**CIS-350  
Infrastructure Technologies  
Lab 5 Report**

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**The total number of points granted for this lab is 50. The answers to 20 questions in this Lab 5 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-18728627-dt-content-rid-66730975_2/xid-66730975_2) CIS-350-Lab5-Linux Command Prompt.pdf](https://blackboard.louisville.edu/bbcswebdav/pid-18728627-dt-content-rid-66730975_2/xid-66730975_2). **If you follow the Lab 5 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 documents named [[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), [[File](https://blackboard.louisville.edu/bbcswebdav/pid-18728624-dt-content-rid-66730972_2/xid-66730972_2) CIS-350-Lab4-Linux Command Prompt.pdf](https://blackboard.louisville.edu/bbcswebdav/pid-18728624-dt-content-rid-66730972_2/xid-66730972_2), [[File](https://blackboard.louisville.edu/bbcswebdav/pid-18728627-dt-content-rid-66730975_2/xid-66730975_2) CIS-350-Lab5-Linux Command Prompt.pdf](https://blackboard.louisville.edu/bbcswebdav/pid-18728627-dt-content-rid-66730975_2/xid-66730975_2), [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 does the *echo $SHELL* command do? Describe briefly.

It allows to find out which shell is the login shell.

1. What command would you use to output the directory listing (in a long form and including invisible files) to both the computer screen and file *Names* at the same time?

ls -al | tee Names

1. Assume file *Names* contains several spelling errors. What command would you use to find these errors in the file? spell Names
2. Assume that you created a script file named *displaymenu*. What command would you use to execute the script file? ./displaymenu
3. What command would you use to display the first 5 lines in file *Prog2.c*? head -5 Prog2.c
4. What command would you use to display the calendar for year 2021? cal 2021
5. What command would you use to put a shell to sleep for 50 seconds? sleep 50
6. What would the command *wc -w Names* generate? (*Names* is a file.)

It displays the number of words in the file named Names.

1. What command would you use to find all occurrences of word *Joe* in file *Names*?

grep Joe Names

1. What command displays the current date? \_\_\_\_date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What command clears the screen? \_\_\_\_clear\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What does a command *chmod u-w+rx designmenu* do? Briefly describe.

It changes the permissions of the owner, -w is to deny the write permission of the file named designmenu, and +rx is to grant permission to read and execute this file.

1. What command allows the user to check Linux environment, i.e., how environmental variables are set up? \_\_\_\_\_\_\_env\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What command is derived from the physical device called T-joint attached to a water pipe, for example? (The T-joint lets water out from one source to two outlets.) \_\_\_\_\_\_\_\_tee\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What command allows you to change the Linux level 1 prompt? \_\_\_PS1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What are the two modes that the *vi* editor uses? Command Mode and Input Mode
5. The *ls –al designmenu* command displayed the following attributes of file *designmenu*. Describe **all** attributes of file *designmenu*, including the 3 groups of users, access permissions given to each of the 3 groups of users and the permission types, the name of the owner, size of the file, date, and the name of the file.  
   *- r w x r - x - - - jacobb02 850 Mar 13 12:30 2021 designmenu*The owner permission types are read, write and execute.

The group permission type is read and execute.

Other users don’t have permission to this file.

Name of the owner: jacobbo2

The size of the file is 850 bytes.

The date of this file: Mar 13 12:30 2021.

The name of this file: designmenu.

1. Look at the Linux directory structure below. Write an absolute path that starts at the root directory (**/**) and leads to file *pay*? \_/home/jmzura01/letters/pay\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. Look at the Linux directory structure above. Assume that your current directory is *home*. Write a relative path that leads to file *pay*? \_\_jmzura01/letters/pay\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 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.

\_Xiaoyin Druen\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Describe briefly which command(s) did not work and/or what places in the lab could be improved.

Two commands did not work in this lab.

1.When tried to have ~$ back, it switched back to my user id but the $ was not there. I compared the instruction and my command, but I couldn’t figure out what was wrong. Maybe it is because $ is missing in the command?

Text

Description automatically generated

*Text

Description automatically generated*

2.The spell command did not work on my end.