

Pipes

1. Download the contents of "Harry Potter and the Goblet of fire" using the command line from [here](#)

```
> touch file.txt  
> curl (link of the file) > file.txt
```

To download the content, first, I created an empty file then I used the “curl” command to get the contents of the data and with the help of the “>” sign is inserted the data into the file.txt

```
vivekcr7@Viveks-MacBook-Air:~/Desktop/Mountblue/Level1/CLI-2  
→ CLI-2 touch file.txt  
→ CLI-2 curl https://raw.githubusercontent.com/bobdeng/owlreader/master/ERead/assets/books/Harry%20Potter%20and%20the%20Goblet%20of%20Fire.txt > file.txt  
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current  
                                 Dload  Upload  Total  Spent    Left  Speed  
100 1113k    100 1113k    0     0  880k      0  0:00:01  0:00:01 --:--:-- 880k  
→ CLI-2
```

2. Print the first three lines in the book

```
> head -3 file.txt
```

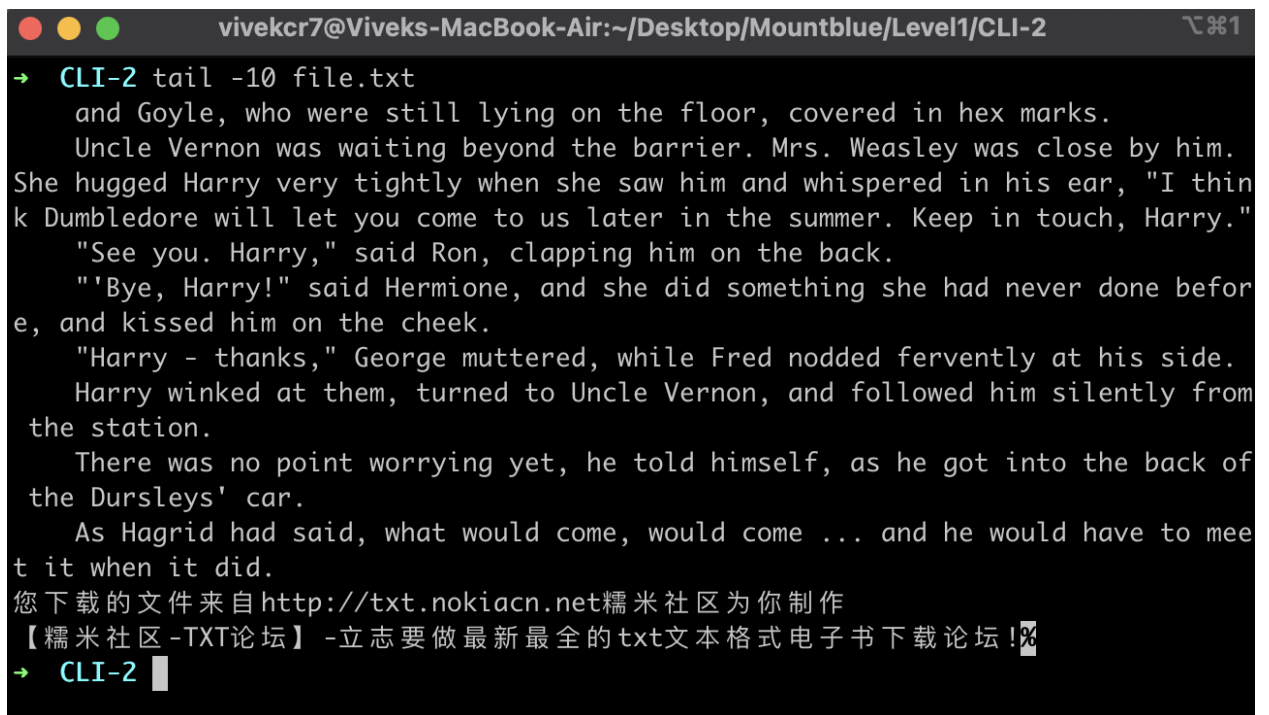
To print the first three lines I used (head -3 file-name) here any number of lines can be printed(-n) where n is any number, the “head” is used to print from the start.

```
vivekcr7@Viveks-MacBook-Air:~/Desktop/Mountblue/Level1/CLI-2  
→ CLI-2 head -3 file.txt  
Harry Potter and the Goblet of Fire  
    By J.K. Rowling  
→ CLI-2
```

3. Print the last 10 lines in the book

> **tail -10 file.txt**

To print the last 10 lines of the file I used (tail -10 file-name) here any number of lines can be printed (-n) where n is the number, the “tail” is used to print from the end



```
vivekcr7@Viveks-MacBook-Air:~/Desktop/Mountblue/Level1/CLI-2
→ CLI-2 tail -10 file.txt
    and Goyle, who were still lying on the floor, covered in hex marks.
    Uncle Vernon was waiting beyond the barrier. Mrs. Weasley was close by him.
    She hugged Harry very tightly when she saw him and whispered in his ear, "I thin
k Dumbledore will let you come to us later in the summer. Keep in touch, Harry."
    "See you. Harry," said Ron, clapping him on the back.
    "'Bye, Harry!" said Hermione, and she did something she had never done befor
e, and kissed him on the cheek.
    "Harry - thanks," George muttered, while Fred nodded fervently at his side.
    Harry winked at them, turned to Uncle Vernon, and followed him silently from
the station.
    There was no point worrying yet, he told himself, as he got into the back of
the Dursleys' car.
    As Hagrid had said, what would come, would come ... and he would have to mee
t it when it did.
    您下载的文件来自http://txt.nokiactn.net糯米社区为您制作
    【糯米社区-TXT论坛】-立志要做最新最全的txt文本格式电子书下载论坛!
→ CLI-2
```

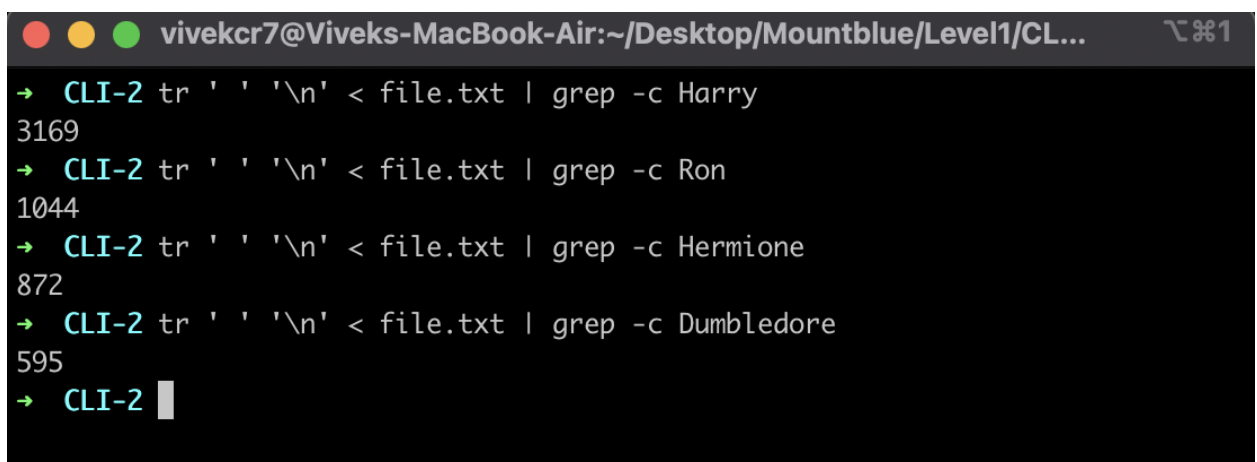
4. How many times do the following words occur in the book?

- a. Harry
- b. Ron
- c. Hermione
- d. Dumbledore

Here piping will use, means pass the output of one command as the input of the second command.

So first, I will transform the content of the input file with the “tr” command so that all the words are in a single line and then use “grep -c” to count that match count.

```
> tr ' ' '\n' < file.txt | grep -c Harry
> tr ' ' '\n' < file.txt | grep -c Ron
> tr ' ' '\n' < file.txt | grep -c Hermione
> tr ' ' '\n' < file.txt | grep -c Dumbledore
```

A terminal window with a dark background. The title bar shows the user 'vivekcr7' on a 'Viveks-MacBook-Air' at the path '~/Desktop/Mountblue/Level1/CL...'. The terminal shows four commands being executed: 'CLI-2 tr ' ' '\n' < file.txt | grep -c Harry' resulting in '3169', 'CLI-2 tr ' ' '\n' < file.txt | grep -c Ron' resulting in '1044', 'CLI-2 tr ' ' '\n' < file.txt | grep -c Hermione' resulting in '872', and 'CLI-2 tr ' ' '\n' < file.txt | grep -c Dumbledore' resulting in '595'. The prompt 'CLI-2' is followed by a cursor on the next line.

```
vivekcr7@Viveks-MacBook-Air:~/Desktop/Mountblue/Level1/CL...
→ CLI-2 tr ' ' '\n' < file.txt | grep -c Harry
3169
→ CLI-2 tr ' ' '\n' < file.txt | grep -c Ron
1044
→ CLI-2 tr ' ' '\n' < file.txt | grep -c Hermione
872
→ CLI-2 tr ' ' '\n' < file.txt | grep -c Dumbledore
595
→ CLI-2
```

5. Print lines from 100 through 200 in the book

```
> tail +100 file.txt | head 101
```

Here, we need to print lines from 100-200 from the book, so the (tail -n 100 file.txt) command will print the entire file starting from line 100, and (head -n 101) Prints the first 101 lines of that (and including line 200 of the original file).

6. How many unique words are present in the book?

```
> tr ' ' '\n' < file.txt | sort | uniq -c | wc -l
```

We are going to transform the file into a single line then sort it then count using “uniq -c” and then count the lines. And return it

```
vivekcr7@Viveks-MacBook-Air:~/Desktop/Mountblue/Level1/CLI-2
→ CLI-2 tr ' ' '\n' < file.txt | sort | uniq -c | wc -l
22504
→ CLI-2
```

Processes, ports

1. List your browser's process ids (pid) and parent process ids(ppid)

> **pgrep chrome**

> **ps aux | grep chrome**

Above are the two ways to get the process ids and parent process ids.

2. Stop the browser application from the command line

> **pkill ####**

Here, after getting the process id using the “pkill” command to kill the process.

(####) is the process id.

3. List the top 3 processes by CPU usage.

> **ps aux -c| head -5**

Here, I first gathered all the processes from the (ps aux) command then I passed that to (sort -nk +3) to sort ascending where +3 is the column where CPU is there then I just selected the top 5 processes using (head -5)

4. List the top 3 processes by MEM usage

> **ps aux -m| head -5**

Here, I first gathered all the processes from the (ps aux) command then I passed that to (sort -nk +4) to sort ascending where +4 is the column where MEM is there then I just selected the top 5 processes using (head -5)

5. Start a Python HTTP server on port 8000

> **python3 -m http.server**

By default, this will run the contents of the directory on a local web server, on port 8000. You can go to this server by going to the URL localhost:8000 in your web browser. Here you'll see the contents of the directory listed — click the HTML file you want to run.

6. Open another tab. Stop the process you started in the previous step

> **lsof -i:8000**

> **kill -9 PID**

Open a new tab, then get the process id of port 8000 and kill the process using the “kill” command.

7. Start a Python HTTP server on port 90

> **python3 -m http.server 90**

The above command will run a local web server on port 90, by default it is run on port 8000

8. Display all active connections and the corresponding TCP / UDP ports.

> **netstat -a | more**

The above command is used to display all the active connections and the corresponding TCP/UDP ports.

9. Find the pid of the process that is listening on port 5432

> **lsof -i:5432**

The best way to get the pid of the port is by using (lsof command).

Managing software

1. Install `htop`, `vim` and `nginx`

So currently, I'm on my MacBook, I'm going to use homebrew for the installation of the above software.

> **brew install htop**

> **brew install vim**

> **brew install nginx**

2. Uninstall `nginx`

>**brew uninstall nginx**

To, uninstall we simply need to run (brew uninstall Nginx)

Misc

1. What's your local IP address?

> **ifconfig**

(ifconfig command is used to change and view network configuration)

Locate inet address of "en0" that's the IP address of the local machine.

2. Find the IP address of `google.com`

> ping google.com

The above command is used to ping google.com and check the packets shared and received, there we can get the IP address of google

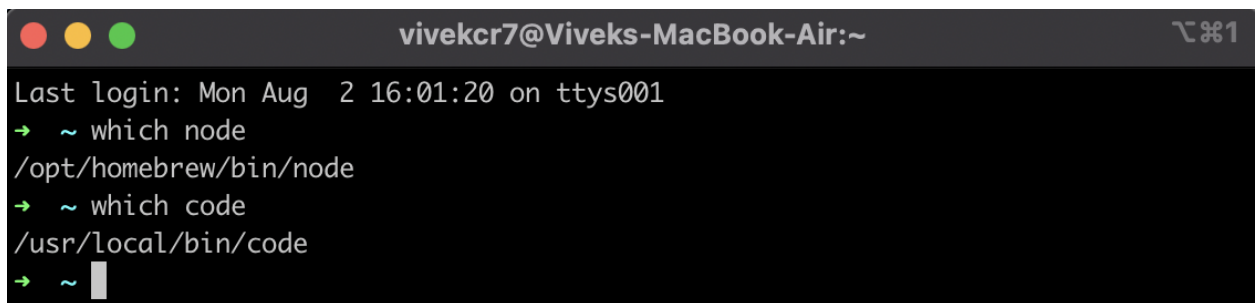
3. How to check if the Internet is working using CLI?

> ping website

Ping any website, if the ping commands works, means the internet is working

4. Where is the `node` command located? What about `code`?

Using which command we can find the location of the node, code.



```
vivekcr7@Viveks-MacBook-Air:~  
Last login: Mon Aug  2 16:01:20 on ttys001  
→ ~ which node  
/opt/homebrew/bin/node  
→ ~ which code  
/usr/local/bin/code  
→ ~
```