**Q1.1 Use a command to show current working directory**

cdac\_kh@DESKTOP-P6HBNOS:~$ pwd

/home/cdac\_kh

Q1.2 List the directory contents in short and long format

cdac\_kh@DESKTOP-P6HBNOS:~$ ls

d.txt dbda h1.txt

cdac\_kh@DESKTOP-P6HBNOS:~$ ls -l

total 0

-rwxrwxrwx 1 root root 17 Mar 10 15:34 d.txt

drwxr-xr-x 1 root root 512 Mar 10 20:38 dbda

-rw-r--r-- 1 root root 0 Mar 10 17:03 h1.txt

Q1.3 List all files along with hidden file

cdac\_kh@DESKTOP-P6HBNOS:~$ ls -a

. .. .bash\_history .bash\_logout .bashrc .d.txt.swp .landscape .local .motd\_shown .profile .sudo\_as\_admin\_successful .vim .viminfo .z1.txt.swp d.txt dbda h1.txt

Q1.4 Show only hidden files

-

**Q2.1 Make a directory and name it as cadc-dir and change the current working directory to the new directory**

Structure 1

cdac\_kh@DESKTOP-P6HBNOS:/$ sudo mkdir cdac-dir

cdac\_kh@DESKTOP-P6HBNOS:/$ ls

1 3 boot dev ee1.txt f1.txt hey init lib32 libx32 mnt proc run snap sys test.tar tt1 var

2 bin cdac-dir dss etc folder home lib lib64 media opt root sbin srv temp.txt tmp usr ww2

cdac\_kh@DESKTOP-P6HBNOS:/$ cd cdac-dir

cdac\_kh@DESKTOP-P6HBNOS:/cdac-dir$ sudo mkdir -p a1/b1

cdac\_kh@DESKTOP-P6HBNOS:/cdac-dir$ sudo mkdir -p a1/b2

cdac\_kh@DESKTOP-P6HBNOS:/cdac-dir$ sudo mkdir -p a2/c1

cdac\_kh@DESKTOP-P6HBNOS:/cdac-dir$ sudo mkdir -p a2/c2

cdac\_kh@DESKTOP-P6HBNOS:/cdac-dir$ tree

.

├── a1

│   ├── b1

│   └── b2

└── a2

├── c1

└── c2

Structure 2

cdac\_kh@DESKTOP-P6HBNOS:/$ sudo mkdir cdac-dir

cdac\_kh@DESKTOP-P6HBNOS:/$ ls

1 3 boot dev ee1.txt f1.txt hey init lib32 libx32 mnt proc run snap sys test.tar tt1 var

2 bin cdac-dir dss etc folder home lib lib64 media opt root sbin srv temp.txt tmp usr ww2

cdac\_kh@DESKTOP-P6HBNOS:/$ cd cdac-dir

cdac\_kh@DESKTOP-P6HBNOS:/cdac-dir$ sudo mkdir -p a1/b1/c1

cdac\_kh@DESKTOP-P6HBNOS:/cdac-dir$ sudo mkdir -p a2/b2/c2

cdac\_kh@DESKTOP-P6HBNOS:/cdac-dir$ tree

.

├── a1

│   └── b1

│   └── c1

└── a2

└── b2

└── c2

6 directories, 0 files

cdac\_kh@DESKTOP-P6HBNOS:/cdac-dir$

**Q 2 Remove the the directory and show that it is no longer present**

cdac\_kh@DESKTOP-P6HBNOS:/cdac-dir$ cd ..

cdac\_kh@DESKTOP-P6HBNOS:/$ sudo rm -rf cdac-dir

cdac\_kh@DESKTOP-P6HBNOS:/$ ls

1 2 3 bin boot dev dss ee1.txt etc f1.txt folder hey home init lib lib32 lib64 libx32 media mnt opt proc root run sbin snap srv sys temp.txt test.tar tmp tt1 usr var ww2

cdac\_kh@DESKTOP-P6HBNOS:/$

**Question-2. 1. Display the man-page for ls, but redirect the output into temp.txt, then use the cat, less, and more commands to display the new file.**

cdac\_kh@DESKTOP-P6HBNOS:/$ sudo su

root@DESKTOP-P6HBNOS:/# man ls >> temp.txt

root@DESKTOP-P6HBNOS:/# cat temp.txt

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.

-a, --all

do not ignore entries starting with .

-A, --almost-all

do not list implied . and ..

--author

with -l, print the author of each file

-b, --escape

print C-style escapes for nongraphic characters

--block-size=SIZE

with -l, 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 ~

-c with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first

-C list entries by columns

--color[=WHEN]

colorize the output; WHEN can be 'always' (default if omitted), 'auto', or 'never'; more info below

-d, --directory

list directories themselves, not their contents

-D, --dired

generate output designed for Emacs' dired mode

-f do not sort, enable -aU, disable -ls --color

-F, --classify

append indicator (one of \*/=>@|) to entries

--file-type

likewise, except do not append '\*'

--format=WORD

across -x, commas -m, horizontal -x, long -l, single-column -1, verbose -l, vertical -C

--full-time

like -l --time-style=full-iso

-g like -l, but do not list owner

--group-directories-first

group directories before files;

can be augmented with a --sort option, but any use of --sort=none (-U) disables grouping

-G, --no-group

in a long listing, don't print group names

-h, --human-readable

with -l and -s, print sizes like 1K 234M 2G etc.

--si likewise, but use powers of 1000 not 1024

-H, --dereference-command-line

follow symbolic links listed on the command line

--dereference-command-line-symlink-to-dir

follow each command line symbolic link

that points to a directory

--hide=PATTERN

do not list implied entries matching shell PATTERN (overridden by -a or -A)

--hyperlink[=WHEN]

hyperlink file names; WHEN can be 'always' (default if omitted), 'auto', or 'never'

--indicator-style=WORD

append indicator with style WORD to entry names: none (default), slash (-p), file-type (--file-type), classify (-F)

-i, --inode

print the index number of each file

-I, --ignore=PATTERN

do not list implied entries matching shell PATTERN

-k, --kibibytes

default to 1024-byte blocks for disk usage; used only with -s and per directory totals

-l use a long listing format

-L, --dereference

when showing file information for a symbolic link, show information for the file the link references rather than for the link itself

-m fill width with a comma separated list of entries

-n, --numeric-uid-gid

like -l, but list numeric user and group IDs

-N, --literal

print entry names without quoting

-o like -l, but do not list group information

-p, --indicator-style=slash

append / indicator to directories

-q, --hide-control-chars

print ? instead of nongraphic characters

--show-control-chars

show nongraphic characters as-is (the default, unless program is 'ls' and output is a terminal)

-Q, --quote-name

enclose entry names in double quotes

--quoting-style=WORD

use quoting style WORD for entry names: literal, locale, shell, shell-always, shell-escape, shell-escape-always, c, escape (overrides QUOTING\_STYLE environment variable)

-r, --reverse

reverse order while sorting

-R, --recursive

list subdirectories recursively

-s, --size

print the allocated size of each file, in blocks

-S sort by file size, largest first

--sort=WORD

sort by WORD instead of name: none (-U), size (-S), time (-t), version (-v), extension (-X)

--time=WORD

with -l, show time as WORD instead of default modification time: atime or access or use (-u); ctime or status (-c); also use specified time as sort key if --sort=time (newest first)

--time-style=TIME\_STYLE

time/date format with -l; see TIME\_STYLE below

-t sort by modification time, newest first

-T, --tabsize=COLS

assume tab stops at each COLS instead of 8

-u with -lt: sort by, and show, access time; with -l: show access time and sort by name; otherwise: sort by access time, newest first

-U do not sort; list entries in directory order

-v natural sort of (version) numbers within text

-w, --width=COLS

set output width to COLS. 0 means no limit

-x list entries by lines instead of by columns

-X sort alphabetically by entry extension

-Z, --context

print any security context of each file

-1 list one file per line. Avoid '\n' with -q or -b

--help display this help and exit

--version

output version information and exit

The SIZE argument is an integer and optional unit (example: 10K is 10\*1024). Units are K,M,G,T,P,E,Z,Y (powers of 1024) or KB,MB,... (powers of 1000).

The TIME\_STYLE argument can be full-iso, long-iso, iso, locale, or +FORMAT. FORMAT is interpreted like in date(1). If FORMAT is FORMAT1<newline>FORMAT2, then FORMAT1 applies to non-recent files

and FORMAT2 to recent files. TIME\_STYLE prefixed with 'posix-' takes effect only outside the POSIX locale. Also the TIME\_STYLE environment variable sets the default style to use.

Using color to distinguish file types is disabled both by default and with --color=never. With --color=auto, ls emits color codes only when standard output is connected to a terminal. The LS\_COL‐

ORS environment variable can change the settings. Use the dircolors command to set it.

Exit status:

0 if OK,

1 if minor problems (e.g., cannot access subdirectory),

2 if serious trouble (e.g., cannot access command-line argument).

AUTHOR

Written by Richard M. Stallman and David MacKenzie.

REPORTING BUGS

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>

Report ls translation bugs to <https://translationproject.org/team/>

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SEE ALSO

Full documentation at: <https://www.gnu.org/software/coreutils/ls>

or available locally via: info '(coreutils) ls invocation'

GNU coreutils 8.30

More Command

root@DESKTOP-P6HBNOS:/# more temp.txt

LS(1) User Commands LS(1)

NAME

ls - list directory contents

SYNOPSIS

ls [OPTION]... [FILE]...

DESCRIPTION

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do not ignore entries starting with .

-A, --almost-all

do not list implied . and ..

--author

with -l, print the author of each file

-b, --escape

print C-style escapes for nongraphic characters

--block-size=SIZE

with -l, 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 ~

-c with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first

-C list entries by columns

--color[=WHEN]

colorize the output; WHEN can be 'always' (default if omitted), 'auto', or 'never'; more info below

-d, --directory

list directories themselves, not their contents

-D, --dired

generate output designed for Emacs' dired mode

-f do not sort, enable -aU, disable -ls --color

-F, --classify

append indicator (one of \*/=>@|) to entries

Less Command

root@DESKTOP-P6HBNOS:/home# less temp.txt

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 speci‐

fied.

Mandatory arguments to long options are mandatory for short options

too.

-a, --all

do not ignore entries starting with .

-A, --almost-all

do not list implied . and ..

--author

with -l, print the author of each file

-b, --escape

print C-style escapes for nongraphic characters

**Q2.2. Display the initial 10 lines and final 5 lines of temp.txt with the obvious Linux commands.(Hint: use head and tail commands)**

**Head**

root@DESKTOP-P6HBNOS:/# head temp.txt

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.

**Tail**

root@DESKTOP-P6HBNOS:/# tail -n 5 temp.txt

SEE ALSO

Full documentation at: <https://www.gnu.org/software/coreutils/ls>

or available locally via: info '(coreutils) ls invocation'

GNU coreutils 8.30

**Q 2.3. Copy temp.txt to another directory and rename it there. (Hint: use cp to copy and mv command to rename).**

root@DESKTOP-P6HBNOS:/# ls

1 2 3 bin boot dev dss ee1.txt etc f1.txt folder hey home init lib lib32 lib64 libx32 media mnt opt proc root run sbin snap srv sys temp.txt test.tar tmp tt1 usr var ww2

root@DESKTOP-P6HBNOS:/# cd folder

root@DESKTOP-P6HBNOS:/folder# ls

root@DESKTOP-P6HBNOS:/folder# cd ..

root@DESKTOP-P6HBNOS:/# cp f1.txt folder

root@DESKTOP-P6HBNOS:/# ls

1 2 3 bin boot dev dss ee1.txt etc f1.txt folder hey home init lib lib32 lib64 libx32 media mnt opt proc root run sbin snap srv sys temp.txt test.tar tmp tt1 usr var ww2

root@DESKTOP-P6HBNOS:/# cd folder

root@DESKTOP-P6HBNOS:/folder# ls

f1.txt

root@DESKTOP-P6HBNOS:/folder# mv f1.txt f2.txt

root@DESKTOP-P6HBNOS:/folder# ls

f2.txt

root@DESKTOP-P6HBNOS:/folder#

**Q.3.4.Display the number of lines, words and characters in file using Linux command (Hint: use wc command).**

root@DESKTOP-P6HBNOS:/folder# cat f2.txt

afajgajbsjfbsajfbashjvbashjvbasjhvbasjv

vsanvaskjvaskjv akslv naslkva

vasjvbs

v

sv

sv

sv

sv

s

vroot@DESKTOP-P6HBNOS:/folder# wc f2.txt

9 12 95 f2.txt

root@DESKTOP-P6HBNOS:/folder#

Q3.5 Use history command to display last 10 commands used. (Hint: use history command)

root@DESKTOP-P6HBNOS:/# history 10

429 cat > f2.txt

430 wc folder.txt

431 clear

432 wc f2.txt

433 clear

434 cat f2.txt

435 wc f2.txt

436 CD ..

437 cd ..

438 history 10

root@DESKTOP-P6HBNOS:/#

**Question-3. 1. Create tar archive file of any directory present in your home directory. (Hint: use tar command) - list the contents of the archive file without extracting**

root@DESKTOP-P6HBNOS:/# tar -cvf varun.tar varun

varun/

varun/x1.txt

varun/x2.txt

root@DESKTOP-P6HBNOS:/# ls

1 3 boot dss etc folder home lib lib64 media opt root sbin srv temp.txt tmp usr var varun.tar

2 bin dev ee1.txt f1.txt hey init lib32 libx32 mnt proc run snap sys test.tar tt1 v1.txt varun ww2

root@DESKTOP-P6HBNOS:/#

**3. Give read, write & execute permissions to your file. (Hint: use chmod command)**

root@DESKTOP-P6HBNOS:/# ls -l v1.txt

-rw-r--r-- 1 root root 16 Mar 11 13:33 v1.txt

root@DESKTOP-P6HBNOS:/# chmod 777 v1.txt

root@DESKTOP-P6HBNOS:/# ls -l v1.txt

-rwxrwxrwx 1 root root 16 Mar 11 13:33 v1.txt

root@DESKTOP-P6HBNOS:/#

Question-4. 1. Display current time and calendar (Hint: use date, cal commands)

root@DESKTOP-P6HBNOS:/# date

Fri Mar 11 13:39:21 IST 2022

root@DESKTOP-P6HBNOS:/#

**Question-4. 1. Display current time and calendar (Hint: use date, cal commands)**

root@DESKTOP-P6HBNOS:/# cal

March 2022

Su Mo Tu We Th Fr Sa

1 2 3 4 5

6 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

**2. Change the current date and time of the system to following 14th March 2017, 10:10 AM**

root@DESKTOP-P6HBNOS:/# date

Fri Mar 11 13:50:30 IST 2022

root@DESKTOP-P6HBNOS:/# date -s"14 MARCH 2017 10:10:00"

date: cannot set date: Function not implemented

Tue Mar 14 10:10:00 IST 2017

root@DESKTOP-P6HBNOS:/#

**3. Explore following commands who, whoami, whatis, whereis, (Hint: use man pages).**

root@DESKTOP-P6HBNOS:/# whoami

root

root@DESKTOP-P6HBNOS:/# whatis clear

clear (1) - clear the terminal screen

root@DESKTOP-P6HBNOS:/# whereis f2.txt

f2:

root@DESKTOP-P6HBNOS:/#