The other 25 points you earn for the hand-on work in Ubuntu Linux. You must login to your Ubuntu Linux account on the Mercury server and work all of the commands in file** [[File](https://blackboard.louisville.edu/bbcswebdav/pid-18728621-dt-content-rid-66716967_2/xid-66716967_2) *CIS-350-Lab3-Linux Command Prompt.pdf*](https://blackboard.louisville.edu/bbcswebdav/pid-18728621-dt-content-rid-66716967_2/xid-66716967_2). **If you follow the Lab 3 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). I will go the Linux account of every student to check if the hands-on work was done. If I do not see any activity you will get 0 out of 25 points. If I see partial activity, you will earn between 0 and 25 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 [[File](https://blackboard.louisville.edu/bbcswebdav/pid-18728621-dt-content-rid-66716967_2/xid-66716967_2) *CIS-350-Lab3-Linux Command Prompt.pdf*](https://blackboard.louisville.edu/bbcswebdav/pid-18728621-dt-content-rid-66716967_2/xid-66716967_2), document named [[File](https://blackboard.louisville.edu/bbcswebdav/pid-19082872-dt-content-rid-66599265_2/xid-66599265_2) CIS-350 Unix-Linux Features, Commands and Utilities.pdf](https://blackboard.louisville.edu/bbcswebdav/pid-19082872-dt-content-rid-66599265_2/xid-66599265_2), and the recorded demo of Labs 3-5 and on Panopto and/or MS Teams.

1. What command displays your working directory? \_\_\_\_\_\_\_\_\_\_pwd\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. What command moves you to the parent directory? \_\_\_\_\_\_\_\_cd ..\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. What command moves you to the root directory from anywhere? \_cd/\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. What command moves you to your home directory from anywhere? \_\_\_\_\_\_\_\_\_\_cd\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. What command displays all files and directories in a long form and includes invisible files? \_\_\_\_\_\_ls -la\_\_\_

6. What command displays the contents of file *Andy*? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_cat Andy\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. What command allows you to get the manual on-line help on the *ls* command? \_\_\_\_man ls\_\_\_\_\_\_\_\_\_\_\_\_

8. What command would you use to sort data in the ascending order coming from file *MyData* and redirect (route) the sorted output to file *MyDataSorted*? (Watch the lower and upper case!) \_\_\_\_\_\_\_\_\_\_\_\_sort -o MyData > MyDataSorted\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Display the content of the directory in a long form. Include invisible files and protect the directory list from scrolling off the screen. \_\_\_\_\_\_\_\_\_\_\_more ls -la\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. What command would you use to open the *nano* editor to create file *students*? \_\_\_\_nano students\_\_\_\_

11. What command would you use to open the *vi* editor to create file *KIM*? \_\_\_\_\_\_\_\_\_\_\_vi KIM\_\_\_\_\_\_\_\_\_\_\_

12. What command would you use to remove the directory *letters*? \_\_\_\_\_\_\_\_\_\_rmdir letters\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. What command is used to change the password? \_\_\_\_\_\_\_\_\_\_passwd\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. What does the command *cat students > letters* do? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_This command takes the file contents of students and routes the output to letters\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15. Assume that your home directory is your login directory. Write a command that

(a) creates directory named *mary3* in your home directory

\_\_\_\_\_\_\_\_\_\_\_\_\_mkdir mary3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(b) copies all files with extension *cc* from your home directory to the *mary3* directory

\_\_\_\_\_\_\_\_\_\_\_\_cp /home/\*.cc /home/mary3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(c) changes your home directory to the *mary3* directory

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_cd mary3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16. Describe briefly what does a command *cat tom1 | sort* do.

\_\_\_\_\_A cat tom1 command would display the file contents of the subdirectories tom1. The |sort part of the command takes that output and inputs it into the sort command which orders it alphabetically (or numerically). Then it is output onto the screen.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. Look at the Linux directory diagram below. Circle the correct absolute path to file *prog1*?  
a. /home/jmzura01/programs/prog1 b. /home/jmzura02/letters/prog1  
c. /home/jmzura01/letters/prog1 d. /home/jmzura01/letters/pay  
e. programs/prog1





18. Look at the Linux directory diagram above. You are already in directory *jmzura01*. Circle the correct relative path to file *prog1*?  
a. /home/jmzura01/programs/prog1 b. /home/jmzura02/letters/prog1  
c. /home/jmzura01/letters/prog1 d. /programs/prog1  
e. programs/prog1



19. You have typed the command *ls -al*, pressed Enter key, and the first 10 characters are displayed as

– r w x r - - - - - indicating the file type and file access permissions. Circle the correct access permissions for the owner?

a. – b. r w x c. r - - d. - - - e. r w –



20. The link (*ln*) command does not copy a file; it merely assigns another name to the same file by creating a new directory entry. Circle the correct answer.

a. True b. False



21. What commercial or open version of Linux you have been using in this lab? Circle the correct answer.  
a. RedHat b. Debian c. Ubuntu d. Gentoo e. X Windows



22. What is the name of the default shell that you have logged into in this lab? Circle the correct answer.  
a. Korn shell b. C shell c. Bourne shell d. Bourne Again shell or Bash shell  
e. Joy shell



23. What command do you use to log off from Linux? Circle the correct answer.

a. CTRL-U b. end c. logout or exit d. finish e. terminate



24. Unix was created in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Circle the correct answer.

a. 1980’s b. 1970’s c. 1960’s d. 1990’s e. 2000’s



25. Linux was created by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Circle the correct answer.

a. Ken Thompson b. Dennis Ritchie c. Bill Joy d. Brian Kernighan  
e. Linus Torvalds



26. 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.

\_\_\_\_\_Jon McCarrick\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_