CIS 90 Linux Lab Exercise

Lab 2: Using Commands
Spring 2012

Lab 2: Using Commands

The purpose of this lab is to explore command usage with the shell and miscellaneous UNIX commands.

Forum

Browse to: http://opus.cabrillo.edu/forum/viewforum.php?f=46

Check the forum for any late breaking news about this lab. The forum is also the place to go if you get stuck, have a question or want to share something you have learned about this lab.

Procedure

This lab must be done on Opus to get credit

Please log into the Opus server using your personal account. You will need to use the following commands in the steps below.

banner	clear	finger	passwd	whatis
bash	date	history	ps	who
bc	echo	id	type	
cal	exit	man	uname	

For grading purposes your command history along with your answers to three questions will be submitted at the end of the. Your command history will be scanned to verify each step below was completed.

The Shell

1. What shell are you currently using? What command did you use to determine this? (Hint: We did this in Lab 1)

2. Use the following commands as arguments to the **type** command, to find out where each of the commands resides.

```
cmd  argument
type  man
type  uname
type  tryme
type  echo
type  type
```

3. Use the **echo** command to find the values of each of the following shell variables.

    ```
    echo $HOME
    echo $TERM
    echo $LOGNAME
    echo $PS1
    echo $SHELL
    echo $PATH
    ```

4. Set the TERM environment variable to "dumb", and execute the **clear** command. What does it do? Use **echo $TERM** to see the new setting. Set TERM to "vt100" or "ansi" What happens?

    ```
    TERM="dumb"
    TERM="ansi"
    ```

    Set the TERM environment variable back to "xterm" which is what it was when you logged in.

5. What happens when you enter the following commands? Why?

    ```
    DATE
    Date
    date
    ```

6. What results do you get from the command: **who -g** What program outputs this message?

7. Enter each command below and observe the results. How many arguments does each of the following command lines have?

    ```
    echo one    two        threefour
    echo "My TERM type is" $TERM
    echo one.two.three
    ```

8. What is the difference in output between the following two commands? Note, the $ and > are part of the prompt, you don't need to type them.

    ```
    $ echo red 'white
    > and blue'
    ```

    and

    ```
    $ echo red white \
    ```

> **and blue**

Note: the [enter] key is pressed immediately after the last character of each line.

9. Use the shell metacharacter ";" to write out a one line command that will clear the screen, print out the date and the current month's calendar.
    $ _____

Commands

10. If you have not already done so, use the **passwd** command to change your password. Name three things you should never do with your password:

    1._____

    2._____

    3._____

11. Use a single **uname** command with the necessary options to display ONLY the *network node hostname,* the *kernel release* number and the *operating system* (`opus.cabrillo.edu 2.6.18-164.el5 GNU/Linux`) Hint: Use the **man uname** command, use **q** to quit.

12. What is the difference in output between the following two commands?
    banner I am fine
    banner "I am fine"

13. Use the **finger** command to find out what guest90's plan is. (Hint: Use guest90 as an argument to the **finger** command.)

    guest90's plan:

14. What is your uid (user ID number)? (Hint: we did this in Lab 1)

Using online documentation

15. Issue a **man bc** command. Use q to quit.

16. What is the **whatis** command? Use the command with the argument, **bc**

    How does this compare to using the **man** command with **-f** option?

    man -f bc

17. Is **tryme** a UNIX command? Use the commands you know to find out?

18. Use the manual pages, and the **who** command, to output a count of the number of users logged on.

19. Run the command: **man -k boot**
    Use the manual pages to find out what the **-k** option does. What command is **man -k** equivalent to? Run the equivalent command and verify.

20. Run the command: **info bash** See if you can explore the hot links (marked with a *). Use the up and down arrows to select a link. Use Enter key to follow a link. Use L to go back to last page. Use Q to quit.

21. Now use your PC browser (outside of Opus) and google "linux bc command". If you find any interesting sites you can post them to the forum.

22. Here's a challenging task: Use the **man** command to discover how you can use the **bc** command to obtain the square root of 361. The **bc** command is an example of an interactive command, because you must enter the numbers to calculate from the keyboard while the program is running.

Submit this lab

Now that you have finished this lab, you may submit your work using the following two commands:

> **history -a**
> **submit**

When the command asks you which assignment to submit, respond with 2 followed by the enter key. Then answer the three questions that it asks of you.

Grading Rubric

27 points	For entering the commands on Opus necessary to do each step of Lab 2. The instructor will scan the commands in your user account's history file and take off a point for any missing commands.
3 points	For correct answers to the three questions asked by the submit script (1 point each)

Appendix

Questions asked by the submit script:

1. Name a UNIX command that gets its input only from the command line?
2. Name an interactive command that reads its input from the keyboard?
3. Name a UNIX command that gets its input from the Operating System?