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OS-LAB-3

list all the files names starting with a

```
(base) tazmeen@afroz:~$ ls a*
abc:

anaconda3:
bin          etc          mysql        share
cmake        include     mysql-test   shell
compiler_compat lib        phrasebooks  ssl
_conda       libexec     pkgs         translations
condabin     LICENSE.txt plugins       var
conda-meta   licensing   qml          x86_64-conda_cos7-linux-gnu
doc          man         resources    x86_64-conda-linux-gnu
envs         mkspecs     sbin
(base) tazmeen@afroz:~$
```

create a main directory in Desktop

Then create 5 more directories in main

```
(base) tazmeen@afroz:~$ cd Desktop
(base) tazmeen@afroz:~/Desktop$ mkdir main
(base) tazmeen@afroz:~/Desktop$ cd main
(base) tazmeen@afroz:~/Desktop/main$ mkdir test1 && mkdir test2 && mkdir test3 && mkdir test4 && mkdir test5
(base) tazmeen@afroz:~/Desktop/main$
```

rm is used for remove list not directories

```
(base) tazmeen@afroz:~/Desktop/main$ mkdir test1 && mkdir test2 && mkdir test3 && mkdir test4 && mkdir test5
(base) tazmeen@afroz:~/Desktop/main$ rm *
rm: cannot remove 'test1': Is a directory
rm: cannot remove 'test2': Is a directory
rm: cannot remove 'test3': Is a directory
rm: cannot remove 'test4': Is a directory
rm: cannot remove 'test5': Is a directory
(base) tazmeen@afroz:~/Desktop/main$ rm test1
rm: cannot remove 'test1': Is a directory
```

ls ab* give all directories

```
(base) tazmeen@afroz:~/Desktop/main$ mkdir ab1 && mkdir ab2 && mkdir a
(base) tazmeen@afroz:~/Desktop/main$ ls ab*
ab1:

ab2:
(base) tazmeen@afroz:~/Desktop/main$
```

```
(base) tazmeen@afroz:~/Desktop/main$ LS
LS: command not found
(base) tazmeen@afroz:~/Desktop/main$ Ls
Ls: command not found
(base) tazmeen@afroz:~/Desktop/main$ ls
ls: command not found
(base) tazmeen@afroz:~/Desktop/main$
```

auto-completion

fd and fdi + tab give fdisk

```
(base) tazmeen@afroz:~$ fdisk
```

f + tab (give you all the files starting with f)

```
(base) tazmeen@afroz:~$ f
Display all 109 possibilities? (y or n)
```

```
(base) tazmeen@afroz:~$ f
Display all 109 possibilities? (y or n)
f2py          fc-match      firefox.geckodriver  foo2hbp12-wrapper  foomatic-rip      fstab-decode
factor        fc-pattern    fits2bitmap          foo2hiperc          for                fstrim
faillock     fc-query     fitscheck            foo2hiperc-wrapper  fpack              ftp
faillog      fc-scan      fitscopy             foo2hp              fprintd-delete    function
faked-sysv   fc-validate  fitsdiff             foo2hp2600-wrapper  fprintd-enroll    funpack
faked-tcp    fdisk        fitsheader           foo2lava            fprintd-list      funzip
fakeroot     fg           fitsinfo             foo2lava-wrapper    fprintd-verify    fuser
fakeroot-sysv fgconsole    fixparts             foo2oak              free               fusermount
fakeroot-tcp fgrep        fixqt4headers.pl     foo2oak-wrapper     freetype-config    fusermount3
fallocate    fi           flask                 foo2qpd1             fsck                futurize
false        file         flask                 foo2qpd1-wrapper    fsck.cramfs        fwupdagent
fatlabel     file2brl     flock                 foo2slx              fsck.ext2          fwupdate
fax2ps       filefrag     fmt                   foo2slx-wrapper     fsck.ext3          fwupdmgr
fax2tiff     file-roller  fold                  foo2xqx              fsck.ext4          fwupdtool
fc           fincore     fonttools             foo2xqx-wrapper     fsck.fat            fsfreeze
fc-cache     find        fonttosfnt           foo2zjs              fsck.minix         fsck.msos
fc-cat       findfs      foo2ddst              foo2zjs-icc2ps       fsck.vfat
fc-conflist  findmnt     foo2ddst-wrapper     foo2zjs-pstops       fsck.vfat
fc-list      firefox     foo2hbp12            foo2zjs-wrapper     fsck.vfat
```

cd Des + tab

```
(base) tazmeen@afroz:~$ cd Desktop/
```

cd home/tazmeen/a + tab

```
(base) tazmeen@afroz:~$ cd /home/tazmeen/a
abc/      anaconda3/
(base) tazmeen@afroz:~$ cd /home/tazmeen/a
```

cd home/tazmeen/Dow + tab

```
abc/      anaconda3/
(base) tazmeen@afroz:~$ cd /home/tazmeen/Downloads/
```

ls for listing all the files

cd to move to directory

mkdir to create a new folder

rmdir to delete that folder

```
(base) tazmeen@afroz:~/Desktop/main$ ls
a  ab1  ab2  test1  test2  test3  test4  test5
(base) tazmeen@afroz:~/Desktop/main$ cd ab1
(base) tazmeen@afroz:~/Desktop/main/ab1$ cd ..
(base) tazmeen@afroz:~/Desktop/main$ mkdir tazmeen
(base) tazmeen@afroz:~/Desktop/main$ rmdir tazmeen
(base) tazmeen@afroz:~/Desktop/main$ touch taz.txt
(base) tazmeen@afroz:~/Desktop/main$ cat taz.txt
(base) tazmeen@afroz:~/Desktop/main$ cat taz.txt
Tazmeen Afroz
```

remove all directories in main directory

```
(base) tazmeen@afroz:~/Desktop/main$ ls
a  ab1  ab2  taz.txt  test1  test2  test3  test4  test5
(base) tazmeen@afroz:~/Desktop/main$ rmdir *
rmdir: failed to remove 'ab1': Directory not empty
rmdir: failed to remove 'taz.txt': Not a directory
(base) tazmeen@afroz:~/Desktop/main$ ls
ab1  taz.txt
(base) tazmeen@afroz:~/Desktop/main$
```

use nano to create and edit the file

```
desktop/main$ cat file.txt
file or directory
desktop/main$ nano file.txt
desktop/main$
```

```
GNU nano 6.2
Tazmeen Afroz
22P-9252
BAI-5A
Watching Animes
No dream
```

fil

[Wrote 5 lines]				
^W Where Is	^K Cut	^T Execute	^C Location	M-U Undo
^_\ Replace	^U Paste	^J Justify	^/ Go To Line	M-E Redo

now cat will output the contents of file

```
(base) tazmeen@afroz:~/Desktop/main$ cat file.txt
Tazmeen Afroz
22P-9252
BAI-5A
Watching Animes
No dream
(base) tazmeen@afroz:~/Desktop/main$
```

copy command cp

```
(base) tazmeen@afroz:~/Desktop/main$ cp file.txt ../
(base) tazmeen@afroz:~/Desktop/main$ cd ..
(base) tazmeen@afroz:~/Desktop$ ls
file.txt  main  main2  taz.txt  test2
(base) tazmeen@afroz:~/Desktop$
```

```
(base) tazmeen@afroz:~/Desktop/main$ cp taz.txt ~/Desktop/
(base) tazmeen@afroz:~/Desktop/main$ cd ..
(base) tazmeen@afroz:~/Desktop$ ls
main  taz.txt
```

move command mv

move from main to main2

```
(base) tazmeen@afroz:~/Desktop/main$ mv file.txt ../main2
(base) tazmeen@afroz:~/Desktop/main$ cd ..
(base) tazmeen@afroz:~/Desktop$ cd main2
(base) tazmeen@afroz:~/Desktop/main2$ ls
file.txt  taz.txt
(base) tazmeen@afroz:~/Desktop/main2$
```

from main2 to main

```
(base) tazmeen@afroz:~/Desktop$ mv ~/Desktop/main2/file.txt ~/Desktop/main/  
(base) tazmeen@afroz:~/Desktop$ cd main  
(base) tazmeen@afroz:~/Desktop/main$ ls  
ab1 file.txt test1 test2 test3 test4 test5  
(base) tazmeen@afroz:~/Desktop/main$
```

echo command

```
(base) tazmeen@afroz:~/Desktop/main$ echo hello  
hello  
(base) tazmeen@afroz:~/Desktop/main$
```

cat echoing

```
(base) tazmeen@afroz:~/Desktop/main$ cat  
hello  
hello
```

cat 2 files content

```
(base) tazmeen@afroz:~/Desktop$ cat taz.txt file.txt  
filee 2 content  
  
Tazmeen Afroz  
22P-9252  
BAI-5A  
Watching Animes  
No dream
```

cat -b file.txt

```
(base) tazmeen@afroz:~/Desktop$ cat -b file.txt  
1 Tazmeen Afroz  
2 22P-9252  
3 BAI-5A  
4 Watching Animes  
5 No dream  
  
(base) tazmeen@afroz:~/Desktop$
```

cat -n file.txt


```
(base) tazmeen@afroz:~/Desktop$ cat -b file.txt
 1 Tazmeen Afroz
 2 22P-9252
 3 BAI-5A
 4 Watching Animes
 5 No dream

(base) tazmeen@afroz:~/Desktop$ cat -n file.txt
 1 Tazmeen Afroz
 2 22P-9252
 3 BAI-5A
 4 Watching Animes
 5 No dream
 6
(base) tazmeen@afroz:~/Desktop$
```

man cat

```
(base) tazmeen@afroz:~/Desktop$ man cat
(base) tazmeen@afroz:~/Desktop$
```

```
CAT(1) User Commands CAT(1)
NAME
  cat - concatenate files and print on the standard output
SYNOPSIS
  cat [OPTION]... [FILE]...
DESCRIPTION
  Concatenate FILE(s) to standard output.
  With no FILE, or when FILE is -, read standard input.
  -A, --show-all
      equivalent to -vET
  -b, --number-nonblank
      number nonempty output lines, overrides -n
  -e
      equivalent to -vE
  -E, --show-ends
      display $ at end of each line
  -n, --number
      number all output lines
  -s, --squeeze-blank
      suppress repeated empty output lines
  -t
      equivalent to -vT
  -T, --show-tabs
      display TAB characters as ^I
  -u
      (ignored)
Manual page cat(1) line 1 (press h for help or q to quit)
```

Redirection

```
(base) tazmeen@afroz:~/Desktop$ ls
file.txt  main  main2  taz.txt  test2
(base) tazmeen@afroz:~/Desktop$ touch newfile
(base) tazmeen@afroz:~/Desktop$ ls
file.txt  main  main2  newfile  taz.txt  test2
(base) tazmeen@afroz:~/Desktop$ ls > newfile
(base) tazmeen@afroz:~/Desktop$ cat < newfile
file.txt
main
main2
newfile
taz.txt
test2
(base) tazmeen@afroz:~/Desktop$
```

```
test2
(base) tazmeen@afroz:~/Desktop$ rm newfile
(base) tazmeen@afroz:~/Desktop$ cat > hello.txt
hello
(base) tazmeen@afroz:~/Desktop$ cat hello.txt
hello
(base) tazmeen@afroz:~/Desktop$
```

overwrite the old content of the file

```
(base) tazmeen@afroz:~/Desktop$ cat hello.txt
hello
(base) tazmeen@afroz:~/Desktop$ cat > hello.txt
hello123
(base) tazmeen@afroz:~/Desktop$ cat hello.txt
hello123
(base) tazmeen@afroz:~/Desktop$
```

append the text

```
hello123
(base) tazmeen@afroz:~/Desktop$ cat >> hello.txt
bye123
(base) tazmeen@afroz:~/Desktop$ cat hello.txt
hello123
bye123
(base) tazmeen@afroz:~/Desktop$
```


combine both files content in one single file

```
(base) tazmeen@afroz:~/Desktop$ cat > output1.txt
1234
(base) tazmeen@afroz:~/Desktop$ cat > output.txt
4567
(base) tazmeen@afroz:~/Desktop$ cat output.txt output1.txt > combinefile.txt
(base) tazmeen@afroz:~/Desktop$ cat combinefile.txt
4567
1234
(base) tazmeen@afroz:~/Desktop$
```

mkdir -p (if the file/directory doesnot exist)

```
(base) tazmeen@afroz:~/Desktop/main$ mkdir images/pictures
mkdir: cannot create directory 'images/pictures': No such file or directory
(base) tazmeen@afroz:~/Desktop/main$ mkdir -p images/pictures
(base) tazmeen@afroz:~/Desktop/main$ ls
ab1 file.txt images test1 test2 test3 test4 test5
(base) tazmeen@afroz:~/Desktop/main$
```

```
mkdir: cannot create directory '/Apic': Permission denied
mkdir: cannot create directory '/Bpic': Permission denied
mkdir: cannot create directory '/Cpic': Permission denied
(base) tazmeen@afroz:~/Desktop/main$ sudo mkdir -p images /{Apic,Bpic,Cpic}
[sudo] password for tazmeen:
(base) tazmeen@afroz:~/Desktop/main$
```

rmdir

```
(base) tazmeen@afroz:~/Desktop/main$ ls
ab1 file.txt images test1 test2 test3 test4 test5
(base) tazmeen@afroz:~/Desktop/main$ rmdir test1
(base) tazmeen@afroz:~/Desktop/main$ ls
ab1 file.txt images test2 test3 test4 test5
(base) tazmeen@afroz:~/Desktop/main$
```

ls -R to show the structure of the directory

```
(base) tazmeen@afroz:~/Desktop/main$ ls -R
.:
ab1 file.txt images test2 test3 test4 test5

./ab1:
taz.txt

./images:
pictures

./images/pictures:

./test2:

./test3:

./test4:

./test5:
```

remove the directory with sub directories

```
(base) tazmeen@afroz:~/Desktop/main$ rm -r images
(base) tazmeen@afroz:~/Desktop/main$ ls
ab1 file.txt test2 test3 test4 test5
(base) tazmeen@afroz:~/Desktop/main$
```

```
(base) tazmeen@afroz:~/Desktop/main$ rmdir -pv test2/test12
rmdir: removing directory, 'test2/test12'
```

Task

```
(base) tazmeen@afroz:~/Desktop/main/task$ mkdir -p Grades/A/Maths && mkdir -p Grades/B/Physics && mkdir -p Grades/B/Maths && mkdir -p Grades/C/Physics
(base) tazmeen@afroz:~/Desktop/main/task$ ls
Grades
(base) tazmeen@afroz:~/Desktop/main/task$ tree Grades/
Grades/
├── A
│   └── Maths
├── B
│   ├── Maths
│   └── Physics
└── C
    └── Physics

7 directories, 0 files
(base) tazmeen@afroz:~/Desktop/main/task$
```