

ls Command :

USE of ls command:

ls [options] [fd]

commands

Clear screen => clear => Ctrl + l

ls Documents/

path for the ubuntu files on windows:

C:\Users\Kiran\AppData\Local\Packages\CanonicalGroupLimited.Ubuntu18.04onWindows_79rhkp1fndgsc\LocalState\rootfs

ls .. - this will print the list in one step back from the pwd

ls -a : this will show all the files including hidden files too!

ls -al : hidden with the long list

ls -S : file with the biggest size is at the top and rest below it as per the size

ls *.html : this command will basically find all the files in the system with the html extension

ls -S > out.txt : here the result of the first command will be stored in the new file out.txt

ls -d */ : this will print all the directories in the pwd:

```
kiran_512@LAPTOP-TG43J350:/$ ls -d */  
bin/ etc/ lib64/ opt/ run/ srv/ usr/  
boot/ home/ media/ proc/ sbin/ sys/ var/  
dev/ lib/ mnt/ root/ snap/ tmp/  
kiran_512@LAPTOP-TG43J350:/$
```

ls -R : will show directory structure in case of sub directories

cd ~ : Home directory

cd / : Root directory

to get into the folder with the name "New Folder" below three ways are there:

cd New\ Folder

cd "New Folder"

cd 'New Folder'

for CD absolute and relative path can be given:

relative path : cd documents/books/

absolute path: cd /usr/bin

CAT :

- Main purpose :file concetenation
- to copy
- to create file
- to add content in the end
- We can not edit existing file with the CAT!

cat [options] [filename]

To exit use : Cntrl +D : EOF End of the file

USE :

cat file1 OR cat file1 file2 file3: Used to display the content on the command line

cat -b file : this will add the line nos to each line excluding the blank one in specified file

cat -n file: unlnk above command this will add line nos to eac line inclduing the blank lines

cat -s file : with this the line breaks will be removed and only one line break will be applied after evry line

cat -E file this will add \$ to represent the (EOL) end of the line

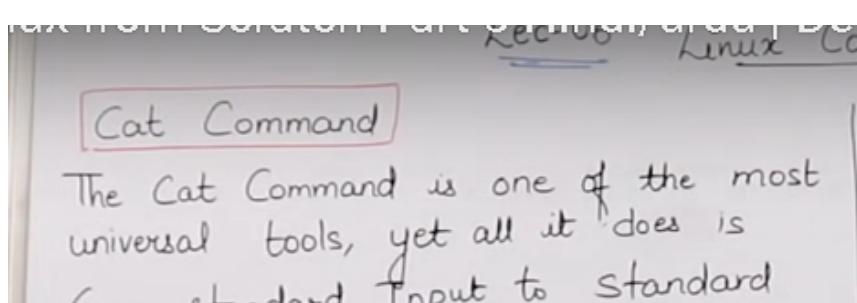
I/O Redirection :

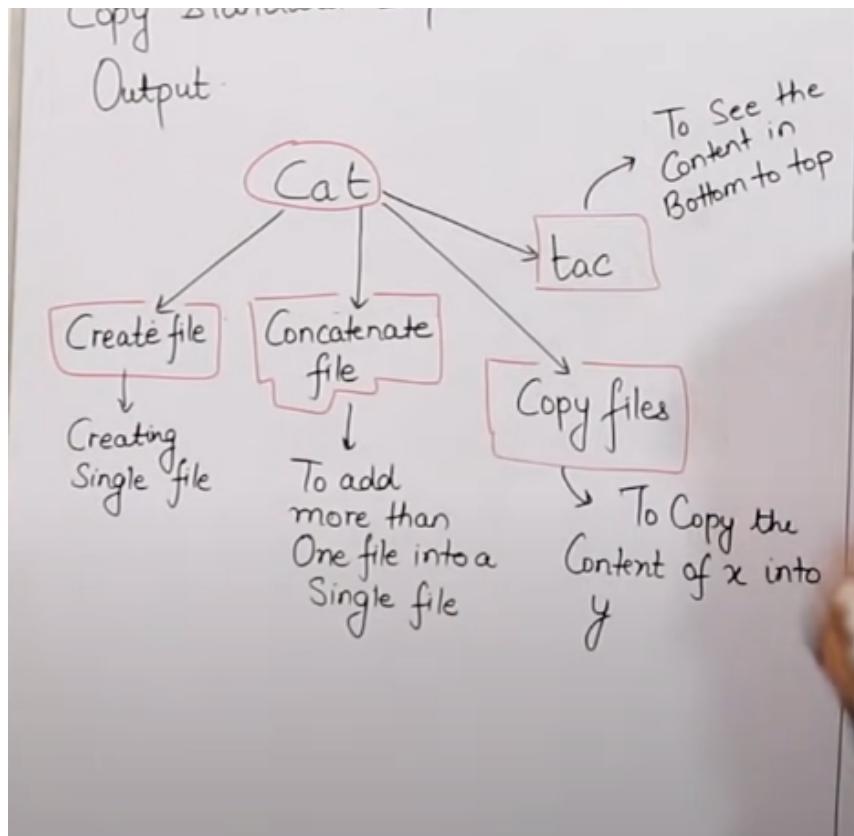
cat > file : used to add content in the file this will override the content

cat >> to append the file content

cat file1 file2 > file3 : here the content of first two files will be send to the third file

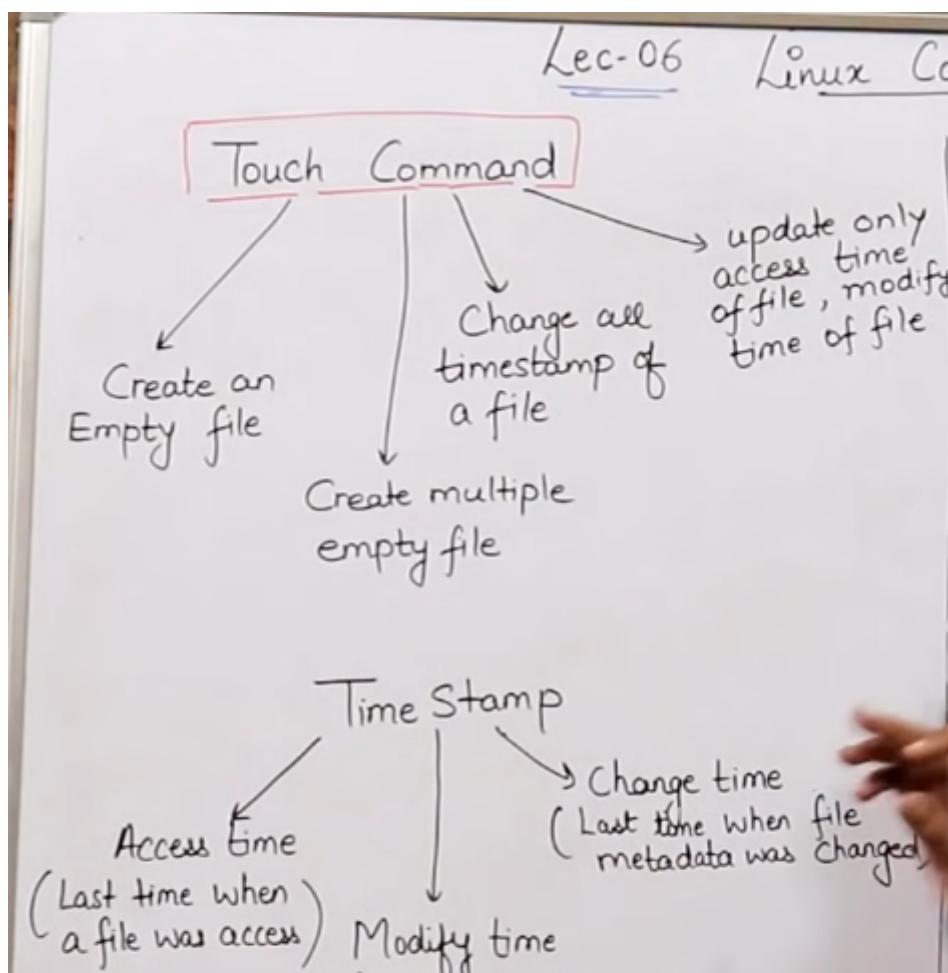
cat file1 > file 2 : tocopy content from fil1 to file2





TOUCH Command :

- USED TO Modify the timestamp (Main purpose)



touch -a (Last time when a file was modified)
 touch -m

[root@ip] touch file1 ↵
 [root@ip] ls
 o/p file1
 []# touch file2 file3 file4
 []# ls
 o/p file1 file2 file3 file4
 []# touch file2 ↵
 [] stat file2 ↵
)
 ==

touch -a file -- access time is changed
 touch -m file -- modified time is changed

stat file
 -- will list meta data of file

```
kiran_512@LAPTOP-TG43J350:/mnt/c/cdac/linux$ stat file
  File: file
  Size: 36          Blocks: 0          IO Block: 4096   regular file
Device: eh/14d  Inode: 95982967058365847  Links: 1
Access: (0777/-rwxrwxrwx)  Uid: ( 1000/kiran_512)  Gid: ( 1000/kiran_512)
Access: 2022-08-15 13:46:07.066163100 +0530
Modify: 2022-08-15 13:43:47.037603700 +0530
```

```

Change: 2022-08-15 13:43:47.037603700 +0530
Birth: -
kiran_512@LAPTOP-TG43J350:/mnt/c/cdac/linux$ touch file
kiran_512@LAPTOP-TG43J350:/mnt/c/cdac/linux$ stat file
  File: file
  Size: 36          Blocks: 0          IO Block: 4096   regular file
Device: eh/14d  Inode: 95982967058365847  Links: 1
Access: (0777/-rwxrwxrwx) Uid: ( 1000/kiran_512)  Gid: ( 1000/kiran_512)
Access: 2022-08-15 13:47:19.209385600 +0530
Modify: 2022-08-15 13:47:19.209385600 +0530
Change: 2022-08-15 13:47:19.209385600 +0530
 Birth: -
kiran_512@LAPTOP-TG43J350:/mnt/c/cdac/linux$
```

VIM Editor :

Linux

Vi editor

- A programmer text editor
- It can be used to edit all kinds of plain text, it is specially useful for editing programs. Mainly used for Unix Programs.

Note

:w	→ To Save
:wq or :x	→ To Save & quit
:q	→ quit
:q!	→ force Quit , no save

'Vi' is a standard whereas 'nano' has to be available depending on the linux you use.

vi file.txt -- used to create file and insert data into the file

to insert text => press i and insert any text

to Exit Vi editor : => Escape + :wq

Nano editor:

- Nano is not as powerful as VI editor :

Cntrl + O to save

Cntrl + X to exit

Remove Directories :

rm -rf → Removes even non-empty file & directory

rm -rp → Removes non-empty directories including parent & Subdirectory

rm -r → Removes empty directories.

Lec-07Linux Com

How to Copy a file ↴ CP

How to Cut & Paste file ↴ MV

How to rename file or directory ↴

How to Create Hidden file or directory ↴

⇒ Try Some Command like less, more,
Head and Tail

How to remove file or directory
↳ delete

rmdir → This Command is used to remove
the specified directory (empty)

rmdir -p → Remove both the parents and
Child directory.

rmdir -pv → Removes all the parent and
Subdirectories along with the
Verbose.

mkdir command :

=> create directory:

mkdir images

=> create sub directory:

mkdir images/pics : here images must be available or else pics wont be Created

=> Use of -p flag in mkdir :

mkdir --parents names/mark : here both the dir created at the same time

mkdir -p names/mark

mkdir -p names/{john,mark,bob} // here space should be avoided between the sub dir names or else only first will get generated

```

root@ip-172-31-37-98:~# mkdir -p dirc/dird/dire
root@ip-172-31-37-98:~# ls
dirc  dirc  dirx  diry  file1  file10  file2  file3
root@ip-172-31-37-98:~# cd dirc
root@ip-172-31-37-98:dirc# pwd
/home/ec2-user/dirc
root@ip-172-31-37-98:dirc# ls
dird
root@ip-172-31-37-98:dirc# cd dird
root@ip-172-31-37-98:dird# ls
dire
root@ip-172-31-37-98:dird# cd dire
root@ip-172-31-37-98:dire# ls
root@ip-172-31-37-98:dire# cd .
root@ip-172-31-37-98:dire# cd ..
root@ip-172-31-37-98:dird# cd ..
root@ip-172-31-37-98:dirc# cd ..
root@ip-172-31-37-98:~# cd dirc/dircd/dire
bash: cd: dirc/dircd/dire: No such file or directory
root@ip-172-31-37-98:~# cd dirc/dird/dire
root@ip-172-31-37-98:dire# pwd
/home/ec2-user/dirc/dird/dire
root@ip-172-31-37-98:dire# cd ../../..
root@ip-172-31-37-98:~# cd ..
root@ip-172-31-37-98:~# cd ..
root@ip-172-31-37-98:~# 

```

The terminal window shows the creation of a directory structure. It starts with `mkdir -p dirc/dird/dire`, which creates three levels of directories: dirc, dird, and dire. Then, it lists the contents of each level. It changes to the dirc directory and prints its full path. It then lists the contents of the dird directory. It changes to the dire directory and lists its contents. It then changes back to the dirc directory and lists its contents again. It attempts to change to a non-existent directory `dirc/dircd/dire` and gets an error message. Finally, it changes to the parent directory twice and lists its contents.

CREATE Hidden File : use ● (dot) before name fo the file or directory to make it hidden

touch .file

ls -a

mkdir .FolderName

ls -a

Remove Directories :

rmdir command USE:

rmdir option dir

rmdir dir_name

rmdir CLI/a/b/c/d/e : this command will remove only the top directory i.e. e dir

rmdir -p CLI/a/b/c/d/e : this will remove all the dir from CLI to e :

NOTE : Above command will work only if the all directories must be empty or else it will delete directories from the top which are empty and it will stop at the dir which has some files

v flag: verbose flag shows the extended information:

rmdir -pv CLI/a/b/c

```
kiran_512@LAPTOP-TG43J350:$ ls -d */
```

bin/ etc/ lib64/ opt/ run/ srv/ usr/

boot/ home/ media/ proc/ sbin/ sys/ var/

dev/ lib/ mnt/ root/ snap/ tmp/

```
kiran_512@LAPTOP-TG43J350:$
```

```
kiran_512@LAPTOP-TG43J350:/mnt/c/cdac/shell$ mkdir -pv CLI/A/B/C/D/E
```

mkdir: created directory 'CLI'

mkdir: created directory 'CLI/A'

mkdir: created directory 'CLI/A/B'

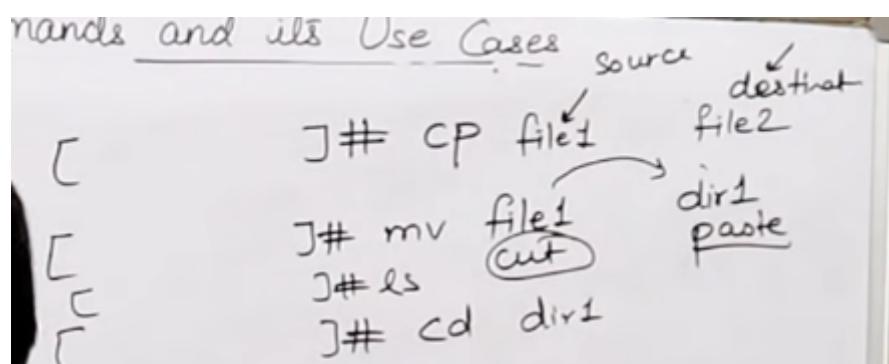
mkdir: created directory 'CLI/A/B/C'

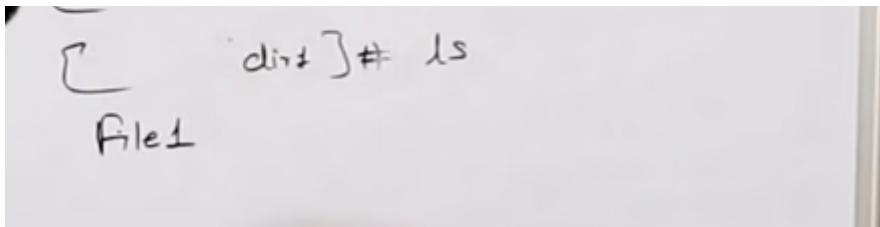
mkdir: created directory 'CLI/A/B/C/D'

mkdir: created directory 'CLI/A/B/C/D/E'

```
kiran_512@LAPTOP-TG43J350:/mnt/c/cdac/shell$
```

COPY Command :





cp option source destination

cp file1 file2 folder

cp file folder

cp -i file folder : here CLI will ask if we want to over ride or not as it already exist in folder

cp filesourepath destinationpath

If we are in the root folder then we can use below command for the copy file from one folder to another

e.g. cp /mnt/c/cdac/file1 /mnt/f/folder

if we are in the some dir and we want some other files to copy here so we can use below command:

cp filecoursepath . here dot('')represents the current directory

We can not copy into the directory which doesnt exist with command cp dir1 dir3 but we can use cp -R dir1 dir3 here dir1 files will be copied into the dir3 along with the dir1

```
root@ip-172-31-37-98:/home/ec2-user# ls
bin dev home lib64 media opt root sbin sys usr
boot etc lib local mnt proc run srv tmp var
[root@ip-172-31-37-98/]# ls -a
. .autorelabel boot etc lib local mnt proc run srv tmp var
.. bin dev home lib64 media opt root sbin sys usr
[root@ip-172-31-37-98/]# cd home
[root@ip-172-31-37-98 home]# cd ec2-user
[root@ip-172-31-37-98 ec2-user]# ls
dir1 dirc dirx diry file1 file10 file2 file3
[root@ip-172-31-37-98 ec2-user]# vi file1
[root@ip-172-31-37-98 ec2-user]# cat file1
hello
[root@ip-172-31-37-98 ec2-user]# cat file2
[root@ip-172-31-37-98 ec2-user]# cp file1 file2
cp: overwrite 'file2'? y
[root@ip-172-31-37-98 ec2-user]# cat file2
hello
[root@ip-172-31-37-98 ec2-user]# cp file2 dir1
[root@ip-172-31-37-98 ec2-user]# cd dir1
[root@ip-172-31-37-98 dir1]# ls
file2
[root@ip-172-31-37-98 dir1]# cd ..
[root@ip-172-31-37-98 ec2-user]# ls
dir1 dirc dirx diry file1 file10 file2 file3
[root@ip-172-31-37-98 ec2-user]#
```



MOVE command :

`mv options source destination`

`mv file1 file2` : here content of file1 will be moved to the file2 and file1 will disappear - **Can also be used for renaming file**

`mv filename destination`

`mv file1 /dir1` : here file1 will be shifted to dir1

`mv -f file1 /dir1` so here it will ask to override or not

`mv dir1 dir2` : this will move dir dir1 along with all subfiles and folders to dir2

if the files or dir doesnt exist so it will create new dir and old will disappear!

```

root@ip-172-31-37-98:~# ls
dir1  dirc  dirx  diry  file1  file10  file2  file3
root@ip-172-31-37-98:~# mv file2 dirx
root@ip-172-31-37-98:~# ls
dir1  dirc  dirx  diry  file1  file10  file3
root@ip-172-31-37-98:~# cd dirx
root@ip-172-31-37-98:~/dirx# ls
file2
root@ip-172-31-37-98:~/dirx# mv dir1 dirx
mv: cannot stat 'dir1': No such file or directory
root@ip-172-31-37-98:~/dirx# cd..
bash: cd..: command not found
root@ip-172-31-37-98:~/dirx# cd ..
root@ip-172-31-37-98:~# mv dirc dirx
root@ip-172-31-37-98:~# ls
dirc  dirx  diry  file1  file10  file3
root@ip-172-31-37-98:~# cd dirx
root@ip-172-31-37-98:~/dirx# ls
dirc  file2
root@ip-172-31-37-98:~/dirx# cd ..
root@ip-172-31-37-98:~# mv diry myfolder
root@ip-172-31-37-98:~# ls
dirc  dirx  file1  file10  file3  myfolder
root@ip-172-31-37-98:~#

```

LESS command :

when file content is huge so in that case less command is used so we can go page by page with the **space** key! or with the **help of arrow key** we can go down.

to go up page by page '**B**' key is used!

to go to the end of the file press **shift+G**

Type **1G** to the top

to find the specific use **/word** end

to quit less command press **q**

MORE command : Display the pages of the files one by one.

more file.txt

TOUCH command : to modify the timestamp

touch file

if file is already exist and even if we use the above command again then it will replace the file and file created time will update to latest one

nano editors features:

nano file.txt

to save use : cntrl +O and enter

Cntrl+X will exit the editor

Cntrl+K to cut

Cnrl+U to paste

sudo command : SUPER USER DO

sudo -s

enter the password

sudo -su

enter the password

LAB :

```
[root@ip-172-31-37-98 ~]$ sudo su
[ec2-user@ip-172-31-37-98 ~]# touch file1 file2 file3
[ec2-user@ip-172-31-37-98 ~]# ls
file1 file2 file3
```

```
[root@ip-172-31-37-98 ec2-user]# mkdir dir1
[root@ip-172-31-37-98 ec2-user]# ls
dir1  file1  file2  file3
[root@ip-172-31-37-98 ec2-user]# mkdir file2
mkdir: cannot create directory 'file2': File exists
[root@ip-172-31-37-98 ec2-user]# mkdir file10
[root@ip-172-31-37-98 ec2-user]# ls
dir1  file1  file10  file2  file3
[root@ip-172-31-37-98 ec2-user]# ls -l
total 0
drwxr-xr-x 2 root root 6 Jun 30 14:16 dir1
-rw-r--r-- 1 root root 0 Jun 30 14:15 file1
drwxr-xr-x 2 root root 6 Jun 30 14:16 file10
-rw-r--r-- 1 root root 0 Jun 30 14:15 file2
-rw-r--r-- 1 root root 0 Jun 30 14:15 file3
[root@ip-172-31-37-98 ec2-user]# 
```



```
[root@ip-172-31-37-98:~/home/ec2-user]
.. .bash_profile  dir1      file1  file2  .file4
[root@ip-172-31-37-98 ec2-user]# mkdir dirx  diry .dirz
[root@ip-172-31-37-98 ec2-user]# ls
dir1  dirx  diry  file1  file10  file2  file3
[root@ip-172-31-37-98 ec2-user]# ls -a
.  .bash_logout  .bashrc  .dira  diry  file1  file2  .file4
..  .bash_profile  dir1  dirx  .dirz  file10  file3  .ssh
[root@ip-172-31-37-98 ec2-user]# ls -la
total 12
drwx----- 9 ec2-user ec2-user 203 Jun 30 14:20 .
drwxr-xr-x  3 root     root      22 Jun 30 14:11 ..
-rw-r--r--  1 ec2-user ec2-user  18 Jan 16 00:56 .bash_logout
-rw-r--r--  1 ec2-user ec2-user 193 Jan 16 00:56 .bash_profile
-rw-r--r--  1 ec2-user ec2-user 231 Jan 16 00:56 .bashrc
drwxr-xr-x  2 root     root      6 Jun 30 14:16 dir1
drwxr-xr-x  2 root     root      6 Jun 30 14:20 .dira
drwxr-xr-x  2 root     root      6 Jun 30 14:20 dirx
drwxr-xr-x  2 root     root      6 Jun 30 14:20 diry
drwxr-xr-x  2 root     root      6 Jun 30 14:20 .dirz
-rw-r--r--  1 root     root      0 Jun 30 14:15 file1
drwxr-xr-x  2 root     root      6 Jun 30 14:16 file10
-rw-r--r--  1 root     root      0 Jun 30 14:15 file2
-rw-r--r--  1 root     root      0 Jun 30 14:15 file3
-rw-r--r--  1 root     root      0 Jun 30 14:18 .file4
drwx----- 2 ec2-user ec2-user  29 Jun 30 14:11 .ssh
[root@ip-172-31-37-98 ec2-user]# 
```



TOP command USE:

Dynamic real time view of Computer system:

top

s enter to change the refresher delay

i this will show the idle processes

k enter the PID : enter again and it will kill the process as per the given PID

pidof process_name

kill pid : this will terminate the process

kill -KILL pid : incase above command didnt work

kill -9 pid alternative to kill process

ps -ux : this command wil display all the process with the PID

PS -aux - will reflect the processes by all the users in case of multiple user on linux system

ps -U user_name : to get the processes for particular user

ECHO :

echo on command line :

var=Kiran

echo \$var his will give Kiran as o/p

echo -e "statement \nonnewline "

File permission :

chmod a+rwx file

chmod ugo-rwx file

chmod u+rw file

chmod u-w file

chmod +x file : execute permision granted to user

r, w, x Permissions	Binary	Octal
---	000	0
-x	001	1
-w-	010	2
-wx	011	3
r--	100	4
r-x	101	5
rw-	110	6
rwx	111	7

Introduction to Bash Scripting

./[file.sh](#) to execute the file with the shell

which and whatis command USE:

which ls : /bin/ls : location of ls command

which bash: /bin/bash : location of bash

whatis ls

whatis bash

```
kiran_512@LAPTOP-TG43J350:$ whatis bash
```

bash (1) - GNU Bourne-Again SHell

useradd command USE:

```
useradd kiran -m -s /bin/bash -g user -c "Comments"
```

-m creates default home directory

-s allows user to use default shell

-g default use of group

-c for comments to the new user

password to the new user will be given by below command:

```
sudo passwd kiran 
```

enter the password and again

Remove users:

```
sudo userdel kiran // this will only delete the user details but not the directory so home directory will be still there
```

```
sudo userdel -r kiran // this will delete the entirely all data and the home directory
```

Basic Group Management (groups, groupadd, groupdel):

```
:groups 
```

cat /etc/group : command that will display all the groups:

```
kiran_512@LAPTOP-TG43J350:$ clear
```

```
kiran_512@LAPTOP-TG43J350:$ groups
```

```
kiran_512 adm dialout cdrom floppy sudo audio dip video plugdev netdev
```

```
kiran_512@LAPTOP-TG43J350:$ cat /etc/group
```

```
root:x:0:
```

```
daemon:x:1:
```

```
bin:x:2:
```

```
sys:x:3:
```

```
adm:x:4:syslog,kiran_512
```

```
tty:x:5:
```

```
disk:x:6:
```

```
lp:x:7:
```

```
mail:x:8:
```

```
news:x:9:
```

```
uucp:x:10:
```

```
man:x:12:
```

```
proxy:x:13:
```

```
kmem:x:15:
```

dialout:x:20:kiran_512
fax:x:21:
voice:x:22:
cdrom:x:24:kiran_512
floppy:x:25:kiran_512
tape:x:26:
sudo:x:27:kiran_512
audio:x:29:kiran_512
dip:x:30:kiran_512
www-data:x:33:
backup:x:34:
operator:x:37:
list:x:38:
irc:x:39:
src:x:40:
gnats:x:41:
shadow:x:42:
utmp:x:43:
video:x:44:kiran_512
sasl:x:45:
plugdev:x:46:kiran_512
staff:x:50:
games:x:60:
users:x:100:
nogroup:x:65534:
systemd-journal:x:101:
systemd-network:x:102:
systemd-resolve:x:103:
input:x:104:
crontab:x:105:
syslog:x:106:
messagebus:x:107:
lxd:x:108:
mlocate:x:109:
uuidd:x:110:
ssh:x:111:
landscape:x:112:
admin:x:113:
netdev:x:114:kiran_512
kiran_512:x:1000:

sudo groupadd grp_name
sudo groupdel grp_name
sudo gpasswd -a username grpname // to add user in grp

sudo gpasswd -d username grpname // to remove the user from grp

.bashrc File USE:

gedit .bashrc //this will open the file in geditor

Viewing Resources (du , df, free command)

```
kiran_512@LAPTOP-TG43J350:~$ df
Filesystem 1K-blocks Used Available Use% Mounted on
rootfs    455166704 356370496 98796208 79% /
none      455166704 356370496 98796208 79% /dev
none      455166704 356370496 98796208 79% /run
none      455166704 356370496 98796208 79% /run/lock
none      455166704 356370496 98796208 79% /run/shm
none      455166704 356370496 98796208 79% /run/user
tmpfs     455166704 356370496 98796208 79% /sys/fs/cgroup
C:\      455166704 356370496 98796208 79% /mnt/c
D:\      16677884 14753132 1924752 89% /mnt/d
F:\      286718972 177943600 108775372 63% /mnt/f
G:\      215038972 31664156 183374816 15% /mnt/g
kiran_512@LAPTOP-TG43J350:~$
```

NOTE : -h flag is used to convert the values in human readable form

```
kiran_512@LAPTOP-TG43J350:~$ df -h
Filesystem Size Used Avail Use% Mounted on
rootfs   435G 340G 95G 79% /
none     435G 340G 95G 79% /dev
none     435G 340G 95G 79% /run
none     435G 340G 95G 79% /run/lock
none     435G 340G 95G 79% /run/shm
none     435G 340G 95G 79% /run/user
tmpfs    435G 340G 95G 79% /sys/fs/cgroup
C:\      435G 340G 95G 79% /mnt/c
D:\      16G 15G 1.9G 89% /mnt/d
F:\      274G 170G 104G 63% /mnt/f
G:\      206G 31G 175G 15% /mnt/g
kiran_512@LAPTOP-TG43J350:~$
```

du - estimate file space usage

SYNOPSIS - du [OPTION]... [FILE]...

df - report file system disk space usage

SYNOPSIS df [OPTION] [FILE]

<https://www-evernote.com/client/web?login=true#?n=d298dc9f-2c00-4f2a-5bcd-cc687c9e41ad&>

~~SUMMARY - OR INFORMATION... [FILE]...~~**-h, --human-readable**

print sizes in human readable format (e.g., 1K 234M 2G)

free -m //cmnd used to check the free spce in a root

watch command USE:

watch free -k

watch free -g

watch free -t

watch -n 1 free -m every 1 sec it will update the values

Head and Tail Commands in Linux:

head logfile enter

this will show first 10 lines of file

tail file enter

this will show last 10 lines bbedefault

head -n3 file enter

this will show the first three lines

tail -f file enter

this will wait to watch the next line if file is taking some ip and o/p

head -3 file1 file2 enter

find command:

find path -name file_name

find path -name file.*

find path -name *.txt

find / -name file_name

this may give permission denied error but we can use sudo command to find the file

sodu find / file.ext

find path -mtime -1 file.* // this will find the file created one day ago

wc command USE: ITS WORD COUNT

wc -c -l -w -L file.txt

cal command:

cal

ncal : weekdays on left

cal year

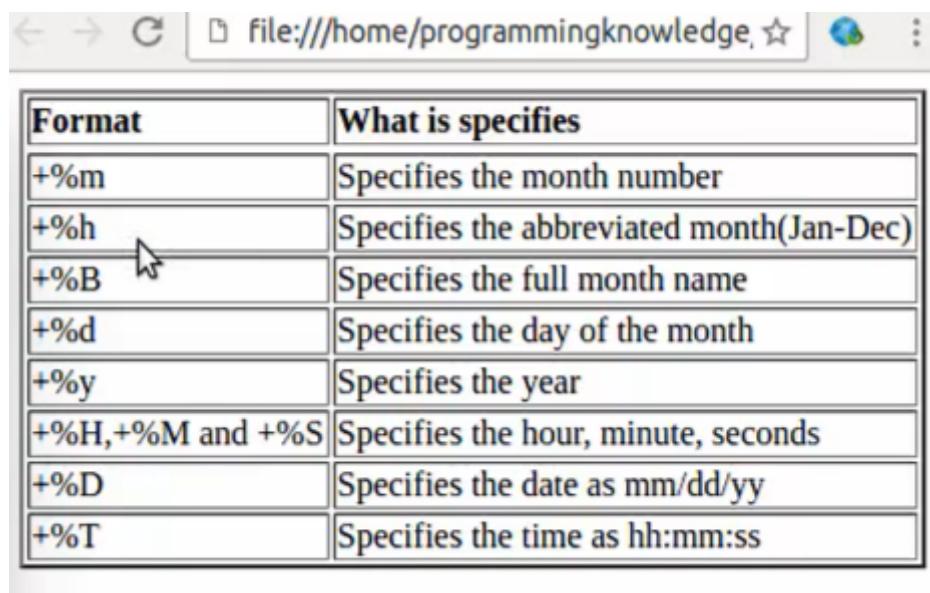
cal 3 2022

cal -3

date command :

date

date -s ""



A screenshot of a web browser window displaying a table of date format specifiers. The table has two columns: 'Format' and 'What it specifies'. The 'Format' column contains various strftime-style codes, and the 'What it specifies' column describes what each code represents. The table is as follows:

Format	What it specifies
+%m	Specifies the month number
+%h	Specifies the abbreviated month(Jan-Dec)
+%B	Specifies the full month name
+%d	Specifies the day of the month
+%y	Specifies the year
+%H,%M and %S	Specifies the hour, minute, seconds
+%D	Specifies the date as mm/dd/yy
+%T	Specifies the time as hh:mm:ss

grep command:

used to find the pattern in particular file

grep "keyword" file_name

grep -i "keyword" file // here -i flag make sure it finds both the case lower and upper case

grep -Ewi 'the|that|then|those'

The four most commonly used flags to grep are -i (case-insensitive search), -l (list only the names of matching files), -w (which matches whole words only), and -v (invert; this lists only the lines that do not match the pattern).

Display the lines (from line number 12 to 22, both inclusive) of a given text file.

head -n 22 | tail -n 11

#In a given fragment of text, delete all the a-z lowercase characters.

tr -d 'a-z'

#In a given fragment of text, replace all sequences of multiple spaces #with just one space. #The -s option is supposed to squeeze every repeated occurrence of each #character into a single occurrence and then change said occurrence.

tr -s ''

#Sort Options: #The vanilla sort command simply sorts the lines of the input file in #lexicographical order. #The -n option sorts the file on the basis of the numeric fields available #if the first word or column in the file is a number. #The -r option reverses the sorting order to either the reverse of the usual #lexicographical ordering or descending order while sorting in numerical mode. #The -k option is useful while sorting a table of data (tsv, csv etc.) #based on a specified column (or columns). #The -t option is used while specifying a delimiter in a particular file #where columns are separated by tabs, spaces, pipes etc. #Given a text file, order the lines in lexicographical order.

sort

#You are given a file of text which contains temperature information

#about American cities, in TSV (tab-separated) format. The first column

#is the name of the city and the next four columns are the average

#temperature in the months of Jan, Feb, March and April (see the sample input).

#Rearrange the rows of the table in descending order of the values for the

#average temperature in January.

#The -k option is useful while sorting a table of data (tsv, csv etc.)

#based on a specified column (or columns).

sort -t\$'\t' -nr -k2

All in One :

1.	ls	Directory listing
2.	ls -al	Formatted listing with hidden files
3.	ls -lt	Sorting the Formatted listing by time modification
4.	cd dir	Change directory to dir
5.	cd	Change to home directory
6.	pwd	Show current working directory
7.	mkdir dir	Creating a directory dir
8.	cat >file	Places the standard input into the file
9.	more file	Output the contents of the file

10.	head file	Output the first 10 lines of the file
11.	tail file	Output the last 10 lines of the file
12.	tail -f file	Output the contents of file as it grows, starting with the last 10 lines
13.	touch file	Create or update file
14.	rm file	Deleting the file
15.	rm -r dir	Deleting the directory
16.	rm -f file	Force to remove the file
17.	rm -rf dir	Force to remove the directory dir
18.	cp file1 file2	Copy the contents of file1 to file2
19.	cp -r dir1 dir2	Copy dir1 to dir2; create dir2 if not present
20.	mv file1 file2	Rename or move file1 to file2, if file2 is an existing directory
21.	ln -s file link	Create symbolic link link to file

Process management

1.	ps	To display the currently working processes
2.	top	Display all running process

6.	finger user	Display information about user
7.	uname -a	Show kernel information
8.	cat /proc/cpuinfo	Cpu information
9.	cat proc/meminfo	Memory information
10.	man command	Show the manual for command
11.	df	Show the disk usage
12.	du	Show directory space usage
13.	free	Show memory and swap usage
14.	whereis app	Show possible locations of app
15.	which app	Show which applications will be run by default

Compression

1.	tar cf file.tar file	Create tar named file.tar containing file
2.	tar xf file.tar	Extract the files from file.tar
3.	tar czf file.tar.gz files	Create a tar with Gzip compression
4.	tar xzf file.tar.gz	Extract a tar using Gzip
5.	tar cjf file.tar.bz2	Create tar with Bzip2 compression
6.	tar xjf file.tar.bz2	Extract a tar using Bzip2
7.	gzip file	Compresses file and renames it to file.gz
8.	gzip -d file.gz	Decompresses file.gz back to file

Network

1.	ping host	Ping host and output results
2.	whois domain	Get whois information for domains
3.	dig domain	Get DNS information for domain
4.	dig -x host	Reverse lookup host
5.	wget file	Download file
6.	wget -c file	Continue a stopped download

3.	kill pid	Kill the process with given pid
4.	killall proc	Kill all the processes named proc
5.	pkill pattern	Will kill all processes matching the pattern
6.	bg	List stopped or background jobs, resume a stopped job in the background
7.	fg	Brings the most recent job to foreground
8.	fg n	Brings job n to the foreground

File permission

1.	chmod octal file	Change the permission of file to octal, which can be found separately for user, group, world by adding, • 4-read(r) • 2-write(w) • 1-execute(x)
----	------------------	--

Searching

1.	grep pattern file	Search for pattern in file
2.	grep -r pattern dir	Search recursively for pattern in dir
3.	command grep pattern	Search pattern in the output of a command
4.	locate file	Find all instances of file
5.	find . -name filename	Searches in the current directory (represented by a period) and below it, for files and directories with names starting with filename
6.	pgrep pattern	Searches for all the named processes , that matches with the pattern and, by default, returns their ID

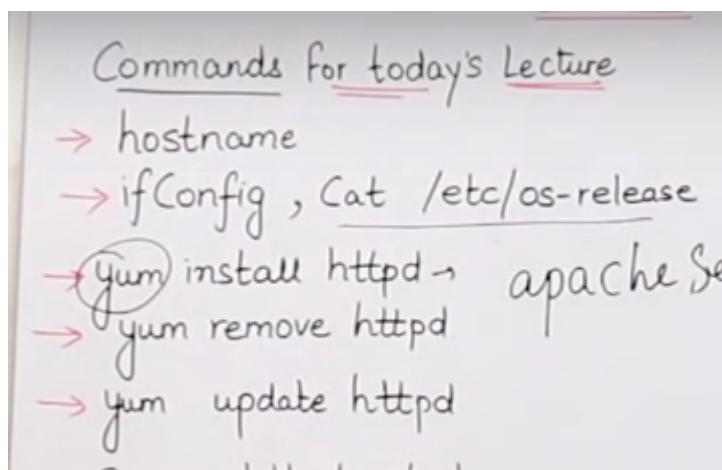
System Info

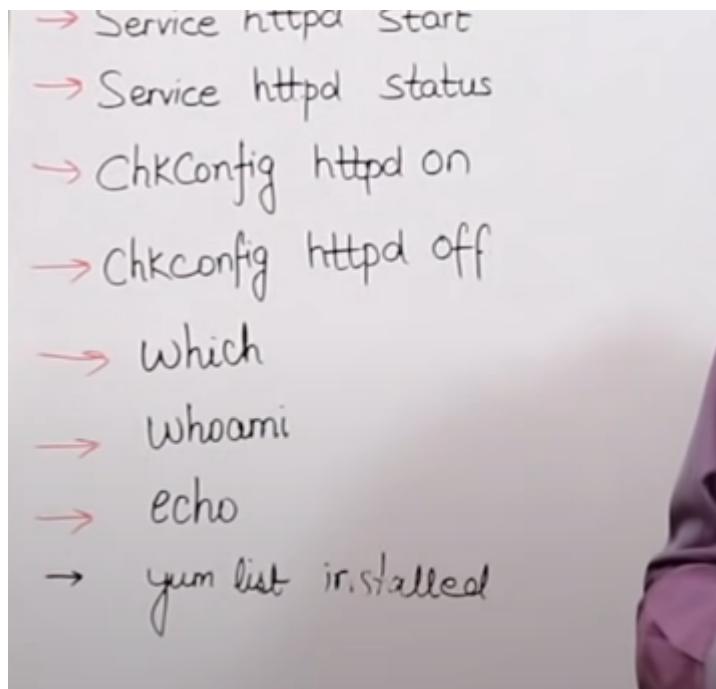
1.	date	Show the current date and time
2.	cal	Show this month's calendar
3.	uptime	Show current uptime
4.	w	Display who is on line
5.	whoami	Who you are logged in as

Shortcuts

1.	ctrl+c	Halts the current command
2.	ctrl+z	Stops the current command, resume with fg in the foreground or bg in the background
3.	ctrl+d	Logout the current session, similar to exit
4.	ctrl+w	Erases one word in the current line
5.	ctrl+u	Erases the whole line
6.	ctrl+r	Type to bring up a recent command
7.	!!	Repeats the last command
8.	exit	Logout the current session

Some more commands :





```
root@LAPTOP-TG43J350:/mnt/c/cdac/linux# hostname
```

```
LAPTOP-TG43J350
```

```
root@LAPTOP-TG43J350:/mnt/c/cdac/linux# cat /etc/os-release
```

```
NAME="Ubuntu"
VERSION="18.04.5 LTS (Bionic Beaver)"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 18.04.5 LTS"
VERSION_ID="18.04"
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
VERSION_CODENAME=bionic
UBUNTU_CODENAME=bionic
```

```
root@LAPTOP-TG43J350:/mnt/c/cdac/linux# ifconfig
```

```
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 1500
inet 127.0.0.1 netmask 255.0.0.0
inet6 ::1 prefixlen 128 scopeid 0xfe<compat,link,site,host>
    loop (Local Loopback)
        RX packets 0 bytes 0 (0.0 B)
```

```
...pu... ~,~...~\...~  
RX errors 0 dropped 0 overruns 0 frame 0  
TX packets 0 bytes 0 (0.0 B)  
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
wifi0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
inet 192.168.0.4 netmask 255.255.255.0 broadcast 192.168.0.255  
inet6 fe80::311b:f68f:e087:4317 prefixlen 64 scopeid 0xfd<compat,link,site,host>  
ether b8:81:98:b5:82:1d (Ethernet)  
RX packets 0 bytes 0 (0.0 B)  
RX errors 0 dropped 0 overruns 0 frame 0  
TX packets 0 bytes 0 (0.0 B)  
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
root@LAPTOP-TG43J350:/mnt/c/cdac/linux#
```

```
yum : yellowdog updater :
```

```
yum install httpd - to install apache web server
```

```
History :
```

```
1797 history> commands.txt
```