

TAR

'tar' command is used to combine multiple files (Directories or file) into a single file. With '.tar' file extension.

Creating a .tar file :

```
$ tar -cvf <outputfilename.tar> file1 file2
```

Or

```
$ tar -cvf <outputfilename.tar> ./
```

Here ,

C: Create tar file

V: Verbose. Which will show the details during combining of files.

F: for combining files

Opening or extracting from .tar

```
$tar -xvf <filename.tar>
```

Extracts the files inside in current directry.

R: -r is used to append files in .tar.

Use Case 1 : To combine files into a single file for mailing .

Use Case 2 : To backup the files.

FIND

'Find' command is used to find file in directories.

```
$find <location_where_file_to_be_found> -name <filename>.<extension> ,
```

This command will search by file name

```
$find /usr -name *.json
```

This will return all the file with .json extension.

Use case 1 : When you dont know the exact name of file , therefore you can search using extension of file.

Use case 2 : To search a file in current or in its sub directories.

LOCATE

'locate' command is used to find file . Locate command uses database to find file, locate command uses 'updatedb' command as in default.

```
$locate abc.txt
```

This will result all the abc.txt file.

```
$locate abc.txt -n 20
```

This will result only first 20 results.

Locate is faster than find.

Use case 1 : To find the location of file in whole file system.

Use case 2 : To find the location of file when you dont have any idea about the directory in which file is stored. Use locate command as it is faster than find.

DIFF

To differentiate between two files line by line

```
$diff <file1> <file2>
```

Two directories can be differentiate also.

```

rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ man diff
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ vi a
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ vi b
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ diff a b
1,4c1,3
< sfsdfafsdfsfoondsf
< fdsfaf
< sadfsa
< sdfas
---
> dfsdisdfsafsa
> sdfsadfsdaf
> dsfsdf
5a5,17
>
> fsadf
> sd
> fs
> f
> sf
> sdd
> fsd
> f
> sdf
> sd
> fds
> f
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ cd ..
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~$ ls
a      Documents      Music      Projects      t
Android Downloads      node_modules Public      Templates
Data   examples.desktop package-lock.json rishabh      Videos
Desktop IdeaProjects   Pictures    snap          WebstormProjects
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~$ diff Documents Music
Only in Documents: Android
Only in Documents: Attendance
Only in Documents: .git
Only in Documents: my-first-git-repository
Only in Documents: rishabh_js.js
Only in Documents: ttn-intern-assignment
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~$ █

```

Use case 1 : To compare the content between two files.

Use case 2 : To compare the subdirectories between two directories.

TAIL

Print the last part of file.

Not for directories.

`$tail <filename>`

Use Case 1 : When some work is added in the end of file.

Use Case 2 : To check last added data in a file.

```
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~$ tail Documents/
tail: error reading 'Documents/': Is a directory
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~$ cd Documents/
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/Documents$ cd t
bash: cd: t: No such file or directory
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/Documents$ ls
Android  Attendance  my-first-git-repository  rishabh_js.js  ttn-intern-ass
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/Documents$ cd ..
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~$ ls
a  Android  Data  Desktop  Documents  Downloads  examples.desktop  IdeaProj
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~$ cd t
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ ls
a  b  package-lock.json  test
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ tail a
sfsdfafsd fsfoonndsfs
fdfsaf
sdfsa
sdfas
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$
```

LESS

Less command is used to only read the file instead of opening it. Less command works faster on large input files as it do not read file as a whole.

`$less <filename>`

You can read file from particular line as well .

`$ less +50 <filename>`

Use case 1 : To view content when only read permission is given.

Use case 2 : To read the content of a file from particular page.

LN (Hardlinks)

It create a copy of same file, if real file is deleted then link will still work.

\$ln <filename> <linkname>

Changes made in <linkname> will reflect in <filename>.

If <filename> is deleted, <linkname> will exist.

```
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ ln a aa
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ ls
a aa b package-lock.json test
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ ls -ltr
total 24
-rw-r--r-- 1 rishabh rishabh  22 Jul  8 18:31 test
-rw-r--r-- 1 rishabh rishabh 6274 Jul  8 22:26 package-lock.json
-rw-r--r-- 2 rishabh rishabh  42 Jul  8 23:05 aa
-rw-r--r-- 2 rishabh rishabh  42 Jul  8 23:05 a
-rw-r--r-- 1 rishabh rishabh  75 Jul  8 23:05 b
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$
```

LN (Softlink)

```
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ ln -s aa aaa
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ ls
aa aaa b package-lock.json test
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$ ls -ltr
total 20
-rw-r--r-- 1 rishabh rishabh  22 Jul  8 18:31 test
-rw-r--r-- 1 rishabh rishabh 6274 Jul  8 22:26 package-lock.json
-rw-r--r-- 1 rishabh rishabh  75 Jul  8 23:05 b
-rw-r--r-- 1 rishabh rishabh  89 Jul  8 23:48 aa
lrwxrwxrwx 1 rishabh rishabh   2 Jul  8 23:50 aaa -> aa
rishabh@rishabh-Lenovo-ideapad-510S-14IKB:~/t$
```

It create a reference of same file with different name, if real file is deleted then link will still not work.

```
$ln -s <filename> <linkname>
```

Changes made in <linkname> will reflect in <filename>.

If <filename> is deleted, <linkname> will not work.