

```
komvl@komvl-VirtualBox:~$ man -h
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  -c, --catman                 used by catman to reformat out of date cat pages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
```

```
komvl@komvl-VirtualBox:~$ which man java
/usr/bin/man
```

Fg

```
/usr/bin/man
komvl@komvl-VirtualBox:~$ fg --help
fg: fg [job_spec]
    Move job to the foreground.

Place the job identified by JOB_SPEC in the foreground, making it the
current job. If JOB_SPEC is not present, the shell's notion of the
current job is used.

Exit Status:
    Status of command placed in foreground, or failure if an error occurs.
```

```
komvl@komvl-VirtualBox:~$ bg --help
bg: bg [job_spec ...]
    Move jobs to the background.

Place the jobs identified by each JOB_SPEC in the background, as if they
had been started with '&'. If JOB_SPEC is not present, the shell's notion
of the current job is used.

Exit Status:
    Returns success unless job control is not enabled or an error occurs.
```

ps

```
komvl@komvl-VirtualBox:~$ 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).

For more details see ps(1).

```
komvl@komvl-VirtualBox:~$ jobs
```

```
[1]  Stopped                  less textnano
[2]  Stopped                  less textnano
[3]- Stopped                  ls --color=auto -la ~/dev | less  (wd: ~/OP3)
[4]+ Stopped                  ls --color=auto -la ~/OP3 | less  (wd: ~/OP3)
```

```
komvl@komvl-VirtualBox:~$
```

```
komvl@komvl-VirtualBox:~$
```

```
komvl@komvl-VirtualBox:~$ 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.

```
komvl@komvl-VirtualBox:~$
```

In

```
komvl@komvl-VirtualBox:~$ ln --help
Usage: ln [OPTION]... [-T] TARGET LINK_NAME
      or: ln [OPTION]... TARGET
      or: ln [OPTION]... TARGET... DIRECTORY
      or: ln [OPTION]... -t DIRECTORY TARGET...
In the 1st form, create a link to TARGET with the name LINK_NAME.
In the 2nd form, create a link to TARGET in the current directory.
In the 3rd and 4th forms, create links to each TARGET in DIRECTORY.
Create hard links by default, symbolic links with --symbolic.
By default, each destination (name of new link) should not already exist.
When creating hard links, each TARGET must exist. Symbolic links
can hold arbitrary text; if later resolved, a relative link is
interpreted in relation to its parent 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
-d, -F, --directory      allow the superuser to attempt to hard link
                           directories (note: will probably fail due to
                           system restrictions, even for the superuser)
-f, --force               remove existing destination files
-i, --interactive         prompt whether to remove destinations
-L, --logical             dereference TARGETs that are symbolic links
-n, --no-dereference      treat LINK_NAME as a normal file if
                           it is a symbolic link to a directory
-P, --physical            make hard links directly to symbolic links
-r, --relative            create symbolic links relative to link location
-s, --symbolic            make symbolic links instead of hard links
-S, --suffix=SUFFIX       override the usual backup suffix
```

Stat

```
komvl@komvl-VirtualBox:~$ ln --help
Usage: ln [OPTION]... [-T] TARGET LINK_NAME
      or: ln [OPTION]... TARGET
      or: ln [OPTION]... TARGET... DIRECTORY
      or: ln [OPTION]... -t DIRECTORY TARGET...
In the 1st form, create a link to TARGET with the name LINK_NAME.
In the 2nd form, create a link to TARGET in the current directory.
In the 3rd and 4th forms, create links to each TARGET in DIRECTORY.
Create hard links by default, symbolic links with --symbolic.
By default, each destination (name of new link) should not already exist.
When creating hard links, each TARGET must exist. Symbolic links
can hold arbitrary text; if later resolved, a relative link is
interpreted in relation to its parent 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
-d, -F, --directory      allow the superuser to attempt to hard link
```

Создание директории, версия.

```
komvl@komvl-VirtualBox:~/OP4$ uname --version
uname (GNU coreutils) 8.32
Copyright (C) 2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by David MacKenzie.
komvl@komvl-VirtualBox:~/OP4$
```

Запись версии в файл

```
komvl@komvl-VirtualBox:~/OP4$ touch text
komvl@komvl-VirtualBox:~/OP4$ uname --version >> text
komvl@komvl-VirtualBox:~/OP4$ cat text
uname (GNU coreutils) 8.32
Copyright (C) 2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by David MacKenzie.
komvl@komvl-VirtualBox:~/OP4$
```

А

```
Written by David MacKenzie.
komvl@komvl-VirtualBox:~/OP4$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin
komvl@komvl-VirtualBox:~/OP4$ echo $PATH >> text
komvl@komvl-VirtualBox:~/OP4$ cat text
uname (GNU coreutils) 8.32
Copyright (C) 2020 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by David MacKenzie.
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin
komvl@komvl-VirtualBox:~/OP4$ uname
Linux
komvl@komvl-VirtualBox:~/OP4$ uname > text2
komvl@komvl-VirtualBox:~/OP4$ cat text2
Linux
komvl@komvl-VirtualBox:~/OP4$ chmod o-r text
komvl@komvl-VirtualBox:~/OP4$ ls -al text
-rw-rw---- 1 komvl komvl 416 дек 13 16:06 text
komvl@komvl-VirtualBox:~/OP4$ S
```

```
komvl@komvl-VirtualBox:~/OP4$ ls -l
total 8
-rw-rw---- 1 komvl komvl 416 дек 13
-rw-rw-r-- 1 komvl komvl 6 дек 13
komvl@komvl-VirtualBox:~/OP4$
```

```
komvl@komvl-VirtualBox:~/OP4$ ps
  PID TTY          TIME CMD
 2927 pts/0        00:00:00 bash
 35161 pts/0        00:00:00 less
 35170 pts/0        00:00:00 less
 35325 pts/0        00:00:00 less
 35328 pts/0        00:00:00 less
 36009 pts/0        00:00:00 ps
komvl@komvl-VirtualBox:~/OP4$
```

```

komvl      36994      36539      0 61477  7344      0
komvl      36997      36539      0 87323  21440     0
komvl      37003      36670      0 58065   6360     0
komvl      37024      36670      0 203474 65216     0
komvl      37049      36539      0 87752  12988     0
komvl      37085      36940      0 43032   7284     0
komvl      37130      36539      0 88132  24680     0
root       37135         2      0      0      0      0
komvl      37157      36539      0 652020 27200     0
komvl      37189      36716      0 700508 56888     0
komvl      37237      36539      0 42916   6688     0
root       37330         2      0      0      0      0
komvl      37338      36670      0 127578 29440     0
komvl      37507      36539      4 144592 50248     0
komvl      37507      37507      0  4949   5324     0
komvl      37525      37525      0  5331   3644     0
komvl@komvl-VirtualBox:~$ kill -KILL 37189S

```

```

GNU nano 6.2                                text
c помощью nano редактирую файл прямо в терминале

[ Read 2 lines ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify

komvl@komvl-VirtualBox:~$ echo "любимое стихотворение: Села муха на варенье, во
т и все стихотворение." >> bigtext
komvl@komvl-VirtualBox:~$ nano bigtext

/etc/passwd
komvl@komvl-VirtualBox:~$ ls -l /etc/passwd
-rw-r--r-- 1 root root 2810 дек 12 21:09 /etc/passwd
komvl@komvl-VirtualBox:~$

```


no manual entry for help

```
komvl@komvl-VirtualBox:~$ help
```

GNU bash, version 5.1.16(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 [&]	history [-c] [-d offset] [n] or his>
((expression))	if COMMANDS; then COMMANDS; [elif >
. filename [arguments]	jobs [-lnprs] [jobspec ...] or jobs>
:	kill [-s sigspec -n signum -sig>
[arg...]	let arg [arg ...]
[[expression]]	local [option] name[=value] ...
alias [-p] [name[=value] ...]	logout [n]
bg [job_spec ...]	mapfile [-d delim] [-n count] [-O o>
bind [-lpsvPSVX] [-m keymap] [-f fil>	popd [-n] [+N -N]
break [n]	printf [-v var] format [arguments]
builtin [shell-builtin [arg ...]]	pushd [-n] [+N -N dir]
caller [expr]	pwd [-LP]
case WORD in [PATTERN [PATTERN]...>	read [-ers] [-a array] [-d delim] [>
cd [-L [-P [-e]] [-@]] [dir]	readarray [-d delim] [-n count] [-O>
command [-pVv] command [arg ...]	readonly [-aAf] [name[=value] ...] >
compgen [-abdefgjkusv] [-o option] >	return [n]
complete [-abdefgjkusv] [-pr] [-DEI>	select NAME [in WORDS ... ;] do COM>
compgen [-abdefgjkusv] [-o option] >	set [-abefhknostuvxPQU] [-o option>

```
komvl@komvl-VirtualBox:~/OP4$ echo hello
```

hello

```
komvl@komvl-VirtualBox:~/OP4$ hello = "Cavehuman"
```

Command 'hello' not found, but can be installed with:

```
sudo snap install hello # version 2.10, or
```

```
sudo apt install hello # version 2.10-2ubuntu4
```

```
sudo apt install hello-traditional # version 2.10-5
```

See 'snap info hello' for additional versions.

```
komvl@komvl-VirtualBox:~/OP4$ hello="ww"
```

```
komvl@komvl-VirtualBox:~/OP4$ echo $hello
```

ww

```
komvl@komvl-VirtualBox:~/OP4$
```

ww

```
komvl@komvl-VirtualBox:~/OP4$ echo $RANDOM
```

12099

```
komvl@komvl-VirtualBox:~/OP4$
```

HELLO

```
komvl@komvl-VirtualBox:~/OP4$ nano script
```

```
komvl@komvl-VirtualBox:~/OP4$ cat script
```

```
#!/bin/bash
```

```
echo "HELLO"
```

```
echo "WORLD"
```

Script is in file ~/script. Command not found

```
komvl@komvl-VirtualBox:~/OP4$ bash script34
```

HELLO

WORLD

```
komvl@komvl-VirtualBox:~/OP4$
```

Вывод имен пользователей

```
komvl@komvl-VirtualBox:~/OP4$ bash script34
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
```

```
komvl@komvl-VirtualBox:~/OP4$ cat script
cat: script: No such file or directory
komvl@komvl-VirtualBox:~/OP4$ cat script34
#!/bin/bash
index=1
while [[ $index < 5 ]]
do
echo $index
let "index=index+1"
done
komvl@komvl-VirtualBox:~/OP4$ bash script34
1
2
3
4
komvl@komvl-VirtualBox:~/OP4$
```