

Lab 2: More Unix Commands

‘echo’

1. What are the differences among the following commands? Explain with screenshots. (6 pts , 1 point each)
 - a) echo cal
 - b) echo \$(cal)
 - c) echo \$cal
 - d) echo “\$(cal)”
 - e) echo `cal` ← This is back quote
 - f) echo `echo `cal`` ← This is back quote

Environment variables

2. What command will show you all the environment variables? What command will display the environment variable named **PATH**? Show both with screenshot. (2 points, 1 point each)

I/O

3. What are the differences among the following commands. Explain with examples and screenshot. (4 points, 1 point each)

cat

cat < filename

cat > filename

cat >> filename

4. Write a command that counts the total number of lines the string “**bird**” exists in a file named “**The Rhyme of Ancient Mariner**” in your current directory. (1 point)
5. Write a command that searches the string “**line**” in all .c and .txt files starting from your current directory and all sub directories. (1 point)

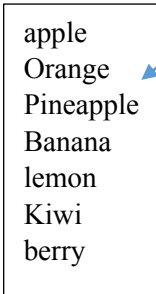
Metacharacters in Regular Expression

6. What will the following patterns match? Explain. (4 points, 1 point each)
 - a) ^bags\$
 - b) ^...\$
 - c) l.g
 - d) ^\.

‘grep’, ‘find’, pipe

7. Consider the following file named “**FruitsList.txt**”. Try the following commands and explain each output with screenshot. (6 points, 1 point each)

- a) `grep “[A-Z]e” FruitsList.txt`
- b) `grep -i “[A-Z]e” FruitsList.txt`
- c) `grep “[^A-Z]e” FruitsList.txt`
- d) `grep -i “[^A-Z]e” FruitsList.txt`
- e) `grep “^le” FruitsList.txt`
- f) `grep “le$” FruitsList.txt`



```
apple
Orange
Pineapple
Banana
lemon
Kiwi
berry
```

FruitsList.txt

8. Suppose you are in your home directory. What are the differences between the following commands? Explain with screenshot. 1 point

```
find . -name "*.txt"
```

```
find ~ -name "*.txt"
```

9. Write a command that finds all text files in your home directory and subdirectory and shows the long listing. 1 point

10. What will the following commands do? Explain with screenshots. (2 points, 1 point each)

- a) `ls -l | grep ‘^.....rw’`
- b) `grep -n variable *.[ch]`

Processes and Jobs

11. What is process? How will you differentiate processes from jobs? 1 point
12. What are the difference between the following commands: Explain with screenshot. 1 point
- ps** and **ps -aux**.

Submission:

- A PDF file - Name this file as follows: your last name, first letter of your first name, Lab2.pdf (i.e., YasminSLab2.pdf). This file will contain all your answers. Each question should be copied first and then answered.
- You should turn in through the EWU Canvas system.
- Submission deadline is **Friday, January 26. No late submission will be accepted.**