(ls a*) is used to check files that start from a, Similarly ls D* is used to check directories that start form D I also shows us files that exists within directories

when we type cd D command and press tab twice it also shows us Directories that start from word D

With cd command I moved to desktop then with touch command I make a File in desktop
then I entered command cd and move to home and hit ls command to check directories in home

type f and hit tab twice it will show you all files starting with letter f

```
fast@HALAB-12:~$ f
factor          fc-list         fi              firefox.geckodriver  foo2hiperc         foo2slx            fprintd-delete     fsck.fat        fuser
faillock        fc-match        file            fixparts             foo2hiperc-wrapper foo2slx-wrapper    fprintd-enroll     fsck.minix      fusermount
faillog         fc-pattern      file2brl        flock                foo2hp             foo2xqx            fprintd-list       fsck.msdos      fusermount3
fallocate       fc-query        filefrag        fmt                  foo2hp2600-wrapper foo2xqx-wrapper    fprintd-verify     fsck.vfat       futurize
false           fc-scan         file-roller     fold                 foo2lava           foo2zjs            free               fsfreeze        fwupdagent
fatlabel        fc-validate     fincore         fonttosfnt           foo2lava-wrapper   foo2zjs-icc2ps     fsck               fstab-decode    fwupdate
fc              fdisk           find            foo2ddst             foo2oak            foo2zjs-pstops     fsck.cramfs        fstrim          fwupdmgr
fc-cache        fg              findfs          foo2ddst-wrapper     foo2oak-wrapper    foo2zjs-wrapper    fsck.ext2          ftp             fwupdtool
fc-cat          fgconsole       findmnt         foo2hbpl2            foo2qpdl           foomatic-rip       fsck.ext3          function
fc-conflist     fgrep           firefox         foo2hbpl2-wrapper    foo2qpdl-wrapper   for                fsck.ext4          funzip
```

type fd and hit tab twice it will show you your hard drives partitions

```
fast@HALAB-12:~$ cd D
Desktop/   Documents/ Downloads/
fast@HALAB-12:~$ fdisk /dev/
/dev/loop0    /dev/loop2    /dev/loop4    /dev/loop6    /dev/loop8    /dev/sda     /dev/sda2    /dev/sda4    /dev/sda6    /dev/sda8    /dev/sr0
/dev/loop10   /dev/loop3    /dev/loop5    /dev/loop7    /dev/loop9    /dev/sda1    /dev/sda3    /dev/sda5    /dev/sda7    /dev/sdb
```

mkdir is used to create repository while with touch command I make new file

```
fast@HALAB-12:~$ ls
abc  abc1  Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
fast@HALAB-12:~$ cd Desktop/
fast@HALAB-12:~/Desktop$ ls
xyz.txt
fast@HALAB-12:~/Desktop$ mkdir main
fast@HALAB-12:~/Desktop$ cd main
fast@HALAB-12:~/Desktop/main$ mkdir abc
fast@HALAB-12:~/Desktop/main$ touch file.txt
fast@HALAB-12:~/Desktop/main$ ls
abc   file.txt
```

Again I make a new directory named as main2

```
fast@HALAB-12:~/Desktop/main$ cd ..
fast@HALAB-12:~/Desktop$ mkdir main2
fast@HALAB-12:~/Desktop$ cd main
fast@HALAB-12:~/Desktop/main$ ls
abc   file.txt
```

Here I Copy file file.txt from main directory to main2 directory and at last I removed file from main repository

```
fast@HALAB-12:~/Desktop/main$ cd ..
fast@HALAB-12:~/Desktop$ cp ./main/file.txt ./main2/
fast@HALAB-12:~/Desktop$ ls main2
file.txt
fast@HALAB-12:~/Desktop$ cd main
fast@HALAB-12:~/Desktop/main$ ls
abc   file.txt
fast@HALAB-12:~/Desktop/main$ rm file.txt
fast@HALAB-12:~/Desktop/main$ ls\
>
abc
```

Now I moved file (file.txt) from main2 to main

```
abc
fast@HALAB-12:~/Desktop/main$
fast@HALAB-12:~/Desktop/main$ cd ..
fast@HALAB-12:~/Desktop$ mv ./main2/file.txt ./main/
fast@HALAB-12:~/Desktop$ ls main
abc   file.txt
fast@HALAB-12:~/Desktop$ ls main2
```

Cat command is used to display what is within a file

```
fast@HALAB-12:~/Desktop$ cat
hello
hello
fast@HALAB-12:~/Desktop$ cd cd main
bash: cd: too many arguments
fast@HALAB-12:~/Desktop$ cd main
fast@HALAB-12:~/Desktop/main$ ls
abc   file.txt
fast@HALAB-12:~/Desktop/main$
```
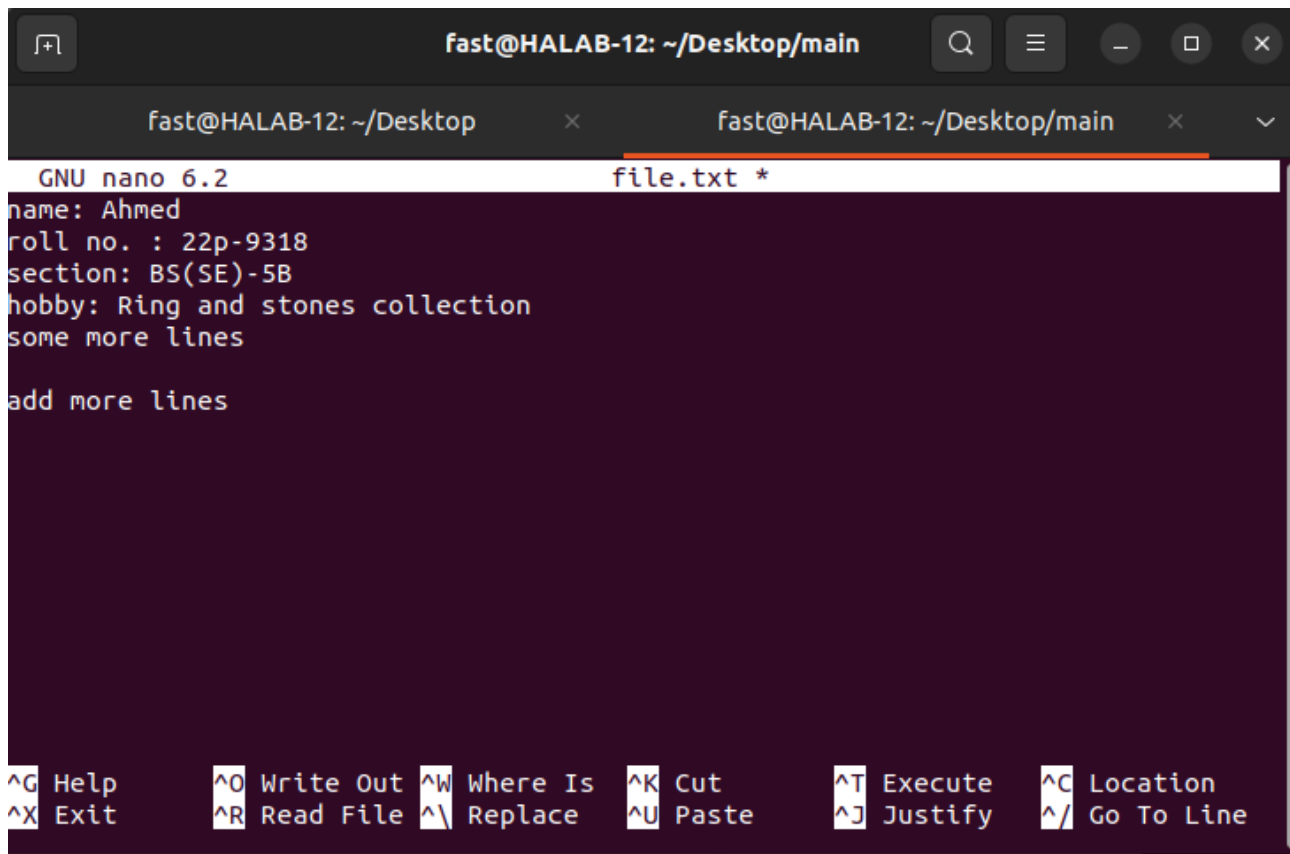
Type vi and you have moved in vim text editor


```
name: Ahmed Ali
Roll no. : 22p-9318
Section: BS(SE)-5B
Hobby: Rings and stone collection
```

here I type Some lines and to exit from vim enter i and type (:wq!)


```
name: Ahmed
roll no. : 22p-9318
section: BS(SE)-5B
hobby: Ring and stones collection
some more lines
```

Then I opened other Text editor nano and add a line in the same file (add more lines)
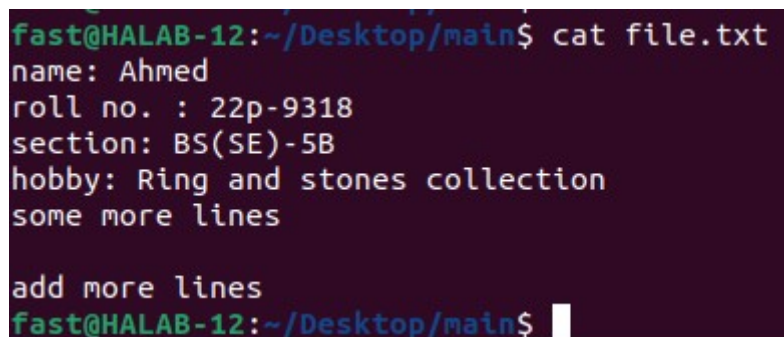Then I hit ctrl+s to save and Ctrl+x to exit from nano

Here I used cat command to display text within file

then I display content of 2 files and display it using cat command

```
fast@HALAB-12:~/Desktop/main$ nano file2.txt
fast@HALAB-12:~/Desktop/main$ cat file.txt file2.txt
name: Ahmed
roll no. : 22p-9318
section: BS(SE)-5B
hobby: Ring and stones collection
some more lines

add more lines
I belong from Abbottabad
How are you
what's up


fast@HALAB-12:~/Desktop/main$
```

cat -b filename command do not shows numbering along blank lines

```
fast@HALAB-12:~/Desktop/main$ cat -b file.txt
     1  name: Ahmed
     2  roll no. : 22p-9318
     3  section: BS(SE)-5B
     4  hobby: Ring and stones collection
     5  some more lines

     6  add more lines
fast@HALAB-12:~/Desktop/main$
```

cat -n filename command shows numbering along blank lines

```
fast@HALAB-12:~/Desktop/main$ cat -n file.txt
     1  name: Ahmed
     2  roll no. : 22p-9318
     3  section: BS(SE)-5B
     4  hobby: Ring and stones collection
     5  some more lines
     6
     7  add more lines
fast@HALAB-12:~/Desktop/main$
```

```
fast@HALAB-12:~/Desktop/main$ cd
fast@HALAB-12:~$ ls
 abc     Desktop     Downloads   Pictures   snap        'Untitled 1.odt'
 abc1    Documents   Music       Public     Templates   Videos
fast@HALAB-12:~$ touch newfile
fast@HALAB-12:~$ ls
 abc     Desktop     Downloads   newfile    Public    Templates          Videos
 abc1    Documents   Music       Pictures   snap      'Untitled 1.odt'
```

here output of one file is being the input of another file

```
fast@HALAB-12:~$ ls>newfile
fast@HALAB-12:~$ cat<newfile
abc
abc1
Desktop
Documents
Downloads
Music
newfile
Pictures
Public
snap
Templates
Untitled 1.odt
Videos
fast@HALAB-12:~$ 
```

```
fast@HALAB-12:~$ rm newfile
fast@HALAB-12:~$ 
```

```
fast@HALAB-12:~$ cat>hello.txt
this is a text file
fast@HALAB-12:~$ cat hello.txt
this is a text file
fast@HALAB-12:~$
```

```
fast@HALAB-12:~$ cat>hello.txt
test file
fast@HALAB-12:~$ cat hello.txt
test file
fast@HALAB-12:~$
```

```
fast@HALAB-12:~$ cat>>hello.txt
testing testing
fast@HALAB-12:~$ cat hello.txt
test file
testing testing
fast@HALAB-12:~$
```

```
fast@HALAB-12:~$ cd Desktop/
fast@HALAB-12:~/Desktop$ cd main
fast@HALAB-12:~/Desktop/main$ cat file.txt file2.txt > combinefile.txt
fast@HALAB-12:~/Desktop/main$ cat combinefile.txt
name: Ahmed
roll no. : 22p-9318
section: BS(SE)-5B
hobby: Ring and stones collection
some more lines

add more lines
I belong from Abbottabad
How are you
what's up



fast@HALAB-12:~/Desktop/main$
```

```
fast@HALAB-12:~/Desktop/main$ mkdir images
fast@HALAB-12:~/Desktop/main$ ls
 abc    combinefile.txt  'fi;e.txt'    file2.txt    file.txt    images
fast@HALAB-12:~/Desktop/main$ mkdir images/pictures
```

```
fast@HALAB-12:~/Desktop/main$ rm -rf images/
fast@HALAB-12:~/Desktop/main$ ls
 abc    combinefile.txt  'fi;e.txt'   file2.txt   file.txt
fast@HALAB-12:~/Desktop/main$ mkdir images/picturs
mkdir: cannot create directory 'images/picturs': No such file or directory
fast@HALAB-12:~/Desktop/main$ mkdir -p  images/picturs
fast@HALAB-12:~/Desktop/main$ ls
 abc    combinefile.txt  'fi;e.txt'   file2.txt   file.txt   images
fast@HALAB-12:~/Desktop/main$
```

making directories within a directory it will make it even parent directory doesnot exist

```
fast@HALAB-12:~/Desktop/main$ mkdir -p Pictures/{alipic,aslampic,khanpic}
fast@HALAB-12:~/Desktop/main$ ls
 abc    combinefile.txt  'fi;e.txt'   file2.txt   file.txt   Pictures
fast@HALAB-12:~/Desktop/main$
```

making directory

```
fast@HALAB-12:~/Desktop/main$ cd abc
fast@HALAB-12:~/Desktop/main/abc$ mkdir abc1
fast@HALAB-12:~/Desktop/main/abc$ ls
abc1
```

removing directory abc but shows error

```
fast@HALAB-12:~/Desktop/main/abc$ cd ..
fast@HALAB-12:~/Desktop/main$ rmdir abc
rmdir: failed to remove 'abc': Directory not empty
fast@HALAB-12:~/Desktop/main$
```

removing abc forcefully

```
fast@HALAB-12:~/Desktop/main$ rm -r abc/
fast@HALAB-12:~/Desktop/main$ ls
 combinefile.txt  'fi;e.txt'   file2.txt   file.txt   Pictures
fast@HALAB-12:~/Desktop/main$
```

add directory even the parent direct do not exist

```
fast@HALAB-12:~/Desktop/main$ mkdir -p Images/pictures/AsadPics
fast@HALAB-12:~/Desktop/main$ ls
 combinefile.txt  'fi;e.txt'   file2.txt   file.txt   Images   Pictures
fast@HALAB-12:~/Desktop/main$
```

remove directory within a direcrtory

```
fast@HALAB-12:~/Desktop/main$ rmdir -v Images/pictures/AsadPics
rmdir: removing directory, 'Images/pictures/AsadPics'
fast@HALAB-12:~/Desktop/main$ ls
 combinefile.txt  'fi;e.txt'   file2.txt   file.txt   Images   Pictures
fast@HALAB-12:~/Desktop/main$
```

EXERCISE:

```
fast@HALAB-12:~/Desktop$ mkdir -p Grades/A/Maths Grades/B/Physics Grades/B/Maths Grades/C/Physics
fast@HALAB-12:~/Desktop$ tree Grades
Grades
├── A
│   └── Maths
├── B
│   ├── Maths
│   └── Physics
└── C
    └── Physics

7 directories, 0 files
fast@HALAB-12:~/Desktop$
```