Assignment 01

01. adduser command

```
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~$ sudo adduser mohan
[sudo] password for gcl-19:
Adding user `mohan' ...
Adding new group `mohan' (1004) ...
Adding new user `mohan' (1002) with group `mohan' ...
Creating home directory `/home/mohan' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for mohan
Enter the new value, or press ENTER for the default
Full Name []: Mohan Manjhi
         Room Number []:
         Work Phone []:
         Home Phone []:
         Other []:
Is the information correct? [Y/n] y
```

02. at command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls
'command screeshot'
                        'Mohan Manjhi'
'command screeshot.zip' 'Mohan Manjhi.zip'
mohan@Mohan:~/Downloads/os assignment 1$ at 22:01
warning: commands will be executed using /bin/sh
at Thu Jan 11 22:01:00 2024
at> touch atfile.txt
at> <E0T>
job 3 at Thu Jan 11 22:01:00 2024
mohan@Mohan:~/Downloads/os assignment 1$ at -l
mohan@Mohan:~/Downloads/os assignment 1$ ls
atfile.txt
                     'command screeshot.zip' 'Mohan Manjhi.zip'
'command screeshot' 'Mohan Manjhi'
mohan@Mohan:~/Downloads/os assignment 1$
```

03. batch command

```
mohan@Mohan:~/Downloads/os assignment 1$ batch
warning: commands will be executed using /bin/sh
at Thu Jan 11 22:03:00 2024
at> echo "Hello,mohan" >> batch.txt
at> <EOT>
at> <EOT>
job 4 at Thu Jan 11 22:03:00 2024
mohan@Mohan:~/Downloads/os assignment 1$ cat batch.txt
Hello,mohan
mohan@Mohan:~/Downloads/os assignment 1$ [
```

04. touch, nano command

05. cd, pwd, commands

```
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ cd ...
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~$ ls
boi
         Documents examples.desktop Music Pictures
                                                       Templates
Desktop Downloads mohan.txt
                                      051
                                                       Videos
                                             Public
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~$ cd Downloads
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ pwd
/home/gcl-19/Downloads
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ cd ...
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~$ pwd
/home/gcl-19
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~$
```

06. chgrp and Is command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls -l
total 1248
-rw-rw-r-- 1 mohan mohan
                             0 Jan 11 22:01 atfile.txt
-rw-rw-r-- 1 mohan mohan
                            12 Jan 11 22:05 batch.txt
                         4096 Jan 11 22:06 'command screeshot'
drwxrwxr-x 2 mohan mohan
-rw-rw-r-- 1 mohan mohan 387238 Jan 11 21:46 'command screeshot.zip'
drwxrwxr-x 2 mohan mohan
                          4096 Jan 11 21:47 'Mohan Manjhi'
-rw-rw-r-- 1 mohan mohan 875183 Jan 11 21:46 'Mohan Manjhi.zip'
mohan@Mohan:~/Downloads/os assignment 1$ sudo chgrp mygrp atfile.txt
mohan@Mohan:~/Downloads/os assignment 1$ ls -l
total 1248
-rw-rw-r-- 1 mohan mygrp
                             0 Jan 11 22:01 atfile.txt
                            12 Jan 11 22:05 batch.txt
-rw-rw-r-- 1 mohan mohan
drwxrwxr-x 2 mohan mohan 4096 Jan 11 22:06 'command screeshot'
-rw-rw-r-- 1 mohan mohan 387238 Jan 11 21:46 'command screeshot.zip'
drwxrwxr-x 2 mohan mohan 4096 Jan 11 21:47 'Mohan Manjhi'
-rw-rw-r-- 1 mohan mohan 875183 Jan 11 21:46 'Mohan Manjhi.zip'
mohan@Mohan:~/Downloads/os assignment 1$
```

07. chmod command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls -l
total 1248
-rw-rw-r-- 1 mohan mygrp 0 Jan 11 22:01 atfile.txt
-rw-rw-r-- 1 mohan mohan 12 Jan 11 22:05 batch.txt
                             0 Jan 11 22:01 atfile.txt
drwxrwxr-x 2 mohan mohan 4096 Jan 11 22:18 'command screeshot'
-rw-rw-r-- 1 mohan mohan 387238 Jan 11 21:46 'command screeshot.zip'
drwxrwxr-x 2 mohan mohan 4096 Jan 11 21:47 'Mohan Manjhi'
-rw-rw-r-- 1 mohan mohan 875183 Jan 11 21:46 'Mohan Manjhi.zip'
mohan@Mohan:~/Downloads/os assignment 1$ chmod u+rwx atfile.txt
mohan@Mohan:~/Downloads/os assignment 1$ ls -l
total 1248
-rwxrw-r-- 1 mohan mygrp
                             0 Jan 11 22:01 atfile.txt
drwxrwxr-x 2 mohan mohan 4096 Jan 11 22:18 'command screeshot'
-rw-rw-r-- 1 mohan mohan 387238 Jan 11 21:46 'command screeshot.zip'
drwxrwxr-x 2 mohan mohan 4096 Jan 11 21:47 'M<mark>ohan Manjhi</mark>'
-rw-rw-r-- 1 mohan mohan 875183 Jan 11 21<u>:</u>46 <mark>'Mohan Manjhi.zip</mark>'
mohan@Mohan:~/Downloads/os assignment 1$
```

08. chown command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls -l
total 1248
-rwxrw-r-- 1 mohan mygrp 0 Jan 11 22:01 atfile.txt
-rw-rw-r-- 1 mohan mohan 12 Jan 11 22:05 batch.txt
drwxrwxr-x 2 mohan mohan 4096 Jan 11 23:16 'command screeshot'
-rw-rw-r-- 1 mohan mohan 387238 Jan 11 21:46 'command screeshot.zip'
drwxrwxr-x 2 mohan mohan 4096 Jan 11 21:47 'Mohan Manjhi'
-rw-rw-r-- 1 mohan mohan 875183 Jan 11 21:46 'Mohan Manjhi.zip'
mohan@Mohan:~/Downloads/os assignment 1$ sudo chown ruhaan batch.txt
mohan@Mohan:~/Downloads/os assignment 1$ ls -l
total 1248
-rwxrw-r-- 1 mohan mygrp
                                 0 Jan 11 22:01 atfile.txt
-rw-rw-r-- 1 ruhaan mohan
                                 12 Jan 11 22:05 batch.txt
drwxrwxr-x 2 mohan mohan 4096 Jan 11 23:16 'command screeshot'
-rw-rw-r-- 1 mohan mohan 387238 Jan 11 21:46 'command screeshot.zip'
drwxrwxr-x 2 mohan mohan 4096 Jan 11 21:47 'Mohan Manjhi'
-rw-rw-r-- 1 mohan mohan 875183 Jan 11 21:46 <mark>'Mohan Manjhi.zip'</mark>
```

09. cd and clear command

10. cp command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls
atfile.txt 'command screeshot' 'Mohan Manjhi'
batch.txt 'command screeshot.zip' 'Mohan Manjhi.zip'
mohan@Mohan:~/Downloads/os assignment 1$ cp 'command screeshot.zip'
'Mohan Manjhi.zip' 'Mohan Manjhi'
mohan@Mohan:~/Downloads/os assignment 1$ cd 'Mohan Manjhi'
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ ls
atfile.txt 'command screeshot.zip' 'Mohan Manjhi.zip'
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ []
```

11. cat and cut command

```
mohan@Mohan:~/Downloads/os assignment 1$ cat employees.txt
                                                                     SH_CLERK
       Douglas,
199
                      Grant
                             DGRANT,650.507.9844 13-JAN-08
       Jennifer,
                      Whalen JWHALEN,515.123.4444
200
                                                     17-SEP-03
                                                                     AD ASS
       Michael,
                                                                     MK_MAN
201
                      Harts MHARTSTE,515.123.5555
                                                    17-FEB-04
202
       Pat, Fay,
                      PFAY
                              603.123.6666,
                                                     17-AUG-05
                                                                     MK REP
mohan@Mohan:~/Downloads/os assignment 1$ cut -f 1 employees.txt
199
200
201
202
mohan@Mohan:~/Downloads/os assignment 1$ cut -f 2,3,4 employees.txt
            Grant DGRANT,650.507.9844
Douglas,
Jennifer,
              Whalen JWHALEN,515.123.4444
Michael,
              Harts MHARTSTE,515.123.5555
              PFAY
Pat,Fay,
                      603.123.6666,
```

12. dc command

```
mohan@Mohan:~/Downloads/os assignment 1$ dc --expression "50 10 * 9+ p"
509
mohan@Mohan:~/Downloads/os assignment 1$ dc --expression "50 10 * 9 + 4 5 f"
5
4
509
mohan@Mohan:~/Downloads/os assignment 1$ [
```

13. df command

```
mohan@Mohan:~/Downloads$ df
                           Used Available Use% Mounted on
Filesystem
            1K-blocks
tmpfs
                400104
                           1572
                                 398532 1% /run
              27134084 15054296 10676092 59% /
/dev/sda3
tmpfs
                2000508 52752 1947756 3% /dev/shm
tmpfs
                   5120
                            4
                                    5116 1% /run/lock
                                           2% /boot/efi
/dev/sda2
                 524252
                           6220
                                   518032
                400100
                                   399988
                                           1% /run/user/1000
tmpfs
                           112
mohan@Mohan:~/Downloads$ df 'os assignment 1'
Filesystem
              1K-blocks
                           Used Available Use% Mounted on
/dev/sda3
               27134084 15054296 10676092 59% /
mohan@Mohan:~/Downloads$
```

14. dir command

```
mohan@Mohan:~/Downloads/os assignment 1$ dir
atfile.txt command\ screeshot employees.txt Mohan\ Manjhi
batch.txt command\ screeshot.zip employee.txt Mohan\ Manjhi.zip
mohan@Mohan:~/Downloads/os assignment 1$ dir -a
. atfile.txt command\ screeshot employees.txt Mohan\ Manjhi
.. batch.txt command\ screeshot.zip employee.txt Mohan\ Manjhi.zip
```

15. du command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls
atfile.txt 'command screeshot' employees.txt 'Mohan Manjhi'
batch.txt 'command screeshot.zip' employee.txt 'Mohan Manjhi.zip'
mohan@Mohan:~/Downloads/os assignment 1$ du 'command screeshot'
1732 command screeshot
mohan@Mohan:~/Downloads/os assignment 1$ du employees.txt
4 employees.txt
mohan@Mohan:~/Downloads/os assignment 1$
```

16. echo command

```
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ echo "mohan manjhi"
mohan manjhi
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ x=10
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ echo The value of x is $x
The value of x is 10
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ echo "Here I am using echo command"
Here I am using echo command
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$
```

17. fdisk command

```
mohan@Mohan:~/Downloads/os assignment 1$ sudo fdisk -l
Disk /dev/loop0: 4 KiB, 4096 bytes, 8 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop1: 63.45 MiB, 66531328 bytes, 129944 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop2: 73.88 MiB, 77463552 bytes, 151296 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
```

18. file command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls
atfile.txt 'command screeshot' employees.txt 'Mohan Manjhi'
batch.txt 'command screeshot.zip' employee.txt 'Mohan Manjhi.zip'
mohan@Mohan:~/Downloads/os assignment 1$ file employees.txt
employees.txt: ASCII text
mohan@Mohan:~/Downloads/os assignment 1$ file 'Mohan Manjhi.zip'
Mohan Manjhi.zip: Zip archive data, at least v2.0 to extract, compression method=store
mohan@Mohan:~/Downloads/os assignment 1$ [
```

19. find command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls
atfile.txt 'command screeshot' employees.txt fmtcmd.txt 'Mohan Manjhi.zip'
batch.txt 'command screeshot.zip' employee.txt 'Mohan Manjhi'
mohan@Mohan:~/Downloads/os assignment 1$ find -name fmtcmd.txt
mohan@Mohan:~/Downloads/os assignment 1$ find -iname Fmtcmd.txt
./fmtcmd.txt
mohan@Mohan:~/Downloads/os assignment 1$ find -empty
./Mohan Manjhi/atfile.txt
./atfile.txt
mohan@Mohan:~/Downloads/os assignment 1$ [
```

20. fmt command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls
  atfile.txt 'command screeshot' employees.txt fmtcmd.txt 'Mohan Manjhi.zip'
  batch.txt 'command screeshot.zip' employee.txt 'Mohan Manjhi'
mohan@Mohan:~/Downloads/os assignment 1$ cat fmtcmd.txt
hello
mohan
manjhi
i am
fmt command
to format a text file.
mohan@Mohan:~/Downloads/os assignment 1$ fmt fmtcmd.txt
hello mohan manjhi i am fmt command to format a text file.
mohan@Mohan:~/Downloads/os assignment 1$ [
```

21. free command

```
mohan@Mohan:~/Downloads/os assignment 1$ free
             total
                        used
                                             shared buff/cache
                                   free
                                                                 available
           4001016
                      1553520
                                  213596
                                             133972
                                                       2233900
                                                                  2063960
           2959356
                         12
                                2959344
Swap:
mohan@Mohan:~/Downloads/os assignment 1$ free -b
                                             shared buff/cache
                                   free
                                                                available
             total
                        used
         4097040384 1591300096
                               219754496
                                          135614464 2285985792 2114572288
                       12288 3030368256
        3030380544
mohan@Mohan:~/Downloads/os assignment 1$ free -m
             total
                         used
                                    free
                                             shared buff/cache
                                                                 available
              3907
                         1517
                                     209
                                              129
                                                          2180
                                                                     2016
Mem:
              2889
                           0
                                    2889
mohan@Mohan:~/Downloads/os assignment 1$ free -k
                                   free
                                             shared buff/cache
                                                                 available
             total used
           4001016
                      1553136
                                  215108
                                             132436
                                                       2232772
                                                                  2065876
Mem:
           2959356
                                 2959344
Swap:
                          12
mohan@Mohan:~/Downloads/os assignment 1$
```

22. fsck command

```
mohan@Mohan:~/Downloads/os assignment 1$ df -h
               Size Used Avail Use% Mounted on
Filesystem
               391M 1.6M 390M
tmpfs
                                 1% /run
/dev/sda3
                26G 15G 11G 59% /
tmpfs
               2.0G 38M 1.9G
                                 2% /dev/shm
tmpfs
               5.0M 4.0K 5.0M
                                  1% /run/lock
/dev/sda2
               512M 6.1M 506M
                                2% /boot/efi
tmpfs
               391M 120K 391M
                                1% /run/user/1000
mohan@Mohan:~/Downloads/os assignment 1$ sudo fsck /dev/sda3
fsck from util-linux 2.37.2
e2fsck 1.46.5 (30-Dec-2021)
/dev/sda3 is mounted.
e2fsck: Cannot continue, aborting.
mohan@Mohan:~/Downloads/os assignment 1$ sudo fsck /dev/sda2
fsck from util-linux 2.37.2
fsck.fat 4.2 (2021-01-31)
There are differences between boot sector and its backup.
This is mostly harmless. Differences: (offset:original/backup)
 65:01/00

    Copy original to backup

Copy backup to original
No action
```

23. grep command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls
atfile.txt 'command screeshot' employees.txt fmtcmd.txt 'Mohan Manjhi.zip'
batch.txt 'command screeshot.zip' employee.txt 'Mohan Manjhi'
mohan@Mohan:~/Downloads/os assignment 1$ grep mohan fmtcmd.txt employee.txt
fmtcmd.txt:mohan
employee.txt:mohan manjhi
mohan@Mohan:~/Downloads/os assignment 1$ grep hello fmtcmd.txt
hello
mohan@Mohan:~/Downloads/os assignment 1$ [
```

24. gunzip command

```
$ ls
dir.zip.gz file1.txt file2.txt.gz folder1 folder2 myfile.zip.gz
$ gunzip file2.txt.gz
$ ls
dir.zip.gz file1.txt file2.txt folder1 folder2 myfile.zip.gz
$ gunzip -k myfile.zip.gz
$ ls
dir.zip.gz file1.txt file2.txt folder1 folder2 myfile.zip myfile.zip.gz
$ ls
dir.zip.gz file1.txt file2.txt folder1 folder2 myfile.zip myfile.zip.gz
$ gunzip dir.zip.gz myfile.zip.gz
gzip: myfile.zip already exists; do you wish to overwrite (y or n)? y
$ ls
dir.zip file1.txt file2.txt folder1 folder2 myfile.zip
$ ■
```

25. gzip command

```
$ cd gzipCmd
$ ls
dir.zip file1.txt file2.txt folder1 folder2 myfile.zip
$ gzip -f file1.txt
dir.zip file1.txt.gz file2.txt folder1 folder2 myfile.zip
$ gzip -f dir.zip myfile.zip
$ ls
dir.zip.gz file1.txt.gz file2.txt folder1 folder2 myfile.zip.gz
$ gzip -k file2.txt
$ ls
dir.zip.gz file1.txt.gz file2.txt file2.txt.gz folder1 folder2 myfile.zip.gz
$ gzip -d file1.txt.gz
$ ks
-sh: 62: ks: not found
$ ls
dir.zip.gz file1.txt file2.txt file2.txt.gz folder1 folder2 myfile.zip.gz
```

26. kill command

```
mohan@Mohan:~/Downloads/os assignment 1$ kill -l

    SIGHUP

                SIGINT
                                 SIGQUIT
                                                 4) SIGILL
                                                                 SIGTRAP
SIGABRT
                 7) SIGBUS
                                 SIGFPE
                                                 9) SIGKILL
                                                                10) SIGUSR1
11) SIGSEGV
                12) SIGUSR2
                                13) SIGPIPE
                                                                 15) SIGTERM
                                                14) SIGALRM
16) SIGSTKFLT
               17) SIGCHLD
                                18) SIGCONT
                                               19) SIGSTOP
                                                                20) SIGTSTP
                22) SIGTTOU
                               23) SIGURG
                                               24) SIGXCPU
                                                                25) SIGXFSZ
21) SIGTTIN
                               28) SIGWINCH
26) SIGVTALRM
                                                29) SIGIO
               27) SIGPROF
                                                                 30) SIGPWR
31) SIGSYS 34) SIGRTMIN 35) SIGRTMIN+1 36) SIGRTMIN+2 37) SIGRTMIN+3
38) SIGRTMIN+4 39) SIGRTMIN+5 40) SIGRTMIN+6 41) SIGRTMIN+7 42) SIGRTMIN+8
43) SIGRTMIN+9 44) SIGRTMIN+10 45) SIGRTMIN+11 46) SIGRTMIN+12 47) SIGRTMIN+13
48) SIGRTMIN+14 49) SIGRTMIN+15 50) SIGRTMAX-14 51) SIGRTMAX-13 52) SIGRTMAX-12
53) SIGRTMAX-11 54) SIGRTMAX-10 55) SIGRTMAX-9 56) SIGRTMAX-8 57) SIGRTMAX-7
58) SIGRTMAX-6 59) SIGRTMAX-5 60) SIGRTMAX-4 61) SIGRTMAX-3 62) SIGRTMAX-2
63) SIGRTMAX-1 64) SIGRTMAX
mohan@Mohan:~/Downloads/os assignment 1$ top -n3 | grep firefox
 14123 mohan
                  20
                      0 3265060 330372 142592 R 16.3
                                                         8.3
                                                               0:20.72 firefox
 14123 mohan
                  20
                       0 3260996 328776 142592 S 46.7
                                                         8.2
                                                               0:22.13 firefox
mohan@Mohan:~/Downloads/os assignment 1$ kill -9 14123
mohan@Mohan:~/Downloads/os assignment 1$ top -n3 | grep firefox
mohan@Mohan:~/Downloads/os assignment 1$
```

27. locate command

```
mohan@Mohan:~/Downloads/os assignment 1$ locate mysql
/etc/apparmor.d/abstractions/mysql
/snap/core20/1974/etc/apparmor.d/abstractions/mysql
/snap/core20/1974/usr/share/bash-completion/completions/mysql
/snap/core20/1974/usr/share/bash-completion/completions/mysqladmin
/snap/core20/2105/etc/apparmor.d/abstractions/mysql
/snap/core20/2105/usr/share/bash-completion/completions/mysql
snap/core20/2105/usr/share/bash-completion/completions/mysqladmin/
/snap/core22/1033/etc/apparmor.d/abstractions/mysql
snap/core22/1033/usr/share/bash-completion/completions/mysql/
/snap/core22/1033/usr/share/bash-completion/completions/mysqladmin
/snap/core22/858/etc/apparmor.d/abstractions/mysql
/snap/core22/858/usr/share/bash-completion/completions/mysql
/snap/core22/858/usr/share/bash-completion/completions/mysqladmin
snap/snapd/19457/usr/lib/snapd/apparmor.d/abstractions/mysql/
snap/snapd/20671/usr/lib/snapd/apparmor.d/abstractions/mysql/
/usr/share/bash-completion/completions/mysql
/usr/share/bash-completion/completions/mysqladmin
/usr/share/libreoffice/help/en-US/text/sdatabase/dabawiz02mysql.html
mohan@Mohan:~/Downloads/os assignment 1$ locate atfile.txt
/home/mohan/Downloads/os assignment 1/atfile.txt
/home/mohan/Downloads/os assignment 1/Mohan Manjhi/atfile.txt
mohan@Mohan:~/Downloads/os assignment 1$
```

28. make command

```
mohan@Mohan:~/Downloads/os assignment 1$ nano Makefile
mohan@Mohan:~/Downloads/os assignment 1$ make
gcc -c main.c
gcc -c text.c
gcc main.o text.o -o my_app
mohan@Mohan:~/Downloads/os assignment 1$ ./my_app
Hello Mohan Manjhi I am Here!
mohan@Mohan:~/Downloads/os assignment 1$ ...
```

29. man command



```
LS(1)
                                   User Commands
                                                                              LS(1)
NAME
       ls - list directory contents
SYNOPSIS
       ls [OPTION]... [FILE]...
DESCRIPTION
       List information about the FILEs (the current directory by default). Sort
       entries alphabetically if none of -cftuvSUX nor --sort is specified.
       Mandatory arguments to long options are mandatory for short options too.
             do not ignore entries starting with .
       -A, --almost-all
             do not list implied . and ..
       --author
             with -1, print the author of each file
       -b, --escape
             print C-style escapes for nongraphic characters
       --block-size=SIZE
             with -1, scale sizes by SIZE when printing them; e.g.,
              '--block-size=M'; see SIZE format below
       -B, --ignore-backups
             do not list implied entries ending with ~
             with -lt: sort by, and show, ctime (time of last modification of file
              status information); with -1: show ctime and sort by name; otherwise:
             sort by ctime, newest first
       -C
             list entries by columns
```

30. mkdir,rmdir and rm commands

```
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~$ ls
        Documents examples.desktop Music Pictures Templates
boi
Desktop Downloads mohan.txt
                                     051
                                            Public
                                                      Videos
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~$ mkdir mohan
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~$ ls
boi
          Downloads
                            mohan.txt Pictures
                                                 Videos
Desktop
          examples.desktop Music
                                       Public
Documents mohan
                            051
                                       Templates
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~$ cd mohan
acl-19@gcl19-HP-Compag-Elite-8300-MT:~/mohan$ ls
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~/mohan$ touch mohan.txt
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~/mohan$ ls
mohan.txt
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~/mohan$ rm mohan.txt
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~/mohan$ ls
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~/mohan$ cd ...
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~$ ls
                            mohan.txt Pictures Videos
boi
          Downloads
Desktop
          examples.desktop Music
                                       Public
Documents mohan
                                       Templates
                            051
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~$ rmdir mohan
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~$ ls
        Documents examples.desktop Music Pictures Templates
Desktop Downloads mohan.txt
                                     051
                                            Public
                                                      Videos
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~$ rm mohan.txt
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~$ ls
boi
          Downloads
                            051
                                      Templates
          examples.desktop Pictures Videos
Desktop
Documents Music
                            Public
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~$
```

31. mke2fs command

32. mkfs command

```
mohan@Mohan:~/Downloads/os assignment 1$ mkfs ~/backup.img
mke2fs 1.46.5 (30-Dec-2021)
Discarding device blocks: done
Creating filesystem with 25600 4k blocks and 25600 inodes

Allocating group tables: done
Writing inode tables: done
Writing superblocks and filesystem accounting information: done
mohan@Mohan:~/Downloads/os assignment 1$
```

33. more command

mohan@Mohan:~/Downloads/os assignment 1\$ more file.txt

The format of a 500-word scholarship essay is similar to a shorter essay. Each paragraph is abou t 75-125 words, and it consists of 3-5 well-written sentences. If you are writing a story or per sonal anecdote, the formatting can be more like a novel than a news article. It is ok to use 10% less or more words.

The main components of a 500-word essay include:

The introductory paragraph is to get your reader's attention and lay a foundation for your essay

This first step is to write a topic sentence. This could be a question or statement that you wil l answer or explain in the balance of the essay. The other sentences in the first paragraph open up the topic and can be 3-4 sentences. (60-90 words)

The body paragraphs are what you use to back up your essay. Each paragraph should have its own i ntro and conclusion.

Some people use the PEE principle (point, evidence , explanation). At the most use 1 point per paragraph.

--More--(33%)

34. mount command

```
mohan@Mohan:~/Downloads/os assignment 1$ mount -V
mount from util-linux 2.37.2 (libmount 2.37.2: selinux, smack, btrfs,
verity, namespaces, assert, debug)
mohan@Mohan:~/Downloads/os assignment 1$ mount -t ext4
/dev/sda3 on / type ext4 (rw,relatime,errors=remount-ro)
/dev/sda3 on /var/snap/firefox/common/host-hunspell type ext4 (ro,noex
ec,noatime,errors=remount-ro)
mohan@Mohan:~/Downloads/os assignment 1$
```

35. nohup command

```
mohan@Mohan:~/Downloads/os assignment 1$ nohup bash -c 'cal && ls'
nohup: ignoring input and appending output to 'nohup.out'
mohan@Mohan:~/Downloads/os assignment 1$ cat nohup.out
bash: line 1: cal: command not found
    January 2024
Su Mo Tu We Th Fr Sa
      2 3 4 5 6
    1
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
atfile.txt
batch.txt
command screeshot
command screeshot.zip
employees.txt
```

36. passwd command

```
mohan@Mohan:~/Downloads/os assignment 1$ passwd mohan
Changing password for mohan.
Current password:
New password:
Retype new password:
passwd: password updated successfully
mohan@Mohan:~/Downloads/os assignment 1$
```

37. pr command

38. ps command

```
mohan@Mohan:~/Downloads/os assignment 1$ ps
   PID TTY
                    TIME CMD
                00:00:00 bash
 17021 pts/1
                00:00:00 ps
 17314 pts/1
mohan@Mohan:~/Downloads/os assignment 1$ ps x
   PID TTY
                STAT
                       TIME COMMAND
                       0:07 /lib/systemd/systemd --user
  7018 ?
                Ss
  7019 ?
                S
                       0:00 (sd-pam)
  7025 ?
                S<sl
                       0:00 /usr/bin/pipewire
  7026 ?
                       0:00 /usr/bin/pipewire-media-session
                Ssl
```

39. pwd command

40. shutdown command

```
mohan@Mohan:~/Downloads/os assignment 1$ shutdown
Shutdown scheduled for Sat 2024-01-13 22:57:30 IST, use 'shutdown -c' to cancel.
mohan@Mohan:~/Downloads/os assignment 1$ [
```

41. sort command

```
mohan@Mohan:~/Downloads/os assignment 1$ cat letter

x
d
g
a
j
m
b
c
mohan@Mohan:~/Downloads/os assignment 1$ sort letter
a
b
c
d
g
j
m
x
mohan@Mohan:~/Downloads/os assignment 1$
```

42. stat command

```
mohan@Mohan:~/Downloads/os assignment 1$ stat letter
 File: letter
 Size: 16
                     Blocks: 8
                                       IO Block: 4096
                                                       regular file
                                      Links: 1
Device: 803h/2051d
                     Inode: 1198268
Access: 2024-01-13 22:59:33.728049181 +0530
Modify: 2024-01-13 22:59:26.811506678 +0530
Change: 2024-01-13 22:59:26.811506678 +0530
Birth: 2024-01-13 22:59:26.811506678 +0530
mohan@Mohan:~/Downloads/os assignment 1$ stat file.txt
 File: file.txt
                     Blocks: 8
 Size: 2844
                                       IO Block: 4096
                                                      regular file
Device: 803h/2051d
                     Inode: 1195508
                                       Links: 1
Access: (0664/-rw-rw-r--) Uid: ( 1000/
                                      mohan)
                                              Gid: ( 1000/
Access: 2024-01-13 22:26:09.630346918 +0530
Modify: 2024-01-13 22:26:01.074251218 +0530
Change: 2024-01-13 22:26:01.082251309 +0530
Birth: 2024-01-13 22:26:01.066251129 +0530
```

43. sty command

```
mohan@Mohan:~/Downloads/os assignment 1$ stty
speed 38400 baud; line = 0;
-brkint -imaxbel iutf8
mohan@Mohan:~/Downloads/os assignment 1$ stty --all
speed 38400 baud; rows 29; columns 93; line = 0;
intr = ^{\circ}; quit = ^{\circ}; erase = ^{\circ}; kill = ^{\circ}U; eof = ^{\circ}D; eol = ^{\circ}0; eol2 = ^{\circ}1, endef^{\circ}3;
swtch = <undef>; start = ^Q; stop = ^S; susp = ^Z; rprnt = ^R; werase = ^W; lnext = ^V;
discard = ^0; min = 1; time = 0;
-parenb -parodd -cmspar cs8 -hupcl -cstopb cread -clocal -crtscts
-ignbrk -brkint -ignpar -parmrk -inpck -istrip -inlcr -igncr icrnl ixon -ixoff -iuclc -ixany
-imaxbel iutf8
opost -olcuc -ocrnl onlcr -onocr -onlret -ofill -ofdel nl0 cr0 tab0 bs0 vt0 ff0
isig icanon iexten echo echoe echok -echonl -noflsh -xcase -tostop -echoprt echoctl echoke
-flusho -extproc
mohan@Mohan:~/Downloads/os assignment 1$ stty --version
stty (GNU coreutils) 8.32
Copyright (C) 2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.
Written by David MacKenzie.
```

44. su command

```
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ whoami
gcl-19
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ su mohan
Password:
mohan@gcl19-HP-Compaq-Elite-8300-MT:/home/gcl-19/Downloads$ whoami
mohan
mohan@gcl19-HP-Compaq-Elite-8300-MT:/home/gcl-19/Downloads$ su gcl-19
Password:
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ whoami
gcl-19
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$
```

45. tail command

```
mohan@Mohan:~/Downloads/os assignment 1$ tail employees.txt
       Douglas,
                                                      13-JAN-08
199
                      Grant
                               DGRANT,650.507.9844
                                                                      SH_CLERK
        Jennifer,
                                                                      AD_ASS
200
                       Whalen JWHALEN,515.123.4444
                                                      17-SEP-03
                               MHARTSTE,515.123.5555 17-FEB-04
201
       Michael,
                       Harts
                                                                      MK_MAN
202
       Pat,Fay,
                      PFAY
                               603.123.6666,
                                                      17-AUG-05
                                                                      MK REP
mohan@Mohan:~/Downloads/os assignment 1$ tail -3 employees.txt
                       Harts MHARTSTE,515.123.5555 17-FEB-04
                                                                      MK MAN
201
       Michael.
202
       Pat, Fay,
                       PFAY
                               603.123.6666,
                                                      17-AUG-05
                                                                      MK REP
mohan@Mohan:~/Downloads/os assignment 1$ tail -2 employees.txt
                      PFAY 603.123.6666,
                                                      17-AUG-05
                                                                      MK_REP
202
       Pat, Fay,
```

46. tar command

```
mohan@Mohan:~/Downloads/os assignment 1$ ls 'Mohan Manjhi'/
atfile.txt 'command screeshot.zip' 'Mohan Manjhi.zip'
mohan@Mohan:~/Downloads/os assignment 1$ tar -cvf tarFile.tar 'Mohan Manjhi'/
Mohan Manjhi/
Mohan Manjhi/Mohan Manjhi.zip
Mohan Manjhi/command screeshot.zip
Mohan Manjhi/atfile.txt
mohan@Mohan:~/Downloads/os assignment 1$ ls
atfile.txt
                         employees.txt
                                         letter
                                                    'Mohan Manjhi'
                                                                         tarFile.tar
batch.txt
                         employee.txt
                                         main.c
                                                   'Mohan Manjhi.zip'
                                                                         text.c
'command screeshot'
                                         main.o
                         file.txt
                                                    my app
                                                                         text.h
'command screeshot.zip' fmtcmd.txt
                                         Makefile
                                                    nohup.out
                                                                         text.o
mohan@Mohan:~/Downloads/os assignment 1$ tar -cvf textFile.tar *.txt
atfile.txt
batch.txt
employees.txt
employee.txt
file.txt
fmtcmd.txt
mohan@Mohan:~/Downloads/os assignment 1$ ls
atfile.txt
                        employee.txt main.o
                                                             nohup.out
                                                                            text.o
batch.txt
                         file.txt
                                        Makefile
                                                             tarFile.tar
command screeshot'
                                        'Mohan Manjhi'
                         fmtcmd.txt
                                                             text.c
'command screeshot.zip' letter
                                       'Mohan Manjhi.zip'
                                                             textFile.tar
employees.txt
                         main.c
                                         my_app
                                                             text.h
mohan@Mohan:~/Downloads/os assignment 1$
```

47. tee command

```
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ ls |tee list1.txt list2.txt
atfile.txt
command screeshot.zip
list1.txt
list2.txt
Mohan Manjhi.zip
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ cat list1.txt
atfile.txt
command screeshot.zip
list1.txt
list2.txt
Mohan Manjhi.zip
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ cat list2.txt
atfile.txt
command screeshot.zip
list1.txt
list2.txt
Mohan Manjhi.zip
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$
```

48. tput command

```
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ tput
Usage: tput [options] [command]
Options:
  -S <<
             read commands from standard input
  -T TERM
             use this instead of $TERM
  -V
             print curses-version
  - X
             do not try to clear scrollback
Commands:
             clear the screen
 clear
              initialize the terminal
 init
 reset
              reinitialize the terminal
             unlike clear/init/reset, print value for capability "capname"
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ tput init
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ tput -V
ncurses 6.3.20211021
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$
```

49. umount command

```
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ umount -a -v
-umount: /run/snapd/ns/firefox.mnt: must be superuser to unmount.
umount: /run/user/1000/doc: must be superuser to unmount.
umount: /run/user/1000/gvfs: must be superuser to unmount.
umount: /run/user/1000: must be superuser to unmount.
umount: /run/snapd/ns/snapd-desktop-integration.mnt: must be superuser to unmount.
umount: /snap/core22/1033: must be superuser to unmount.
'umount: /snap/core20/2105: must be superuser to unmount.
umount: /run/snapd/ns: must be superuser to unmount.
umount: /proc/sys/fs/binfmt_misc: must be superuser to unmount.
umount: /boot/efi: must be superuser to unmount.
```

50. uname command

```
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ uname -a
Linux Mohan 6.5.0-14-generic #14~22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Mon Nov 20 18:15:30 UT
C 2 x86_64 x86_64 x86_64 GNU/Linux
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ uname --kernel-name
Linux
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ uname --kernel-release
6.5.0-14-generic
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$
```

51. unzip command

```
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan/zipfiles$ ls
dir.zip myfile.zip pswd.zip
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan/zipfiles$ unzip myfile.zip
Archive: myfile.zip
extracting: file1.txt
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan/zipfiles$ ls
dir.zip file1.txt myfile.zip pswd.zip
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan/zipfiles$ unzip -l dir.zip
Archive: dir.zip
Length Date Time
                            Name
 -----
          _____
     0 2024-01-11 11:30 folder1/
                            1 file
     0
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan/zipfiles$ unzip -v dir.zip
Archive: dir.zip
                Size Cmpr Date Time CRC-32 Name
Length Method
    0 Stored 0 0% 2024-01-11 11:30 00000000 folder1/
          -----
. . . . . . . .
                     0 0%
     0
                                                      1 file
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan/zipfiles$ unzip "*.zip"
Archive: pswd.zip
[pswd.zip] file1.txt password:
replace file1.txt? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
extracting: file1.txt
extracting: file2.txt
Archive: dir.zip
 creating: folder1/
Archive: myfile.zip
replace file1.txt? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
extracting: file1.txt
3 archives were successfully processed.
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan/zipfiles$ ls
dir.zip file1.txt file2.txt folder1 myfile.zip pswd.zip
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan/zipfiles$
```

52. vdir command

```
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ vdir
total 1244
-rwxrw-r-- 1 mohan mohan 0 Jan 11 23:25 atfile.txt
-rw-rw-r-- 1 mohan mohan 387238 Jan 11 23:28 command\ screeshot.zip
-rw-rw-r-- 1 mohan mohan 70 Jan 13 23:19 list1.txt
-rw-rw-r-- 1 mohan mohan 70 Jan 13 23:19 list2.txt
-rw-rw-r-- 1 mohan mohan 875183 Jan 11 23:28 Mohan\ Manjhi.zip
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$
```

53. view command

```
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ man view
mohan@Mohan:~/Downloads/os assignment 1/Mohan Manjhi$ view fileview.txt
E1187: Failed to source defaults.vim
Press ENTER or type command to continue
```

54. wall command

```
$ wall "hello sarthak"

Broadcast message from be22-148@veerendra (pts/9) (Thu Jan 11 18:01:35 2024):

hello sarthak
```

55, wc command

```
mohan@Mohan:~/Downloads/os assignment 1$ wc file.txt
41 510 2844 file.txt
mohan@Mohan:~/Downloads/os assignment 1$ wc -w file.txt
510 file.txt
mohan@Mohan:~/Downloads/os assignment 1$ wc -l file.txt
41 file.txt
mohan@Mohan:~/Downloads/os assignment 1$ wc -m file.txt
2842 file.txt
mohan@Mohan:~/Downloads/os assignment 1$
```

56. whatis command

57. whereis command

```
mohan@Mohan:~/Downloads/os assignment 1$ whereis -l
bin: /usr/bin
bin: /usr/sbin
bin: /usr/lib/x86_64-linux-gnu
bin: /usr/lib
bin: /usr/lib32
bin: /usr/lib64
bin: /etc
bin: /usr/games
bin: /usr/local/bin
```

58. which command

```
mohan@Mohan:~/Downloads/os assignment 1$ which touch
/usr/bin/touch
mohan@Mohan:~/Downloads/os assignment 1$ which -a touch
/usr/bin/touch
/bin/touch
mohan@Mohan:~/Downloads/os assignment 1$ which file
/usr/bin/file
mohan@Mohan:~/Downloads/os assignment 1$ which bin
mohan@Mohan:~/Downloads/os assignment 1$ [
```

59. who command

```
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ who
gcl-19
                      2024-01-09 16:11 (:0)
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ who -m -H
NAME
         LINE
                      TIME
                                       COMMENT
gcl-19@gcl19-HP-Compag-Elite-8300-MT:~/Downloads$ who -a
           system boot 2024-01-09 16:09
           run-level 5 2024-01-09 16:10
gcl-19
         ? :0
                        2024-01-09 16:11
                                           ?
                                                      1243 (:0)
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ who -T -H
          LINE
                        TIME
                                         COMMENT
gcl-19
        ? :0
                        2024-01-09 16:11 (:0)
```

60. whoami command

```
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ whoami
gcl-19
gcl-19@gcl19-HP-Compaq-Elite-8300-MT:~/Downloads$ sudo whoami
[sudo] password for gcl-19:
root
```

61. zip command

```
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan$ ls
file1.txt file2.txt folder1 folder2
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan$ zip myfile.zip file1.txt
adding: file1.txt (stored 0%)
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan$ ls
file1.txt file2.txt folder1 folder2 myfile.zip
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan$ zip -r dir.zip folder1
 adding: folder1/ (stored 0%)
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan$ ls
dir.zip file1.txt file2.txt folder1 folder2 myfile.zip
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan$ zip -u myfile.zip myfile.zip file2.txt
adding: file2.txt (stored 0%)
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan$ zip -d myfile.zip file2.txt
deleting: file2.txt
gcl-68@gcl68-HP-Compaq-Elite-8300-MT:~/mohan$ zip -e pswd.zip file1.txt file2.txt
Enter password:
Verify password:
 adding: file1.txt (stored 0%)
  adding: file2.txt (stored 0%)
```