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CSC3320 System Level Programming

Lab Assignment 4 – Part 2 (Out of lab)

1) `grep -E 'Towns|Union' mountainList.txt`

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ grep -E 'Towns|Union' mountainList.txt
      Brasstown Bald, (summit),4784,feet,Union County
       Hightower Bald, (summit),4568,feet,Towns County
Wolfpen Ridge, (ridge high point),4561,feet,Towns and Union
      Blood Mountain, (summit),4458,feet,Union County
Tray Mountain, (summit), 4430,feet,Towns County
Slaughter Mountain, (summit),4338,feet,Union County
Coosa Bald, (summit),4280,feet,Union County
[choang7@gsuad.gsu.edu@snowball Lab4]$
```

2) `grep 'Rabun' mountainList.txt | wc -l`

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ grep 'Rabun' mountainList.txt | wc -l
4
[choang7@gsuad.gsu.edu@snowball Lab4]$
```

3) `grep -c 'Rabun' mountainList.txt`

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ grep -c 'Rabun' mountainList.txt
4
[choang7@gsuad.gsu.edu@snowball Lab4]$
```

4)

A.

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sed 's/ridge high point/r.h.p/p' mountainList.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, (r.h.p),4561,feet,Towns and Union
Wolfpen Ridge, (r.h.p),4561,feet,Towns and Union

Counties

      Blood Mountain, (summit),4458,feet,Union County

Tray Mountain, (summit), 4430,feet,Towns County

      Grassy Ridge, (r.h.p),4420,feet,Rabun County
      Grassy Ridge, (r.h.p),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

[choang7@gsuad.gsu.edu@snowball Lab4]$ █
```

B.

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sed -n 's/ridge high point/r.h.p/p' mountainList.txt
Wolfpen Ridge, (r.h.p),4561,feet,Towns and Union
      Grassy Ridge, (r.h.p),4420,feet,Rabun County
[choang7@gsuad.gsu.edu@snowball Lab4]$ █
```

C. By default, sed prints all processed input except input that has been modified/deleted by commands.
We use -n to suppress the automatic printing of pattern space.

D. `sed -n 's/ridge high point/r.h.p./p' mountainList.txt`

This command replaces 'ridge high point' in the file 'mountainList.txt' with 'r.h.p' and prints out the
processed lines.

5) `sed -n 's/^ *//p' mountainList.txt`

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sed -n 's/^ *//p' mountainList.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

[choang7@gsuad.gsu.edu@snowball Lab4]$
```

6) sed 's/^ *//g' < mountainList.txt > newList.txt

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sed 's/^ *//g' < mountainList.txt > newList.txt
[choang7@gsuad.gsu.edu@snowball Lab4]$ cat newList.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

[choang7@gsuad.gsu.edu@snowball Lab4]$
```

7) `sed -n '/^\s/p' mountainList.txt`

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sed -n '/^\s/p' mountainList.txt
      Brasstown Bald, (summit),4784,feet,Union County
       Hightower Bald, (summit),4568,feet,Towns County
      Blood Mountain, (summit),4458,feet,Union County
     Grassy Ridge, (ridge high point),4420,feet,Rabun County
[choang7@gsuad.gsu.edu@snowball Lab4]$
```

8) `sed '/Union County/d' mountainList.txt`

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sed '/Union County/d' mountainList.txt

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


Tray Mountain, (summit), 4430,feet,Towns County

     Grassy Ridge, (ridge high point),4420,feet,Rabun County


Double Spring Knob, (summit),4280,feet,Rabun County


[choang7@gsuad.gsu.edu@snowball Lab4]$
```

9) the provided command only removes the second and fourth field, so I modified the command a bit like the picture below:

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sed -r 's/(,[^,]*){3},/,/g' mountainList.txt
       Brasstown Bald,Union County

Rabun Bald,Rabun County

Dick's Knob,Rabun County

       Hightower Bald,Towns County

Wolfpen Ridge,Towns and Union

Counties

      Blood Mountain,Union County

Tray Mountain,Towns County

     Grassy Ridge,Rabun County

Slaughter Mountain,Union County

Double Spring Knob,Rabun County

Coosa Bald,Union County

[choang7@gsuad.gsu.edu@snowball Lab4]$
```

10) awk '{sub(/(,[^,]*){3},/,",")}1' mountainList.txt

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ awk '{sub(/(,[^,]*){3},/,",")}1' mountainList.txt
       Brasstown Bald,Union County

Rabun Bald,Rabun County

Dick's Knob,Rabun County

       Hightower Bald,Towns County

Wolfpen Ridge,Towns and Union

Counties

      Blood Mountain,Union County

Tray Mountain,Towns County

     Grassy Ridge,Rabun County

Slaughter Mountain,Union County

Double Spring Knob,Rabun County

Coosa Bald,Union County

[choang7@gsuad.gsu.edu@snowball Lab4]$
```

11) sed '1 I Table: Eleven highest mountains in Georgia' mountainList.txt

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sed '1 i Table: Eleven highest mountains in Georgia' mountainList.txt
Table: Eleven highest mountains in Georgia
     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

[choang7@gsuad.gsu.edu@snowball Lab4]$
```

12) sort -b mountainList.txt

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sort -b  mountainList.txt




     Blood Mountain, (summit),4458,feet,Union County
     Brasstown Bald, (summit),4784,feet,Union County
Coosa Bald, (summit),4280,feet,Union County
Counties
Dick's Knob, (summit),4620,feet,Rabun County
Double Spring Knob, (summit),4280,feet,Rabun County
     Grassy Ridge, (ridge high point),4420,feet,Rabun County
     Hightower Bald, (summit),4568,feet,Towns County
Rabun Bald, (summit),4696,feet,Rabun County
Slaughter Mountain, (summit),4338,feet,Union County
Tray Mountain, (summit), 4430,feet,Towns County
Wolfpen Ridge, (ridge high point),4561,feet,Towns and Union
[choang7@gsuad.gsu.edu@snowball Lab4]$
```

13) `sort -s -n -k 3,4 mountainList.txt`

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sort -s -n -k 3,4 mountainList.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

[choang7@gsuad.gsu.edu@snowball Lab4]$
```

14)

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sed -E 's/(Union)\s(County)/\1:\2/g' mountainList.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

[choang7@gsuad.gsu.edu@snowball Lab4]$
```

15) `sed -r 's/([^,]*){1}(,[^,]*){3},([^,]*)/\1,\3/g' mountainList.txt`

```
[choang7@gsuad.gsu.edu@snowball Lab4]$ sed -r 's/([^,]*){1}(,[^,]*){3},([^,]*)/\1,\3/g' mountainList.txt
        Brasstown Bald,Union County

Rabun Bald,Rabun County

Dick's Knob,Rabun County

        Hightower Bald,Towns County

Wolfpen Ridge,Towns and Union

Counties

        Blood Mountain,Union County

Tray Mountain,Towns County

        Grassy Ridge,Rabun County

Slaughter Mountain,Union County

Double Spring Knob,Rabun County

Coosa Bald,Union County

[choang7@gsuad.gsu.edu@snowball Lab4]$
```