Exsercise 3: Exploring Linux Command-Line tools (Cont.)

I. Log in to the system

1. Log in to the CentOS system with the username/password: **student/lpic1@123**

II. The grep Command

1. Find the line in the /etc/passwd file for user name that start with student.
2. Find all lines in the /etc/passwd file that begin with the letter st.
3. Find all lines in /etc/passwd that contain a digit 0-9.
4. Repeat the search in the previous instruction, but this time display only the number of lines that contain the pattern.
5. Use the ps and grep commands to display the processes initiated by users other than yourself.
6. Create a file with the content as follow, name it anything you want:

```
Fred apples 20
Susy oranges 5
Mark watermellons 12
Robert pears 4
Terry oranges 9
Lisa peaches 7
Susy oranges 12
Mark grapes 39
Anne mangoes 7
Greg pineapples 3
Oliver rockmellons 2
Betty limes 14
```

Do the below excercises with this file.

7. Find all the lines with string **mellon**
8. Find all the lines end with the character 2
9. Find all the people with the name begin with the letter from A to L
10. Count the number of lines that contain **apple**

III. Use streams, pipes and redirects

11. Using the **cat** command and redirection, create a file called **junk** containing a few lines of text. Use <ctrl-d> at the beginning of a new line when you have finished entering text and want to return the shell $ prompt.
12. Append more lines of text to the file you have created using the **cat** command and redirection.
13. Using the **ls** command, list the files in your current directory. Make a note of the number of files. _____

14. List the files in your current directory, but this time redirect the output to the file **temp**.
15. Use the appropriate command to count the number of words in the **temp** file. Is this the same count as in instruction 11? __________ If not, why not?__________ Display the contents of **temp**. Remove the file.
16. This time use a pipe to count the number of files in your current directory. Was the result what you expected this time? __________ Is it the same as in instruction 11?
17. Display all the content of the file you created at excercise 6, but find and replace all the **oranges** to **apples**
18. Using xargs and $() to generate the ls -l command to all the file inside your home directory

Exsercise Instructions

I. Log in to the system

1. Log in to the system

Log int to the CentOS system with the user name and password provided: student/lpic1@123

II. The grep Command

1. Find all lines in the **/etc/passwd** file for user names that start with **student**.

   - **$ grep student /etc/passwd**

2. Find all lines in the **/etc/passwd** file that begin with the letter **st**.

   - **$ grep '^st' /etc/passwd**

3. Find all lines in **/etc/passwd** that contain a digit **0-9**.

   - **$ grep '[0-9]' /etc/passwd**

4. Repeat the search in the previous instruction, but this time display only the number of lines that contain the pattern.

   - **$ grep -c '[0-9]' /etc/passwd**

5. Use the **ps** and **grep** commands to display the processes initiated by users other than yourself.

   - **$ ps -ef l grep -v student**

6. Create a file with the content as follow, name it anything you want:

```
Fred apples 20
Susy oranges 5
Mark watermellons 12
Robert pears 4
Terry oranges 9
Lisa peaches 7
Susy oranges 12
Mark grapes 39
Anne mangoes 7
Greg pineapples 3
Oliver rockmellons 2
Betty limes 14
```

$ vim <your file>

Input the above content
:wq!

Do the below excercises with this file.

7. Find all the lines with string **mellon**
$ grep ‘mellon’ <your file>

8. Find all the lines end with the character 2
$ grep ‘2$’ <your file>

9. Find all the people with the name begin with the letter from A to L
$ grep ‘^[A-L]’ <your file>

10. Count the number of lines that contain **apple**
$ grep -c ‘apple’ <your file>

III. Use streams, pipes and redirects

11. Using the **cat** command and redirection, create a file called **junk** containing a few lines of text. Use <ctrl-d> at the beginning of a new line when you have finished entering text and want to return the shell $ prompt.

    • **$ cat > junk**
    Type in several lines of junk for your file

    <ctrl-d> on a new line to return to the shell prompt

12. Append more lines of text to the file you have created using the **cat** command and redirection.

    • **$ cat >> junk** (no spaces between the >>)

13. Using the **ls** command, list the files in your current directory. Make a note of the number of files. _____

    • **$ ls**

14. List the files in your current directory, but this time redirect the output to the file **temp**.
    • **$ ls > temp**
15. Use the appropriate command to count the number of words in the **temp** file. Is this the same count as in instruction 11? __________ If not, why not?__________ Display the contents of **temp**. Remove the file.

    • **$ wc -w temp**
    • **$ cat temp**
    • **$ rm temp**

16. This time use a pipe to count the number of files in your current directory. Was the result what you expected this time? __________ Is it the same as in instruction 11? __________

    - **$ ls | wc -w**

17. Display all the content of the file you created at excercise 6, but find and replace all the **oranges** to **apples**

    ```
    $ cat <your file> | sed ‘s/oranges/apples/g’
    ```

18. Using xargs and $() to generate the ls -l command to all the file inside your home directory that have string **te** in the file name

    ```
    $ ls | grep te | xargs ls -l
    $ ls -l $(ls | grep te)
    ```