

# LINUX: Exercises about files manipulation

## Part 1

Create a file called "awards" in your home directory, containing

JESSE#EISENBERG#THE SOCIAL NETWORK#ACTOR

COLIN#FIRTH#THE KING'S SPEECH#ACTOR

HALLE#BERRY#FRANKIE AND ALICE#ACTRESS

NATALIE#PORTMAN#BLACK SWAN#ACTRESS

DARREN#FINCHER#THE SOCIAL NETWORK#DIRECTOR

ANNETTE#BENING#THE KIDS ARE ALRIGHT#ACTRESS

1. Add a new line, containing CHRISTOPHER#NOLAN#INCEPTION#DIRECTOR, at the end of the file. You should complete this exercise using commands instead of file editors.



```
> cat > awards
JESSE#EISENBERG#THE SOCIAL NETWORK#ACTOR
COLIN#FIRTH#THE KING'S SPEECH#ACTOR
HALLE#BERRY#FRANKIE AND ALICE#ACTRESS
NATALIE#PORTMAN#BLACK SWAN#ACTRESS
DARREN#FINCHER#THE SOCIAL NETWORK#DIRECTOR
ANNETTE#BENING#THE KIDS ARE ALRIGHT#ACTRESS

> cat awards
JESSE#EISENBERG#THE SOCIAL NETWORK#ACTOR
COLIN#FIRTH#THE KING'S SPEECH#ACTOR
HALLE#BERRY#FRANKIE AND ALICE#ACTRESS
NATALIE#PORTMAN#BLACK SWAN#ACTRESS
DARREN#FINCHER#THE SOCIAL NETWORK#DIRECTOR
ANNETTE#BENING#THE KIDS ARE ALRIGHT#ACTRESS

> cat >> awards
CHRISTOPHER#NOLAN#INCEPTION#DIRECTOR

> cat awards
JESSE#EISENBERG#THE SOCIAL NETWORK#ACTOR
COLIN#FIRTH#THE KING'S SPEECH#ACTOR
HALLE#BERRY#FRANKIE AND ALICE#ACTRESS
NATALIE#PORTMAN#BLACK SWAN#ACTRESS
DARREN#FINCHER#THE SOCIAL NETWORK#DIRECTOR
ANNETTE#BENING#THE KIDS ARE ALRIGHT#ACTRESS
CHRISTOPHER#NOLAN#INCEPTION#DIRECTOR
```

2. Create a file called "actors" in which you only include ACTORS.

```
> grep "ACTOR$" awards > actors

> cat actors
JESSE#EISENBERG#THE SOCIAL NETWORK#ACTOR
COLIN#FIRTH#THE KING'S SPEECH#ACTOR
```

3. Display the files which begin with a in your home directory.

```
> ls -d a*
actors  awards
```

4. Create a file called "directors" in which you only include DIRECTORS.

```
> grep "DIRECTOR$" awards > directors

> cat directors
DARREN#FINCHER#THE SOCIAL NETWORK#DIRECTOR
CHRISTOPHER#NOLAN#INCEPTION#DIRECTOR
```

5. Display the lines of "awards" containing actresses. Show the line number.

```
> grep "ACTRESS$" -n awards
3:HALLE#BERRY#FRANKIE AND ALICE#ACTRESS
4:NATALIE#PORTMAN#BLACK SWAN#ACTRESS
6:ANNETTE#BENING#THE KIDS ARE ALRIGHT#ACTRESS
```

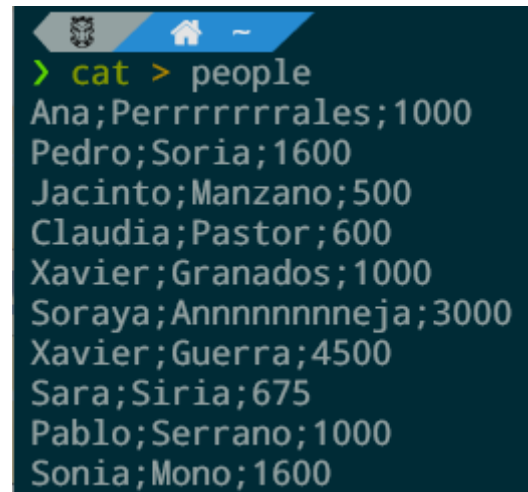
6. Display the lines in "awards" which are not directors. Show the line number.

```
> grep -vin "#DIRECTOR$" awards
1:JESSE#EISENBERG#THE SOCIAL NETWORK#ACTOR
2:COLIN#FIRTH#THE KING'S SPEECH#ACTOR
3:HALLE#BERRY#FRANKIE AND ALICE#ACTRESS
4:NATALIE#PORTMAN#BLACK SWAN#ACTRESS
6:ANNETTE#BENING#THE KIDS ARE ALRIGHT#ACTRESS
```

## Part 2

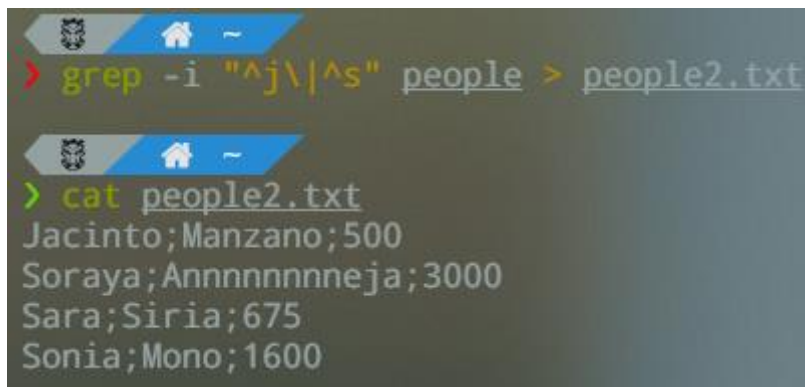
Create the file called "people.txt"

```
Ana;Perrrrrrrales;1000
Pedro;Soria;1600
Jacinto;Manzano;500
Claudia;Pastor;600
Xavier;Granados;1000
Soraya;Annnnnnnneja;3000
Xavier;Guerra;4500
Sara;Siria;675
Pablo;Serrano;1000
Sonia;Mono;1600
```

A terminal window with a dark blue background and light blue icons at the top. It shows the command 'cat > people' followed by the same list of names and numbers as in the previous block, creating a file named 'people'.

```
> cat > people
Ana;Perrrrrrrales;1000
Pedro;Soria;1600
Jacinto;Manzano;500
Claudia;Pastor;600
Xavier;Granados;1000
Soraya;Annnnnnnneja;3000
Xavier;Guerra;4500
Sara;Siria;675
Pablo;Serrano;1000
Sonia;Mono;1600
```

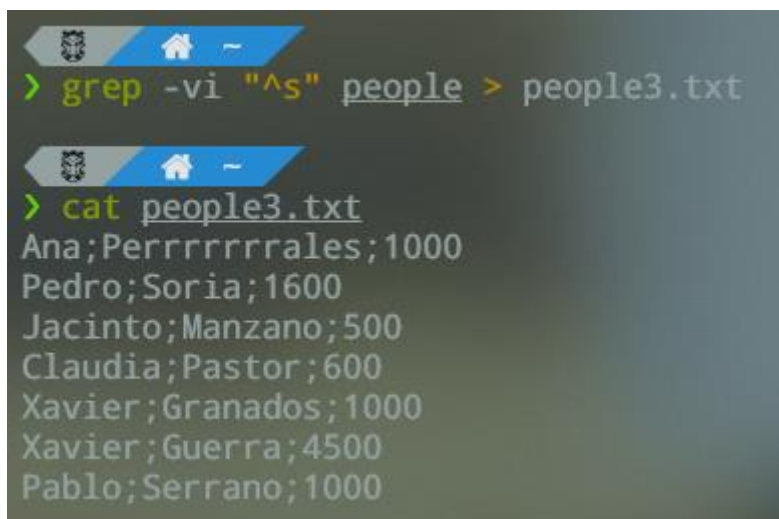
7. Create a file called "people2.txt", containing those people whose name begins with J or S.

A terminal window showing two commands. First, 'grep -i "^j\|^s" people > people2.txt' to filter names starting with J or S. Then, 'cat people2.txt' to display the contents of the new file.

```
> grep -i "^j\|^s" people > people2.txt

> cat people2.txt
Jacinto;Manzano;500
Soraya;Annnnnnnneja;3000
Sara;Siria;675
Sonia;Mono;1600
```

8. Create a file called "people3.txt", containing those people whose names do not begin with S.

A terminal window showing two commands. First, 'grep -vi "^s" people > people3.txt' to filter out names starting with S. Then, 'cat people3.txt' to display the contents of the new file.

```
> grep -vi "^s" people > people3.txt

> cat people3.txt
Ana;Perrrrrrrales;1000
Pedro;Soria;1600
Jacinto;Manzano;500
Claudia;Pastor;600
Xavier;Granados;1000
Xavier;Guerra;4500
Pablo;Serrano;1000
```

9. Display people whose name begin with S and redirect to file to "people\_s.txt"

```
> grep -i "^S" people && grep -i "^S" people | cat > people_s.txt
Soraya;Annnnnnnneja;3000
Sara;Siria;675
Sonia;Mono;1600
```

10. Display the number of people whose name begins with A (case insensitive).

```
> grep -i "^A" people
Ana;Perrrrrrrales;1000
```

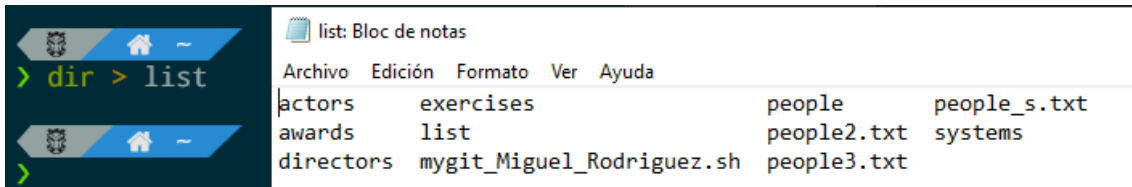
11. Display how many people earn 1000 and concatenate the result in people2.txt

```
> grep "1000" people && grep "1000" people | cat >> people2.txt
Ana;Perrrrrrrales;1000
Xavier;Granados;1000
Pablo;Serrano;1000
```

### Part 3

12. Create a file called list, including the contents from the current directory

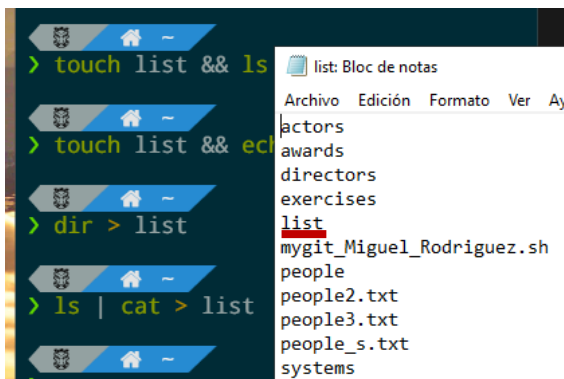
```
> dir > list
```



list: Bloc de notas			
Archivo	Edición	Formato	Ver Ayuda
actors	exercises	people	people_s.txt
awards	list	people2.txt	systems
directors	mygit_Miguel_Rodriguez.sh	people3.txt	

13. Open the file to check if the content is right using cat, more and less and observe

```
> touch list && ls
> touch list && echo
> dir > list
> ls | cat > list
```



list: Bloc de notas	
Archivo	Edición Formato Ver Ay
actors	
awards	
directors	
exercises	
list	
mygit_Miguel_Rodriguez.sh	
people	
people2.txt	
people3.txt	
people_s.txt	
systems	

14. Print the contents of the current directory in reverse alphabetical order.

```
> ls -ra
systems          directors        .wget-hsts      .oh-my-zsh      .bash_logout
people_s.txt     awards          .vscode-server  .motd_shown     .bash_history
people3.txt      actors          .tooling        .local          ..
people2.txt     .zshrc.pre-oh-my-zsh .sudo_as_admin_successful .landscape      .
people          .zshrc         .sts4           .gitconfig
mygit_Miguel_Rodriguez.sh .zsh_history    .shell.pre-oh-my-zsh .config
list            .zcompdump-DESKTOP-OUP6HIH-5.8 .profile        .cache
exercises       .zcompdump     .p10k.zsh       .bashrc
```

15. Create a file called inform, containing the long format list of the files and directories in your home directory.

```
> ls -l $HOME > inform

> cat inform
total 44
-rw-r--r-- 1 migueljrm95 migueljrm95 79 Jan 23 12:31 actors
-rw-r--r-- 1 migueljrm95 migueljrm95 276 Jan 23 12:28 awards
-rw-r--r-- 1 migueljrm95 migueljrm95 80 Jan 23 12:33 directors
drwxr-xr-x 6 migueljrm95 migueljrm95 4096 Jan 19 09:55 exercises
-rw-r--r-- 1 migueljrm95 migueljrm95 0 Jan 23 13:32 inform
-rw-r--r-- 1 migueljrm95 migueljrm95 117 Jan 23 13:22 list
-rwxr-xr-x 1 migueljrm95 migueljrm95 1336 Dec 18 20:45 mygit_Miguel_Rodriguez.sh
-rw-r--r-- 1 migueljrm95 migueljrm95 194 Jan 23 12:43 people
-rw-r--r-- 1 migueljrm95 migueljrm95 139 Jan 23 13:09 people2.txt
-rw-r--r-- 1 migueljrm95 migueljrm95 138 Jan 23 12:50 people3.txt
-rw-r--r-- 1 migueljrm95 migueljrm95 56 Jan 23 13:02 people_s.txt
drwxr-xr-x 3 migueljrm95 migueljrm95 4096 Jan 17 12:42 systems
```

16. Find the word FILE in each file of your home directory, ignoring case and showing the line number (create files containing this word if you want any match).

```
> grep -iwn pablo *
grep: exercises: Is a directory
people:9:Pablo;Serrano;1000
people2.txt:7:Pablo;Serrano;1000
people3.txt:7:Pablo;Serrano;1000
grep: systems: Is a directory

> grep -iwn file *
```