

(base) **student@bioinfo-Precision-T5600**:~\$ 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 `-'' 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.

(base) **student@bioinfo-Precision-T5600**:~\$ 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 &apos;*&apos;;
--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&apos;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
&apos;always&apos;              (default if omitted), &apos;auto&apos;;, or
&apos;never&apos;;
--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
--show-control-chars  print ? instead of nongraphic characters
                      show nongraphic characters as-is (the default,
                      unless program is &apos;ls&apos;; 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 ' 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).

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

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

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

(base) **student@bioinfo-Precision-T5600**:~\$ mkdir --help

Usage: mkdir [OPTION]... DIRECTORY...

Create the DIRECTORY(ies), if they do not already exist.

Mandatory arguments to long options are mandatory for short options too.

-m, --mode=MODE	set file mode (as in chmod), not a=rwx - umask
-p, --parents	no error if existing, make parent directories as needed
-v, --verbose	print a message for each created directory
-Z	set SELinux security context of each created directory to the default type
--context[=CTX]	like -Z, or if CTX is specified then set the SELinux or SMACK security context to CTX
--help	display this help and exit
--version	output version information and exit

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

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

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

(base) **student@bioinfo-Precision-T5600**:~\$ gedit --help

Usage:

gedit [OPTION...] [FILE...] [+LINE[:COLUMN]]

Help Options:

-h, --help	Show help options
--help-all	Show all help options
--help-application	Show GApplication options
--help-gtk	Show GTK+ Options

Application Options:

-V, --version	Show the application's version
--list-encodings	Display list of possible values for the encoding option
--encoding=ENCODING	Set the character encoding to be used to open the files listed on the command line
--new-window	Create a new top-level window in an existing instance of gedit
--new-document	Create a new document in an existing instance of gedit
-w, --wait	Open files and block process until files are closed
-s, --standalone	Run gedit in standalone mode
--display=DISPLAY	X display to use

(base) **student@bioinfo-Precision-T5600**:~\$ cat --help
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: <<https://www.gnu.org/software/coreutils/>>
Full documentation at: <<https://www.gnu.org/software/coreutils/cat>>
or available locally via: info '(coreutils) cat invocation'
(base) **student@bioinfo-Precision-T5600**:~\$ tac --help
Usage: tac [OPTION]... [FILE]...
Write each FILE to standard output, last line first.

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

Mandatory arguments to long options are mandatory for short options too.

-b, --before	attach the separator before instead of after
-r, --regex	interpret the separator as a regular expression
-s, --separator=STRING	use STRING as the separator instead of newline
--help	display this help and exit
--version	output version information and exit

GNU coreutils online help: <<https://www.gnu.org/software/coreutils/>>
Full documentation at: <<https://www.gnu.org/software/coreutils/tac>>
or available locally via: info '(coreutils) tac invocation'
(base) **student@bioinfo-Precision-T5600**:~\$ rm --help
Usage: rm [OPTION]... [FILE]...
Remove (unlink) the FILE(s).

-f, --force	ignore nonexistent files and arguments, never prompt
-i	prompt before every removal
-I	prompt once before removing more than three files, or

when removing recursively; less intrusive than `-i`, while still giving protection against most mistakes

`--interactive[=WHEN]` prompt according to WHEN: never, once (`-I`), or always (`-i`); without WHEN, prompt always

`--one-file-system` when removing a hierarchy recursively, skip any directory that is on a file system different from that of the corresponding command line argument

`--no-preserve-root` do not treat `'/'` specially

`--preserve-root[=all]` do not remove `'/'`; (default); with `'all'`, reject any command line argument

on a separate device from its parent

`-r, -R, --recursive` remove directories and their contents recursively

`-d, --dir` remove empty directories

`-v, --verbose` explain what is being done

`--help` display this help and exit

`--version` output version information and exit

By default, `rm` does not remove directories. Use the `--recursive` (`-r` or `-R`) option to remove each listed directory, too, along with all of its contents.

To remove a file whose name starts with a `'-'`, for example `'-foo'`,

use one of these commands:

```
rm -- -foo
```

```
rm ./-foo
```

Note that if you use `rm` to remove a file, it might be possible to recover some of its contents, given sufficient expertise and/or time. For greater assurance that the contents are truly unrecoverable, consider using `shred`.

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

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

or available locally via: `info '(coreutils) rm invocation'`

(base) **student@bioinfo-Precision-T5600:~\$** `lscpu --help`

Usage:

```
lscpu [options]
```

Display information about the CPU architecture.

Options:

`-a, --all` print both online and offline CPUs (default for `-e`)

`-b, --online` print online CPUs only (default for `-p`)

`-B, --bytes` print sizes in bytes rather than in human readable format

`-C, --caches[=<list>]` info about caches in extended readable format

`-c, --offline` print offline CPUs only

`-J, --json` use JSON for default or extended format

`-e, --extended[=<list>]` print out an extended readable format

`-p, --parse[=<list>]` print out a parsable format

`-s, --sysroot <dir>` use specified directory as system root

`-x, --hex` print hexadecimal masks rather than lists of CPUs

`-y, --physical` print physical instead of logical IDs

`--output-all` print all available columns for `-e`, `-p` or `-C`

`-h, --help` display this help

`-V, --version` display version

Available output columns for `-e` or `-p`:

```
    CPU    logical CPU number
    CORE    logical core number
    SOCKET  logical socket number
```

NODE	logical NUMA node number
BOOK	logical book number
DRAWER	logical drawer number
CACHE	shows how caches are shared between CPUs
POLARIZATION	CPU dispatching mode on virtual hardware
ADDRESS	physical address of a CPU
CONFIGURED	shows if the hypervisor has allocated the CPU
ONLINE	shows if Linux currently makes use of the CPU
MAXMHZ	shows the maximum MHz of the CPU
MINMHZ	shows the minimum MHz of the CPU

Available output columns for -C:

ALL-SIZE	size of all system caches
LEVEL	cache level
NAME	cache name
ONE-SIZE	size of one cache
TYPE	cache type
WAYS	ways of associativity

For more details see `lscpu(1)`.

(base) **student@bioinfo-Precision-T5600**:~\$ ssh --help

unknown option -- -

```
usage: ssh [-46AaCfGgKkMnqsTtVvXxYy] [-B bind_interface]
          [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]
          [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]
          [-i identity_file] [-J [user@]host[:port]] [-L address]
          [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]
          [-Q query_option] [-R address] [-S ctl_path] [-W host:port]
          [-w local_tun[:remote_tun]] destination [command]
```

(base) **student@bioinfo-Precision-T5600**:~\$ ftp --help

ftp: -: unknown option

(base) **student@bioinfo-Precision-T5600**:~\$ who --help

Usage: who [OPTION]... [FILE | ARG1 ARG2]

Print information about users who are currently logged in.

-a, --all	same as -b -d --login -p -r -t -T -u
-b, --boot	time of last system boot
-d, --dead	print dead processes
-H, --heading	print line of column headings
--ips	print ips instead of hostnames. with --lookup, canonicalizes based on stored IP, if available, rather than stored hostname
-l, --login	print system login processes
--lookup	attempt to canonicalize hostnames via DNS
-m	only hostname and user associated with stdin
-p, --process	print active processes spawned by init
-q, --count	all login names and number of users logged on
-r, --runlevel	print current runlevel
-s, --short	print only name, line, and time (default)
-t, --time	print last system clock change
-T, -w, --mesg	add user's message status as +, - or ?
-u, --users	list users logged in
--message	same as -T
--writable	same as -T
--help	display this help and exit
--version	output version information and exit

If FILE is not specified, use `/var/run/utmp`. `/var/log/wtmp` as FILE is common. If ARG1 ARG2 given, -m presumed: 'am i'; or 'mom likes'; are usual.

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

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

or available locally via: `info '(coreutils) who invocation'`

(base) **student@bioinfo-Precision-T5600**:-\$ date --help

Usage: date [OPTION]... [+FORMAT]

or: date [-u|--utc|--universal] [MMDDhhmm[[CC]YY][.ss]]

Display the current time in the given FORMAT, or set the system date.

Mandatory arguments to long options are mandatory for short options too.

-d, --date=STRING display time described by STRING, not

'now';

--debug

annotate the parsed date,

and warn about questionable usage to stderr

-f, --file=DATEFILE

like --date; once for each line of DATEFILE

-I[FMT], --iso-8601[=FMT]

output date/time in ISO 8601 format.

FMT='date'; for date only (the default),

'hours';, 'minutes';,

'seconds';, or 'ns';

for date and time to the indicated precision.

Example: 2006-08-14T02:34:56-06:00

-R, --rfc-email

output date and time in RFC 5322 format.

Example: Mon, 14 Aug 2006 02:34:56 -0600

--rfc-3339=FMT

output date/time in RFC 3339 format.

FMT='date';, 'seconds';, or

'ns';

for date and time to the indicated precision.

Example: 2006-08-14 02:34:56-06:00

-r, --reference=FILE

display the last modification time of FILE

-s, --set=STRING

set time described by STRING

-u, --utc, --universal

print or set Coordinated Universal Time (UTC)

--help

display this help and exit

--version

output version information and exit

FORMAT controls the output. Interpreted sequences are:

%% a literal %

%a locale's abbreviated weekday name (e.g., Sun)

%A locale's full weekday name (e.g., Sunday)

%b locale's abbreviated month name (e.g., Jan)

%B locale's full month name (e.g., January)

%c locale's date and time (e.g., Thu Mar 3 23:05:25 2005)

%C century; like %Y, except omit last two digits (e.g., 20)

%d day of month (e.g., 01)

%D date; same as %m/%d/%y

%e day of month, space padded; same as %_d

%F full date; same as %Y-%m-%d

%g last two digits of year of ISO week number (see %G)

%G year of ISO week number (see %V); normally useful only with %V

%h same as %b

%H hour (00..23)

%I hour (01..12)

%j day of year (001..366)

%k hour, space padded (0..23); same as %_H

%l hour, space padded (1..12); same as %_I

%m month (01..12)

%M minute (00..59)

%n a newline

%N nanoseconds (000000000..999999999)

%p locale's equivalent of either AM or PM; blank if not known

%P like %p, but lower case

%q quarter of year (1..4)

%r locale's 12-hour clock time (e.g., 11:11:04 PM)

%R 24-hour hour and minute; same as %H:%M

%S seconds since 1970-01-01 00:00:00 UTC

%S second (00..60)

%t a tab

%T time; same as %H:%M:%S

```

%u    day of week (1..7); 1 is Monday
%U    week number of year, with Sunday as first day of week (00..53)
%V    ISO week number, with Monday as first day of week (01..53)
%w    day of week (0..6); 0 is Sunday
%W    week number of year, with Monday as first day of week (00..53)
%x    locale's date representation (e.g., 12/31/99)
%X    locale's time representation (e.g., 23:13:48)
%y    last two digits of year (00..99)
%Y    year
%z    +hhmm numeric time zone (e.g., -0400)
%:z    +hh:mm numeric time zone (e.g., -04:00)
%::z    +hh:mm:ss numeric time zone (e.g., -04:00:00)
%:::z    numeric time zone with : to necessary precision (e.g., -04, +05:30)
%Z    alphabetic time zone abbreviation (e.g., EDT)

```

By default, date pads numeric fields with zeroes.
The following optional flags may follow `'%';`:

- (hyphen) do not pad the field
- _ (underscore) pad with spaces
- 0 (zero) pad with zeros
- ^ use upper case if possible
- # use opposite case if possible

After any flags comes an optional field width, as a decimal number;
then an optional modifier, which is either
E to use the locale's alternate representations if available, or
O to use the locale's alternate numeric symbols if available.

Examples:

Convert seconds since the epoch (1970-01-01 UTC) to a date

```
$ date --date=&apos;@2147483647&apos;;
```

Show the time on the west coast of the US (use `tzselect(1)` to find TZ)

```
$ TZ=&apos;America/Los_Angeles&apos;; date
```

Show the local time for 9AM next Friday on the west coast of the US

```
$ date --date=&apos;TZ="America/Los_Angeles" 09:00 next Fri&apos;;
```

GNU coreutils online help: [<https://www.gnu.org/software/coreutils/>](https://www.gnu.org/software/coreutils/)

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

or available locally via: `info '(coreutils) date invocation';`

```
(base) student@bioinfo-Precision-T5600:~$ 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.

```
(base) student@bioinfo-Precision-T5600:~$ cp --help
```

```
Usage: cp [OPTION]... [-T] SOURCE DEST
```

```
or: cp [OPTION]... SOURCE... DIRECTORY
```

```
or: cp [OPTION]... -t DIRECTORY SOURCE...
```

Copy SOURCE to DEST, or multiple SOURCE(s) to DIRECTORY.

Mandatory arguments to long options are mandatory for short options too.

```
-a, --archive same as -dR --preserve=all
```


<code>--attributes-only</code>	don't copy the file data, just the
attributes	
<code>--backup[=CONTROL]</code>	make a backup of each existing destination file
<code>-b</code>	like <code>--backup</code> but does not accept an argument
<code>--copy-contents</code>	copy contents of special files when recursive
<code>-d</code>	same as <code>--no-dereference</code> <code>--preserve=links</code>
<code>-f, --force</code>	if an existing destination file cannot be opened, remove it and try again (this option is ignored when the <code>-n</code> option is also used)
<code>-i, --interactive</code>	prompt before overwrite (overrides a previous <code>-n</code> option)
<code>-H</code>	follow command-line symbolic links in SOURCE
<code>-l, --link</code>	hard link files instead of copying
<code>-L, --dereference</code>	always follow symbolic links in SOURCE
<code>-n, --no-clobber</code>	do not overwrite an existing file (overrides a previous <code>-i</code> option)
<code>-P, --no-dereference</code>	never follow symbolic links in SOURCE
<code>-p</code>	same as <code>--preserve=mode,ownership,timestamps</code>
<code>--preserve[=ATTR_LIST]</code>	preserve the specified attributes (default: mode,ownership,timestamps), if possible additional attributes: context, links, xattr, all
<code>--no-preserve=ATTR_LIST</code>	don't preserve the specified attributes
<code>--parents</code>	use full source file name under DIRECTORY
<code>-R, -r, --recursive</code>	copy directories recursively
<code>--reflink[=WHEN]</code>	control clone/CoW copies. See below
<code>--remove-destination</code>	remove each existing destination file before attempting to open it (contrast with <code>--force</code>)
<code>--sparse=WHEN</code>	control creation of sparse files. See below
<code>--strip-trailing-slashes</code>	remove any trailing slashes from each SOURCE argument
<code>-s, --symbolic-link</code>	make symbolic links instead of copying
<code>-S, --suffix=SUFFIX</code>	override the usual backup suffix
<code>-t, --target-directory=DIRECTORY</code>	copy all SOURCE arguments into DIRECTORY
<code>-T, --no-target-directory</code>	treat DEST as a normal file
<code>-u, --update</code>	copy only when the SOURCE file is newer than the destination file or when the destination file is missing
<code>-v, --verbose</code>	explain what is being done
<code>-x, --one-file-system</code>	stay on this file system
<code>-Z</code>	set SELinux security context of destination file to default type
<code>--context[=CTX]</code>	like <code>-Z</code> , or if CTX is specified then set the SELinux or SMACK security context to CTX
<code>--help</code>	display this help and exit
<code>--version</code>	output version information and exit

By default, sparse SOURCE files are detected by a crude heuristic and the corresponding DEST file is made sparse as well. That is the behavior selected by `--sparse=auto`. Specify `--sparse=always` to create a sparse DEST file whenever the SOURCE file contains a long enough sequence of zero bytes. Use `--sparse=never` to inhibit creation of sparse files.

When `--reflink[=always]` is specified, perform a lightweight copy, where the data blocks are copied only when modified. If this is not possible the copy fails, or if `--reflink=auto` is specified, fall back to a standard copy. Use `--reflink=never` to ensure a standard copy is performed.

The backup suffix is `'~'`, unless set with `--suffix` or `SIMPLE_BACKUP_SUFFIX`.

The version control method may be selected via the `--backup` option or through the `VERSION_CONTROL` environment variable. Here are the values:

<code>none, off</code>	never make backups (even if <code>--backup</code> is given)
------------------------	---

numbered, t	make numbered backups
existing, nil	numbered if numbered backups exist, simple otherwise
simple, never	always make simple backups

As a special case, cp makes a backup of SOURCE when the force and backup options are given and SOURCE and DEST are the same name for an existing, regular file.

GNU coreutils online help: <<https://www.gnu.org/software/coreutils/>>
 Full documentation at: <<https://www.gnu.org/software/coreutils/cp>>
 or available locally via: info '(coreutils) cp invocation'
 (base) student@bioinfo-Precision-T5600:~\$ mv --help
 Usage: mv [OPTION]... [-T] SOURCE DEST
 or: mv [OPTION]... SOURCE... DIRECTORY
 or: mv [OPTION]... -t DIRECTORY SOURCE...
 Rename SOURCE to DEST, or move SOURCE(s) to DIRECTORY.

Mandatory arguments to long options are mandatory for short options too.

--backup[=CONTROL]	make a backup of each existing destination file
-b	like --backup but does not accept an argument
-f, --force	do not prompt before overwriting
-i, --interactive	prompt before overwrite
-n, --no-clobber	do not overwrite an existing file

If you specify more than one of -i, -f, -n, only the final one takes effect.

--strip-trailing-slashes	remove any trailing slashes from each SOURCE argument
-S, --suffix=SUFFIX	override the usual backup suffix
-t, --target-directory=DIRECTORY	move all SOURCE arguments into DIRECTORY
-T, --no-target-directory	treat DEST as a normal file
-u, --update	move only when the SOURCE file is newer than the destination file or when the destination file is missing
-v, --verbose	explain what is being done
-Z, --context	set SELinux security context of destination file to default type
--help	display this help and exit
--version	output version information and exit

The backup suffix is '~', unless set with --suffix or SIMPLE_BACKUP_SUFFIX.

The VERSION_CONTROL method may be selected via the --backup option or through the VERSION_CONTROL environment variable. Here are the values:

none, off	never make backups (even if --backup is given)
numbered, t	make numbered backups
existing, nil	numbered if numbered backups exist, simple otherwise
simple, never	always make simple backups

GNU coreutils online help: <<https://www.gnu.org/software/coreutils/>>
 Full documentation at: <<https://www.gnu.org/software/coreutils/mv>>
 or available locally via: info '(coreutils) mv invocation'
 (base) student@bioinfo-Precision-T5600:~\$ cd -i

Command 'cd -i': not found, did you mean:

command 'cdi' from deb cdo (1.9.9~rc1-1)

Try: sudo apt install <deb name>

(base) student@bioinfo-Precision-T5600:~\$ cd -i
 bash: cd: -i: invalid option
 cd: usage: cd [-L|[-P [-e]] [-@]] [dir]
 (base) student@bioinfo-Precision-T5600:~\$ 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.
--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	

-q, --hide-control-chars	append / indicator to directories
--show-control-chars	print ? instead of nongraphic characters
	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_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).

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

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

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

(base) **student@bioinfo-Precision-T5600**:~\$ lp --help

Usage: lp [options] [--] [file(s)]

lp [options] -i id

Options:

```

-c                Make a copy of the print file(s)
-d destination    Specify the destination
-E               Encrypt the connection to the server
-h server[:port] Connect to the named server and port
-H HH:MM         Hold the job until the specified UTC time
-H hold          Hold the job until released/resumed
-H immediate     Print the job as soon as possible
-H restart       Reprint the job
-H resume        Resume a held job
-i id            Specify an existing job ID to modify
-m              Send an email notification when the job completes
-n num-copies    Specify the number of copies to print
-o option[=value] Specify a printer-specific option
-o job-sheets=standard Print a banner page with the job
-o media=size    Specify the media size to use
-o number-up=N   Specify that input pages should be printed N-up (1, 2,
4, 6, 9, and 16 are supported)
-o orientation-requested=N
                  Specify portrait (3) or landscape (4) orientation
-o print-quality=N Specify the print quality - draft (3), normal (4), or
best (5)
-o sides=one-sided Specify 1-sided printing
-o sides=two-sided-long-edge Specify 2-sided portrait printing
-o sides=two-sided-short-edge Specify 2-sided landscape printing
-P page-list     Specify a list of pages to print
-q priority      Specify the priority from low (1) to high (100)
-s              Be silent
-t title        Specify the job title
-U username      Specify the username to use for authentication
(base) student@bioinfo-Precision-T5600:~$ nano --help
Usage: nano [OPTIONS] [[+LINE[,COLUMN]] FILE]...

```

To place the cursor on a specific line of a file, put the line number with a `'+'` before the filename. The column number can be added after a comma.

When a filename is `'-'`, nano reads data from standard input.

Option	Long option	Meaning
-A	--smarthome	Enable smart home key
-B	--backup	Save backups of existing files
-C <dir>	--backupdir=<dir>	Directory for saving unique backup files
-D	--boldtext	Use bold instead of reverse video text
-E	--tabstospaces	Convert typed tabs to spaces
-F	--multibuffer	Read a file into a new buffer by default
-G	--locking	Use (vim-style) lock files
-H	--historylog	Log & read search/replace string history
-I	--ignorercfiles	Don't look at nanorc files
-J <number>	--guidestripe=<number>	Show a guiding bar at this column
-K	--rawsequences	Fix numeric keypad key confusion problem
-L	--nonewlines	Don't add an automatic newline
-M	--trimblanks	Trim tail spaces when hard-wrapping
-N	--noconvert	Don't convert files from DOS/Mac
format		
-P	--positionlog	Log & read location of cursor position
-Q <regex>	--quotestr=<regex>	Regular expression to match quoting
-R	--restricted	Restrict access to the filesystem
-T <#cols>	--tabsize=<#cols>	Set width of a tab to #cols columns
-U	--quickblank	Wipe status bar upon next keystroke
-V	--version	Print version information and exit
-W	--wordbounds	Detect word boundaries more accurately
-X <str>	--wordchars=<str>	Which other characters are word parts
-Y <name>	--syntax=<name>	Syntax definition to use for coloring

-Z	--zap	Let Bsp and Del erase a marked region
-a	--atblanks	When soft-wrapping, do it at whitespace
-b	--breaklonglines	Automatically hard-wrap overlong lines
-c	--constantshow	Constantly show cursor position
-d	--rebinddelete	Fix Backspace/Delete confusion problem
-e	--emptyline	Keep the line below the title bar empty
-f <file>	--rcfile=<file>	Use only this file for configuring nano
-g	--showcursor	Show cursor in file browser & help text
-h	--help	Show this help text and exit
-i	--autoindent	Automatically indent new lines
-j	--jumpscrolling	Scroll per half-screen, not per line
-k	--cutfromcursor	Cut from cursor to end of line
-l	--linenumbers	Show line numbers in front of the text
-m	--mouse	Enable the use of the mouse
-n	--noread	Do not read the file (only write it)
-o <dir>	--operatingdir=<dir>	Set operating directory
-p	--preserve	Preserve XON (^Q) and XOFF (^S) keys
-r <#cols>	--fill=<#cols>	Set width for hard-wrap and justify
-s <prog>	--speller=<prog>	Enable alternate speller
-t	--tempfile	Auto save on exit, don't prompt
-u	--unix	Save a file by default in Unix format
-v	--view	View mode (read-only)
-w	--nowrap	Don't hard-wrap long lines
[default]		
-x	--nohelp	Don't show the two help lines
-y	--afterends	Make Ctrl+Right stop at word ends
-z	--suspend	Enable suspension
-\$	--softwrap	Enable soft line wrapping

(base) student@bioinfo-Precision-T5600:~\$ man --help

Usage: man [OPTION...] [SECTION] PAGE...

-C, --config-file=FILE	use this user configuration file
-d, --debug	emit debugging messages
-D, --default	reset all options to their default values
--warnings[=WARNINGS]	enable warnings from groff

Main modes of operation:

-f, --whatis	equivalent to whatis
-k, --apropos	equivalent to apropos
-K, --global-apropos	search for text in all pages
-l, --local-file	interpret PAGE argument(s) as local filename(s)
-w, --where, --path, --location	print physical location of man page(s)
-W, --where-cat, --location-cat	print physical location of cat file(s)

-c, --catman	used by catman to reformat out of date cat pages
-R, --recode=ENCODING	output source page encoded in ENCODING

Finding manual pages:

-L, --locale=LOCALE	define the locale for this particular man search
-m, --systems=SYSTEM	use manual pages from other systems
-M, --manpath=PATH	set search path for manual pages to PATH
-S, -s, --sections=LIST	use colon separated section list
-e, --extension=EXTENSION	limit search to extension type EXTENSION
-i, --ignore-case	look for pages case-insensitively (default)
-I, --match-case	look for pages case-sensitively
--regex	show all pages matching regex
--wildcard	show all pages matching wildcard

<code>--names-only</code>	make <code>--regex</code> and <code>--wildcard</code> match page names only, not descriptions
<code>-a, --all</code>	find all matching manual pages
<code>-u, --update</code>	force a cache consistency check
<code>--no-subpages</code>	don't try subpages, e.g. <code>'man foo</code>
<code>bar' => 'man</code>	<code>foo-bar'</code>

Controlling formatted output:

<code>-P, --pager=PAGER</code>	use program PAGER to display output
<code>-r, --prompt=STRING</code>	provide the <code>'less'</code> pager with a prompt
<code>-7, --ascii</code>	display ASCII translation of certain latin1 chars
<code>-E, --encoding=ENCODING</code>	use selected output encoding
<code>--no-hyphenation, --nh</code>	turn off hyphenation
<code>--no-justification, --nj</code>	turn off justification
<code>-p, --preprocessor=STRING</code>	STRING indicates which preprocessors to run: e - [n]eqn, p - pic, t - tbl,

g - grap, r - refer, v - vgrind

<code>-t, --troff</code>	use groff to format pages
<code>-T, --troff-device=[DEVICE]</code>	use groff with selected device
<code>-H, --html=[BROWSER]</code>	use www-browser or BROWSER to display HTML output
<code>-X, --gxditview=[RESOLUTION]</code>	use groff and display through gxditview (X11): -X = -TX75, -X100 = -TX100, -X100-12 = -TX100-12
<code>-Z, --ditroff</code>	use groff and force it to produce ditroff
<code>-?, --help</code>	give this help list
<code>--usage</code>	give a short usage message
<code>-V, --version</code>	print program version

Mandatory or optional arguments to long options are also mandatory or optional for any corresponding short options.

Report bugs to cjwatson@debian.org.

(base) **student@bioinfo-Precision-T5600:~\$** tar --help

Usage: tar [OPTION...] [FILE]...

GNU `'tar'` saves many files together into a single tape or disk archive, and can restore individual files from the archive.

Examples:

```
tar -cf archive.tar foo bar # Create archive.tar from files foo and bar.
tar -tvf archive.tar       # List all files in archive.tar verbosely.
tar -xf archive.tar        # Extract all files from archive.tar.
```

Local file name selection:

<code>--add-file=FILE</code>	add given FILE to the archive (useful if its name starts with a dash)
<code>-C, --directory=DIR</code>	change to directory DIR
<code>--exclude=PATTERN</code>	exclude files, given as a PATTERN
<code>--exclude-backups</code>	exclude backup and lock files
<code>--exclude-caches</code>	exclude contents of directories containing CACHEDIR.TAG, except for the tag file itself
<code>--exclude-caches-all</code>	exclude directories containing CACHEDIR.TAG
<code>--exclude-caches-under</code>	exclude everything under directories containing CACHEDIR.TAG
<code>--exclude-ignore=FILE</code>	read exclude patterns for each directory from

	FILE, if it exists
--exclude-ignore-recursive=FILE	read exclude patterns for each directory and its subdirectories from FILE, if it exists
--exclude-tag=FILE	exclude contents of directories containing FILE, except for FILE itself
--exclude-tag-all=FILE	exclude directories containing FILE
--exclude-tag-under=FILE	exclude everything under directories containing FILE
--exclude-vcs	exclude version control system directories
--exclude-vcs-ignores	read exclude patterns from the VCS ignore files
--no-null	disable the effect of the previous --null option
--no-recursion	avoid descending automatically in directories
--no-unquote	do not unquote input file or member names
--no-verbatim-files-from	-T treats file names starting with dash as options (default)
--null	-T reads null-terminated names; implies --verbatim-files-from
--recursion	recurse into directories (default)
-T, --files-from=FILE	get names to extract or create from FILE
--unquote	unquote input file or member names (default)
--verbatim-files-from	-T reads file names verbatim (no escape or option handling)
-X, --exclude-from=FILE	exclude patterns listed in FILE

File name matching options (affect both exclude and include patterns):

--anchored	patterns match file name start
--ignore-case	ignore case
--no-anchored	patterns match after any '/'; (default for exclusion)
--no-ignore-case	case sensitive matching (default)
--no-wildcards	verbatim string matching
--no-wildcards-match-slash	wildcards do not match '/';
--wildcards	use wildcards (default for exclusion)
--wildcards-match-slash	wildcards match '/'; (default for exclusion)

Main operation mode:

-A, --catenate, --concatenate	append tar files to an archive
-c, --create	create a new archive
-d, --diff, --compare	find differences between archive and file system
--delete	delete from the archive (not on mag tapes!)
-r, --append	append files to the end of an archive
-t, --list	list the contents of an archive
--test-label	test the archive volume label and exit
-u, --update	only append files newer than copy in archive
-x, --extract, --get	extract files from an archive

Operation modifiers:

--check-device	check device numbers when creating incremental archives (default)
-g, --listed-incremental=FILE	handle new GNU-format incremental backup
-G, --incremental	handle old GNU-format incremental backup
--hole-detection=TYPE	technique to detect holes
--ignore-failed-read	do not exit with nonzero on unreadable files
--level=NUMBER	dump level for created listed-incremental archive
-n, --seek	archive is seekable
--no-check-device	do not check device numbers when creating incremental archives
--no-seek	archive is not seekable
--occurrence[=NUMBER]	process only the NUMBERth occurrence of each file

in the archive; this option is valid only in conjunction with one of the subcommands `--delete`, `--diff`, `--extract` or `--list` and when a list of files is given either on the command line or via the `-T` option; NUMBER defaults to 1

`--sparse-version=MAJOR[.MINOR]` set version of the sparse format to use (implies `--sparse`)

`-S, --sparse` handle sparse files efficiently

Overwrite control:

`-k, --keep-old-files` don't replace existing files when extracting, treat them as errors

`--keep-directory-symlink` preserve existing symlinks to directories when extracting

`--keep-newer-files` don't replace existing files that are newer than their archive copies

`--no-overwrite-dir` preserve metadata of existing directories

`--one-top-level[=DIR]` create a subdirectory to avoid having loose files extracted

`--overwrite` overwrite existing files when extracting

`--overwrite-dir` overwrite metadata of existing directories when extracting (default)

`--recursive-unlink` empty hierarchies prior to extracting directory

`--remove-files` remove files after adding them to the archive

`--skip-old-files` don't replace existing files when extracting, silently skip over them

`-U, --unlink-first` remove each file prior to extracting over it

`-W, --verify` attempt to verify the archive after writing it

Select output stream:

`--ignore-command-error` ignore exit codes of children

`--no-ignore-command-error` treat non-zero exit codes of children as error

`-O, --to-stdout` extract files to standard output

`--to-command=COMMAND` pipe extracted files to another program

Handling of file attributes:

`--atime-preserve[=METHOD]` preserve access times on dumped files, either by restoring the times after reading (METHOD='replace'; default) or by not setting the times in the first place (METHOD='system';)

`--clamp-mtime` only set time when the file is more recent than what was given with `--mtime`

`--delay-directory-restore` delay setting modification times and permissions of extracted directories until the end of extraction

`--group=NAME` force NAME as group for added files

`--group-map=FILE` use FILE to map file owner GIDs and names

`--mode=CHANGES` force (symbolic) mode CHANGES for added files

`--mtime=DATE-OR-FILE` set mtime for added files from DATE-OR-FILE

`-m, --touch` don't extract file modified time

`--no-delay-directory-restore` cancel the effect of `--delay-directory-restore` option

`--no-same-owner` extract files as yourself (default for ordinary users)

--no-same-permissions apply the user's umask when extracting permissions
 from the archive (default for ordinary users)
 --numeric-owner always use numbers for user/group names
 --owner=NAME force NAME as owner for added files
 --owner-map=FILE use FILE to map file owner UIDs and names
 -p, --preserve-permissions, --same-permissions extract information about file permissions (default for superuser)
 --same-owner try extracting files with the same ownership as exists in the archive (default for superuser)
 -s, --preserve-order, --same-order member arguments are listed in the same order as the files in the archive
 --sort=ORDER directory sorting order: none (default), name or inode

Handling of extended file attributes:

--acls Enable the POSIX ACLs support
 --no-acls Disable the POSIX ACLs support
 --no-selinux Disable the SELinux context support
 --no-xattrs Disable extended attributes support
 --selinux Enable the SELinux context support
 --xattrs Enable extended attributes support
 --xattrs-exclude=MASK specify the exclude pattern for xattr keys
 --xattrs-include=MASK specify the include pattern for xattr keys

Device selection and switching:

-f, --file=ARCHIVE use archive file or device ARCHIVE
 --force-local archive file is local even if it has a colon
 -F, --info-script=NAME, --new-volume-script=NAME run script at end of each tape (implies -M)
 -L, --tape-length=NUMBER change tape after writing NUMBER x 1024 bytes
 -M, --multi-volume create/list/extract multi-volume archive
 --rmt-command=COMMAND use given rmt COMMAND instead of rmt
 --rsh-command=COMMAND use remote COMMAND instead of rsh
 --volno-file=FILE use/update the volume number in FILE

Device blocking:

-b, --blocking-factor=BLOCKS BLOCKS x 512 bytes per record
 -B, --read-full-records reblock as we read (for 4.2BSD pipes)
 -i, --ignore-zeros ignore zeroed blocks in archive (means EOF)
 --record-size=NUMBER NUMBER of bytes per record, multiple of 512

Archive format selection:

-H, --format=FORMAT create archive of the given format

FORMAT is one of the following:

gnu GNU tar 1.13.x format
 oldgnu GNU format as per tar <= 1.12
 pax POSIX 1003.1-2001 (pax) format
 posix same as pax
 ustar POSIX 1003.1-1988 (ustar) format
 v7 old V7 tar format

--old-archive, --portability same as --format=v7
 --pax-option=keyword[[:]=value][,keyword[[:]=value]]... control pax keywords

--posix same as --format=posix
 -V, --label=TEXT create archive with volume name TEXT; at list/extract time, use TEXT as a globbing pattern for volume name

Compression options:

-a, --auto-compress use archive suffix to determine the compression program
 -I, --use-compress-program=PROG filter through PROG (must accept -d)
 -j, --bzip2 filter the archive through bzip2
 -J, --xz filter the archive through xz
 --lzip filter the archive through lzip
 --lzma filter the archive through xz
 --lzop filter the archive through lzop
 --no-auto-compress do not use archive suffix to determine the compression program
 -z, --gzip, --gunzip, --ungzip filter the archive through gzip
 --zstd filter the archive through zstd
 -Z, --compress, --uncompress filter the archive through compress

Local file selection:

 --backup[=CONTROL] backup before removal, choose version CONTROL
 -h, --dereference follow symlinks; archive and dump the files they point to
 --hard-dereference follow hard links; archive and dump the files they refer to
 -K, --starting-file=MEMBER-NAME begin at member MEMBER-NAME when reading the archive
 --newer-mtime=DATE compare date and time when data changed only
 -N, --newer=DATE-OR-FILE, --after-date=DATE-OR-FILE only store files newer than DATE-OR-FILE
 --one-file-system stay in local file system when creating archive
 -P, --absolute-names don't strip leading slashes from file names
 --suffix=STRING backup before removal, override usual suffix ("~"; unless overridden by environment variable SIMPLE_BACKUP_SUFFIX)

File name transformations:

 --strip-components=NUMBER strip NUMBER leading components from file names on extraction
 --transform=EXPRESSION, --xform=EXPRESSION use sed replace EXPRESSION to transform file names

Informative output:

 --checkpoint[=NUMBER] display progress messages every NUMBERth record (default 10)
 --checkpoint-action=ACTION execute ACTION on each checkpoint
 --full-time print file time to its full resolution
 --index-file=FILE send verbose output to FILE
 -l, --check-links print a message if not all links are dumped
 --no-quote-chars=STRING disable quoting for characters from STRING
 --quote-chars=STRING additionally quote characters from STRING
 --quoting-style=STYLE set name quoting style; see below for valid STYLE values
 -R, --block-number show block number within archive with each message

--show-defaults	show tar defaults
--show-omitted-dirs	when listing or extracting, list each directory that does not match search criteria
--show-snapshot-field-ranges	show valid ranges for snapshot-file fields
--show-transformed-names, --show-stored-names	show file or archive names after transformation
--totals[=SIGNAL]	print total bytes after processing the archive; with an argument - print total bytes when this SIGNAL is delivered; Allowed signals are: SIGHUP, SIGQUIT, SIGINT, SIGUSR1 and SIGUSR2; the names without SIG prefix are also accepted
--utc	print file modification times in UTC
-v, --verbose	verbosely list files processed
--warning=KEYWORD	warning control
-w, --interactive, --confirmation	ask for confirmation for every action

Compatibility options:

-o	when creating, same as --old-archive; when extracting, same as --no-same-owner
----	--

Other options:

-, --help	give this help list
--restrict	disable use of some potentially harmful options
--usage	give a short usage message
--version	print program version

Mandatory or optional arguments to long options are also mandatory or optional for any corresponding short options.

The backup suffix is `'~'`, unless set with --suffix or SIMPLE_BACKUP_SUFFIX.

The version control may be set with --backup or VERSION_CONTROL, values are:

none, off	never make backups
t, numbered	make numbered backups
nil, existing	numbered if numbered backups exist, simple otherwise
never, simple	always make simple backups

Valid arguments for the --quoting-style option are:

```
literal
shell
shell-always
shell-escape
shell-escape-always
c
c-maybe
escape
locale
clocale
```

This tar defaults to:

```
--format=gnu -f- -b20 --quoting-style=escape --rmt-command=/usr/sbin/rmt
--rsh-command=/usr/bin/rsh
```

```
(base) student@bioinfo-Precision-T5600:~$ apt --help
```

```
apt 2.0.10 (amd64)
```

```
Usage: apt [options] command
```

apt is a commandline package manager and provides commands for

searching and managing as well as querying information about packages. It provides the same functionality as the specialized APT tools, like apt-get and apt-cache, but enables options more suitable for interactive use by default.

Most used commands:

- list - list packages based on package names
- search - search in package descriptions
- show - show package details
- install - install packages
- reinstall - reinstall packages
- remove - remove packages
- autoremove - Remove automatically all unused packages
- update - update list of available packages
- upgrade - upgrade the system by installing/upgrading packages
- full-upgrade - upgrade the system by removing/installing/upgrading packages
- edit-sources - edit the source information file
- satisfy - satisfy dependency strings

See apt(8) for more information about the available commands. Configuration options and syntax is detailed in apt.conf(5). Information about how to configure sources can be found in sources.list(5). Package and version choices can be expressed via apt_preferences(5). Security details are available in apt-secure(8).

This APT has Super Cow Powers.

```
(base) student@bioinfo-Precision-T5600:~$ echo --help
--help
(base) student@bioinfo-Precision-T5600:~$ ps --help
```

Usage:

ps [options]

Try 'ps --help <simple|list|output|threads|misc|all>' or
'ps --help <s|l|o|t|m|a>'
for additional help text.

For more details see ps(1).

```
(base) student@bioinfo-Precision-T5600:~$ kill --help
kill: kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill -l
[sigspec]
```

Send a signal to a job.

Send the processes identified by PID or JOBSPEC the signal named by SIGSPEC or SIGNUM. If neither SIGSPEC nor SIGNUM is present, then SIGTERM is assumed.

Options:

- s sig SIG is a signal name
- n sig SIG is a signal number
- l list the signal names; if arguments follow 'l'; they are assumed to be signal numbers for which names should be listed
- L synonym for -l

Kill is a shell builtin for two reasons: it allows job IDs to be used instead of process IDs, and allows processes to be killed if the limit on processes that you can create is reached.

Exit Status:

Returns success unless an invalid option is given or an error occurs.

```
(base) student@bioinfo-Precision-T5600:~$ history --help
history: history [-c] [-d offset] [n] or history -anrw [filename] or history -ps
arg [arg...]
Display or manipulate the history list.
```

Display the history list with line numbers, prefixing each modified entry with a ``'`. An argument of `N` lists only the last `N` entries.

Options:

- c clear the history list by deleting all of the entries
- d `offset` delete the history entry at position `OFFSET`. Negative offsets count back from the end of the history list
- a append history lines from this session to the history file
- n read all history lines not already read from the history file and append them to the history list
- r read the history file and append the contents to the history list
- w write the current history to the history file
- p perform history expansion on each ARG and display the result without storing it in the history list
- s append the ARGs to the history list as a single entry

If `FILENAME` is given, it is used as the history file. Otherwise, if `HISTFILE` has a value, that is used, else `~/.bash_history`.

If the `HISTTIMEFORMAT` variable is set and not null, its value is used as a format string for `strftime(3)` to print the time stamp associated with each displayed history entry. No time stamps are printed otherwise.

Exit Status:

Returns success unless an invalid option is given or an error occurs.

```
(base) student@bioinfo-Precision-T5600:~$ passwd --help
```

Usage: passwd [options] [LOGIN]

Options:

- a, --all report password status on all accounts
- d, --delete delete the password for the named account
- e, --expire force expire the password for the named account
- h, --help display this help message and exit
- k, --keep-tokens change password only if expired
- i, --inactive `INACTIVE` set password inactive after expiration to `INACTIVE`
- l, --lock lock the password of the named account
- n, --mindays `MIN_DAYS` set minimum number of days before password change to `MIN_DAYS`
- q, --quiet quiet mode
- r, --repository `REPOSITORY` change password in `REPOSITORY` repository
- R, --root `CHROOT_DIR` directory to chroot into
- S, --status report password status on the named account
- u, --unlock unlock the password of the named account
- w, --warndays `WARN_DAYS` set expiration warning days to `WARN_DAYS`
- x, --maxdays `MAX_DAYS` set maximum number of days before password change to `MAX_DAYS`

```
(base) student@bioinfo-Precision-T5600:~$ which --help
```

Illegal option --

Usage: /usr/bin/which [-a] args

```
(base) student@bioinfo-Precision-T5600:~$ tail --head
```

tail: unrecognized option `'`--head`'`;

Try `'`tail --help`'` for more information.

```
(base) student@bioinfo-Precision-T5600:~$ head --help
```

Usage: head [OPTION]... [FILE]...

Print the first 10 lines of each FILE to standard output.

With more than one FILE, precede each with a header giving the file name.

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

Mandatory arguments to long options are mandatory for short options too.

-c, --bytes=[-]NUM	print the first NUM bytes of each file; with the leading '-';, print all but the last
-n, --lines=[-]NUM	NUM bytes of each file print the first NUM lines instead of the first 10; with the leading '-';, print all but the last
-q, --quiet, --silent	NUM lines of each file never print headers giving file names
-v, --verbose	always print headers giving file names
-z, --zero-terminated	line delimiter is NUL, not newline
--help	display this help and exit
--version	output version information and exit

NUM may have a multiplier suffix:

b 512, kB 1000, K 1024, MB 1000*1000, M 1024*1024,
GB 1000*1000*1000, G 1024*1024*1024, and so on for T, P, E, Z, Y.

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

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

or available locally via: info '(coreutils) head invocation';

(base) **student@bioinfo-Precision-T5600**:~\$ more --help

Usage:

more [options] <file>...

A file perusal filter for CRT viewing.

Options:

-d	display help instead of ringing bell
-f	count logical rather than screen lines
-l	suppress pause after form feed
-c	do not scroll, display text and clean line ends
-p	do not scroll, clean screen and display text
-s	squeeze multiple blank lines into one
-u	suppress underlining
-<number>	the number of lines per screenful
+<number>	display file beginning from line number
+/<string>	display file beginning from search string match
--help	display this help
-V, --version	display version

For more details see more(1).

(base) **student@bioinfo-Precision-T5600**:~\$ less --help

(base) **student@bioinfo-Precision-T5600**:~\$ wget --help

GNU Wget 1.20.3, a non-interactive network retriever.

Usage: wget [OPTION]... [URL]...

Mandatory arguments to long options are mandatory for short options too.

Startup:

-V, --version	display the version of Wget and exit
-h, --help	print this help
-b, --background	go to background after startup
-e, --execute=COMMAND	execute a '.wgetrc'-style command

Logging and input file:

-o, --output-file=FILE	log messages to FILE
-a, --append-output=FILE	append messages to FILE
-d, --debug	print lots of debugging information
-q, --quiet	quiet (no output)
-v, --verbose	be verbose (this is the default)

-nv, --no-verbose	turn off verbosity, without being quiet
--report-speed=TYPE	output bandwidth as TYPE. TYPE can be bits
-i, --input-file=FILE	download URLs found in local or external FILE
-F, --force-html	treat input file as HTML
-B, --base=URL	resolves HTML input-file links (-i -F)
	relative to URL
--config=FILE	specify config file to use
--no-config	do not read any config file
--rejected-log=FILE	log reasons for URL rejection to FILE
Download:	
-t, --tries=NUMBER	set number of retries to NUMBER (0 unlimited)
--retry-connrefused	retry even if connection is refused
--retry-on-http-error=ERRORS	comma-separated list of HTTP errors to
retry	
-O, --output-document=FILE	write documents to FILE
-nc, --no-clobber	skip downloads that would download to
	existing files (overwriting them)
--no-netrc	don't try to obtain credentials
from .netrc	
-c, --continue	resume getting a partially-downloaded file
--start-pos=OFFSET	start downloading from zero-based position
OFFSET	
--progress=TYPE	select progress gauge type
--show-progress	display the progress bar in any verbosity
mode	
-N, --timestamping	don't re-retrieve files unless newer
than	local
--no-if-modified-since	don't use conditional if-modified-since
get	
--no-use-server-timestamps	requests in timestamping mode
timestamp by	don't set the local file's
	the one on the server
-S, --server-response	print server response
--spider	don't download anything
-T, --timeout=SECONDS	set all timeout values to SECONDS
--dns-timeout=SECS	set the DNS lookup timeout to SECS
--connect-timeout=SECS	set the connect timeout to SECS
--read-timeout=SECS	set the read timeout to SECS
-w, --wait=SECONDS	wait SECONDS between retrievals
--waitretry=SECONDS	wait 1..SECONDS between retries of a
retrieval	
--random-wait	wait from 0.5*WAIT...1.5*WAIT secs between
retrievals	
--no-proxy	explicitly turn off proxy
-Q, --quota=NUMBER	set retrieval quota to NUMBER
--bind-address=ADDRESS	bind to ADDRESS (hostname or IP) on local
host	
--limit-rate=RATE	limit download rate to RATE
--no-dns-cache	disable caching DNS lookups
--restrict-file-names=OS	restrict chars in file names to ones OS
allows	
--ignore-case	ignore case when matching files/directories
-4, --inet4-only	connect only to IPv4 addresses
-6, --inet6-only	connect only to IPv6 addresses
--prefer-family=FAMILY	connect first to addresses of specified
family,	
	one of IPv6, IPv4, or none
--user=USER	set both ftp and http user to USER
--password=PASS	set both ftp and http password to PASS
--ask-password	prompt for passwords
--use-askpass=COMMAND	specify credential handler for requesting

	username and password. If no COMMAND is specified the WGET_ASKPASS or the
SSH_ASKPASS	environment variable is used.
--no-iri	turn off IRI support
--local-encoding=ENC	use ENC as the local encoding for IRIs
--remote-encoding=ENC	use ENC as the default remote encoding
--unlink	remove file before clobber
--xattr	turn on storage of metadata in extended file
attributes	
Directories:	
-nd, --no-directories	don't create directories
-x, --force-directories	force creation of directories
-nH, --no-host-directories	don't create host directories
--protocol-directories	use protocol name in directories
-P, --directory-prefix=PREFIX	save files to PREFIX/..
--cut-dirs=NUMBER	ignore NUMBER remote directory components
HTTP options:	
--http-user=USER	set http user to USER
--http-password=PASS	set http password to PASS
--no-cache	disallow server-cached data
--default-page=NAME	change the default page name (normally this is 'index.html'.)
-E, --adjust-extension	save HTML/CSS documents with proper
extensions	
--ignore-length	ignore 'Content-Length' header
field	
--header=STRING	insert STRING among the headers
--compression=TYPE	choose compression, one of auto, gzip and
none. (default: none)	
--max-redirect	maximum redirections allowed per page
--proxy-user=USER	set USER as proxy username
--proxy-password=PASS	set PASS as proxy password
--referer=URL	include 'Referer: URL' header in
HTTP request	
--save-headers	save the HTTP headers to file
-U, --user-agent=AGENT	identify as AGENT instead of Wget/VERSION
--no-http-keep-alive	disable HTTP keep-alive (persistent
connections)	
--no-cookies	don't use cookies
--load-cookies=FILE	load cookies from FILE before session
--save-cookies=FILE	save cookies to FILE after session
--keep-session-cookies	load and save session (non-permanent) cookies
--post-data=STRING	use the POST method; send STRING as the data
--post-file=FILE	use the POST method; send contents of FILE
--method=HTTPMethod	use method "HTTPMethod" in the request
--body-data=STRING	send STRING as data. --method MUST be set
--body-file=FILE	send contents of FILE. --method MUST be set
--content-disposition	honor the Content-Disposition header when
	choosing local file names (EXPERIMENTAL)
--content-on-error	output the received content on server errors
--auth-no-challenge	send Basic HTTP authentication information
	without first waiting for the server's
	challenge
HTTPS (SSL/TLS) options:	
--secure-protocol=PR	choose secure protocol, one of auto, SSLv2,
	SSLv3, TLSv1, TLSv1_1, TLSv1_2 and PFS
--https-only	only follow secure HTTPS links
--no-check-certificate	don't validate the server's
certificate	
--certificate=FILE	client certificate file

--certificate-type=TYPE	client certificate type, PEM or DER
--private-key=FILE	private key file
--private-key-type=TYPE	private key type, PEM or DER
--ca-certificate=FILE	file with the bundle of CAs
--ca-directory=DIR	directory where hash list of CAs is stored
--crl-file=FILE	file with bundle of CRLs
--pinnedpubkey=FILE/HASHES	Public key (PEM/DER) file, or any number of base64 encoded sha256 hashes preceded by 'sha256/' and separated by ' ' to verify peer against
--random-file=FILE	file with random data for seeding the SSL PRNG
--ciphers=STR	Set the priority string (GnuTLS) or cipher list string (OpenSSL) directly.
secure-protocol.	Use with care. This option overrides --
on the specific SSL/TLS engine.	The format and syntax of this string depend
HSTS options:	
--no-hsts	disable HSTS
--hsts-file	path of HSTS database (will override default)
FTP options:	
--ftp-user=USER	set ftp user to USER
--ftp-password=PASS	set ftp password to PASS
--no-remove-listing	don't remove '.listing' files
--no-glob	turn off FTP file name globbing
--no-passive-ftp	disable the "passive" transfer mode
--preserve-permissions	preserve remote file permissions
--retr-symlinks	when recursing, get linked-to files (not dir)
FTPS options:	
--ftps-implicit	use implicit FTPS (default port is 990)
--ftps-resume-ssl	resume the SSL/TLS session started in the control connection when opening a data connection
--ftps-clear-data-connection	cipher the control channel only; all the data will be in plaintext
--ftps-fallback-to-ftp	fall back to FTP if FTPS is not supported in the target server
WARC options:	
--warc-file=FILENAME	save request/response data to a .warc.gz file
--warc-header=STRING	insert STRING into the warcinfo record
--warc-max-size=NUMBER	set maximum size of WARC files to NUMBER
--warc-cdx	write CDX index files
--warc-dedup=FILENAME	do not store records listed in this CDX file
--no-warc-compression	do not compress WARC files with GZIP
--no-warc-digests	do not calculate SHA1 digests
--no-warc-keep-log	do not store the log file in a WARC record
--warc-tempdir=DIRECTORY	location for temporary files created by the WARC writer
Recursive download:	
-r, --recursive	specify recursive download
-l, --level=NUMBER	maximum recursion depth (inf or 0 for infinite)
--delete-after	delete files locally after downloading them
-k, --convert-links	make links in downloaded HTML or CSS point to local files
--convert-file-only	convert the file part of the URLs only
(usually known as the basename)	

	--backups=N	before writing file X, rotate up to N backup
files		
-K,	--backup-converted	before converting file X, back up as X.orig
-m,	--mirror	shortcut for -N -r -l inf --no-remove-listing
-p,	--page-requisites	get all images, etc. needed to display HTML
page		
	--strict-comments	turn on strict (SGML) handling of HTML
comments		

Recursive accept/reject:

-A,	--accept=LIST	comma-separated list of accepted extensions
-R,	--reject=LIST	comma-separated list of rejected extensions
	--accept-regex=REGEX	regex matching accepted URLs
	--reject-regex=REGEX	regex matching rejected URLs
	--regex-type=TYPE	regex type (posix pcre)
-D,	--domains=LIST	comma-separated list of accepted domains
	--exclude-domains=LIST	comma-separated list of rejected domains
	--follow-ftp	follow FTP links from HTML documents
	--follow-tags=LIST	comma-separated list of followed HTML tags
	--ignore-tags=LIST	comma-separated list of ignored HTML tags
-H,	--span-hosts	go to foreign hosts when recursive
-L,	--relative	follow relative links only
-I,	--include-directories=LIST	list of allowed directories
	--trust-server-names	use the name specified by the redirection URL's last component
-X,	--exclude-directories=LIST	list of excluded directories
-np,	--no-parent	don't ascend to the parent directory

Email bug reports, questions, discussions to <bug-wget@gnu.org>
 and/or open issues at <https://savannah.gnu.org/bugs/?func=additem&group=wget>.
 (base) **student@bioinfo-Precision-T5600**:~\$ pipe --help

Command 'pipe'; not found, did you mean:

```
command 'piper' from deb piper (0.4-1)
command 'spipe' from deb spiped (1.6.0-5)
command 'cpipe' from deb cpipe (3.0.1-2)
command 'vipe' from deb moreutils (0.63-1)
command 'zpipe' from deb opencaster (3.2.2+dfsg-1.1build2)
command 'pipx' from deb pipx (0.12.3.1-2ubuntu1)
command 'pip' from deb python3-pip (20.0.2-5ubuntu1.10)
command 'ipe' from deb ipe (7.2.13-2build1)
command 'dpipe' from deb vde2 (2.3.2+r586-2.2build1)
command 'pip3' from deb python3-pip (20.0.2-5ubuntu1.10)
command 'wipe' from deb wipe (0.24-6)
```

Try: sudo apt install <deb name>

(base) **student@bioinfo-Precision-T5600**:~\$ grep --help
 Usage: grep [OPTION]... PATTERNS [FILE]...
 Search for PATTERNS in each FILE.
 Example: grep -i 'hello world' menu.h main.c
 PATTERNS can contain multiple patterns separated by newlines.

Pattern selection and interpretation:

-E,	--extended-regexp	PATTERNS are extended regular expressions
-F,	--fixed-strings	PATTERNS are strings
-G,	--basic-regexp	PATTERNS are basic regular expressions
-P,	--perl-regexp	PATTERNS are Perl regular expressions
-e,	--regexp=PATTERNS	use PATTERNS for matching
-f,	--file=FILE	take PATTERNS from FILE
-i,	--ignore-case	ignore case distinctions in patterns and data
	--no-ignore-case	do not ignore case distinctions (default)
-w,	--word-regexp	match only whole words

-x, --line-regexp match only whole lines
 -z, --null-data a data line ends in 0 byte, not newline

Miscellaneous:

-s, --no-messages suppress error messages
 -v, --invert-match select non-matching lines
 -V, --version display version information and exit
 --help display this help text and exit

Output control:

-m, --max-count=NUM stop after NUM selected lines
 -b, --byte-offset print the byte offset with output lines
 -n, --line-number print line number with output lines
 --line-buffered flush output on every line
 -H, --with-filename print file name with output lines
 -h, --no-filename suppress the file name prefix on output
 --label=LABEL use LABEL as the standard input file name prefix
 -o, --only-matching show only nonempty parts of lines that match
 -q, --quiet, --silent suppress all normal output
 --binary-files=TYPE assume that binary files are TYPE;
 TYPE is 'binary', 'text', or

'without-match'

-a, --text equivalent to --binary-files=text
 -I equivalent to --binary-files=without-match
 -d, --directories=ACTION how to handle directories;
 ACTION is 'read', 'recurse', or

'skip'

-D, --devices=ACTION how to handle devices, FIFOs and sockets;
 ACTION is 'read' or 'skip';
 -r, --recursive like --directories=recurse
 -R, --dereference-recursive likewise, but follow all symlinks
 --include=GLOB search only files that match GLOB (a file pattern)
 --exclude=GLOB skip files that match GLOB
 --exclude-from=FILE skip files that match any file pattern from FILE
 --exclude-dir=GLOB skip directories that match GLOB
 -L, --files-without-match print only names of FILES with no selected lines
 -l, --files-with-matches print only names of FILES with selected lines
 -c, --count print only a count of selected lines per FILE
 -T, --initial-tab make tabs line up (if needed)
 -Z, --null print 0 byte after FILE name

Context control:

-B, --before-context=NUM print NUM lines of leading context
 -A, --after-context=NUM print NUM lines of trailing context
 -C, --context=NUM print NUM lines of output context
 -NUM same as --context=NUM
 --color[=WHEN],
 --colour[=WHEN] use markers to highlight the matching strings;
 WHEN is 'always', 'never', or

'auto'

-U, --binary do not strip CR characters at EOL (MSDOS/Windows)

When FILE is '-', read standard input. With no FILE, read
 '-'.
 recursive, '-' otherwise. With fewer than two FILES, assume -h.
 Exit status is 0 if any line (or file if -L) is selected, 1 otherwise;
 if any error occurs and -q is not given, the exit status is 2.

Report bugs to: bug-grep@gnu.org

GNU grep home page: <<http://www.gnu.org/software/grep/>>

General help using GNU software: <<https://www.gnu.org/gethelp/>>

(base) **student@bioinfo-Precision-T5600**~\$ sed --help

Usage: sed [OPTION]... {script-only-if-no-other-script} [input-file]...

```

-n, --quiet, --silent
    suppress automatic printing of pattern space
    --debug
        annotate program execution
-e script, --expression=script
    add the script to the commands to be executed
-f script-file, --file=script-file
    add the contents of script-file to the commands to be executed
--follow-symlinks
    follow symlinks when processing in place
-i[SUFFIX], --in-place[=SUFFIX]
    edit files in place (makes backup if SUFFIX supplied)
-l N, --line-length=N
    specify the desired line-wrap length for the 's' command
--posix
    disable all GNU extensions.
-E, -r, --regexp-extended
    use extended regular expressions in the script
    (for portability use POSIX -E).
-s, --separate
    consider files as separate rather than as a single,
    continuous long stream.
    --sandbox
        operate in sandbox mode (disable e/r/w commands).
-u, --unbuffered
    load minimal amounts of data from the input files and flush
    the output buffers more often
-z, --null-data
    separate lines by NUL characters
    --help
        display this help and exit
    --version
        output version information and exit

```

If no -e, --expression, -f, or --file option is given, then the first non-option argument is taken as the sed script to interpret. All remaining arguments are names of input files; if no input files are specified, then the standard input is read.

GNU sed home page: <<https://www.gnu.org/software/sed/>>.

General help using GNU software: <<https://www.gnu.org/gethelp/>>.

E-mail bug reports to: <bug-sed@gnu.org>.

(base) **student@bioinfo-Precision-T5600**:~\$ ~^C

(base) **student@bioinfo-Precision-T5600**:~\$