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CIS 045, Fall 2020

G08125504  
Lab 5  
2020/10/07

1. You should have a set of files that you copied from the /tmp/week-5 directory into your week-5 directory under your home.

**$ cp /tmp/week-5/\*  $HOME/homework/week-5**

Or

**$ cd $HOME/homework**

**$ cp /tmp/week-5/\*    .**

2. Write an expression to sort the months file in numeric order.

**$ sort -n months**

3. Write an expression using the sort command to merge the months and numbers file into one file called ‘monbrs’

**$ sort months numbers -o monbrs**

4. Use the grep command to match all lines in the /etc/passwd file that begins with the letter ‘r’. (Be specific in using the beginning of line or end of line characters and single quotes around your expression.

**$ grep '^r' /etc/passwd**

5. Write a grep expression to count the numbers of lines that match your search in #4 above.

**$ grep -c '^r' /etc/passwd**

6. Write a grep expression to give you all lines in the /etc/passwd file except those that have the string ‘cs45’.

**$ grep -v 'cs45' /etc/passwd**

7. Write a grep expression to search for all lines in the months file that ends with the letter ‘y’.

**$ grep 'y$' months**

8. Write a grep expression to match all lines in the file that have the string ‘root’ or the string ‘ly’ or the string ‘body’. You should make sure you include options that match uppercase or lowercase

**Using /etc/passwd as the file**

**$ grep 'root\|ly\|body' /etc/passwd**

9. Write a command to show all special characters like the ‘TAB’ or other in the ‘regtxt’ file.

**$ cat -A regtxt**

10. Write a grep command to pull out all the phone numbers from the ‘regtxt’ file.

**$ grep '^[0-9]\{3\}-[0-9]\{3\}-[0-9]\{4\}$' regtxt**

11. What line will be pulled out of the regtxt file with the following grep expression.

**$ grep '^a.\*A$' regtxt**

**It will pull out the line that starts with a and ends with A, with anything (including nothing) in between. The only line that matches is:**

**aaaaaAA**

12. Use the ‘sed’ command to mask the last 4 digits of all Social Security Numbers (SSN) in the regtxt2 file. Note that SSN begins with 3 digits, has two digits in the middle and ends with 4 digits. You want to replace the last four digits so that a number like this: 223-45-3456 ends up looking like this: 223-45-\*\*\*\*

**$ sed 's/\([0-9]\{3\}-[0-9]\{2\}-\)\([0-9]\{4\}\)/\1\*\*\*\*/' regtxt2**

13.  In regtxt1, there is a line that has ‘100’. Write a sed expression to put a parenthesis around the 100 so that it looks like this: (100).  Hint: Find the pattern in your search, group it in a buffer, and when you replace, put parentheses around your search pattern. Note→ Look at the use of the ampersand character→ &

**$ sed 's/100/(&)/' regtxt1**

14. Write a grep expression to match any phone numbers in the file called regtxt2.

**$ grep '^[0-9]\{3\}-[0-9]\{3\}-[0-9]\{4\}$' regtxt2**

15. Write a sed expression to swap the first three digits of any phone number with the last 4 digits that are in regtxt2 file. You are swapping the area code with the last 4 digits of the phone number.

**$ sed 's/\([0-9]\{3\}\)-\([0-9]\{3\}\)-\([0-9]\{4\}\)/\3-\2-\1/' regtxt2**

Full lab below. This had a cleaning script ran. Please Refer to CIS45\_Lab5\_Emori\_Noboru\_raw for full uncleaned lab:

Script started on Thu 08 Oct 2020 01:00:37 AM EDT

[cs45aa17@mc-redhat01 ~]$ cd $HOME/homework

[cs45aa17@mc-redhat01 homework]$ cp /tmp/week-5/\* .

[cs45aa17@mc-redhat01 homework]$ cd week-5

[cs45aa17@mc-redhat01 week-5]$ sort -n months

Apr

Aug

Dec

Feb

Jan

Jul

Jun

Mar

May

Nov

Oct

Sep

[cs45aa17@mc-redhat01 week-5]$ sort months numbers -o monbrs

[cs45aa17@mc-redhat01 week-5]$ cat monbrs

1

10

100

…

70

80

90

Apr

Aug

Dec

…

Nov

Oct

Sep

[cs45aa17@mc-redhat01 week-5]$ grep '^r' /etc/passwd

root:x:0:0:root:/root:/bin/bash

rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin

rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin

radvd:x:75:75:radvd user:/:/sbin/nologin

rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin

[cs45aa17@mc-redhat01 week-5]$ grep -c '^r' /etc/passwd

5

[cs45aa17@mc-redhat01 week-5]$ grep -v 'cs45' /etc/passwd

root:x:0:0:root:/root:/bin/bash

bin:x:1:1:bin:/bin:/sbin/nologin

daemon:x:2:2:daemon:/sbin:/sbin/nologin

adm:x:3:4:adm:/var/adm:/sbin/nologin

lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin

sync:x:5:0:sync:/sbin:/bin/sync

...

hcampbell:x:1041:1043::/home/hcampbell:/bin/bash

siah:x:1042:1044::/home/siah:/bin/bash

mooks:x:1043:1045::/home/mooks:/bin/bash

keith:x:1044:1046::/home/keith:/bin/bash

mr-tester:x:1045:1047::/home/mr-tester:/bin/bash

mrs-tester:x:1046:1048::/home/mrs-tester:/bin/bash

jj:x:1048:9001::/home/jj:/bin/bash

mickey:x:1049:9002:manager:/home/mickey:/bin/bash

[cs45aa17@mc-redhat01 week-5]$ grep 'y$' months

May

[cs45aa17@mc-redhat01 week-5]$ grep 'root\|ly\|body' /etc/passwd

root:x:0:0:root:/root:/bin/bash

operator:x:11:0:operator:/root:/sbin/nologin

nobody:x:99:99:Nobody:/:/sbin/nologin

nfsnobody:x:65534:65534:Anonymous NFS User:/var/lib/nfs:/sbin/nologin

ply:x:1000:1000:Patrick Ly:/home/ply:/bin/bash

[cs45aa17@mc-redhat01 week-5]$ cat -Arregtxt

I am line one$

2 I am$

100 is cost of ticket$

two spaces in begin$

...

55555566666$

55555555 $

55$

[cs45aa17@mc-redhat01 week-5]$ grep '^[0-9]\{3\}-[0-9]\{3\}-[0-9]\{4\}$' regtxt

408-334-9808

[cs45aa17@mc-redhat01 week-5]$ grep '^a.\*A$' regtxt

aaaaaAA

[cs45aa17@mc-redhat01 week-5]$ sed 's/\([0-9]\{3\}-[0-9]\{2\}-\)\([0-9]\{4\}\)/\1\*\*\*\*/' regtxt2

408-334-9808

415-934-6808

510-534-9808

446-35-\*\*\*\*

346-35-\*\*\*\*

one tab here -> one more here

...

[cs45aa17@mc-redhat01 week-5]$ sed 's/100/(&)/' regtxt1

I am line one

2 I am

(100) is cost of ticket

two spaces in begin

two spaces at end

line with 5 spaces above

jan

feb

[cs45aa17@mc-redhat01 week-5]$ grep '^[0-9]\{3\}-[0-9]\{3\}-[0-9]\{4\}$' regtxt2

408-334-9808

415-934-6808

510-534-9808

[cs45aa17@mc-redhat01 week-5]$ sed 's/\([0-9]\{3\}\)-\([0-9]\{3\}\)-\([0-9]\{4\}\)/\3-\2-\1/' regtxt2

9808-334-408

6808-934-415

9808-534-510

446-35-1088

346-35-2089

one tab here -> one more here

...

[cs45aa17@mc-redhat01 week-5]$ exit

Script done on Thu 08 Oct 2020 02:50:04 AM EDT