1. **ls**

the command line looks at the folder you are in, and then “lists” the files and folders inside it; gets the child item

This might be the first command the majority of Linux users meet. By default, ls looks in the current directory.

**By default**

PS C:\Homework> ls

Directory: C:\Homework

Mode LastWriteTime Length Name

---- ------------- ------ ----

d----- 05-Aug-20 3:47 PM Files Commands

d----- 05-Aug-20 5:46 PM Folders Commands

d----- 05-Aug-20 6:11 PM General

d----- 05-Aug-20 5:22 PM HELP

**With the path**

PS C:\> ls Homework

Directory: C:\Homework

Mode LastWriteTime Length Name

---- ------------- ------ ----

d----- 05-Aug-20 3:47 PM Files Commands

d----- 05-Aug-20 5:46 PM Folders Commands

d----- 05-Aug-20 6:11 PM General

d----- 05-Aug-20 5:22 PM HELP

There are a great many options you can use with ls

**To list the files and folders in the current directory with a detailed listing use the -l (long) option:**

$ ls –l

total 0

drwxrwx---+ 1 Serviceone None 0 Aug 7 10:08 'Files Commands'

drwxrwx---+ 1 Serviceone None 0 Aug 7 10:08 'Folders Commands'

drwxrwx---+ 1 Serviceone None 0 Aug 7 10:08 General

drwxrwx---+ 1 Serviceone None 0 Aug 7 10:08 HELP

**To include hidden files use the -a (all files) option:**

$ ls -a

. .. 'Files Commands' 'Folders Commands' General HELP

**To list folders in a single column (one file per line**)

$ ls -1

'Files Commands'

'Folders Commands'

General

HELP

**to display the contents of the subdirectories recursively**

$ ls -R

.:

'Files Commands' 'Folders Commands' General  HELP

'./Files Commands':

DEL MORE RN

'./Files Commands/DEL':

delhelp.txt

'./Files Commands/MORE':

morehelp.txt

'./Files Commands/RN':

rnhelp.txt

'./Folders Commands':

CD MD RD RN

'./Folders Commands/CD':

cdhelp.txt

'./Folders Commands/MD':

mdhelp.txt

'./Folders Commands/RD':

rdhelp.txt

'./Folders Commands/RN':

rnhelp.txt

./General:

COPY MOVE

./General/COPY:

copyhelp.txt

./General/MOVE:

movehelp.txt

./HELP:

helphelp.txt

1. **pwd**

stands for “print working directory”. It outputs the name of the directory you are currently in, called the working directory, from the root / directory

PS C:\Homework\General\COPY> pwd

Path

----

C:\Homework\General\COPY

1. cd

stands for “change directory”. Just as you would click on a folder in Windows Explorer or Finder, cd switches you into the directory you specify. In other words, cd changes the working directory.

**If you are changing to a directory that is within your current directory**

PS C:\Homework\General> cd COPY

PS C:\Homework\General\COPY>

**To move up one directory**

PS C:\Homework\General\COPY> cd..

**To move up 2 directories**

PS C:\Homework\General\COPY> cd ../..

PS C:\Homework>

**If we are in a directory. The parent directory has other directories in it, as well as the directory you’re currently in. To change into one of those other directories**

PS C:\Homework\General\COPY> cd ..\MOVE

PS C:\Homework\General\MOVE>

PS C:\Homework\General>

**To quickly return to home directory**

PS C:\Homework\General\MOVE> cd ~

PS C:\Users\Serviceone>

**If you are changing to a directory elsewhere within the filesystem directory tree, provide the path to the directory**

PS C:\Users\Serviceone> cd C:\Homework\General\COPY

PS C:\Homework\General\COPY>

1. mkdir

stands for “make directory”. It takes in a directory name as an argument, and then creates a new directory in the current working directory.

PS C:\Homework\General\COPY> mkdir OLIVIA

Directory: C:\Homework\General\COPY

Mode LastWriteTime Length Name

---- ------------- ------ ----

d----- 07-Aug-20 2:22 PM OLIVIA

PS C:\Homework\General\COPY>

**If the new directory is not going to be within the current directory, you must provide the path to the new directory.**

PS C:\> mkdir Homework\General\COPY\Olivia

Directory: C:\Homework\General\COPY

Mode LastWriteTime Length Name

---- ------------- ------ ----

d----- 07-Aug-20 2:35 PM Olivia

PS C:\>

**to create a directory, but its parent directory does not exist**

PS C:\Homework\General\COPY\Olivia> mkdir Anotimp\Vara\August

Directory: C:\Homework\General\COPY\Olivia\Anotimp\Vara

Mode LastWriteTime Length Name

---- ------------- ------ ----

d----- 07-Aug-20 2:44 PM August

PS C:\Homework\General\COPY\Olivia>

1. touch

creates a new file inside the working directory. It takes in a filename as an argument, and then creates an empty file in the current working directory.

$ touch new.txt

Serviceone@DESKTOP-8R24FOU /cygdrive/c/Homework/Anotimp/Vara/August

$

1. cp

This command is used to copy files or group of files or directory.

To copy a file into a directory, use cp with the source file as the first argument and the destination directory as the second argument.

Suppose there is a directory named **August** (C:/Homework/Anotimp/Vara/August) having only a text file **new.txt**  and a directory name **OLIVIA** (C:/Homework/General/OLIVIA) in which we are going to copy the file.

PS C:\Homework\Anotimp\Vara\August> cp new.txt C:\Homework\General\OLIVIA

PS C:\Homework\Anotimp\Vara\August>

\*(wildcard) selects all files in the working directory

PS C:\Homework\Anotimp\Vara\August> cp \* C:\Homework\General\OLIVIA

m\*.txt selects all files in the working directory starting with “m” and ending with “.txt”

PS C:\Homework\Anotimp\Vara\August> cp m\*.txt C:\Homework\General\OLIVIA

1. mv

moves files. It’s similar to cp in its usage.

We can also use the **mv** command to rename a file. For example, if we want to rename the file “**text**” to “**new**”, we can use “**mv text new**”. It takes the two arguments, just like the**cp** command.

$ mv new.txt newer.txt

Serviceone@DESKTOP-8R24FOU /cygdrive/c/Homework/Anotimp/Vara/August

>

8)rm

deletes files and directories

PS C:\Homework\Anotimp\Vara\August> rm new.txt

PS C:\Homework\Anotimp\Vara\August

rm –r

-r stands for “recursive,” and it’s used to delete a directory and all of its child directories.

$ rm -r Vara

rm: descend into write-protected directory 'Vara'?

Serviceone@DESKTOP-8R24FOU /cygdrive/c/Homework/Anotimp/Vara/August

rm! It deletes files and directories permanently.

9)>

redirects the standard output to a file

$ ls -R>new.txt

Serviceone@DESKTOP-8R24FOU /cygdrive/c/Homework

$

10)>>

takes the standard output of the command on the left and appends (adds) it to the file on the right. You can view the output data of the file with cat and the filename

$ cat --help>>new.txt

Serviceone@DESKTOP-8R24FOU /cygdrive/c/Homework

11) cat

(short for “concatenate”) lists the contents of files to the terminal window. This is faster than opening the file in an editor, and there’s no chance you can accidentally alter the file.

$ cat new.txt

.:

Anotimp

Files Commands

Folders Commands

General

HELP

new.txt

./Anotimp:

Vara

./Anotimp/Vara:

./Files Commands:

DEL

MORE

RN

./Files Commands/DEL:

delhelp.txt

./Files Commands/MORE:

morehelp.txt

./Files Commands/RN:

rnhelp.txt

./Folders Commands:

CD

MD

RD

RN

./Folders Commands/CD:

cdhelp.txt

./Folders Commands/MD:

mdhelp.txt

./Folders Commands/RD:

rdhelp.txt

./Folders Commands/RN:

rnhelp.txt

./General:

COPY

MOVE

OLIVIA

./General/COPY:

copyhelp.txt

./General/MOVE:

movehelp.txt

./General/OLIVIA:

new.txt

./HELP:

helphelp.txt

Usage: cat [OPTION]... [FILE]...

Concatenate FILE(s) to standard output.

With no FILE, or when FILE is -, read standard input.

-A, --show-all equivalent to -vET

-b, --number-nonblank number nonempty output lines, overrides -n

-e equivalent to -vE

-E, --show-ends display $ at end of each line

-n, --number number all output lines

-s, --squeeze-blank suppress repeated empty output lines

-t equivalent to -vT

-T, --show-tabs display TAB characters as ^I

-u (ignored)

-v, --show-nonprinting use ^ and M- notation, except for LFD and TAB

--help display this help and exit

--version output version information and exit

Examples:

cat f - g Output f's contents, then standard input, then g's contents.

cat Copy standard input to standard output.

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

Full documentation at: <http://www.gnu.org/software/coreutils/cat>

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

12)|

is a “pipe”. The | takes the standard output of the command on the left, and pipes it as standard input to the command on the right. You can think of this as “command to command” redirection

Pipes help you mash-up two or more commands at the same time and run them consecutively.

$ cat new.txt | wc

86 190 1649

13) wc

outputs the number of lines, words, and characters in a file, respectively

$ wc new.txt

86 190 1649 new.txt

14)sort

takes the standard input and orders it alphabetically for the standard output

$ cat > new1.txt

ana

maria

bianca

irina

simona

cristina

[3]+ Stopped cat > new1.txt

Serviceone@DESKTOP-8R24FOU /cygdrive/c/Homework

$ sort new1.txt

ana

bianca

cristina

irina

maria

simona

15)uniq

stands for “unique” and filters out adjacent, duplicate lines in a file

$ cat > new1.txt

maria

maria

maria

ana

ana

[6]+ Stopped cat > new1.txt

Serviceone@DESKTOP-8R24FOU /cygdrive/c/Homework

$ uniq new1.txt

maria

ana

16)grep

stands for “global regular expression print”. It searches files for lines that match a pattern and returns the results. It is also case sensitive.

$ cat > new1.txt

Ana

Anne Marie

Anne

Mariana

Marie Ann

Ana Maria

Marie Jeanne

[7]+ Stopped cat > new1.txt

Serviceone@DESKTOP-8R24FOU /cygdrive/c/Homework

$ grep an new1.txt

Mariana

Marie Jeanne

Serviceone@DESKTOP-8R24FOU /cygdrive/c/Homework

$ grep An new1.txt

Ana

Anne Marie

Anne

Marie Ann

Ana Maria

Serviceone@DESKTOP-8R24FOU /cygdrive/c/Homework

grep -i enables the command to be case insensitive.

$ grep -i an new1.txt

Ana

Anne Marie

Anne

Mariana

Marie Ann

Ana Maria

Marie Jeanne

17)sed

stands for “stream editor”. It accepts standard input and modifies it based on an expression, before displaying it as output data. It is similar to “find and replace”.

$ sed 's/an/in/g' new1.txt

Ana

Anne Marie

Anne

Mariina

Marie Ann

Ana Maria

Marie Jeinne

* s: stands for “substitution”. it is *always* used when using sed for substitution.
* an: the search string, the text to find.
* in: the replacement string, the text to add in place.
* g expression, meaning “global”