Review on Assignments PC2 , PC3 , HW1 and PC4

YUAN LONG

CSC 3320 SYSTEM LEVEL PROGRAMMING

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Program Challenge 2

- 11) Rename the parent directory **PC2** as **CSC3320_PC2**. (hint: you can use absolute pathname)

$mv /home/ylong4/**PC2** /home/ylong4/ **CSC3320_PC2**

$mv **~/PC2** **~/CSC3320_PC2**

- 13) Create a new folder "Backup" and copy “Course.txt” into this folder with a new name “Course.backup”.

$mkdir Backup
$cp **Course.txt** **Backup/Course.backup**

Program Challenge 2

- 15) What is the meaning for each bit in the file permissions for file "Course.txt".

- rw-rw-r—

- In the *first three* characters, r means **user** can read it, w means user can write it, means user cannot execute it
- In the *middle three* characters, r means **group** can read it, w means group can write it, - means group cannot execute it
- In the *last three* characters, r means **other** user can read it, - means other user cannot write it, - means other user cannot execute it

Program Challenge 3

- 3) Move the cursor to line 29 col. 1.

  :29

  Type **0(zero)** to col. 1 (leading character)

- 5) Substitute all "CSC" with "Computer Science".

  :%s/CSC/Computer Science/g

  :1,$ S/CSC/Computer Science/g

- 8) Delete three lines between line 17 and 19.

  :17,19dd

Homework 1

- Multiple Choices
  - 1) **'a(ab)*a'**

    (a)ababa (b) aaba (c) aabab (d) aabbaa (e)aa
  - 2) **'a(bc){1,5}'**

    (a) abcbc (b) abcb (c) abb (d) bcbc (e)abcbcbc
  - 3) **'(a|b)*c'**

    (a) abbc (b) aabc (c) abab (d) c (e)abb
  - 4) **'a.[bc]+'**

    (a)azbc (b) az (c) azbcbc (d) acc (e)acz
  - 5) **'a.[0-9]'**

    (a)azz (b) aoz (c) a01 (d) aoa (e)aza

Homework 1

- Multiple Choices
  - 6) **'[a-z]+[\.\?!]'**

(a)good! (b) Book. (c) hard? (d) cool?hot (e)nothing

  - 7) **'[a-z]+[\.\?!]\s *[A-Z]'**

(a)Grade. A (b) book. Z (c) E. G (d) Level. a (e)index?a

  - 8) **'(very)+(cool)?(good|bad) weather'**

(a)good weather (b) very good weather (c) cool weather
(d) very cool bad weather (e)cool good weather

  - 9) **'-?[0-9]+'**

(a)3312 (b) -2231 (c) +32 (d) 0.5 (e)2/3

  - 10) **'-?[0-9]*\.?[0-9]*'**

(a)3312 (b) -2231 (c) +32 (d) 0.5 (e)2/3

Homework 1

- Write regular expression
  - Valid URL beginning with “http://”. (e.g. http://cs.gsu.edu)

    http:\/\/.*
  - GSU panther ID in the format of 999-99-9999. (e.g. 001-92-5434)

    [0-9]{3}-[0-9]{2}-[0-9]{4}

Homework 1

- Write regular expression
  - Valid email address, assuming ‘ a-z’,’0-9’,’-‘,’.’ are valid characters for user id and domain name has to be end with either “.com” or “.net” (e.g. aabb-123.xy@g3.com, cdcd@12-3.net)

    [a-z0-9-\.]+@[a-z0-9-]+\.(com|net)
  - Phone number in any of the following format: 999-9999999,999-999-9999, (999)-9999999.

    \(?[0-9]{3}\)?-[0-9]{3}-?[0-9]{4}

Program Challenge 4


```
Brasstown Bald ,(summit),4784,feet,Union County
Rabun Bald, (summit),4696,feet,Rabun County
Dick's Knob, (summit),4620,feet,Rabun County
Hightower Bald, (summit),4568,feet,Towns County
Wolfpen Ridge, (ridge high point),4561,feet,Towns and Union Counties
Blood Mountain, (summit),4458,feet,Union County
Tray Mountain, (summit), 4430,feet,Towns County
Grassy Ridge, (ridge high point),4420,feet,Rabun County
Slaughter Mountain, (summit),4338,feet,Union County
Double Spring Knob, (summit),4280,feet,Rabun County
Coosa Bald, (summit),4280,feet,Union County
```

(3) $grep –-color -n 'Union|Rabun' mountainList.txt

Searching for lines containing "**Union|Rabun**"

(4) $egrep –-color -n 'Union|Rabun' mountainList.txt

Searching for lines containing "**Union**" or "**Rabun**"

(5) count the number of mountains with "**ridge high point**".

$grep 'ridge high point' mountainList.txt | **wc** –l

(6) $sed –n '/summit/p' mountainList.txt

Print out lines containing summit.

Note: -n suppresses automatic printing of pattern space.

Program Challenge 4


```
    Brasstown Bald ,(summit),4784,feet,Union  County
Rabun Bald, (summit),4696,feet,Rabun  County
Dick's Knob, (summit),4620,feet,Rabun  County
        Hightower Bald, (summit),4568,feet,Towns  County
Wolfpen  Ridge, (ridge high point),4561,feet,Towns  and Union
Counties
    Blood Mountain,  (summit),4458,feet,Union  County
Tray Mountain,  (summit), 4430,feet,Towns  County
      Grassy Ridge, (ridge high point),4420,feet,Rabun  County
Slaughter  Mountain,  (summit),4338,feet,Union  County
Double Spring  Knob,  (summit),4280,feet,Rabun  County
Coosa Bald, (summit),4280,feet,Union  County
```

(7) Use **sed** to list the lines beginning with white spaces

$ sed –n '/^ */p' mountainList.txt

Two spaces here

(8) $ Use **sed** to remove the leading spaces in each line of mountainList.txt

sed 's/^ *//g' mountainList.txt > mountainList_v1.txt

Note: if a line does not match a pattern, it should still be printed out.

(9) Use **sed** to remove the leading spaces in the lines only for the mountains with **"ridge high point"**

$ sed ' **/ridge high point/** s/^ *//g' mountainList.txt

Program Challenge 4

(10) Use **sed** to remove the **second field and a comma** after it in each line and save the output to file mountainList_v2.txt .

```
sed  's/(.*),//' mountainList.txt > mountainList_v2.txt
```

```
sed –E 's/\(.*\),//' mountainList.txt > mountainList_v2.txt
```

```
sed –E 's/\(summit\),|\(ridge high point\),//' mountainList.txt
    > mountainList_v2.txt
```

```
Brasstown Bald ,(summit),4784,feet,Union County
Rabun Bald, (summit),4696,feet,Rabun County
Dick's Knob, (summit),4620,feet,Rabun County
Hightower Bald, (summit),4568,feet,Towns County
Wolfpen Ridge, (ridge high point),4561,feet,Towns and Union
Counties
Blood Mountain, (summit),4458,feet,Union County
Tray Mountain, (summit), 4430,feet,Towns County
Grassy Ridge, (ridge high point),4420,feet,Rabun County
Slaughter Mountain, (summit),4338,feet,Union County
Double Spring Knob, (summit),4280,feet,Rabun County
Coosa Bald, (summit),4280,feet,Union County
```

Program Challenge 4

(10) Use **sed** to insert a new line **"Table: Eleven highest mountains in Georgia"** at the beginning of mountainList_v1.txt .

```
$cat> sedp
1i\
Table: Eleven highest mountains in Georgia

$sed   -f    sedp     mountainList_v1.txt
```

```
$sed  '1i\Table: Eleven highest mountains in Georgia'   mountainList_v1.txt
```

(13) Use **awk** to remove the first comma in each line of mountainList_v1.txt

```
$cat>awkp
{print  $1   $2 "," $3 "," $4 "," $5}

$awk  –F,  -f   awkp   mountainList_v1.txt
```

```
$awk  –F,   '{print  $1   $2 "," $3 "," $4 "," $5}'  mountainList_v1.txt
```

Program Challenge 4

(15) write a command to remove the first comma in each line of mountainList_v1.txt using **sed**

```
$sed   -E    's/(.*),(.*),(.*),(.*),(.*)/\1\2,\3,\4,\5/g' mountainList_v1.txt
```

(13) Use **awk** to remove the first comma in each line of mountainList_v1.txt

```
$cat>awkp
{print  $1   $2 “,” $3 “,” $4 “,” $5}

$awk  –F,  -f   awkp   mountainList_v1.txt
```

```
$awk  –F,   ‘{print  $1   $2 “,” $3 “,” $4 “,” $5}’ mountainList_v1.txt
```

Which one do you like ?