



LINUX

Navigation

To use the Linux system we have Graphical user interface and it works completely fine but while working with command line interface we need to know commands to move around and use them to do our work. Using command also increase the work speed

The basic command used to move around the system are :

- pwd
- ls
- cd

PWD :- pwd stands for print working directory and as the name suggest it print the location where user is currently present .

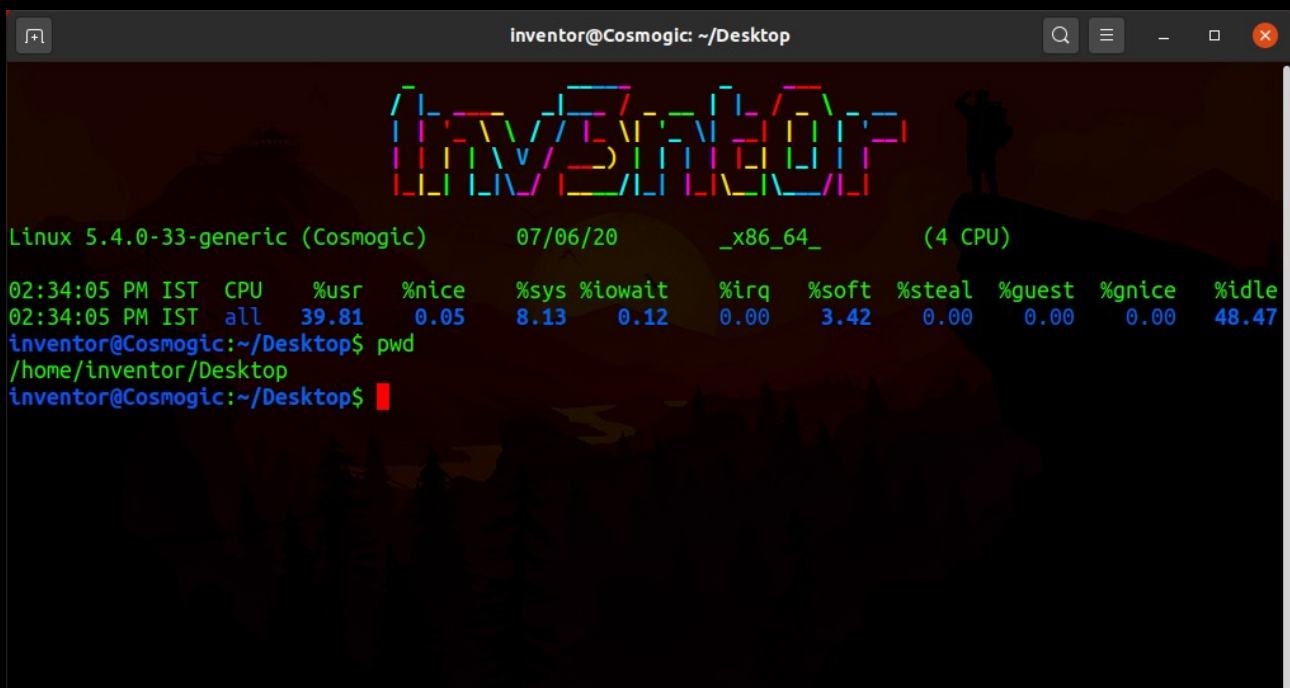
pwd is builtin command of shell and also present as the external command in /usr/bin/pwd .

Internal and external command

The command built into the shell are known as internal command and are comparatively faster then other commands as shell don't have to provide path for the same . And the command which aren't built into the shell are known as external command they are usually stored in /bin or /usr/bin .

To know our location we simply type pwd and we get out location.

For ex :-



```
inventor@Cosmotic: ~/Desktop

Linux 5.4.0-33-generic (Cosmotic)      07/06/20      _x86_64_      (4 CPU)

02:34:05 PM IST  CPU    %usr   %nice    %sys %iowait    %irq   %soft  %steal  %guest  %gnice   %idle
02:34:05 PM IST  all   39.81    0.05    8.13    0.12    0.00   3.42    0.00    0.00    0.00   48.47

inventor@Cosmotic:~/Desktop$ pwd
/home/inventor/Desktop
inventor@Cosmotic:~/Desktop$
```

The pwd command told me my location
root > home > inventor > Desktop

We have option while executing pwd ,they are

- L Prints the symbolic path
- P prints the actual path

We can write `pwd --help` ,to view the options

```
inventor@Cosmotic: ~
Linux 5.4.0-33-generic (Cosmotic)      07/06/20      _x86_64_      (4 CPU)
04:47:57 PM IST  CPU    %usr   %nice    %sys %iowait    %irq   %soft  %steal  %guest  %gnice   %idle
04:47:57 PM IST  all   44.23   0.06    9.17   0.11    0.00   3.93   0.00   0.00    0.00   42.51
inventor@Cosmotic:~$ pwd --help
pwd: pwd [-LP]
Print the name of the current working directory.

Options:
  -L      print the value of $PWD if it names the current working
          directory
  -P      print the physical directory, without any symbolic links

By default, 'pwd' behaves as if '-L' were specified.

Exit Status:
Returns 0 unless an invalid option is given or the current directory
cannot be read.
inventor@Cosmotic:~$
```

And `man pwd` to view manual of `pwd` command

```
inventor@Cosmotic: ~
PWD(1)                                User Commands                                PWD(1)

NAME
    pwd - print name of current/working directory

SYNOPSIS
    pwd [OPTION]...

DESCRIPTION
    Print the full filename of the current working directory.

    -L, --logical
        use PWD from environment, even if it contains symlinks

    -P, --physical
        avoid all symlinks

    --help display this help and exit

    --version
        output version information and exit

    If no option is specified, -P is assumed.

    NOTE: your shell may have its own version of pwd, which usually supersedes the version de-
    scribed here. Please refer to your shell's documentation for details about the options it
    supports.

AUTHOR
    Written by Jim Meyering.

REPORTING BUGS
    GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
    Report pwd translation bugs to <https://translationproject.org/team/>

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    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.
```

A symbolic link, also termed a soft link, is a special kind of file that points to another file, much like a shortcut in Windows or a Macintosh alias. Unlike a hard link, a symbolic link does not contain the data in the target file. It simply points to another entry somewhere in the file system

to create a symbolic link

ln -s ~(full location of file of which link has to be created) ~(location where we want new file)

now we use -L and -P to get location as per our need

```
inventor@Cosmologic: ~/Desktop/test

Linux 5.4.0-33-generic (Cosmologic)      07/06/20      _x86_64_      (4 CPU)

04:54:46 PM IST  CPU    %usr   %nice    %sys %iowait    %irq   %soft  %steal  %guest  %gnice   %idle
04:54:46 PM IST  all    42.61    0.05     8.88   0.11     0.00   3.86    0.00    0.00    0.00   44.50

inventor@Cosmologic:~$ ls
Android Desktop Documents Downloads Music Pictures Public snap Templates Videos
inventor@Cosmologic:~$ cd Music/
inventor@Cosmologic:~/Music$ mkdir test
inventor@Cosmologic:~/Music$ cd ..
inventor@Cosmologic:~$ ls
Android Desktop Documents Downloads Music Pictures Public snap Templates Videos
inventor@Cosmologic:~$ ln -s ~/Music/test/ ~/Desktop/
inventor@Cosmologic:~$ cd Desktop/
inventor@Cosmologic:~/Desktop$ ls
test
inventor@Cosmologic:~/Desktop$ cd test
inventor@Cosmologic:~/Desktop/test$ pwd
/home/inventor/Desktop/test
inventor@Cosmologic:~/Desktop/test$ pwd -P
/home/inventor/Music/test
inventor@Cosmologic:~/Desktop/test$ pwd -L
/home/inventor/Desktop/test
inventor@Cosmologic:~/Desktop/test$
```

CD :- cd stands for change directory and as it's name suggest it's used to move from one directory to another

It's builtin shell command and might slightly differ from shell to shell .

It uses the shell environment variable to determine necessary information for its execution.

The options available in cd command are :

- L :- force symbolic links to be followed: resolve symbolic links in DIR after processing instances of `..`
- P :- use the physical directory structure without following symbolic links: resolve symbolic links in DIR before processing instances of `..`
- e :- if the -P option is supplied, and the current working directory cannot be determined successfully, exit with a non-zero status
- @ :- on systems that support it, presents a file with extended attributes as a directory containing the file attributes

The same information can be gained by cd --help .


```
inventor@Cosmotic: ~  
  
Linux 5.4.0-33-generic (Cosmotic)      07/06/20      _x86_64_      (4 CPU)  
09:34:08 PM IST  CPU      %usr    %nice    %sys %iowait    %irq    %soft    %steal    %guest    %gnice   %idle  
09:34:08 PM IST  all    46.07    0.07    9.71    0.10    0.00    3.94    0.00    0.00    0.00    40.11  
inventor@Cosmotic:~$ cd --help  
cd: cd [-L|[-P [-e]] [-@]] [dir]  
      Change the shell working directory.  
  
      Change the current directory to DIR.  The default DIR is the value of the  
      HOME shell variable.  
  
      The variable CDPATH defines the search path for the directory containing  
      DIR.  Alternative directory names in CDPATH are separated by a colon (:).  
      A null directory name is the same as the current directory.  If DIR begins  
      with a slash (/), then CDPATH is not used.  
  
      If the directory is not found, and the shell option 'cdable_vars' is set,  
      the word is assumed to be a variable name.  If that variable has a value,  
      its value is used for DIR.  
  
Options:  
-L      force symbolic links to be followed: resolve symbolic  
        links in DIR after processing instances of '..'  
-P      use the physical directory structure without following  
        symbolic links: resolve symbolic links in DIR before  
        processing instances of '..'  
-e      if the -P option is supplied, and the current working  
        directory cannot be determined successfully, exit with  
        a non-zero status  
-@      on systems that support it, present a file with extended  
        attributes as a directory containing the file attributes  
  
The default is to follow symbolic links, as if '-L' were specified.  
'..' is processed by removing the immediately previous pathname component  
back to a slash or the beginning of DIR.  
  
Exit Status:  
Returns 0 if the directory is changed, and if $PWD is set successfully when  
-P is used; non-zero otherwise.  
inventor@Cosmotic:~$
```

we write `cd` (location where we want to go) to move to any directory or folder

```
inventor@Cosmogic: ~/Desktop
Linux 5.4.0-33-generic (Cosmogic)      07/06/20      _x86_64_      (4 CPU)
10:03:30 PM IST CPU    %usr    %nice    %sys %iowait    %irq    %soft    %steal    %guest    %gnice    %idle
10:03:30 PM IST all   47.20    0.07     9.93    0.10     0.00    4.09     0.00     0.00     0.00    38.62
inventor@Cosmogic:~$ ls
Android Desktop Documents Downloads Music Pictures Public snap Templates Videos
inventor@Cosmogic:~$ cd Desktop/
inventor@Cosmogic:~/Desktop$ pwd
/home/inventor/Desktop
inventor@Cosmogic:~/Desktop$
```

we write `cd ..` to move out of the folder or directory

```
inventor@Cosmogic: ~
Linux 5.4.0-33-generic (Cosmogic)      07/06/20      _x86_64_      (4 CPU)
10:05:10 PM IST CPU    %usr    %nice    %sys %iowait    %irq    %soft    %steal    %guest    %gnice    %idle
10:05:10 PM IST all   46.90    0.07     9.87    0.10     0.00    4.07     0.00     0.00     0.00    39.00
inventor@Cosmogic:~$ ls
Android Desktop Documents Downloads Music Pictures Public snap Templates Videos
inventor@Cosmogic:~$ cd Desktop/
inventor@Cosmogic:~/Desktop$ pwd
/home/inventor/Desktop
inventor@Cosmogic:~/Desktop$ cd ..
inventor@Cosmogic:~$ pwd
/home/inventor
inventor@Cosmogic:~$
```


we can also specify the location where we want to move

```
inventor@Cosmologic: /usr/bin

Linux 5.4.0-33-generic (Cosmologic)    07/06/20    _x86_64_    (4 CPU)

10:10:45 PM IST  CPU    %usr    %nice    %sys %iowait    %irq    %soft    %steal    %guest    %gnice    %idle
10:10:45 PM IST  all    45.98    0.07    9.67    0.09    0.00    4.00    0.00    0.00    0.00    40.19

inventor@Cosmologic:~$ cd ..
inventor@Cosmologic:/home$ cd ..
inventor@Cosmologic:/$ cd /usr/bin
inventor@Cosmologic:/usr/bin$ pwd
/usr/bin
inventor@Cosmologic:/usr/bin$
```

we can write `cd test\ folder` or `cd "test folder"` if any folder or directory have space between their name

```
inventor@Cosmologic: ~/Desktop/test folder

Linux 5.4.0-33-generic (Cosmologic)    07/06/20    _x86_64_    (4 CPU)

10:14:38 PM IST  CPU    %usr    %nice    %sys %iowait    %irq    %soft    %steal    %guest    %gnice    %idle
10:14:38 PM IST  all    45.33    0.07    9.54    0.09    0.00    3.95    0.00    0.00    0.00    41.02

inventor@Cosmologic:~$ cd Desktop/
inventor@Cosmologic:~/Desktop$ ls
'test folder'
inventor@Cosmologic:~/Desktop$ cd test\ folder
inventor@Cosmologic:~/Desktop/test folder$ pwd
/home/inventor/Desktop/test folder
inventor@Cosmologic:~/Desktop/test folder$ cd ..
inventor@Cosmologic:~/Desktop$ cd "test folder"
inventor@Cosmologic:~/Desktop/test folder$ pwd
/home/inventor/Desktop/test folder
inventor@Cosmologic:~/Desktop/test folder$
```

to move back from multiple directory we write
`cd .. / .. /`

```
inventor@Cosmotic: ~  
Linux 5.4.0-33-generic (Cosmotic)      07/06/20      _x86_64_      (4 CPU)  
10:14:38 PM IST  CPU    %usr  %nice  %sys %iowait  %irq  %soft  %steal %guest %gnice  %idle  
10:14:38 PM IST  all    45.33  0.07   9.54  0.09    0.00  3.95   0.00   0.00   0.00  41.02  
inventor@Cosmotic:~$ cd Desktop/  
inventor@Cosmotic:~/Desktop$ ls  
'test folder'  
inventor@Cosmotic:~/Desktop$ cd test\ folder  
inventor@Cosmotic:~/Desktop/test folder$ pwd  
/home/inventor/Desktop/test folder  
inventor@Cosmotic:~/Desktop/test folder$ cd ..  
inventor@Cosmotic:~/Desktop$ cd "test folder"  
inventor@Cosmotic:~/Desktop/test folder$ pwd  
/home/inventor/Desktop/test folder  
inventor@Cosmotic:~/Desktop/test folder$ cd ../../  
inventor@Cosmotic:~$ pwd  
/home/inventor  
inventor@Cosmotic:~$
```

Or to come back to home we can write `cd ~`

```
inventor@Cosmotic: ~  
Linux 5.4.0-33-generic (Cosmotic)      07/06/20      _x86_64_      (4 CPU)  
10:21:18 PM IST  CPU    %usr  %nice  %sys %iowait  %irq  %soft  %steal %guest %gnice  %idle  
10:21:18 PM IST  all    44.29  0.06   9.32  0.09    0.00  3.89   0.00   0.00   0.00  42.35  
inventor@Cosmotic:~$ cd Desktop/"test folder"  
inventor@Cosmotic:~/Desktop/test folder$ pwd  
/home/inventor/Desktop/test folder  
inventor@Cosmotic:~/Desktop/test folder$ cd ~  
inventor@Cosmotic:~$ pwd  
/home/inventor  
inventor@Cosmotic:~$
```

LS :- ls command stands for list . It displays all the file,folder,directory present at that location

we can write ls --help to get the list of all the option available .

```

inventor@Cosmotic: ~
Linux 5.4.0-33-generic (Cosmotic)      07/06/20      _x86_64_      (4 CPU)
10:27:21 PM IST  CPU      %usr    %nice    %sys %iowait    %irq    %soft    %steal    %guest    %gnice   %idle
10:27:21 PM IST  all    43.42    0.06    9.14    0.09    0.00    3.82    0.00    0.00    0.00    43.46
inventor@Cosmotic:~$ ls --help
Usage: ls [OPTION]... [FILE]...
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.

```



```

-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)
-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_COLORS 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).

We can write `man ls` to read the manual of `ls` command

`ls` :- to display every thing present

```
inventor@Cosmotic: ~  
Linux 5.4.0-33-generic (Cosmotic)      07/06/20      _x86_64_      (4 CPU)  
10:35:16 PM IST  CPU    %usr    %nice    %sys %iowait    %irq    %soft    %steal    %guest    %gnice    %idle  
10:35:16 PM IST  all    42.28    0.06    8.91    0.09    0.00    3.73    0.00    0.00    0.00    44.93  
inventor@Cosmotic:~$ ls  
Android Desktop Documents Downloads Music Pictures Public snap Templates Videos  
inventor@Cosmotic:~$
```

`ls -l` :-to show files with their permissions

```
inventor@Cosmotic: ~  
Linux 5.4.0-33-generic (Cosmotic)      07/06/20      _x86_64_      (4 CPU)  
10:36:27 PM IST  CPU    %usr    %nice    %sys %iowait    %irq    %soft    %steal    %guest    %gnice    %idle  
10:36:27 PM IST  all    42.13    0.06    8.88    0.09    0.00    3.72    0.00    0.00    0.00    45.12  
inventor@Cosmotic:~$ ls -l  
total 40  
drwxrwxr-x  3 inventor inventor 4096 Apr 27 22:22 Android  
drwxr-xr-x  5 inventor inventor 4096 Jun  7 22:14 Desktop  
drwxr-xr-x  2 inventor inventor 4096 Jun  6 17:36 Documents  
drwxr-xr-x  2 inventor inventor 4096 Jun  2 07:45 Downloads  
drwxr-xr-x  2 inventor inventor 4096 Jun  7 18:48 Music  
drwxr-xr-x  3 inventor inventor 4096 Jun  7 22:35 Pictures  
drwxr-xr-x  2 inventor inventor 4096 Apr 27 18:54 Public  
drwxr-xr-x 13 inventor inventor 4096 May 29 20:08 snap  
drwxr-xr-x  2 inventor inventor 4096 Apr 27 18:54 Templates  
drwxr-xr-x  2 inventor inventor 4096 May 24 19:55 Videos  
inventor@Cosmotic:~$
```

ls -a :-to view hidden files

```
inventor@Cosmotic: ~
Linux 5.4.0-33-generic (Cosmotic) 07/06/20 _x86_64_ (4 CPU)
10:38:06 PM IST CPU %usr %nice %sys %iowait %irq %soft %steal %guest %gnice %idle
10:38:06 PM IST all 41.92 0.06 8.83 0.09 0.00 3.71 0.00 0.00 0.00 45.39
inventor@Cosmotic:~$ ls -a
. Desktop .mozilla .ssh
.. Documents Music .steam
.android Downloads .nv .steampath
Android .emulator_console_auth_token .nvidia-settings-rc .steampid
.AndroidStudio3.6 .git .openshot-qt .sudo_as_admin_successful
.AndroidStudio4.0 .gnome Pictures Templates
.bash_history .gnupg .pki Videos
.bash_logout .gradle .profile .viminfo
.bashrc .install4j Public .Xauthority
.BurpSuite .java .pulse-cookie .xsession-errors
.cache .lessht .python_history .zoom
.config .local snap
inventor@Cosmotic:~$
```

we can write two option in combination like ls -la to get all files permission

ls -lh :-to get size of files in human readable format

```
inventor@Cosmotic: ~
Linux 5.4.0-33-generic (Cosmotic) 07/06/20 _x86_64_ (4 CPU)
10:40:16 PM IST CPU %usr %nice %sys %iowait %irq %soft %steal %guest %gnice %idle
10:40:16 PM IST all 41.64 0.06 8.77 0.09 0.00 3.69 0.00 0.00 0.00 45.74
inventor@Cosmotic:~$ ls -lh
total 40K
drwxrwxr-x 3 inventor inventor 4.0K Apr 27 22:22 Android
drwxr-xr-x 5 inventor inventor 4.0K Jun 7 22:14 Desktop
drwxr-xr-x 2 inventor inventor 4.0K Jun 6 17:36 Documents
drwxr-xr-x 2 inventor inventor 4.0K Jun 2 07:45 Downloads
drwxr-xr-x 2 inventor inventor 4.0K Jun 7 18:48 Music
drwxr-xr-x 3 inventor inventor 4.0K Jun 7 22:38 Pictures
drwxr-xr-x 2 inventor inventor 4.0K Apr 27 18:54 Public
drwxr-xr-x 13 inventor inventor 4.0K May 29 20:08 snap
drwxr-xr-x 2 inventor inventor 4.0K Apr 27 18:54 Templates
drwxr-xr-x 2 inventor inventor 4.0K May 24 19:55 Videos
inventor@Cosmotic:~$
```

ls -R :-to get directory tree

```
inventor@Cosmogic: ~/Desktop
Linux 5.4.0-33-generic (Cosmogic)    07/06/20    _x86_64_    (4 CPU)
10:43:20 PM IST  CPU    %usr    %nice    %sys %iowait    %irq    %soft    %steal    %guest    %gnice    %idle
10:43:20 PM IST  all    41.25    0.06     8.69    0.09     0.00    3.66     0.00     0.00     0.00    46.24
inventor@Cosmogic:~$ cd Desktop/
inventor@Cosmogic:~/Desktop$ ls -R
.:
'test folder'

'./test folder':
inventor@Cosmogic:~/Desktop$
```

try it in home directory it will give all details

ls -i :-to get inode of all file

```
inventor@Cosmogic: ~
Linux 5.4.0-33-generic (Cosmogic)    07/06/20    _x86_64_    (4 CPU)
10:45:31 PM IST  CPU    %usr    %nice    %sys %iowait    %irq    %soft    %steal    %guest    %gnice    %idle
10:45:31 PM IST  all    40.98    0.06     8.64    0.09     0.00    3.64     0.00     0.00     0.00    46.58
inventor@Cosmogic:~$ ls -i
6818140 Android 6558050 Documents 6558051 Music 6558049 Public 6557892 Templates
6557890 Desktop 6557891 Downloads 6558052 Pictures 6561651 snap 6558108 Videos
inventor@Cosmogic:~$
inventor@Cosmogic:~$
```

There are more option in ls you can try it and explore more .

These are the basic command with their options to navigate across the Linux .

Anyone interested to know more about the command here is the link to it's source code

PWD

→ <https://github.com/coreutils/coreutils/blob/master/src/pwd.c>

CD

as cd is part of bash → <http://ftp.gnu.org/gnu/bash/>

LS

→ <https://github.com/coreutils/coreutils/blob/master/src/ls.c>

Thank you

-1nv3nt0r