


## SED and AWK –Exercises

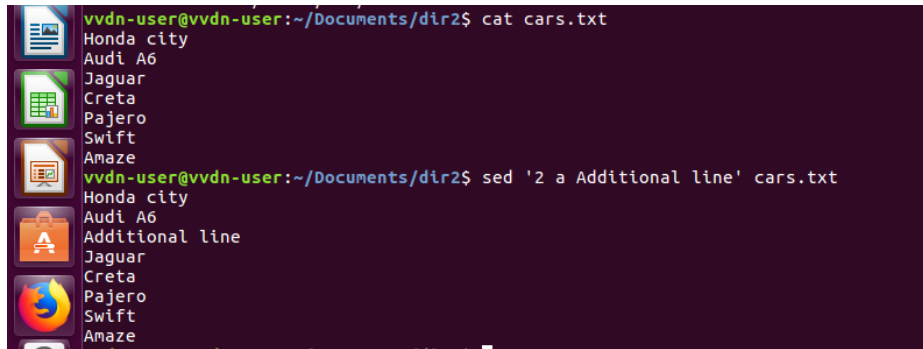
- 1) Use sed to:
  - a) display only the 3rd line from the file `people.txt`;
  - b) insert the text `Additional line` between lines 2 and 3 in the file `cars.txt`;
  - c) display the lines 4-10 from the file `people.txt`;
  - d) display the file `people.txt` except the lines 4-10;
  - e) display from the file `people.txt` the lines starting with the string `C1`;
  - f) display from the file `people.txt` the lines containing the strings `anna` or `Anna`;
  - g) replace the name `Anna` by `Anya` in the data from the file `people.txt`; save the output in the file `people2.txt`;
  - h) replace the string `Jo` by the string `Joel` in the data from the file `people.txt`;
  - i) display from the file `/etc/passwd` the lines containing the string `root`; save the output in the file `root.txt`;
  - j) display from the file `/etc/passwd` the lines beginning with the string `ro`.
- 2) Use awk to:
  - a) display from the file `people.txt` the surnames of all people;
  - b) display from the file `people.txt` the surnames of all people with the name `Anna`;
  - c) display from the file `/etc/passwd` names and surnames of the users;
  - d) display from the file `/etc/passwd` the surnames of all people with the name `Anna`.
- 3) Display the data of people logged in, who logged before 11:00.
- 4) From the file `/etc/passwd` display the names and surnames of people whose login is starting with the string `an`. Hint: use `grep` or `sed` and `awk`.
- 5) List your files and directories with the size greater than 1000 B. Hint: use `ls` and `awk`.

### 1.a.Displaying only 3<sup>rd</sup> line:



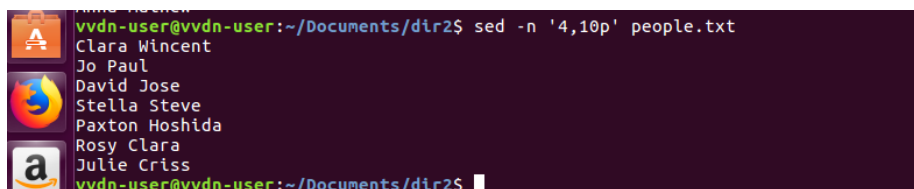
```
vvdn-user@vvdn-user:~/Documents/dir2$ cat people.txt
Jo Britto
Anna Ben
Anna Mathew
Clara Wincent
Jo Paul
David Jose
Stella Steve
Paxton Hoshida
Rosy Clara
Julie Criss
Jeni Jacob
Anna Becent
Jo Stephen
vvdn-user@vvdn-user:~/Documents/dir2$ sed -n '3p' people.txt
Anna Mathew
```

1.b.Insert the text :



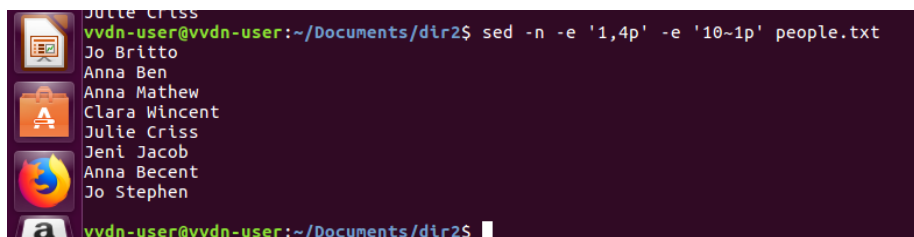
```
vvdn-user@vvdn-user:~/Documents/dir2$ cat cars.txt
Honda city
Audi A6
Jaguar
Creta
Pajero
Swift
Amaze
vvdn-user@vvdn-user:~/Documents/dir2$ sed '2 a Additional line' cars.txt
Honda city
Audi A6
Additional line
Jaguar
Creta
Pajero
Swift
Amaze
```

1.c.Displaying lines 4-10:



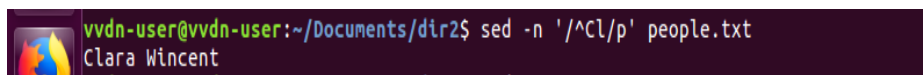
```
vvdn-user@vvdn-user:~/Documents/dir2$ sed -n '4,10p' people.txt
Clara Wincent
Jo Paul
David Jose
Stella Steve
Paxton Hoshida
Rosy Clara
Julie Criss
vvdn-user@vvdn-user:~/Documents/dir2$
```

1.d.Displaying lines except 4-10:



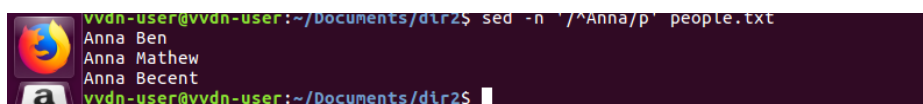
```
vvdn-user@vvdn-user:~/Documents/dir2$ sed -n -e '1,4p' -e '10~1p' people.txt
Julie Criss
Jo Britto
Anna Ben
Anna Mathew
Clara Wincent
Julie Criss
Jeni Jacob
Anna Becent
Jo Stephen
vvdn-user@vvdn-user:~/Documents/dir2$
```

1.e.Displaying lines starting with 'Cl':



```
vvdn-user@vvdn-user:~/Documents/dir2$ sed -n '/^Cl/p' people.txt
Clara Wincent
```

1.f.Displaying lines starting with 'Anna':



```
vvdn-user@vvdn-user:~/Documents/dir2$ sed -n '/^Anna/p' people.txt
Anna Ben
Anna Mathew
Anna Becent
vvdn-user@vvdn-user:~/Documents/dir2$
```

1.g.Replacing Anna with Anya and storing in new file:

```
vvdn-user@vvdn-user:~/Documents/dir2$ sed 's/Anna/Any/' people.txt >people2.txt
vvdn-user@vvdn-user:~/Documents/dir2$ cat people2.txt
Jo Britto
Anya Ben
Anya Mathew
Clara Wincent
Jo Paul
David Jose
Stella Steve
Paxton Hoshida
Rosy Clara
Julie Criss
Jeni Jacob
Anya Becent
Jo Stephen
```

1.h.Replacing Jo with Joel:

```
vvdn-user@vvdn-user:~/Documents/dir2$ sed -n 's/Jo/Joel/p' people.txt
Joel Britto
Joel Paul
David Joelse
Joel Stephen
vvdn-user@vvdn-user:~/Documents/dir2$
```

1.i.Finding root in /etc/passwd/ and storing in new file:

```
vvdn-user@vvdn-user:~/Documents/dir2$ sed -n '/^root/p' /etc/passwd >root.txt
vvdn-user@vvdn-user:~/Documents/dir2$ cat root.txt
root:x:0:0:root:/root:/bin/bash
```

1.j.Finding the string 'ro':

```
vvdn-user@vvdn-user:~/Documents/dir2$ sed -n '/^ro/p' /etc/passwd
root:x:0:0:root:/root:/bin/bash
vvdn-user@vvdn-user:~/Documents/dir2$
```

2.a.Displaying the surname:

```
vvdn-user@vvdn-user:~/Documents/dir2$ awk '{print $2}' people.txt
Britto
Ben
Mathew
Wincent
Paul
Jose
Steve
Hoshida
Clara
Criss
Jacob
Becent
Stephen
vvdn-user@vvdn-user:~/Documents/dir2$
```

2.b.Displaying the name and surname with Anna:

```

> awk '/Anna/{print}' people.txt^C
vvdn-user@vvdn-user:~/Documents/dir2$ awk '/Anna/{print $2}' people.txt
Ben
Mathew
Becent
vvdn-user@vvdn-user:~/Documents/dir2$

```

2.c.Displaying names and surnames of users:

Awk -F ':' 'NR>44' {split(\$5,s," ");print s[1],s[2]} /etc/passwd

2.d.Displaying Surnames of the people with name 'ANNA':

Awk -F ':' 'NR>44' {split(\$5,s," "); if(s[1]=="Anna")print s[1],s[2]} /etc/passwd

3.Login details:

```

vvdn-user@vvdn-user:~/Documents/dir2$ last -t 20201207110000
vvdn-use tty7 :0 Mon Dec 7 00:15 gone - no logout
reboot system boot 4.13.0-36-generi Mon Dec 7 00:14 still running
vvdn-use tty7 :0 Sun Dec 6 15:28 - crash (08:46)
reboot system boot 4.13.0-36-generi Sun Dec 6 20:57 still running

wtmp begins Sun Dec 6 20:57:41 2020
vvdn-user@vvdn-user:~/Documents/dir2$

```

4.Displaying names starting with A:

```

vvdn-user@vvdn-user:~$ grep -E ^a /etc/passwd
avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/bin/false
avahi:x:111:120:Avahi mDNS daemon,,,:/var/run/avahi-daemon:/bin/false
vvdn-user@vvdn-user:~$

```

5.File size:

```

vvdn-user@vvdn-user:~$ ls -l | awk '{if($5>1000)print}'
drwxr-xr-x 2 vvdn-user vvdn-user 4096 Dec 5 2019 Desktop
drwxr-xr-x 4 vvdn-user vvdn-user 4096 Dec 1 12:28 Documents
drwxr-xr-x 2 vvdn-user vvdn-user 4096 Dec 12 2019 Downloads
-rw-r--r-- 1 vvdn-user vvdn-user 8980 Dec 5 2019 examples.desktop
drwxrwxr-x 20 vvdn-user vvdn-user 4096 Dec 9 2019 exploringBB
-rw-rw-r-- 1 vvdn-user vvdn-user 62717006 Dec 7 2019 google-chrome-stable_cur
rent_and64.deb
drwxrwxr-x 7 vvdn-user vvdn-user 4096 Dec 10 2019 gs-gradle
-rwxrwxrwx 1 vvdn-user vvdn-user 502428 Dec 13 2019 gs-gradle.zip
-rw-rw-r-- 1 vvdn-user vvdn-user 1803 Dec 13 2019 linux-commands.txt
drwxr-xr-x 2 vvdn-user vvdn-user 4096 Dec 5 2019 Music
drwxr-xr-x 2 vvdn-user vvdn-user 4096 Dec 9 15:36 Pictures
drwxr-xr-x 2 vvdn-user vvdn-user 4096 Dec 5 2019 Public
drwxrwxr-x 3 vvdn-user vvdn-user 4096 Dec 8 2019 src
drwxr-xr-x 2 vvdn-user vvdn-user 4096 Dec 5 2019 Templates
drwxrwxr-x 3 vvdn-user vvdn-user 4096 Dec 7 2019 test-dir
drwxrwxr-x 3 vvdn-user vvdn-user 4096 Dec 13 2019 test.dir
drwxr-xr-x 2 vvdn-user vvdn-user 4096 Dec 5 2019 Videos
-rw-rw-r-- 1 vvdn-user vvdn-user 28724 Dec 3 18:42 WoPU1eGRqKB6oaSS6
vvdn-user@vvdn-user:~$

```