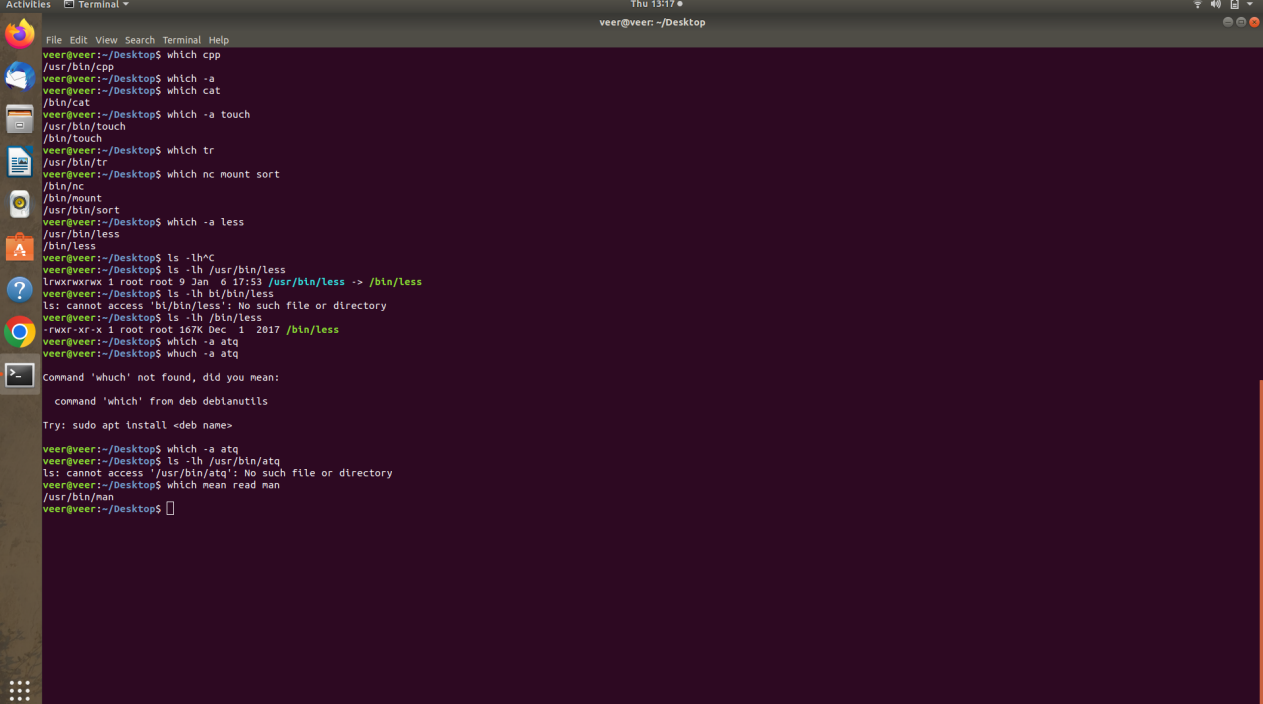


. WHICH COMMAND

WHICH command in linux is a command which is used to locate the executable file associated with the given command by searching it in the path environment variable . it has three return status as follows : 0 : if all specified commands are found and executable .

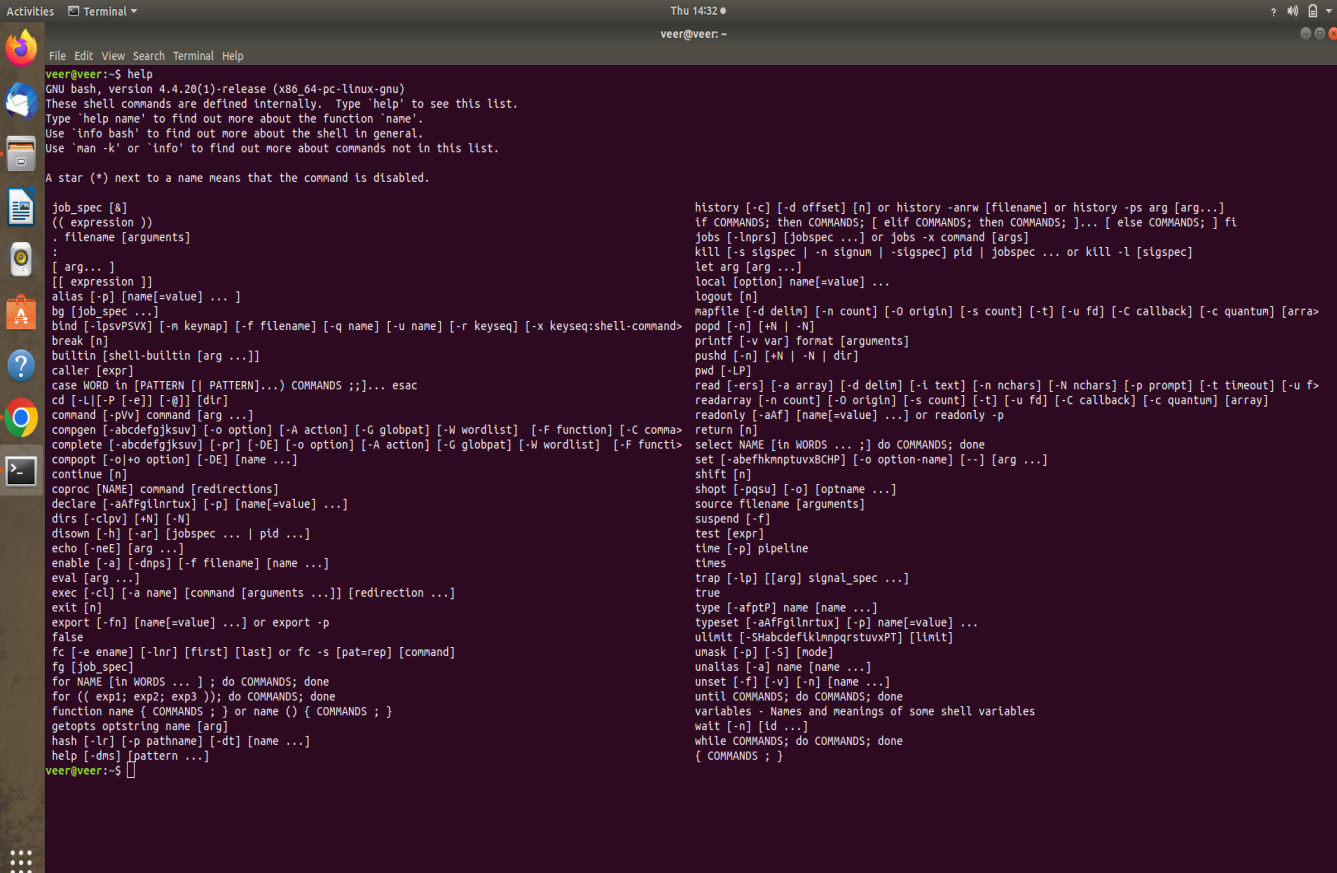


```
Activities Terminal
File Edit View Search Terminal Help
veer@veer: ~/Desktop
veer@veer:~/Desktop$ which cpp
/usr/bin/cpp
veer@veer:~/Desktop$ which -a
veer@veer:~/Desktop$ which cat
/bin/cat
veer@veer:~/Desktop$ which -a touch
/usr/bin/touch
/bin/touch
veer@veer:~/Desktop$ which tr
/usr/bin/tr
veer@veer:~/Desktop$ which nc mount sort
/bin/nc
/bin/mount
/usr/bin/sort
veer@veer:~/Desktop$ which -a less
/usr/bin/less
/bin/less
veer@veer:~/Desktop$ ls -lhC
veer@veer:~/Desktop$ ls -lh /usr/bin/less
lrwxrwxrwx 1 root root 9 Jan 6 17:53 /usr/bin/less -> /bin/less
veer@veer:~/Desktop$ ls -lh /bin/less
ls: cannot access '/bin/less': No such file or directory
veer@veer:~/Desktop$ ls -lh /bin/less
-rwxr-xr-x 1 root root 167K Dec 1 2017 /bin/less
veer@veer:~/Desktop$ which -a atq
veer@veer:~/Desktop$ which -a atq
Command 'whuch' not found, did you mean:
  command 'which' from deb debianutils
Try: sudo apt install <deb name>
veer@veer:~/Desktop$ which -a atq
veer@veer:~/Desktop$ ls -lh /usr/bin/atq
ls: cannot access '/usr/bin/atq': No such file or directory
veer@veer:~/Desktop$ which mean read man
/usr/bin/man
veer@veer:~/Desktop$
```

. HELP COMMAND

The help command

This is the command which is used for listing all possible commands that are pre - installed in Ubuntu . launch the terminal by pressing CTRL+ALT+T or just click on the terminal icon in the task bar . simply type help in the terminal and press enter key .



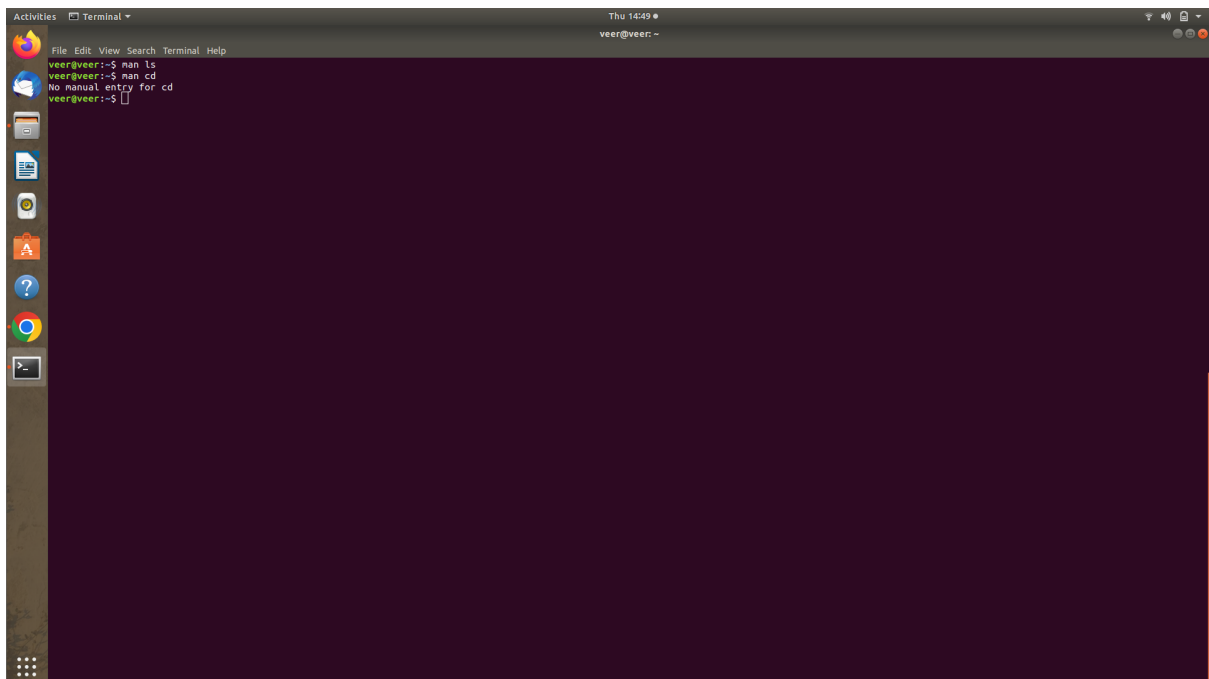
```
Activities Terminal
Thu 14:32
veer@veer: ~$ help
GNU bash, version 4.4.20(1)-release (x86_64-pc-linux-gnu)
These shell commands are defined internally. Type 'help' to see this list.
Type 'help name' to find out more about the function 'name'.
Use 'info bash' to find out more about the shell in general.
Use 'man -k' or 'info' to find out more about commands not in this list.

A star (*) next to a name means that the command is disabled.

job_spec [&]
(( expression ))
. filename [arguments]
:
[ arg... ]
[[ expression ]]
alias [-p] [name[=value] ... ]
bg [job_spec ...]
bind [-lpsvPSVX] [-m keymap] [-f filename] [-q name] [-u name] [-r keyseq] [-x keyseq:shell-command]
break [n]
builtin [shell-builtin [arg ...]]
caller [expr]
case WORD in [PATTERN] [[ PATTERN]...] COMMANDS ;;)... esac
cd [-L][-P][-e]] [-@]] [dir]
command [-p] command [arg ...]
compgen [-abdefgjkuv] [-o option] [-A action] [-G globpat] [-W wordlist] [-F function] [-C command]
complete [-abdefgjkuv] [-pr] [-DE] [-o option] [-A action] [-G globpat] [-W wordlist] [-F function]
compgot [-o] [-o option] [-DE] [name ...]
continue [n]
coproc [NAME] command [redirections]
declare [-aAfFgIlNrtux] [-p] [name[=value] ...]
dirs [-clpw] [+N] [-N]
disown [-h] [-ar] [jobspec ...] pid ...]
echo [-neE] [arg ...]
enable [-a] [-dnps] [-f filename] [name ...]
eval [arg ...]
exec [-cl] [-a name] [command [arguments ...]] [redirection ...]
exit [n]
export [-fn] [name[=value] ...] or export -p
false
fc [-e name] [-lnr] [flrst] [last] or fc -s [pat=rep] [command]
fg [job_spec]
for NAME [in WORDS ... ] : do COMMANDS; done
for (( exp1; exp2; exp3 )); do COMMANDS; done
function name { COMMANDS ; } or name () { COMMANDS ; }
getopts optstring name [arg]
hash [-lr] [-p pathname] [-dt] [name ...]
help [-dms] [pattern ...]
history [-c] [-d offset] [n] or history -anrw [filename] or history -ps arg [arg...]
if COMMANDS; then COMMANDS; [ elif COMMANDS; then COMMANDS; ]... [ else COMMANDS; ] fi
jobs [-lnprs] [jobspec ...] or jobs -x command [args]
kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill -l [sigspec]
let arg [arg ...]
local [option] name[=value] ...
logout [n]
mapfile [-d delim] [-n count] [-O origin] [-s count] [-t] [-u fd] [-C callback] [-c quantum] [arra>
popd [-n] [+N | -N]
printf [-v var] format [arguments]
pushd [-n] [+N | -N | dir]
pwd [-LP]
read [-ers] [-a array] [-d delim] [-l text] [-n nchars] [-N nchars] [-p prompt] [-t timeout] [-u f>
readarray [-n count] [-O origin] [-s count] [-t] [-u fd] [-C callback] [-c quantum] [array]
readonly [-aaf] [name[=value] ...] or readonly -p
return [n]
select NAME [in WORDS ... ] do COMMANDS; done
set [-abefhkmnptuvxBCHP] [-o option-name] [--] [arg ...]
shift [n]
shopt [-psu] [-o] [optname ...]
source filename [arguments]
suspend [-f]
test [expr]
time [-p] pipeline
times
trap [-lp] [[arg] signal_spec ...]
true
type [-afptP] name [name ...]
typeset [-aAfFgIlNrtux] [-p] name[=value] ...
ulimit [-SHabdeflklmnpqrstuvxPT] [limit]
unalias [-p] [-S] [mode]
unalias [-a] name [name ...]
unset [-f] [-v] [-n] [name ...]
until COMMANDS; do COMMANDS; done
variables - Names and meanings of some shell variables
wait [-n] [id ...]
while COMMANDS; do COMMANDS; done
{ COMMANDS ; }
```

. MAN COMMAND

MAN command in linux is used to display the user manual of any command that we can run on the terminal . It provides a detailed view of the command which includes NAME , SYNOPSIS , DESCRIPTIONS , OPTIONS , EXIT STATUS , RETURN VALUES , ERRORS , FILES , VERSIONS , EXAMPLES , AUTHORS and SEE ALSO .



```
Activities Terminal
File Edit View Search Terminal Help
veer@veer:~$ man ls
veer@veer:~$ man cd
No manual entry for cd
veer@veer:~$
```

The screenshot shows a Linux desktop environment with a terminal window open. The terminal has a dark purple background. The command history shows the user running 'man ls' and 'man cd', with the latter resulting in 'No manual entry for cd'. The terminal window title is 'Terminal' and the system clock shows 'Thu 14:49'.

```
Activities Terminal Thu 14:48 veer@veer: -
File Edit View Search Terminal Help
-T, --tabsize=COLS
    assume tab stops at each COLS instead of 8
-u
    with -lt: sort by, and show, access time; with -li: 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
-l
    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).

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).

AUTHOR
    Written by Richard M. Stallman and David Mackenzie.

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

COPYRIGHT
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    This is free software; you are free to change and redistribute it. There is NO WARRANTY, to the extent permitted by law.

SEE ALSO
    Full documentation at: <http://www.gnu.org/software/coreutils/ls>
    or available locally via: info '(coreutils) ls invocation'

GNU coreutils 8.28
Manual page ls(1) line 153/286 (END) (press h for help or q to quit) LS(1)
```

```
Activities Terminal Thu 14:48 veer@veer: -
File Edit View Search Terminal Help
LS(1) User Commands LS(1)
NAME
    ls - list directory contents
SYNOPSIS
    ls [OPTION]... [FILE]...
DESCRIPTION
    List information about the FILES (the current directory by default). Sort entries alphabetically if none of -ctuvSUX 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
    scale sizes by SIZE before printing them; e.g., '--block-size=M' prints sizes in units of 1,048,576 bytes; 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 -li: 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 -n, horizontal -x, long -l, single-column -l, verbose -l, vertical -C
Manual page ls(1) line 1 (press h for help or q to quit)
```

```
Activities Terminal Thu 14:49 veer@veer:~  
File Edit View Search Terminal Help  
File: dir, Node: Top, This is the top of the INFO tree.  
This is the Info main menu (aka directory node).  
A few useful Info commands:  
'q' quits;  
'H' lists all Info commands;  
'h' starts the Info tutorial;  
'nTextinfo RET' visits the Texinfo manual, etc.  
* Menu:  
Archiving  
* Shar utilities: (sharutils). Shell archiver, uuencode/uudecode.  
Basics  
* Common options: (coreutils)Common options.  
* Coreutils: (coreutils). Core GNU (file, text, shell) utilities.  
* Date input formats: (coreutils)Date input formats.  
* Ed: (ed). The GNU line editor  
* File permissions: (coreutils)File permissions.  
Access modes.  
* Finding files: (find). Operating on files matching certain criteria.  
C++ libraries  
* autosprintf: (autosprintf). Support for printf format strings in C++.  
Compression  
* Gzip: (gzip). General (de)compression of files (Lzw).  
Development  
* SSIP: (ssip). Speech Synthesis Interface Protocol.  
* Speech Dispatcher: (speech-dispatcher). Speech Dispatcher.  
DOS  
* Mtools: (mtools). Mtools: utilities to access DOS disks in Unix.  
Editors  
* nano: (nano). Small and friendly text editor.  
GNU Gettext Utilities  
* autopoint: (gettext)autopoint Invocation.  
Copy gettext infrastructure.  
* envsubst: (gettext)envsubst Invocation.  
Expand environment variables.  
* gettextize: (gettext)gettextize Invocation.  
Prepare a package for gettext.  
* gettext: (gettext). GNU gettext utilities.  
* ISO3166: (gettext)Country Codes.  
ISO 3166 country codes.  
* ISO639: (gettext)Language Codes.  
ISO 639 language codes.  
Welcome to info version 6.5. Type h for help, h for tutorial.
```

```
Activities Terminal Thu 14:49 veer@veer:~  
File Edit View Search Terminal Help  
BASH(1) General Commands Manual BASH(1)  
NAME  
bash - GNU Bourne-Again Shell  
SYNOPSIS  
bash [options] [command_string | file]  
COPYRIGHT  
Bash is Copyright (C) 1989-2016 by the Free Software Foundation, Inc.  
DESCRIPTION  
Bash is an sh-compatible command language interpreter that executes commands read from the standard input or from a file. Bash also incorporates useful features from the Korn and C shells (ksh and csh).  
Bash is intended to be a conformant implementation of the Shell and Utilities portion of the IEEE POSIX specification (IEEE Standard 1003.1). Bash can be configured to be POSIX-conformant by default.  
OPTIONS  
All of the single-character shell options documented in the description of the set builtin command can be used as options when the shell is invoked. In addition, bash interprets the following options when it is invoked:  
-c If the -c option is present, then commands are read from the first non-option argument command_string. If there are arguments after the command_string, the first argument is assigned to $0 and any remaining arguments are assigned to the positional parameters. The assignment to $0 sets the name of the shell, which is used in warning and error messages.  
-l If the -l option is present, the shell is interactive.  
-L Make bash act as if it had been invoked as a login shell (see INVOCATION below).  
-r If the -r option is present, the shell becomes restricted (see RESTRICTED SHELL below).  
-s If the -s option is present, or if no arguments remain after option processing, then commands are read from the standard input. This option allows the positional parameters to be set when invoking an interactive shell.  
-v Print shell input lines as they are read.  
-x Print commands and their arguments as they are executed.  
-D A list of all double-quoted strings preceded by $ is printed on the standard output. These are the strings that are subject to language translation when the current locale is not C or POSIX. This implies the -a option; no commands will be executed.  
[--]O [shopt_option]  
shopt_option is one of the shell options accepted by the shopt builtin (see SHELL BUILTIN COMMANDS below). If shopt_option is present, -O sets the value of that option; +O unsets it. If shopt_option is not supplied, the names and values of the shell options accepted by shopt are printed on the standard output. If the invocation option is +O, the output is displayed in a format that may be reused as input.  
-- A -- signals the end of options and disables further option processing. Any arguments after the -- are treated as filenames and arguments. An argument of - is equivalent to --.  
Bash also interprets a number of multi-character options. These options must appear on the command line before the single-character options to be recognized.  
--debugger  
Arrange for the debugger profile to be executed before the shell starts. Turns on extended debugging mode (see the description of the extdebug option to the shopt builtin below).  
--dump-po-strings  
Equivalent to -D, but the output is in the GNU gettext po (portable object) file format.  
--dump-strings  
Equivalent to -D.  
--help Display a usage message on standard output and exit successfully.  
--init-file file  
--rcfile file  
Execute commands from file instead of the system wide initialization file /etc/bash.bashrc and the standard personal initialization file ~/.bashrc if the shell is interactive (see INVOCATION below).  
--login  
Manual page bash(1) line 1 (press h for help or q to quit)
```