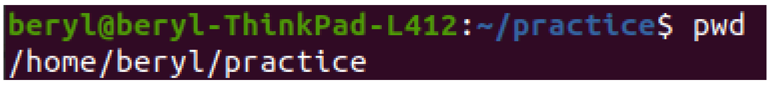
|  |  |
|---|---|
| *File Name* | *: basic_linux_commands.pdf* |
| *Name* | *: Dipanshu Ranga (@dip-beryl)* |
| *Organization* | *: Beryl Systems Pvt. Ltd.* |

# Linux Commands (Basic)

**1. pwd :** to know the current working directory   ['print working directory'].

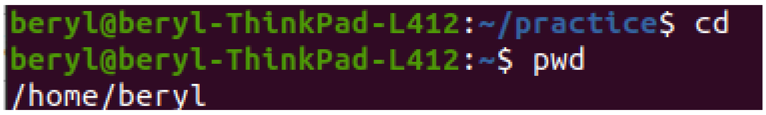


```
beryl@beryl-ThinkPad-L412:~/practice$ pwd
/home/beryl/practice
```

---

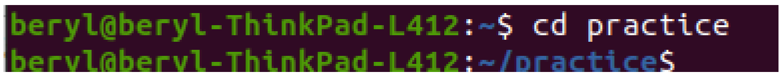
**2. cd :** to change the working directory  [ 'change directory' ]

**2.1 cd : -** when used without any options change the directory to root directory



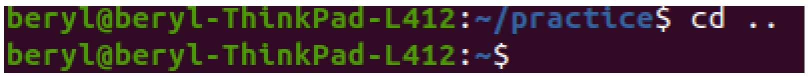
```
beryl@beryl-ThinkPad-L412:~/practice$ cd
beryl@beryl-ThinkPad-L412:~$ pwd
/home/beryl
```

**2.2 cd direcory_name : -** changes the directory to diretory mentioned inplace of 'directory_name'



```
beryl@beryl-ThinkPad-L412:~$ cd practice
beryl@beryl-ThinkPad-L412:~/practice$
```

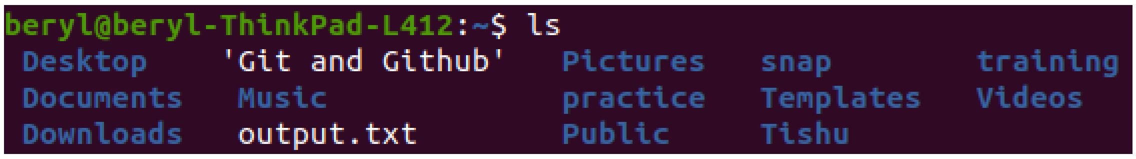
**2.3 cd .. : -** [..] double dots are used to refer the parent directory of current directory



```
beryl@beryl-ThinkPad-L412:~/practice$ cd ..
beryl@beryl-ThinkPad-L412:~$
```

---

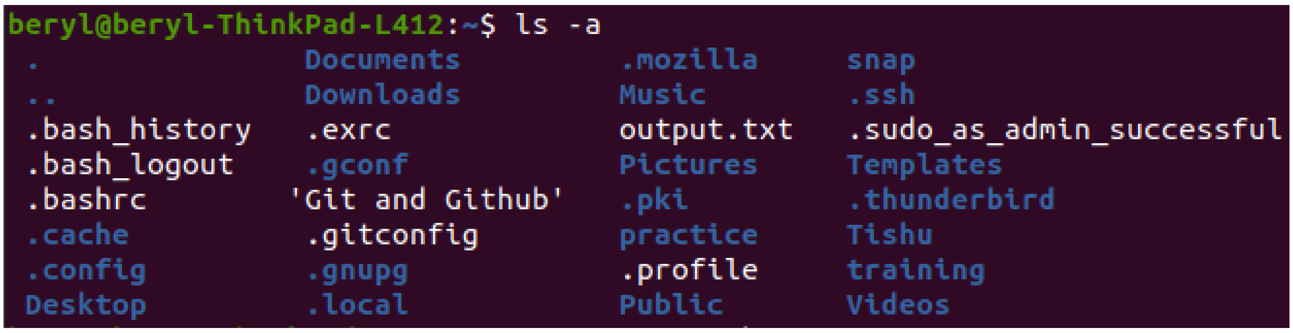
**3. ls :** to list out the current directory items



```
beryl@beryl-ThinkPad-L412:~$ ls
 Desktop     'Git and Github'   Pictures   snap        training
 Documents    Music             practice   Templates   Videos
 Downloads    output.txt        Public     Tishu
```

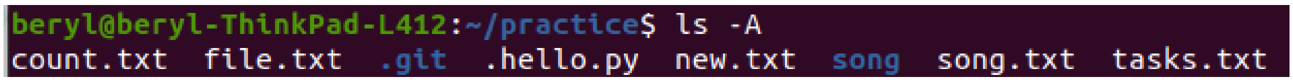
**ls -[options] :**

**3.1    -a, --all : -** to also show hidden files



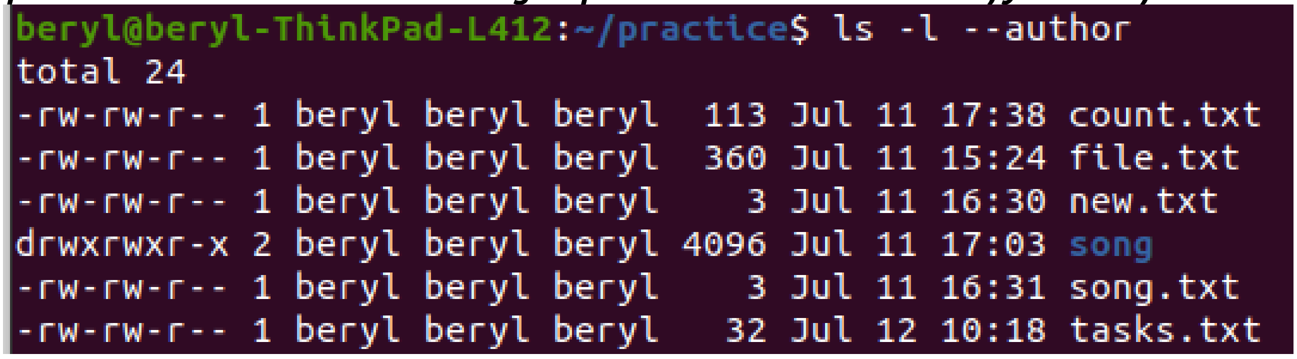
```
beryl@beryl-ThinkPad-L412:~$ ls -a
 .                 Documents          .mozilla     snap
 ..                Downloads          Music        .ssh
 .bash_history     .exrc              output.txt   .sudo_as_admin_successful
 .bash_logout      .gconf             Pictures     Templates
 .bashrc          'Git and Github'    .pki         .thunderbird
 .cache            .gitconfig         practice     Tishu
 .config           .gnupg             .profile     training
 Desktop           .local             Public       Videos
```

**3.2 -A, --almost-all : -** works exactly like [-a] but do not show [.] and [..]

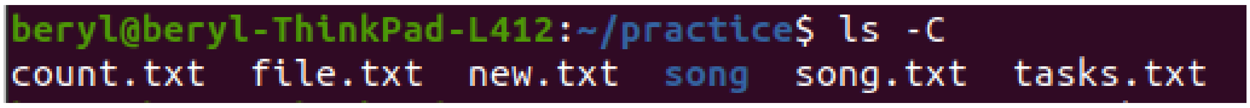

```
beryl@beryl-ThinkPad-L412:~/practice$ ls -A
count.txt  file.txt  .git  .hello.py  new.txt  song  song.txt  tasks.txt
```

**3.3 --author : -** gives author of file when used with [-l]

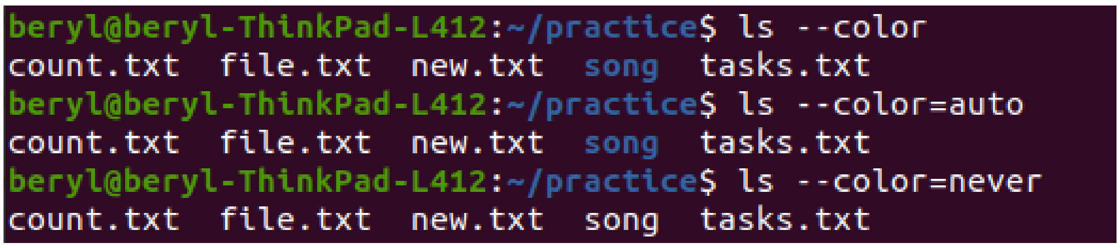
*permissions  hardl inks  owner  group  author  block size  modify dat e  file name*


```
beryl@beryl-ThinkPad-L412:~/practice$ ls -l --author
total 24
-rw-rw-r-- 1 beryl beryl beryl  113 Jul 11 17:38 count.txt
-rw-rw-r-- 1 beryl beryl beryl  360 Jul 11 15:24 file.txt
-rw-rw-r-- 1 beryl beryl beryl    3 Jul 11 16:30 new.txt
drwxrwxr-x 2 beryl beryl beryl 4096 Jul 11 17:03 song
-rw-rw-r-- 1 beryl beryl beryl    3 Jul 11 16:31 song.txt
-rw-rw-r-- 1 beryl beryl beryl   32 Jul 12 10:18 tasks.txt
```

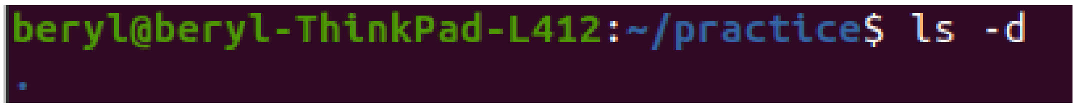
**3.4 -C : -** list enteries by column


```
beryl@beryl-ThinkPad-L412:~/practice$ ls -C
count.txt  file.txt  new.txt  song  song.txt  tasks.txt
```

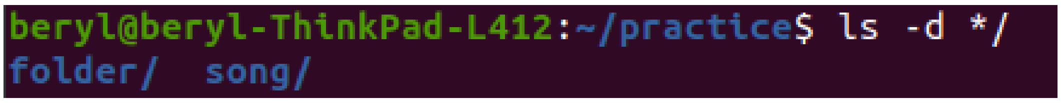
**3.5 --color=[*parameter*] : -** colorize the output.
<u>*Parameters*</u> – always (*default*), never and auto


```
beryl@beryl-ThinkPad-L412:~/practice$ ls --color
count.txt  file.txt  new.txt  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls --color=auto
count.txt  file.txt  new.txt  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls --color=never
count.txt  file.txt  new.txt  song  tasks.txt
```

**3.6 -d, --directory : -** List directory entries instead of contents.

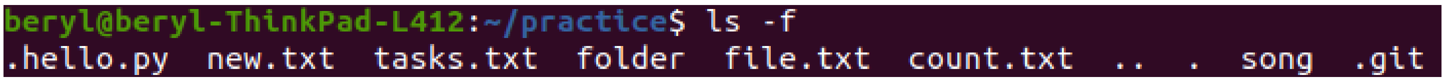

```
beryl@beryl-ThinkPad-L412:~/practice$ ls -d
.
```

**3.6.1 ls -d */ : -** to print only directory names



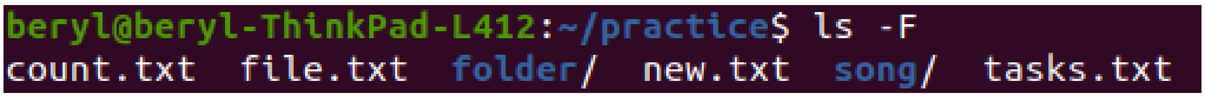
```
beryl@beryl-ThinkPad-L412:~/practice$ ls -d */
folder/  song/
```

**3.7 -f :** Do not sort, enable -aU, and disablels –color.
Prints the same ordr as file system with hidden files.



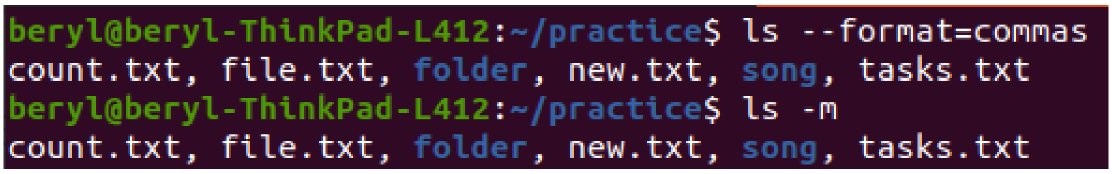
```
beryl@beryl-ThinkPad-L412:~/practice$ ls -f
.hello.py  new.txt  tasks.txt  folder  file.txt  count.txt  ..  .  song  .git
```

**3.8 -F, --classify :** Append indicator (one of */=>@|) to entries.



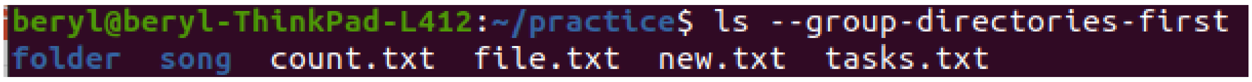
```
beryl@beryl-ThinkPad-L412:~/practice$ ls -F
count.txt  file.txt  folder/  new.txt  song/  tasks.txt
```

**3.9 --format=*word* : -** formats the output according.
across -x, commas -m, horizontal -x, long -l,
single-column -1, verbose -l, vertical -C



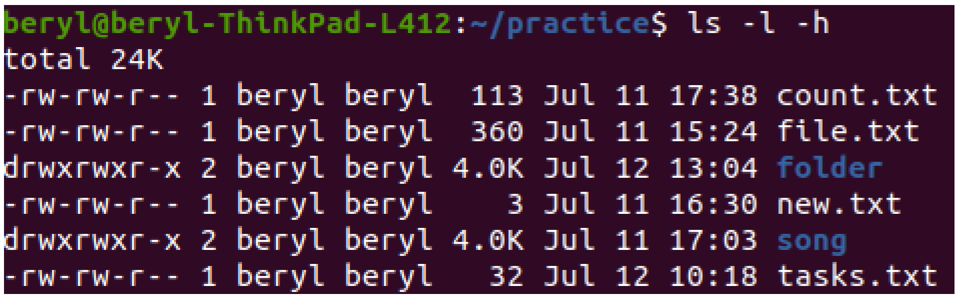
```
beryl@beryl-ThinkPad-L412:~/practice$ ls --format=commas
count.txt, file.txt, folder, new.txt, song, tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls -m
count.txt, file.txt, folder, new.txt, song, tasks.txt
```

**3.10 --group-directories-first :-** shows directories before files



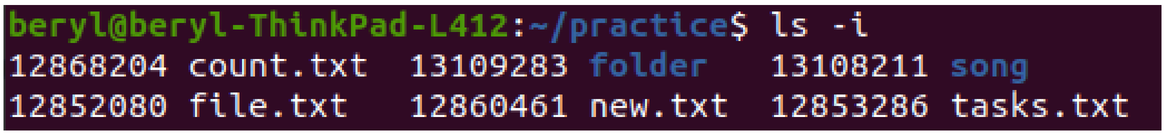
```
beryl@beryl-ThinkPad-L412:~/practice$ ls --group-directories-first
folder  song  count.txt  file.txt  new.txt  tasks.txt
```

**3.11 -h, --human-readable : -** With -l, print sizes in human-readable format
(e.g., 1K, 234M, 2G).



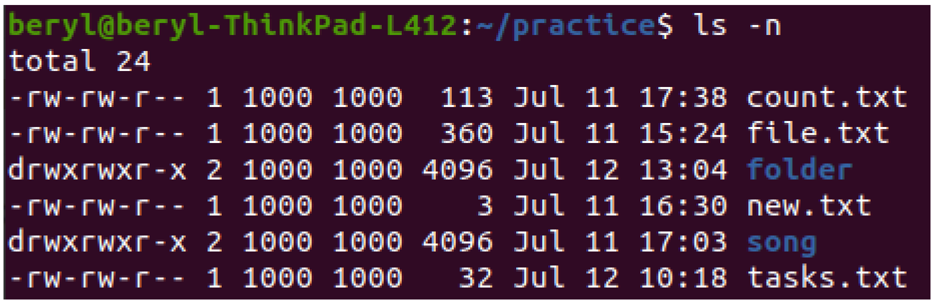
```
beryl@beryl-ThinkPad-L412:~/practice$ ls -l -h
total 24K
-rw-rw-r-- 1 beryl beryl  113 Jul 11 17:38 count.txt
-rw-rw-r-- 1 beryl beryl  360 Jul 11 15:24 file.txt
drwxrwxr-x 2 beryl beryl 4.0K Jul 12 13:04 folder
-rw-rw-r-- 1 beryl beryl    3 Jul 11 16:30 new.txt
drwxrwxr-x 2 beryl beryl 4.0K Jul 11 17:03 song
-rw-rw-r-- 1 beryl beryl   32 Jul 12 10:18 tasks.txt
```

**3.12 -i, -inode : -** print the index number of each file



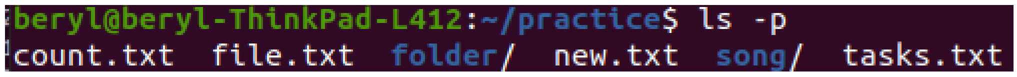
```
beryl@beryl-ThinkPad-L412:~/practice$ ls -i
12868204 count.txt  13109283 folder   13108211 song
12852080 file.txt   12860461 new.txt  12853286 tasks.txt
```

**3.13 -n, --numeric-uid-gid :-** Like **-l**, but list numeric user and group IDs



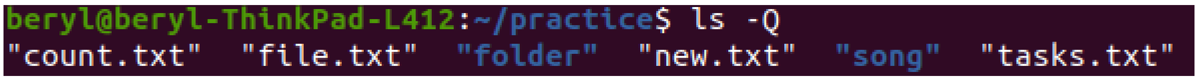
```
beryl@beryl-ThinkPad-L412:~/practice$ ls -n
total 24
-rw-rw-r-- 1 1000 1000  113 Jul 11 17:38 count.txt
-rw-rw-r-- 1 1000 1000  360 Jul 11 15:24 file.txt
drwxrwxr-x 2 1000 1000 4096 Jul 12 13:04 folder
-rw-rw-r-- 1 1000 1000    3 Jul 11 16:30 new.txt
drwxrwxr-x 2 1000 1000 4096 Jul 11 17:03 song
-rw-rw-r-- 1 1000 1000   32 Jul 12 10:18 tasks.txt
```

**3.14 -p : -** apped “/” indicator to directories



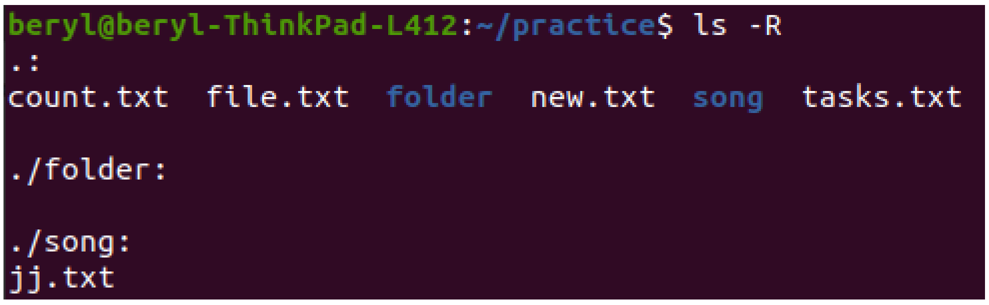
```
beryl@beryl-ThinkPad-L412:~/practice$ ls -p
count.txt  file.txt  folder/  new.txt  song/  tasks.txt
```

**3.15 -Q, --quote-name : -** enclose entry names in double quotes



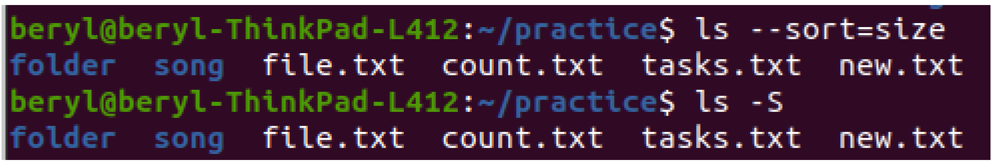
```
beryl@beryl-ThinkPad-L412:~/practice$ ls -Q
"count.txt"  "file.txt"  "folder"  "new.txt"  "song"  "tasks.txt"
```

**3.16 -R, --recursie : -** prints subdirecteries recursively



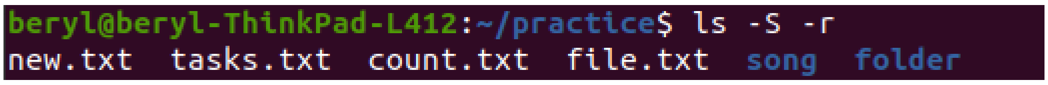
```
beryl@beryl-ThinkPad-L412:~/practice$ ls -R
.:
count.txt  file.txt  folder  new.txt  song  tasks.txt

./folder:

./song:
jj.txt
```

**3.17 --sort=*word* : -** Sort by *word* instead of name: none (-U), extension (-X), size (-S), time (-t), version (-v).



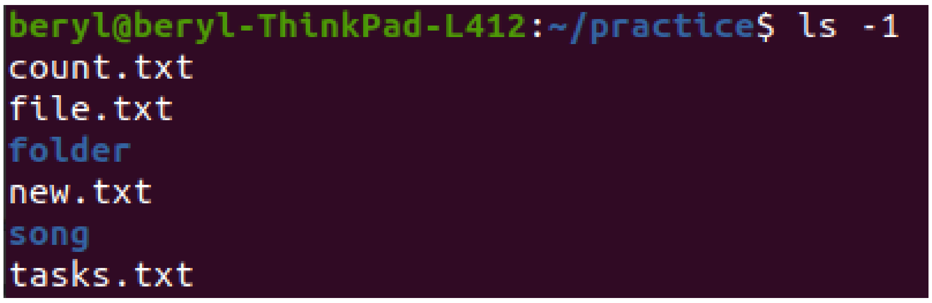
```
beryl@beryl-ThinkPad-L412:~/practice$ ls --sort=size
folder   song   file.txt   count.txt   tasks.txt   new.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls -S
folder   song   file.txt   count.txt   tasks.txt   new.txt
```

**3.18 -r, --reverse : -** reverse the order when sorting



```
beryl@beryl-ThinkPad-L412:~/practice$ ls -S -r
new.txt   tasks.txt   count.txt   file.txt   song   folder
```

**3.19 -1: -** prints eqach filein a new line

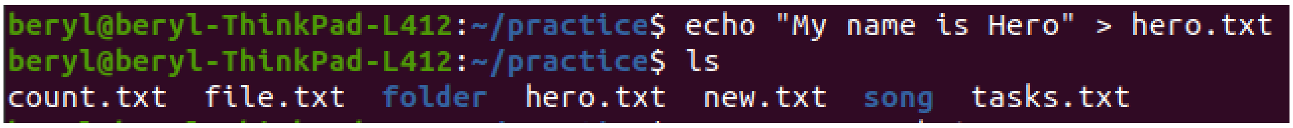


```
beryl@beryl-ThinkPad-L412:~/practice$ ls -1
count.txt
file.txt
folder
new.txt
song
tasks.txt
```

---

**4. echo :** the echo command prints text to standard output

**4.1 echo " " > :** to create a text file in current directory
**'>' - redirection** is used to transfer output to a command or a file

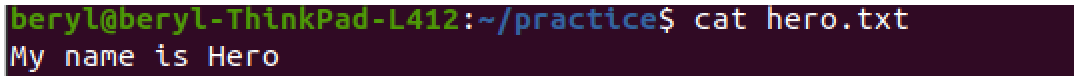


```
beryl@beryl-ThinkPad-L412:~/practice$ echo "My name is Hero" > hero.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt   file.txt   folder   hero.txt   new.txt   song   tasks.txt
```

---

**5. cat :** to join two or more text files or to view the file contents[ 'catenate' ]

**5.1 cat file_name : -** view content of file



```
beryl@beryl-ThinkPad-L412:~/practice$ cat hero.txt
My name is Hero
```

**5.2 cat file1 > file2 : -** tranfers data from one file to other file
*(file2's data will be deleted as '>' overwrites)*

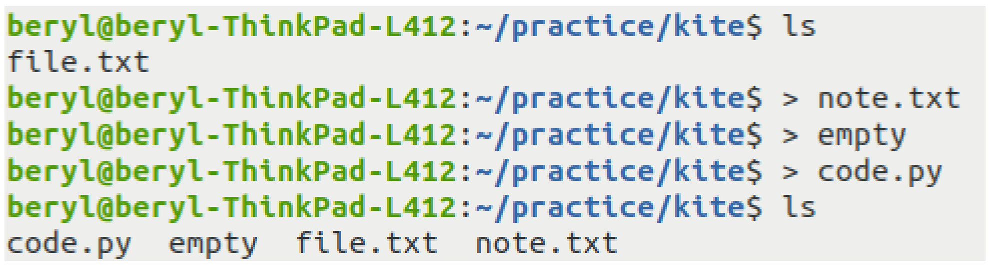
**5.3 cat file1 >> file2 : -** tranfers data from one file to other file
*(file1's is added with file2's data in file2 as ">>" is used)*

---

**6. <<,<, >, >> Redirection : -** used to redirect the input or ouputs from commands.

**6.1 : -** Above in echo and cat we can see the working of redirection (>).

**6.2 : -** We can also use the redirection to directly create files
with any extension or no extension

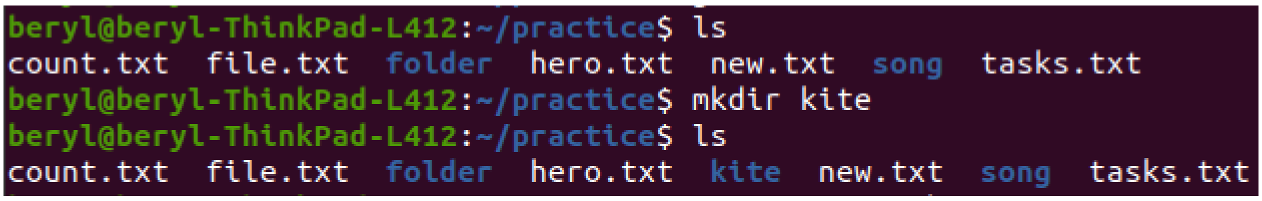


```
beryl@beryl-ThinkPad-L412:~/practice/kite$ ls
file.txt
beryl@beryl-ThinkPad-L412:~/practice/kite$ > note.txt
beryl@beryl-ThinkPad-L412:~/practice/kite$ > empty
beryl@beryl-ThinkPad-L412:~/practice/kite$ > code.py
beryl@beryl-ThinkPad-L412:~/practice/kite$ ls
code.py  empty  file.txt  note.txt
```

---

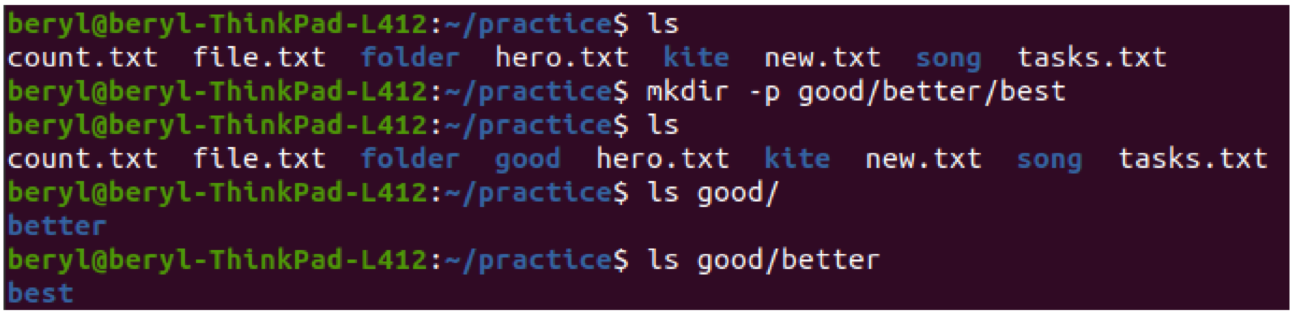
**7. mkdir :** to create a folder in current working directory [ ‘make directory’ ]

**7.1 mkdir dir_name : -**



```
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  folder  hero.txt  new.txt  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ mkdir kite
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  folder  hero.txt  kite  new.txt  song  tasks.txt
```

**7.2 mkdir -p multipe_parent_dir : -** create a multilevel parent empty directory

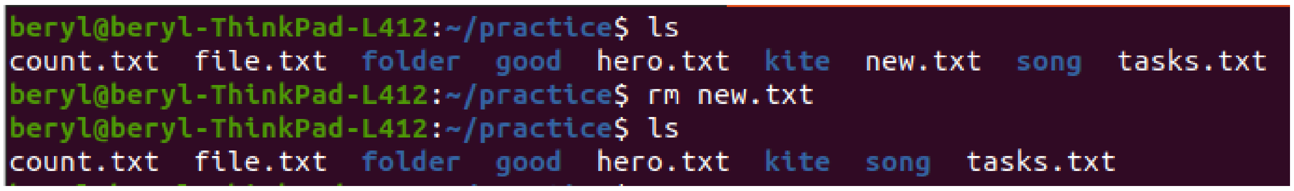


```
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  folder  hero.txt  kite  new.txt  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ mkdir -p good/better/best
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  folder  good  hero.txt  kite  new.txt  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls good/
better
beryl@beryl-ThinkPad-L412:~/practice$ ls good/better
best
```

---

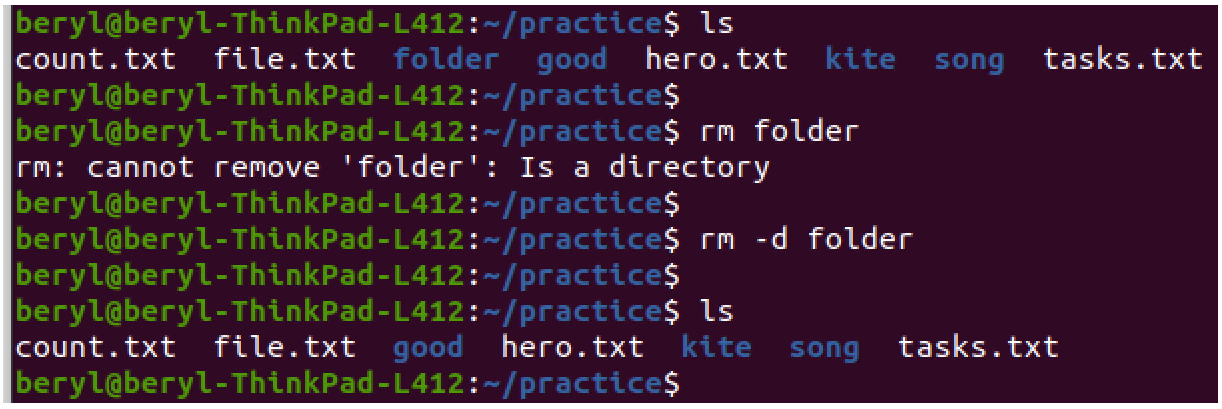
**8. rm :** to delete any file [ ‘remove’ ]
**[options] :**

**8.1 rm file_name : -** delete any file except folders



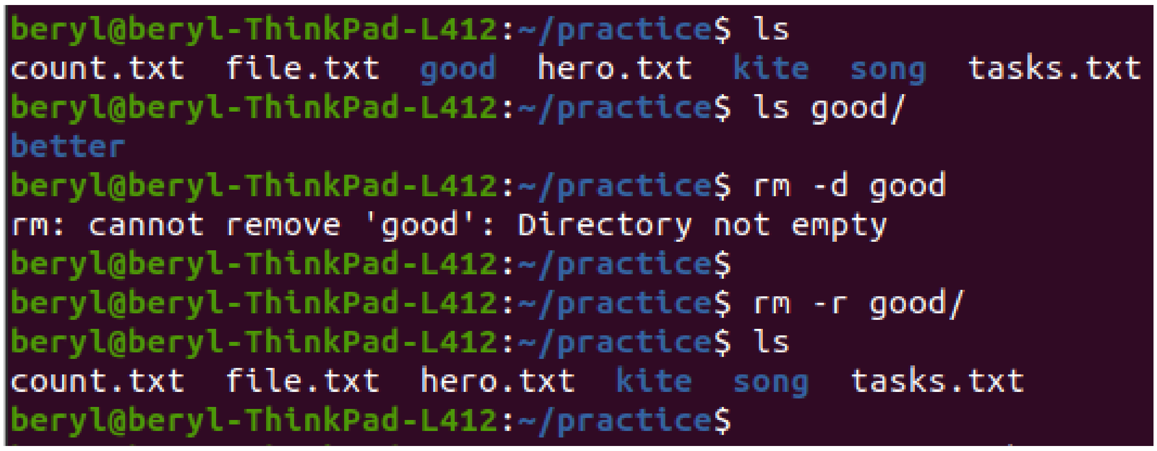
```
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  folder  good  hero.txt  kite  new.txt  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ rm new.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  folder  good  hero.txt  kite  song  tasks.txt
```

**8.2 -d, --dir : -** delete empty directories
**Syntax : -** ***rm -d dir_name***



```
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  folder  good  hero.txt  kite  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$
beryl@beryl-ThinkPad-L412:~/practice$ rm folder
rm: cannot remove 'folder': Is a directory
beryl@beryl-ThinkPad-L412:~/practice$
beryl@beryl-ThinkPad-L412:~/practice$ rm -d folder
beryl@beryl-ThinkPad-L412:~/practice$
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  good  hero.txt  kite  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$
```

**8.3** **-r, -R, --recursive : -** deletes directories and subfiles and subdiretories
**Syntax :** ***rm -r dir_name***



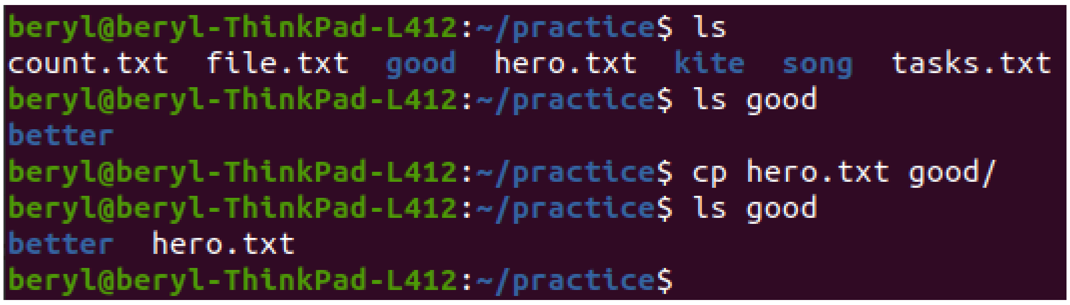
```
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  good  hero.txt  kite  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls good/
better
beryl@beryl-ThinkPad-L412:~/practice$ rm -d good
rm: cannot remove 'good': Directory not empty
beryl@beryl-ThinkPad-L412:~/practice$
beryl@beryl-ThinkPad-L412:~/practice$ rm -r good/
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  hero.txt  kite  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$
```

**8.4** **-f, --force: -** ignore non existing files & never prompt before removing
**Synatx :** ***rm -f file1 file2 .... fileN***

---

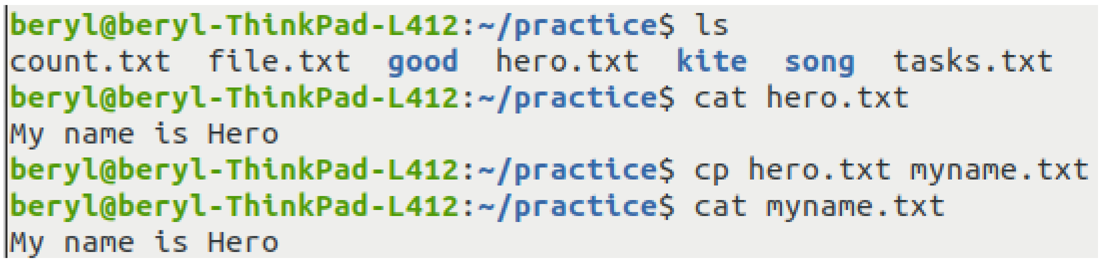
**9. cp :** to copy files or folders [ 'copy' ]
**[options] :**

**9.1 Syntax :** ***cp path1 path2***



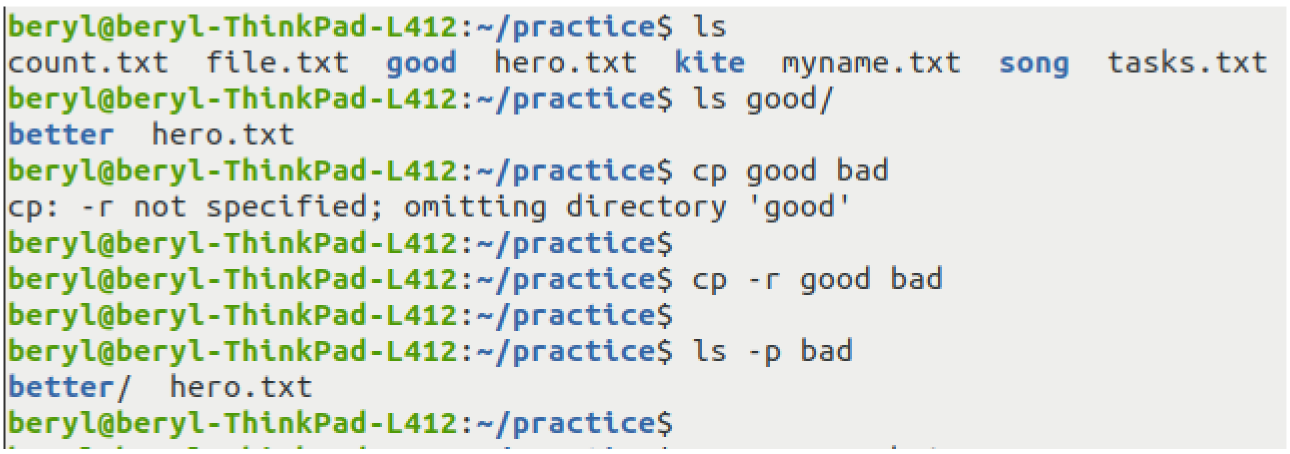
```
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  good  hero.txt  kite  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls good
better
beryl@beryl-ThinkPad-L412:~/practice$ cp hero.txt good/
beryl@beryl-ThinkPad-L412:~/practice$ ls good
better  hero.txt
beryl@beryl-ThinkPad-L412:~/practice$
```

**9.2 : -** creating a copy of file in same folder



```
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  good  hero.txt  kite  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ cat hero.txt
My name is Hero
beryl@beryl-ThinkPad-L412:~/practice$ cp hero.txt myname.txt
beryl@beryl-ThinkPad-L412:~/practice$ cat myname.txt
My name is Hero
```

**9.3 -r, -R, --recursive : -** to copy directories and subdirectories recursively

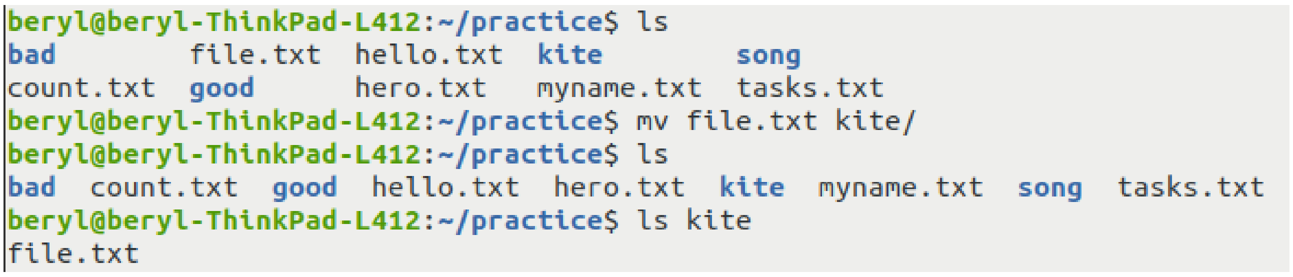


```
beryl@beryl-ThinkPad-L412:~/practice$ ls
count.txt  file.txt  good  hero.txt  kite  myname.txt  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls good/
better  hero.txt
beryl@beryl-ThinkPad-L412:~/practice$ cp good bad
cp: -r not specified; omitting directory 'good'
beryl@beryl-ThinkPad-L412:~/practice$
beryl@beryl-ThinkPad-L412:~/practice$ cp -r good bad
beryl@beryl-ThinkPad-L412:~/practice$
beryl@beryl-ThinkPad-L412:~/practice$ ls -p bad
better/  hero.txt
beryl@beryl-ThinkPad-L412:~/practice$
```

**10. mv :** to move or rename files or folders [ 'move' ]

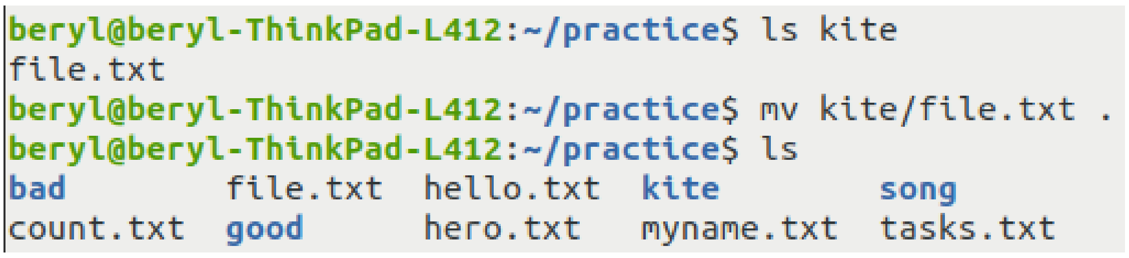
**[options] :**

**10.1 moving a file**
**Syntax :** ***mv path1 path2***



```
beryl@beryl-ThinkPad-L412:~/practice$ ls
bad        file.txt  hello.txt  kite        song
count.txt  good      hero.txt   myname.txt  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ mv file.txt kite/
beryl@beryl-ThinkPad-L412:~/practice$ ls
bad  count.txt  good  hello.txt  hero.txt  kite  myname.txt  song  tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls kite
file.txt
```

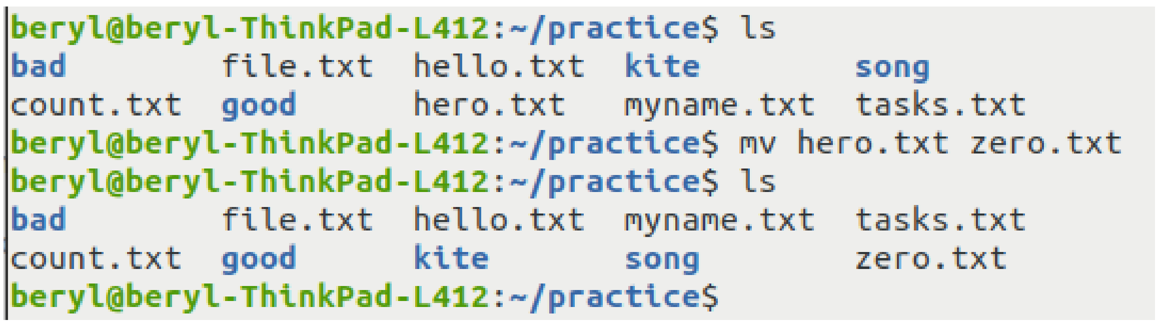
**10.2 moving a file back to current directory, we can use [.] for current dir**
**Syntax :** ***mv path .***



```
beryl@beryl-ThinkPad-L412:~/practice$ ls kite
file.txt
beryl@beryl-ThinkPad-L412:~/practice$ mv kite/file.txt .
beryl@beryl-ThinkPad-L412:~/practice$ ls
bad         file.txt  hello.txt  kite         song
count.txt   good      hero.txt   myname.txt   tasks.txt
```

**10.3 renaming file with mv**
to rename a file with mv arg1 = original name arg2 = new name
(do not change tha path)

**Syntax :** ***mv name1(pah1) name2(path1)***

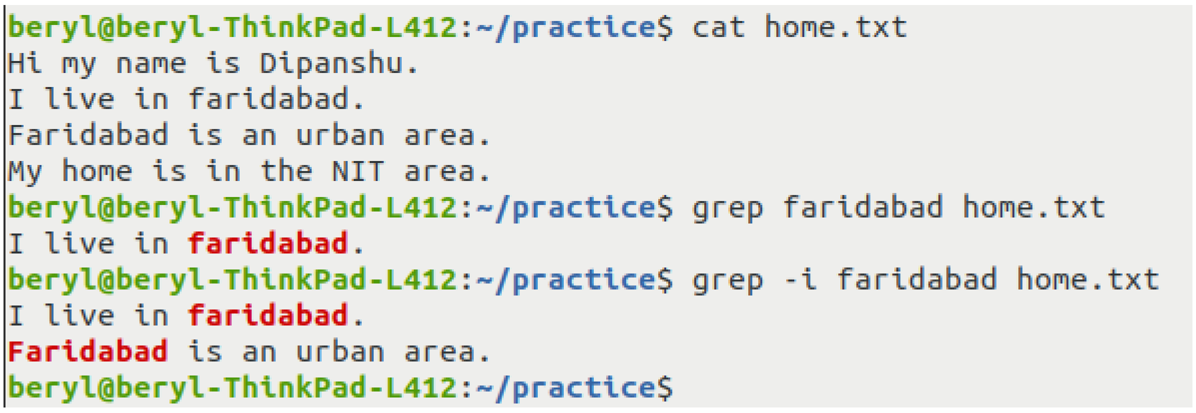


```
beryl@beryl-ThinkPad-L412:~/practice$ ls
bad         file.txt  hello.txt  kite         song
count.txt   good      hero.txt   myname.txt   tasks.txt
beryl@beryl-ThinkPad-L412:~/practice$ mv hero.txt zero.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls
bad         file.txt  hello.txt  myname.txt   tasks.txt
count.txt   good      kite       song         zero.txt
beryl@beryl-ThinkPad-L412:~/practice$
```

**11. grep :** the grep command processes text line by line, and prints any lines which match a specified pattern.
"global regular expression print,"

**11.1 Syntax :** ***grep [search_term] [file_name]***

***11.2 -i :*** *insensitive search*



```
beryl@beryl-ThinkPad-L412:~/practice$ cat home.txt
Hi my name is Dipanshu.
I live in faridabad.
Faridabad is an urban area.
My home is in the NIT area.
beryl@beryl-ThinkPad-L412:~/practice$ grep faridabad home.txt
I live in faridabad.
beryl@beryl-ThinkPad-L412:~/practice$ grep -i faridabad home.txt
I live in faridabad.
Faridabad is an urban area.
beryl@beryl-ThinkPad-L412:~/practice$
```

---

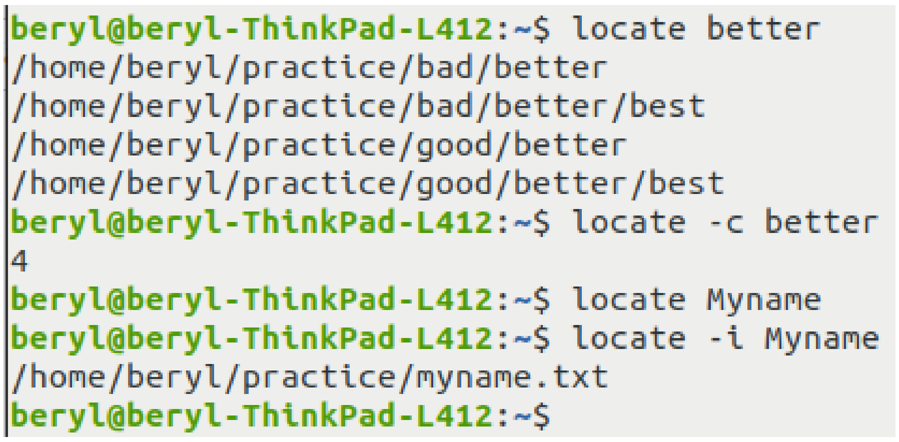
**12. locate :** the locate command finds files by name.

**[options] :**

**12.1 locate (file/folder name) :**

**12.2 -c, --count : -** count the results

**12.3 -i, --ignore-case : -** insensitive search



```
beryl@beryl-ThinkPad-L412:~$ locate better
/home/beryl/practice/bad/better
/home/beryl/practice/bad/better/best
/home/beryl/practice/good/better
/home/beryl/practice/good/better/best
beryl@beryl-ThinkPad-L412:~$ locate -c better
4
beryl@beryl-ThinkPad-L412:~$ locate Myname
beryl@beryl-ThinkPad-L412:~$ locate -i Myname
/home/beryl/practice/myname.txt
beryl@beryl-ThinkPad-L412:~$
```

---

**13 chmod :** the chmod command sets the permissions of files or directories.

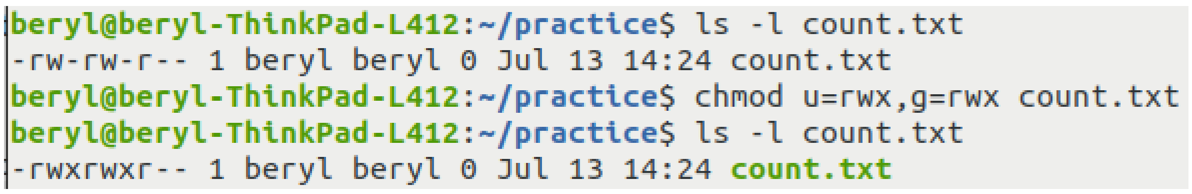
**[Permission Groups] :**

| | |
|---|---|
| **owner** | **: u** |
| **group** | **: g** |
| **other** | **: o** |
| **all users** | **: a** |

**[Permission Types] :**

| | | |
|---|---|---|
| **Read** | **: r** | **: 4** |
| **Write** | **: w** | **: 2** |
| **Execute** | **: x** | **: 1** |

**Syntax :** *chmod [group] = [pemissions], .... [file_name]*



```
beryl@beryl-ThinkPad-L412:~/practice$ ls -l count.txt
-rw-rw-r-- 1 beryl beryl 0 Jul 13 14:24 count.txt
beryl@beryl-ThinkPad-L412:~/practice$ chmod u=rwx,g=rwx count.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls -l count.txt
-rwxrwxr-- 1 beryl beryl 0 Jul 13 14:24 count.txt
```

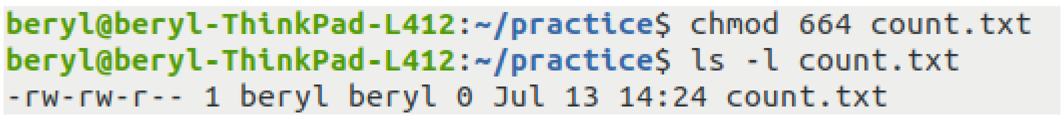
**13.1**

You can also use the **numerical (octal representation)** of **Permission types** to **change the permissions.**

Just **simply add the permission octals** according to **group rank.**

**Eg:** If you want to set permissions as – rw – rw - r

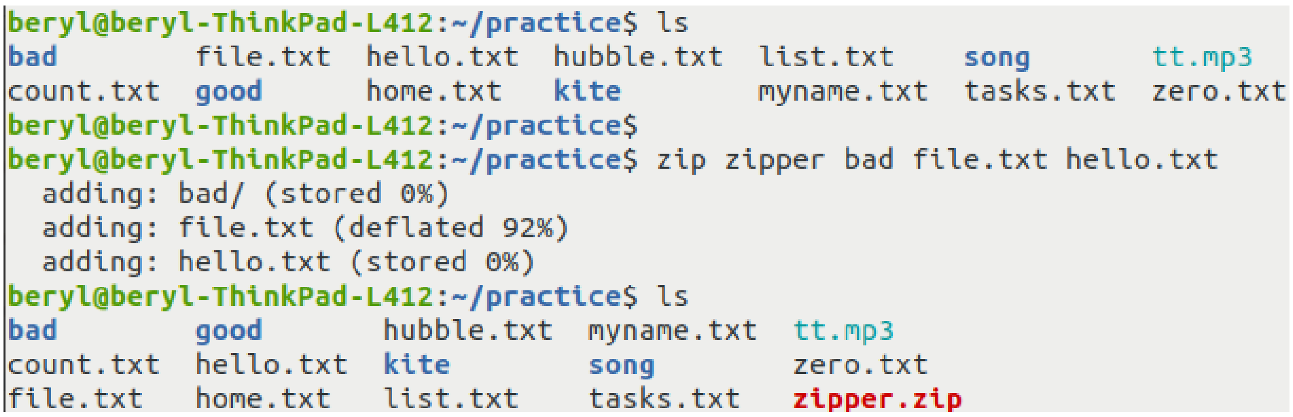
Total for owner = r + w i.e., 4 + 2 = 6
Total for group = r + w i.e., 4 + 2 = 6
Total for others = r i.e., 4 = 4
**i.e., 662**



```
beryl@beryl-ThinkPad-L412:~/practice$ chmod 664 count.txt
beryl@beryl-ThinkPad-L412:~/practice$ ls -l count.txt
-rw-rw-r-- 1 beryl beryl 0 Jul 13 14:24 count.txt
```

**14 zip :** to create zip archive/commpressed file of multiple files or folders

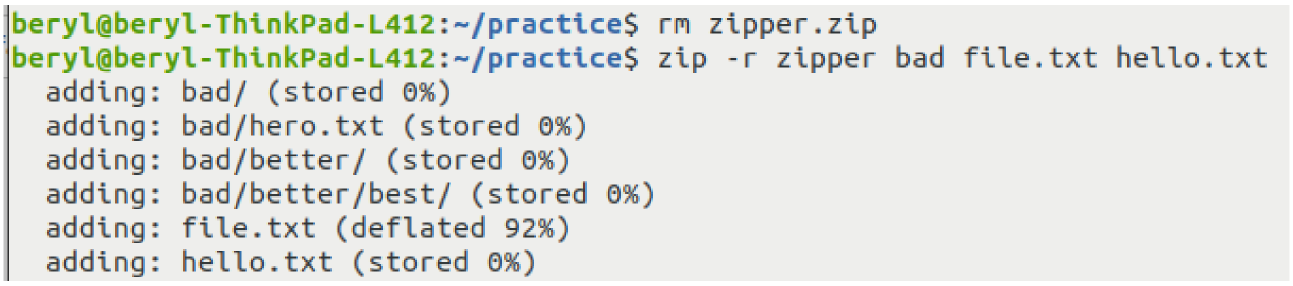
**Syntax :** *zip [archive_name] [file1] [file2] .... [fileN]*



```
beryl@beryl-ThinkPad-L412:~/practice$ ls
bad         file.txt  hello.txt  hubble.txt  list.txt    song       tt.mp3
count.txt   good      home.txt   kite        myname.txt  tasks.txt  zero.txt
beryl@beryl-ThinkPad-L412:~/practice$
beryl@beryl-ThinkPad-L412:~/practice$ zip zipper bad file.txt hello.txt
  adding: bad/ (stored 0%)
  adding: file.txt (deflated 92%)
  adding: hello.txt (stored 0%)
beryl@beryl-ThinkPad-L412:~/practice$ ls
bad         good       hubble.txt  myname.txt  tt.mp3
count.txt   hello.txt  kite        song        zero.txt
file.txt    home.txt   list.txt    tasks.txt   zipper.zip
```

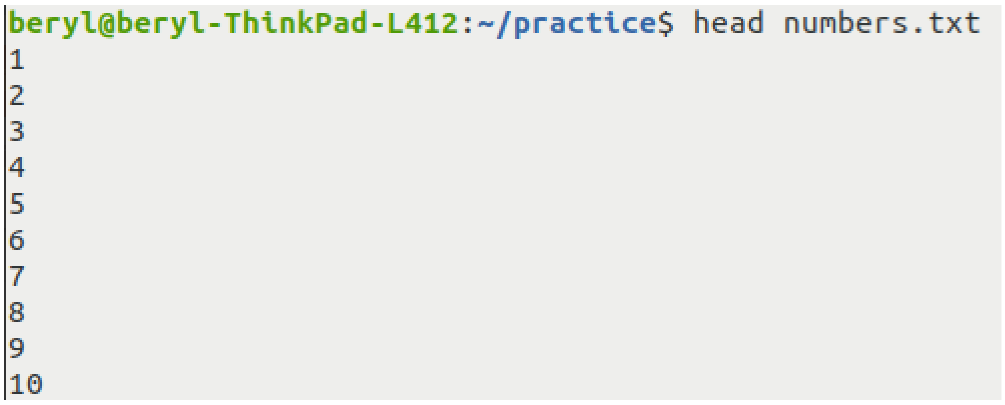
**14.1 -r, --recurse-paths :** In the above example “bad” directory contains sub-directories and files

But, “zipper.zip” does not contain those sub-files
To solve this we can use **-r** option. To include recursive paths

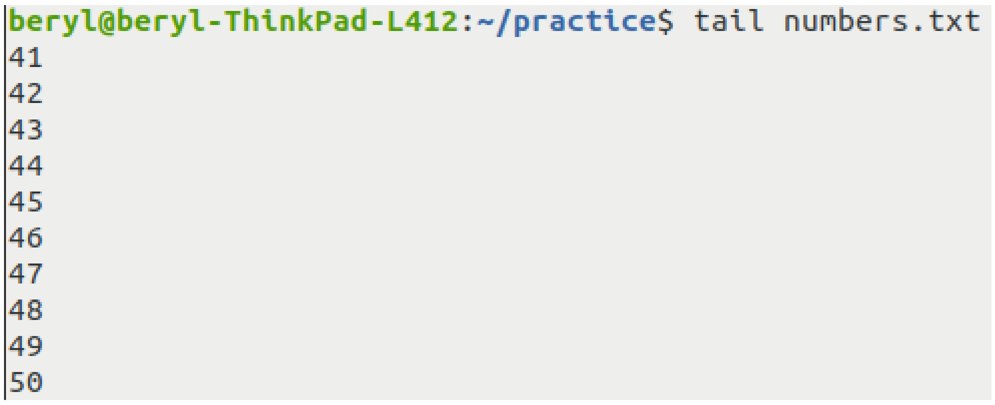


```
beryl@beryl-ThinkPad-L412:~/practice$ rm zipper.zip
beryl@beryl-ThinkPad-L412:~/practice$ zip -r zipper bad file.txt hello.txt
  adding: bad/ (stored 0%)
  adding: bad/hero.txt (stored 0%)
  adding: bad/better/ (stored 0%)
  adding: bad/better/best/ (stored 0%)
  adding: file.txt (deflated 92%)
  adding: hello.txt (stored 0%)
```

**15 tail & head :** to view  top or bottom10 lines of any file.



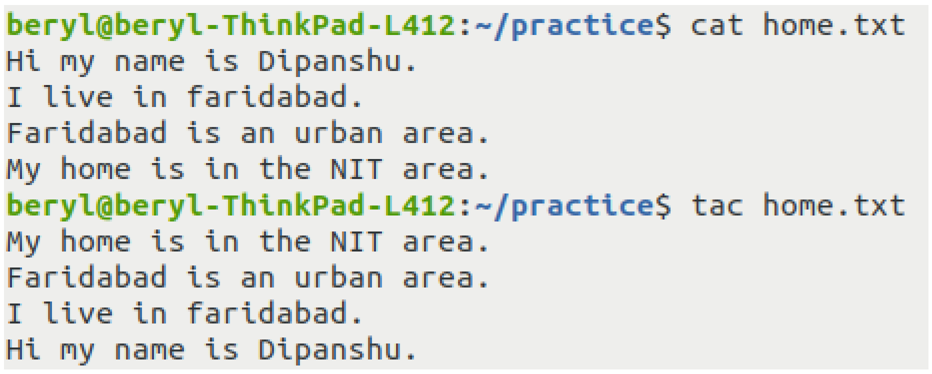
```
beryl@beryl-ThinkPad-L412:~/practice$ head numbers.txt
1
2
3
4
5
6
7
8
9
10
```



```
beryl@beryl-ThinkPad-L412:~/practice$ tail numbers.txt
41
42
43
44
45
46
47
48
49
50
```

---

**16.** **tac :** Works same like **cat** but prints file in reverse order line-by-line.
- It also concate files in reverse order



```
beryl@beryl-ThinkPad-L412:~/practice$ cat home.txt
Hi my name is Dipanshu.
I live in faridabad.
Faridabad is an urban area.
My home is in the NIT area.
beryl@beryl-ThinkPad-L412:~/practice$ tac home.txt
My home is in the NIT area.
Faridabad is an urban area.
I live in faridabad.
Hi my name is Dipanshu.
```

---

**17.** **wc:** to cout the words, charachter or lines [ 'word count' ]

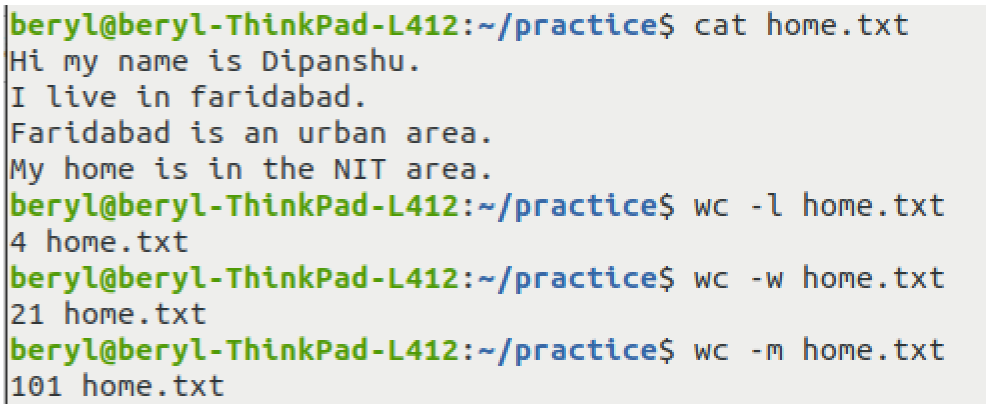
**Syntax :** *wc [option] [file_name]*

**[optons] :**

**17.1** **-l, --lines : -** prints the line count

**17.2** **-m, --chars : -** prints the charachter count

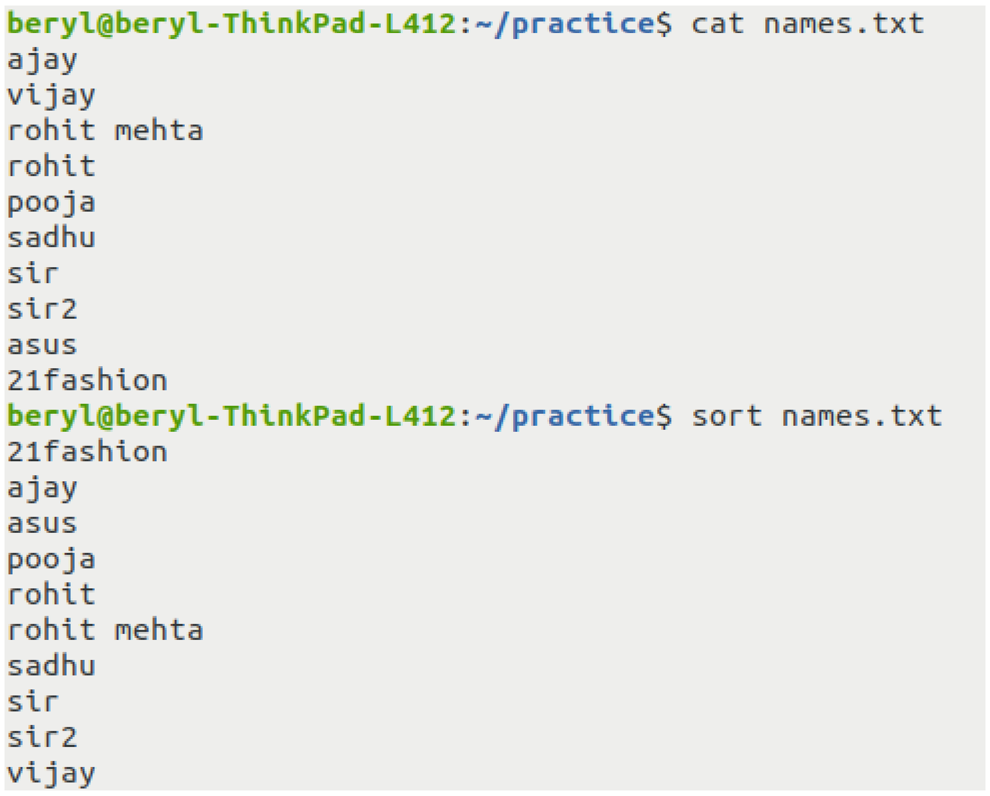
**17.3** **-w, --words : -** prints the word count



```
beryl@beryl-ThinkPad-L412:~/practice$ cat home.txt
Hi my name is Dipanshu.
I live in faridabad.
Faridabad is an urban area.
My home is in the NIT area.
beryl@beryl-ThinkPad-L412:~/practice$ wc -l home.txt
4 home.txt
beryl@beryl-ThinkPad-L412:~/practice$ wc -w home.txt
21 home.txt
beryl@beryl-ThinkPad-L412:~/practice$ wc -m home.txt
101 home.txt
```

**18. sort :** to sort numbers or text line by line in a file

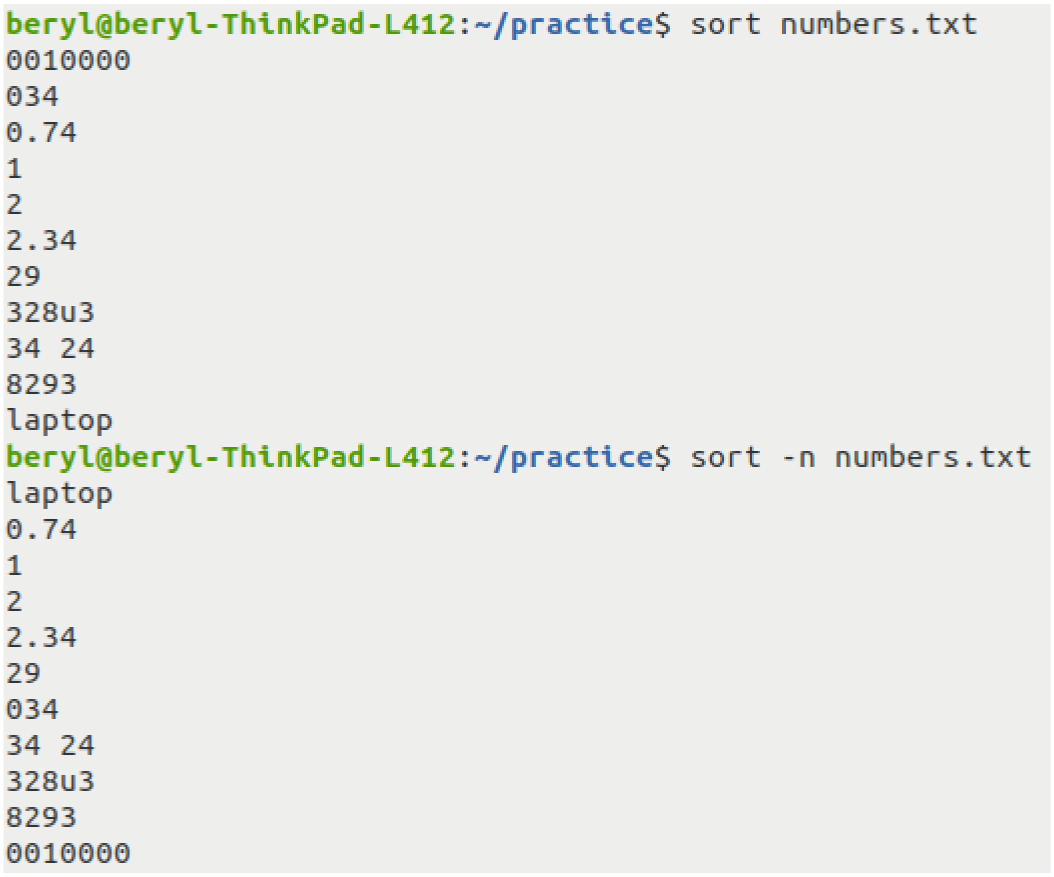
**Syntax :** *sort [option(s)] [file_name]*



```
beryl@beryl-ThinkPad-L412:~/practice$ cat names.txt
ajay
vijay
rohit mehta
rohit
pooja
sadhu
sir
sir2
asus
21fashion
beryl@beryl-ThinkPad-L412:~/practice$ sort names.txt
21fashion
ajay
asus
pooja
rohit
rohit mehta
sadhu
sir
sir2
vijay
```

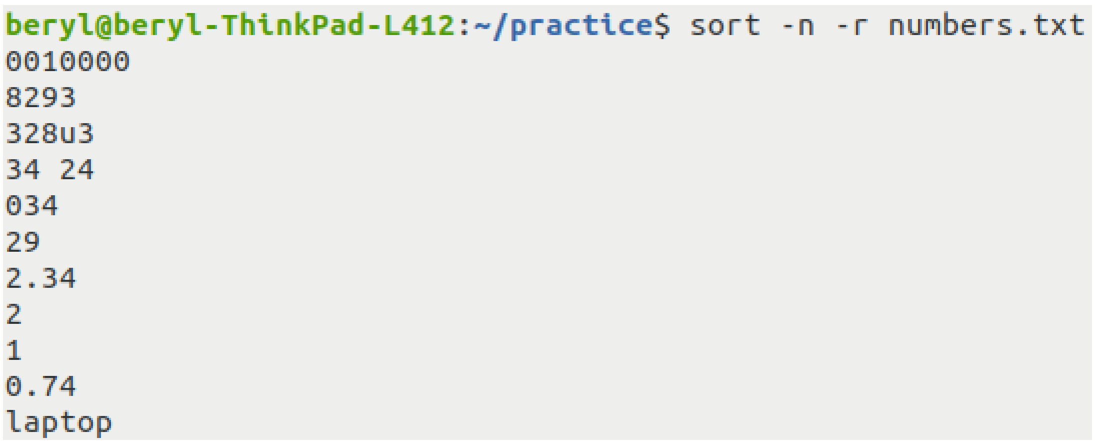
**[options] :**

**18.1 -n, --numeric-sort :** compare according to their numeric value



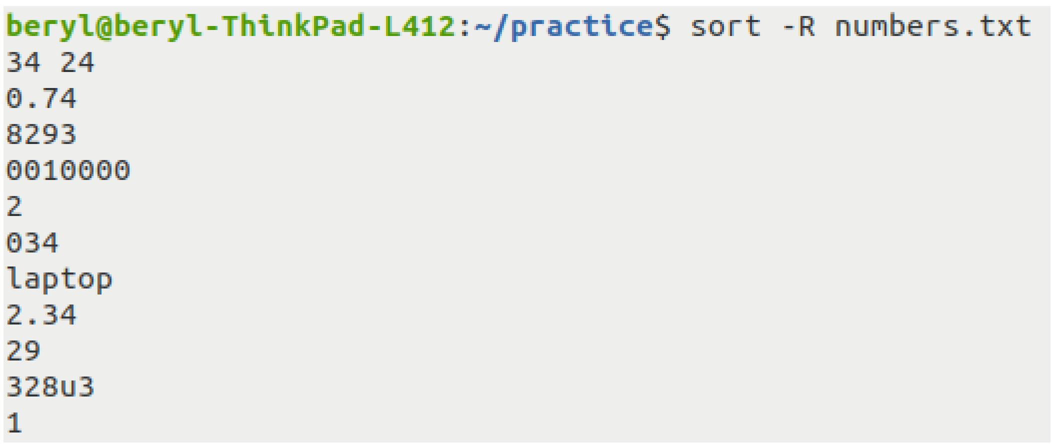
```
beryl@beryl-ThinkPad-L412:~/practice$ sort numbers.txt
0010000
034
0.74
1
2
2.34
29
328u3
34 24
8293
laptop
beryl@beryl-ThinkPad-L412:~/practice$ sort -n numbers.txt
laptop
0.74
1
2
2.34
29
034
34 24
328u3
8293
0010000
```

**18.2 -r, --reverse :** reverse the results



```
beryl@beryl-ThinkPad-L412:~/practice$ sort -n -r numbers.txt
0010000
8293
328u3
34 24
034
29
2.34
2
1
0.74
laptop
```

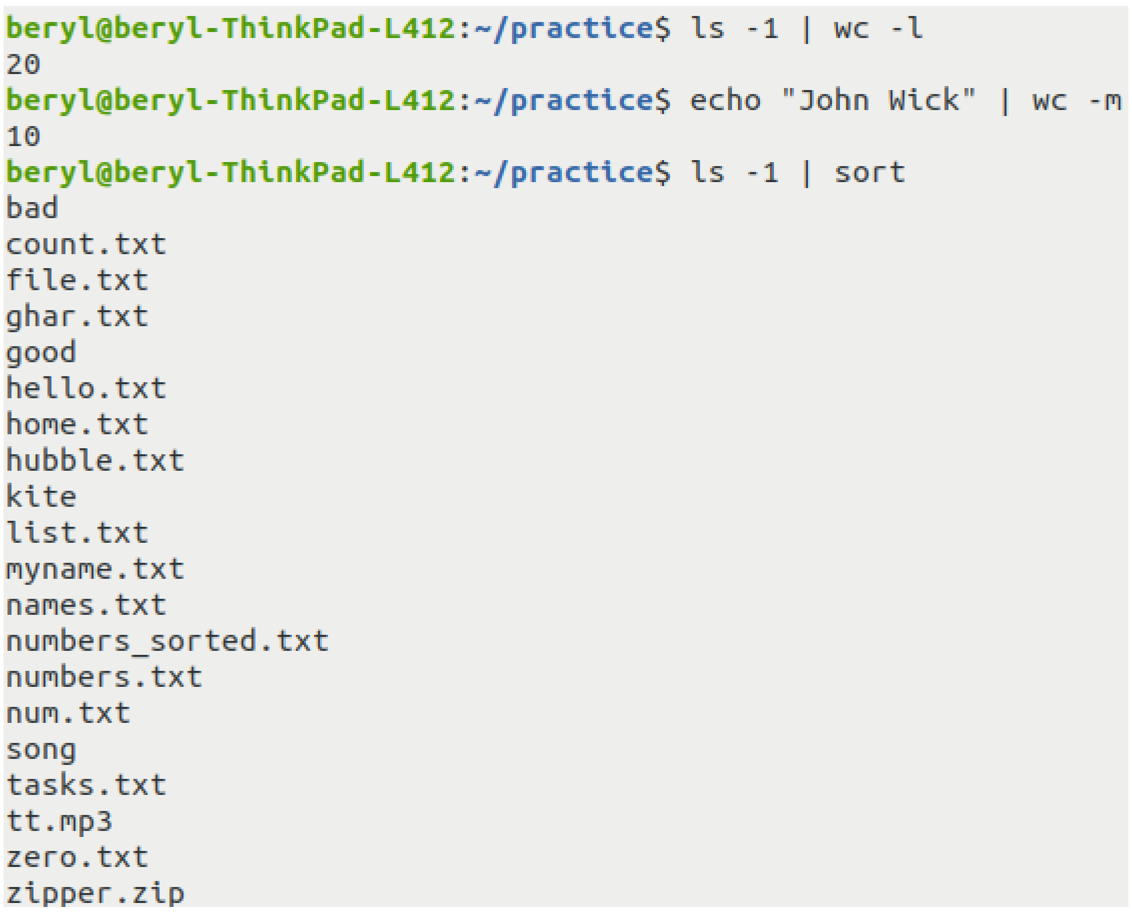
**18.3 -R, --random-sort :** sort by random hash of keys



```
beryl@beryl-ThinkPad-L412:~/practice$ sort -R numbers.txt
34 24
0.74
8293
0010000
2
034
laptop
2.34
29
328u3
1
```

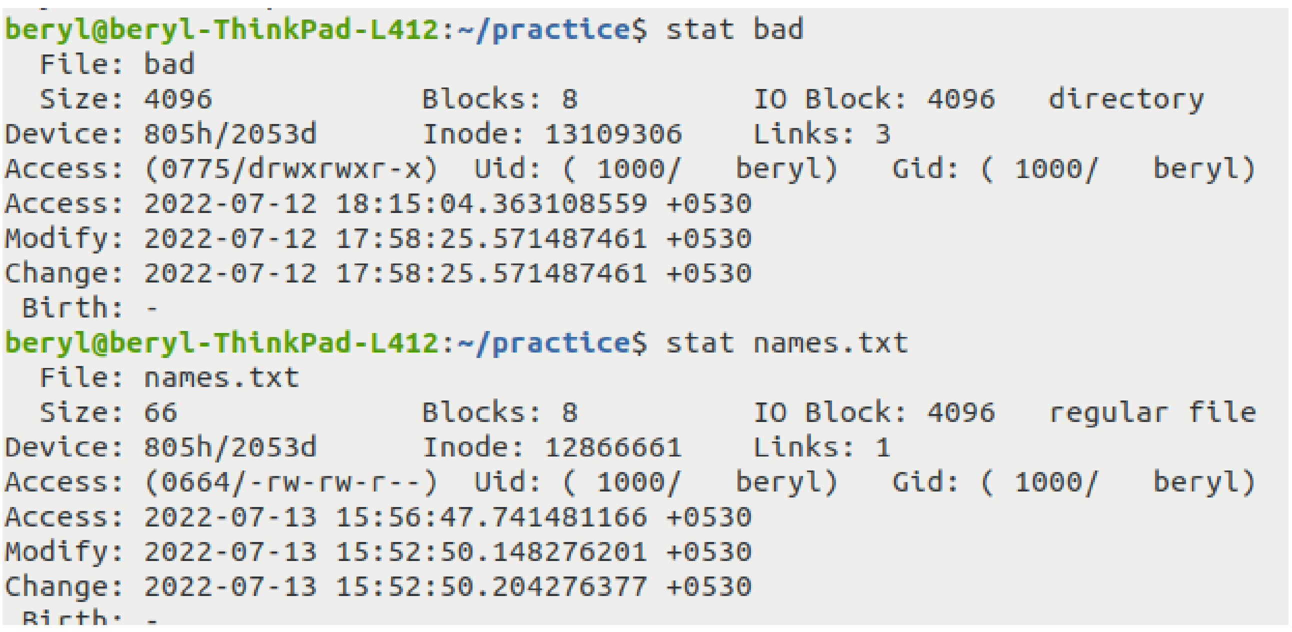
**18.4 -h, --human-numeric-sort :** compare human readable numbers (1M, 3G, 2T)
- sort according to the convention of file sizes
- K < M < G < T ....

**19. | pipe :** to provide output of a command as input in other command



```
beryl@beryl-ThinkPad-L412:~/practice$ ls -1 | wc -l
20
beryl@beryl-ThinkPad-L412:~/practice$ echo "John Wick" | wc -m
10
beryl@beryl-ThinkPad-L412:~/practice$ ls -1 | sort
bad
count.txt
file.txt
ghar.txt
good
hello.txt
home.txt
hubble.txt
kite
list.txt
myname.txt
names.txt
numbers_sorted.txt
numbers.txt
num.txt
song
tasks.txt
tt.mp3
zero.txt
zipper.zip
```

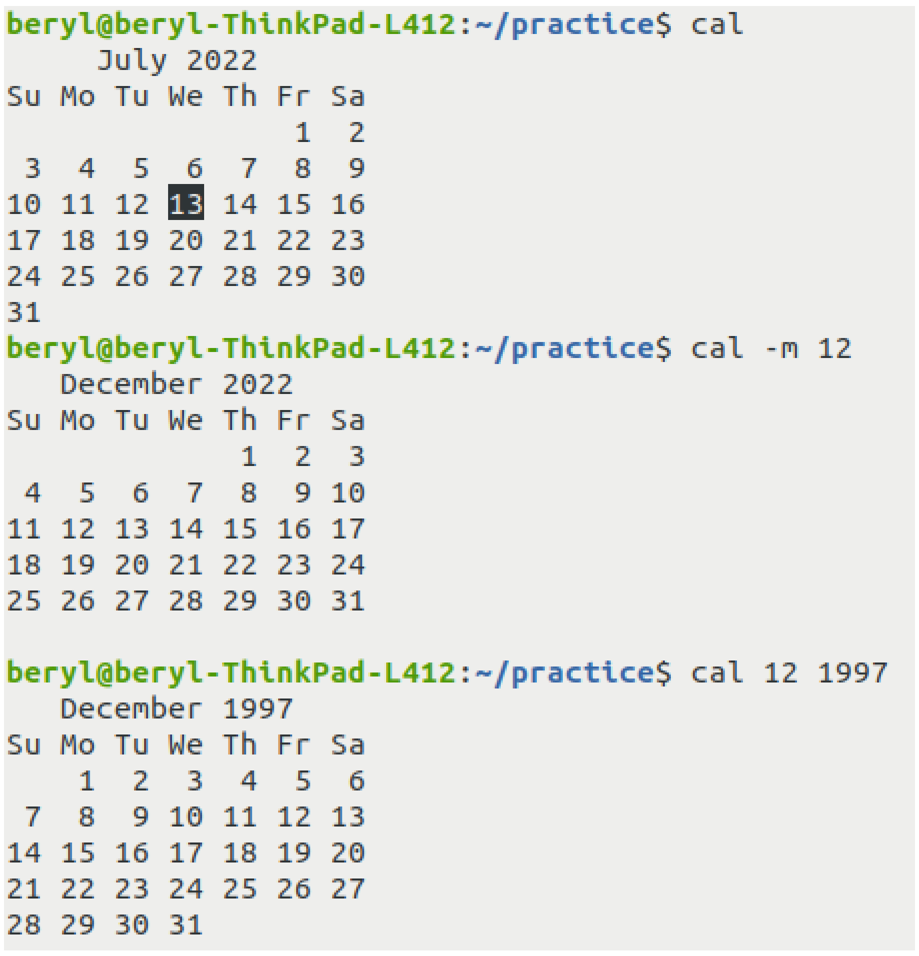
**20. stat :** the stat command displays the detailed status of a particular file or a file system.



```
beryl@beryl-ThinkPad-L412:~/practice$ stat bad
  File: bad
  Size: 4096            Blocks: 8          IO Block: 4096   directory
Device: 805h/2053d      Inode: 13109306    Links: 3
Access: (0775/drwxrwxr-x)  Uid: ( 1000/   beryl)   Gid: ( 1000/   beryl)
Access: 2022-07-12 18:15:04.363108559 +0530
Modify: 2022-07-12 17:58:25.571487461 +0530
Change: 2022-07-12 17:58:25.571487461 +0530
 Birth: -
beryl@beryl-ThinkPad-L412:~/practice$ stat names.txt
  File: names.txt
  Size: 66              Blocks: 8          IO Block: 4096   regular file
Device: 805h/2053d      Inode: 12866661    Links: 1
Access: (0664/-rw-rw-r--)  Uid: ( 1000/   beryl)   Gid: ( 1000/   beryl)
Access: 2022-07-13 15:56:47.741481166 +0530
Modify: 2022-07-13 15:52:50.148276201 +0530
Change: 2022-07-13 15:52:50.204276377 +0530
 Birth: -
```

---

**21. cal : -** the cal commands display a formatted calendar in the terminal.



```
beryl@beryl-ThinkPad-L412:~/practice$ cal
     July 2022
Su Mo Tu We Th Fr Sa
                1  2
 3  4  5  6  7  8  9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31
beryl@beryl-ThinkPad-L412:~/practice$ cal -m 12
   December 2022
Su Mo Tu We Th Fr Sa
             1  2  3
 4  5  6  7  8  9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

beryl@beryl-ThinkPad-L412:~/practice$ cal 12 1997
   December 1997
Su Mo Tu We Th Fr Sa
    1  2  3  4  5  6
 7  8  9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31
```

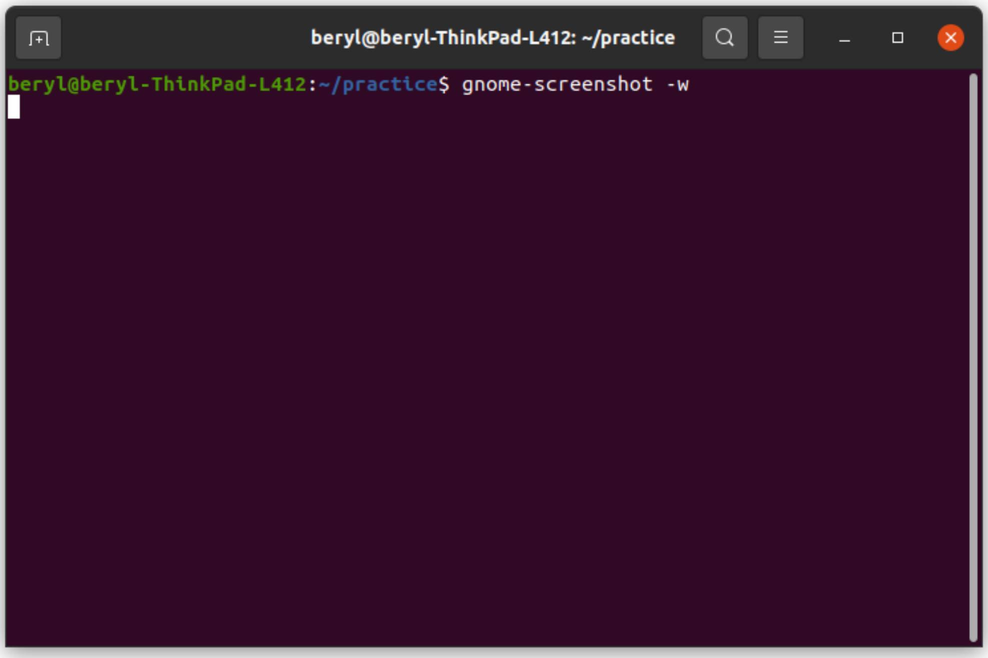
**22. clear : -** to clear the screen of the terminal.
**-** Can also use **ctrl+l**

**23. exit : - closes the terminal window.**

---

**Screenshot Commands :**

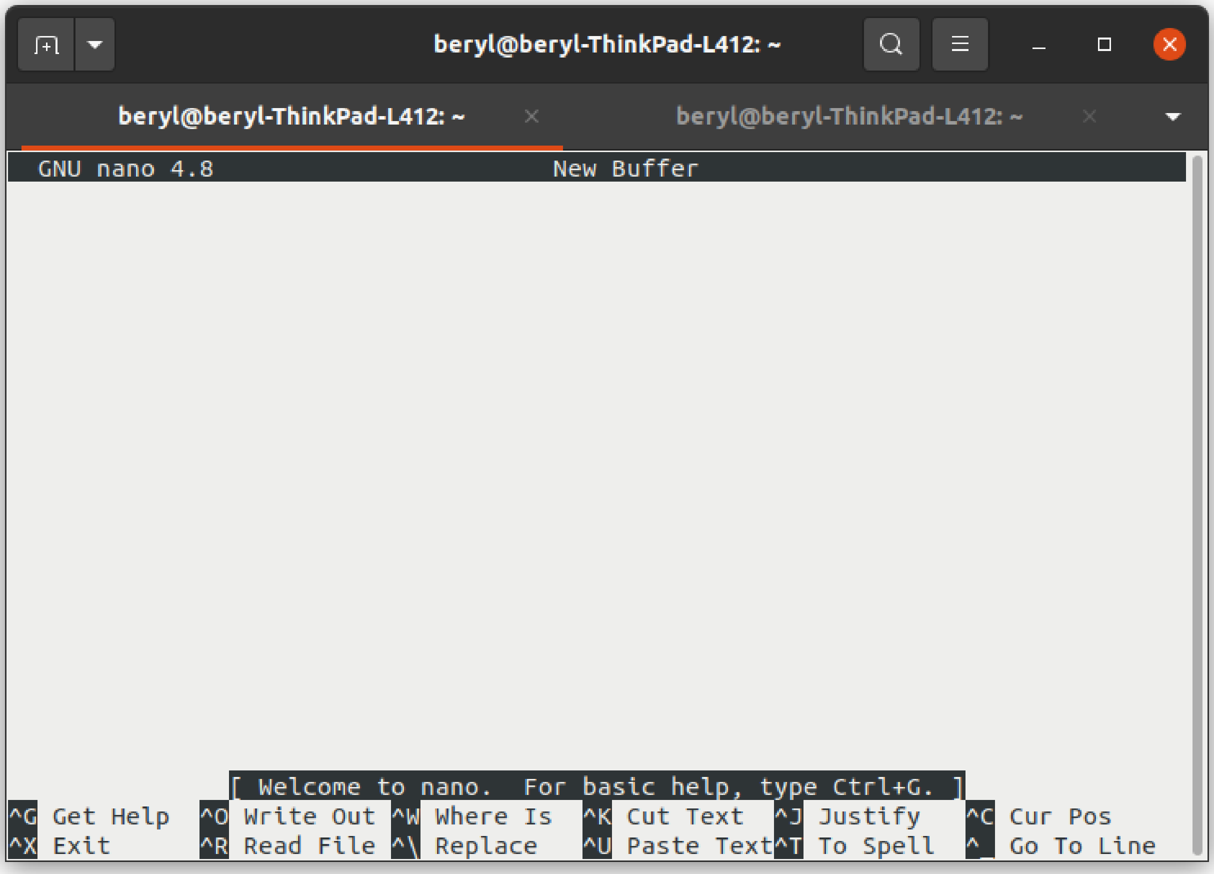
|  |  |
|---|---|
| **gnome-screenshot** | **: -** screenshot of whole screen |
| **gnome-screenshot -w** | **:** - screenshot of terminal window |
| **gnome-screenshot -d t** | **:** - screnshot taken after 't' seconds |
| **gnome-screenshot -a** | **:** - custom screenshot |



```
beryl@beryl-ThinkPad-L412:~/practice$ gnome-screenshot -w
```

- **nano : -** nano is a simple text editor that can be run in the terminal itself.

  **Run / Launch :** just write 'nano'



beryl@beryl-ThinkPad-L412: ~
beryl@beryl-ThinkPad-L412: ~
beryl@beryl-ThinkPad-L412: ~

```
  GNU nano 4.8                        New Buffer










               [ Welcome to nano.  For basic help, type Ctrl+G. ]
^G Get Help    ^O Write Out   ^W Where Is    ^K Cut Text    ^J Justify     ^C Cur Pos
^X Exit        ^R Read File   ^\ Replace     ^U Paste Text  ^T To Spell    ^  Go To Line
```

*Figure 1: nano editor first run screen*

**Open File : -** *nano [file_name / path]*
** If no file of that existed then nano will create an empty file of same name*

**Save File : -** You can type text simply like a normal text editer in nano.
**Ctrl + o** is used to write out save file.

**Help Menu : -** To open help shorcut menu press **ctrl + g**

**Exit nano : -** You can exit nano by pressing **ctrl + x**