

**№4**

Unix

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-03-23



Linux

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shell: /bin/sh;

/bin/csh; /bin/ksh.

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- man
- cd
- pwd
- ls
- mkdir
- rm
- history











```

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 alpha-
    betically 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 change of file status informa-
        tion); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first

```



## /tmp

```
cd(1P)                                POSIX Programmer's Manual                                cd(1P)

PROLOG
    This manual page is part of the POSIX Programmer's Manual. The Linux implementation of
    this interface may differ (consult the corresponding Linux manual page for details of
    Linux behavior), or the interface may not be implemented on Linux.

NAME
    cd - change the working directory

SYNOPSIS
    cd [-L|-P] [directory]

    cd -

DESCRIPTION
    The cd utility shall change the working directory of the current shell execution environ-
    ment (see Section 2.12, Shell Execution Environment) by executing the following steps in
    sequence. (In the following steps, the symbol curpath represents an intermediate value
    used to simplify the description of the algorithm used by cd. There is no requirement
    that curpath be made visible to the application.)

    1. If no directory operand is given and the HOME environment variable is empty or unde-
       fined, the default behavior is implementation-defined and no further steps shall be
       taken.

    2. If no directory operand is given and the HOME environment variable is set to a non-
       empty value, the cd utility shall behave as if the directory named in the HOME envi-
       ronment variable was specified as the directory operand.

    3. If the directory operand begins with a <slash> character, set curpath to the operand
       and proceed to step 7.

    4. If the first component of the directory operand is dot or dot-dot, proceed to step 6.
```

## /tmp ls

```

in CDPATH until all pathnames have been tested.

6. Set curpath to the directory operand.

7. If the -P option is in effect, proceed to step 10. If curpath does not begin with a
<slash> character, set curpath to the string formed by the concatenation of the value
of PWD, a <slash> character if the value of PWD did not end with a <slash> character,
and curpath.

8. The curpath value shall then be converted to canonical form as follows, considering
each component from beginning to end, in sequence:

    a. Dot components and any <slash> characters that separate them from the next compo-
       nent shall be deleted.

    b. For each dot-dot component, if there is a preceding component and it is neither
       root nor dot-dot, then:

        i. If the preceding component does not refer (in the context of pathname resolu-
           tion with symbolic links followed) to a directory, then the cd utility shall
           display an appropriate error message and no further steps shall be taken.

        ii. The preceding component, all <slash> characters separating the preceding com-
            ponent from dot-dot, dot-dot, and all <slash> characters separating dot-dot
            from the following component (if any) shall be deleted.

    c. An implementation may further simplify curpath by removing any trailing <slash>
       characters that are not also leading <slash> characters, replacing multiple non-
       leading consecutive <slash> characters with a single <slash>, and replacing three
       or more leading <slash> characters with a single <slash>. If, as a result of this
       canonicalization, the curpath variable is null, no further steps shall be taken.

9. If curpath is longer than {PATH_MAX} bytes (including the terminating null) and the
   directory operand was not longer than {PATH_MAX} bytes (including the terminating
   null), then curpath shall be converted from an absolute pathname to an equivalent rel-
   ative pathname if possible. This conversion shall always be considered possible if the
   value of PWD, with a trailing <slash> added if it does not already have one, is an
   initial substring of curpath. Whether or not it is considered possible under other
   circumstances is unspecified. Implementations may also apply this conversion if cur-
   path is not longer than {PATH_MAX} bytes or the directory operand was longer than
   {PATH_MAX} bytes.

```

**ls -a   ls -F**

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ls -a

```
MODULE(1)                                User Commands                                MODULE(1)

NAME
    mkdir - make directories

SYNOPSIS
    mkdir [OPTION]... DIRECTORY...

DESCRIPTION
    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, with their file modes un-
        affected by any -m option.

    -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

AUTHOR
    Written by David MacKenzie.

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

## . 4: ls -a



ls -F

```

rmDir(1)                                User Commands                                rmDir(1)

NAME
    rmdir - remove empty directories

SYNOPSIS
    rmdir [OPTION]... DIRECTORY...

DESCRIPTION
    Remove the DIRECTORY(ies), if they are empty.

    --ignore-fail-on-non-empty
        ignore each failure to remove a non-empty directory

    -p, --parents
        remove DIRECTORY and its ancestors; e.g., 'rmdir -p a/b' is similar to 'rmdir a/b
        a'

    -v, --verbose
        output a diagnostic for every directory processed

    --help
        display this help and exit

    --version
        output version information and exit

AUTHOR
    Written by David MacKenzie.

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

SEE ALSO
    rmdir(2)

    Full documentation <https://www.gnu.org/software/coreutils/rmdir>
    or available locally via: info '(coreutils) rmdir invocation'

    Packaged by Gentoo (9.4 (p0))
    GNU/Linux 2023.05.01, GNU Emacs, GNU nano, etc.

```

,

/var/spool

cron

```
RM(1)                                User Commands                                RM(1)

NAME
  rm - remove files or directories

SYNOPSIS
  rm [OPTION]... [FILE]...

DESCRIPTION
  This manual page documents the GNU version of rm. rm removes each specified file. By default, it does not remove directories.

  If the -I or --interactive=once option is given, and there are more than three files or the -r, -R, or --recursive are given, then rm prompts the user for whether to proceed with the entire operation. If the response is not affirmative, the entire command is aborted.

  Otherwise, if a file is unwritable, standard input is a terminal, and the -f or --force option is not given, or the -i or --interactive=always option is given, rm prompts the user for whether to remove the file. If the response is not affirmative, the file is skipped.

OPTIONS
  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
```

## 2.4

```
aagorbachev@dk2n27 ~ $ man ls
aagorbachev@dk2n27 ~ $ man cd
aagorbachev@dk2n27 ~ $ man pws
Нет справочной страницы для pws
aagorbachev@dk2n27 ~ $ man cd
aagorbachev@dk2n27 ~ $ man mkdir
aagorbachev@dk2n27 ~ $ man rmdir
aagorbachev@dk2n27 ~ $ man rm
aagorbachev@dk2n27 ~ $ history
 1 cd
 2 pwd
 3 /usr/local
 4 cd -
 5 cd . .
 6 cd
 7 pwd
 8 /usr/local
 9 cd -
10 owd
11 pwd
12 ls
13 pwd
14 cd /
15 ls
16 ~
17 /etc
18 gsrt=u1~dy9\
19 pwd
20 cd /
21 ls
22 \\\\\\\\\\\\\\\
23 pwd
24 cd
25 pwd
26 cd
27 cd
```

```

52 git config --global user.name "<Alexsey Gorbachev>"
53 git config --global user.email "<alexg-2005@yandex.ru>"
54 git config --global core.quotepath false
55 git config --global init.defaultBranch master
56 git config --global core.autocrlf input
57 git config --global core.safecrlf warn
58 ssh-keygen -C "Alexsey Gorbachev <alexg-2005@yandex.ru>"
59 ssh-keygen -C "Alexsey Gorbachev <alexg-2005@yandex.ru>"
60 cat ~/.ssh/id_rsa.pub
61 mkdir -p ~/work/study/2023-2024/"Архитектура компьютера"
62 cd work/study/2023-2024/'Архитектура компьютера'
63 git clone --recursive git@github.com:gorbachev/study_2023-2024_arch--pc.git
64 git clone --recursive git@github.com:AGorbachev1/study_2023-2024_arch--pc.git
65 cd ~/work/study/2023-2024/"Архитектура компьютера"/study_2023-2024_arch--pc
66 rm package.json
67 echo arch-pc > COURSE
68 make
69 git commit -am 'feat(main): make course structure'
70 git commit -am 'feat(main): make course structure'
71 git add
72 git add .
73 git commit -am 'feat(main): make course structure'
74 git push
75 cd Downloads
76 cd ~/work/study/2023-2024/"Архитектура компьютера"/arch-pc
77 cd ~/work/study/2023-2024/"Архитектура компьютера"/study_2023-2024_arch--pc
78 git pull
79 cd ~/work/study/2023-2024/"Архитектура компьютера"/study_2023-2024_arch--pc/labs/lab03/report
80 cd ~/work/study/2023-2024/"Архитектура компьютера"/study_2023-2024_arch--pc/labs/lab03/report
81 make
82 make clean
83 gedit report.md
84 git add .
85 git commit -am 'feat(main): add files lab-3'
86 make
87 mkdir -p ~/work1/arch-pc/lab04
88 cd ~/work1/arch-pc/lab04
89 touch hello.asm
90 ls
91 gedit hello.asm
92 cat < /dev/null > hello.asm

```



newdir.

```
aagorbachev@dk2n27 ~ $ cd  
aagorbachev@dk2n27 ~ $ pwd  
/afs/.dk.sci.pfu.edu.ru/home/a/aagorbachev
```

. 9:

newdir

~/newdir

morefun.

```
aagorbatchev@dk2n27 ~ $ cd /tmp
```

. 10:

morefun

letters, memos, misk.

```
aagorbachev@dk2n27 /tmp $ ls
aagorbachev
askuznecova
gnome-desktop-thumbnailer-LDK7J2
krb5cc_5437_EAiiug
krb5cc_5437_fgknIi
krb5cc_5463_Qiwlfy
mozilla-temp-1078829588
mozilla-temp-1109262132
mozilla-temp-731208750
mozilla-temp-97634119
portage
pulse-PKdhtXMr18n
root
screen
sddm-:0-xXNOOP
sddm-auth-e3334d91-0c8b-4eaa-91ba-647ccecea5b9
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-colord.service-IKVqKH
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-polkit.service-u01mFR
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-power-profiles-daemon.service-oxj3Ef
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-systemd-logind.service-W85m8w
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-systemd-resolved.service-8C0Wph
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-systemd-timesyncd.service-cjhI2S
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-upower.service-rljqf
Temp-e2e918cd-c4c9-4d48-8a76-9b3429719095
tmpx-0
```



~/newdir/morefun

```
aagorbatchev@dk2n27 /tmp $ ls -la
.
..
aagorbatchev
askuznecova
.font-unix
gnome-desktop-thumbnailer-LDK7J2
.ICE-unix
krb5cc_5437_EAiug
krb5cc_5437_fgknIi
krb5cc_5463_Qiwlfy
mozilla-temp-1078829588
mozilla-temp-1109262132
mozilla-temp-731208750
mozilla-temp-97634119
```

. 12: newdir



man

ls

-

```

xauth_qm_jm1
.XIM-unix
aagorbatchev@dk2n27 /tmp $ ls -F
aagorbatchev/
askuznecova/
gnome-desktop-thumbnailer-LDK7J2/
krb5cc_5437_EAiug
krb5cc_5437_fgknIi
krb5cc_5463_Qiwlfy
mozilla-temp-1078829588
mozilla-temp-1109262132
mozilla-temp-731208750
mozilla-temp-97634119
portage/
pulse-PKdhtXMmr18n/
root/
screen/
sddm-:0-xXNOOP=
sddm-auth-e3334d91-0c8b-4eaa-91ba-647ccecea5b9=
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-color.service-IKVqKH/
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-polkit.service-u01mFR/
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-power-profiles-daemon.service-oxj3Ef/
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-systemd-logind.service-W85m8w/
systemd-private-0ef6b14b846044dbb81d2d1338a8e865-systemd-resolved.service-8C0Wph/

```

```
aagorbatchev@dk2n27 /tmp $ ls /var/spool
cups
aagorbatchev@dk2n27 /tmp $ cd
aagorbatchev@dk2n27 ~ $ ls
44 Architecture_PC  main.cpp  tmp  Документы  Музыка  Шаблоны
5 GNUstep          public   work  Загрузки  Общедоступные
6 main             public_html  Видео  Изображения  'Рабочий стол'
```

. 14: man ls

```

aagorbachev@dk2n27 /tmp $ ls /var/spool
cups
aagorbachev@dk2n27 /tmp $ cd
aagorbachev@dk2n27 ~ $ ls
44 Architecture_PC  main.cpp  tmp      Документы  Музыка  Шаблоны
5  GNUstep          public   work     Загрузки  Общедоступные
6  main            public_html  Видео    Изображения  'Рабочий стол'

```

. 15: -R, -recursive

ls -R



man

ls,

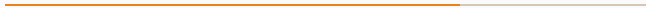
-

.

```
aagorbatchev@dk2n27 ~$ ls -l
итого 50
drwxr-xr-x 2 aagorbatchev studsci 2048 ноя 23 19:16 44
drwxr-xr-x 2 aagorbatchev studsci 2048 дек 8 16:42 5
drwxr-xr-x 2 aagorbatchev studsci 2048 дек 11 16:29 6
drwxr-xr-x 4 aagorbatchev studsci 2048 сен 28 12:43 Architecture_PC
drwxr-xr-x 3 aagorbatchev studsci 2048 дек 11 16:08 GNUstep
-rwxr-xr-x 1 aagorbatchev studsci 16104 сен 28 16:42 main
-rw-r--r-- 1 aagorbatchev studsci 173 сен 28 16:42 main.cpp
drwxr-xr-x 3 aagorbatchev root 2048 сен 5 20:23 public
lrwxr-xr-x 1 aagorbatchev root 18 фев 16 16:50 public_html -> public/public_html
drwxr-xr-x 2 aagorbatchev studsci 2048 дек 11 16:06 tmp
drwxr-xr-x 4 aagorbatchev studsci 2048 дек 11 16:24 work
drwxr-xr-x 2 aagorbatchev studsci 2048 сен 14 12:39 Видео
drwxr-xr-x 2 aagorbatchev studsci 2048 сен 14 12:39 Документы
drwxr-xr-x 2 aagorbatchev studsci 2048 мар 7 16:25 Загрузки
drwxr-xr-x 3 aagorbatchev studsci 2048 ноя 22 17:14 Изображения
drwxr-xr-x 2 aagorbatchev studsci 2048 сен 14 12:39 Музыка
```

. 16: –time-style=TIME\_STYLE





man

: cd, pwd, mkdir, rmdir, rm.

.

```
aagorbachev@dk2n27 ~$ mkdir newdir
aagorbachev@dk2n27 ~$ ls
44 Architecture_PC  main.cpp  public_html  Видео  Изображения  'Рабочий стол'
5  GNUstep          newdir   tmp          Документы  Музыка        Шаблоны
6  main            public   work         Загрузки  Общедоступные
```

. 17:      man cd

```
aagorbachev@dk2n27 ~ $ cd newdir  
aagorbachev@dk2n27 ~/newdir $ mkdir moreFun  
aagorbachev@dk2n27 ~/newdir $ ls  
moreFun  
aagorbachev@dk2n27 ~/newdir $ cd
```

. 18:      man pwd

```
aagorbahev@dk2n27 ~$ mkdir letters nemos nisk
aagorbahev@dk2n27 ~$ ls
```

|    |                 |          |        |             |           |               |                |
|----|-----------------|----------|--------|-------------|-----------|---------------|----------------|
| 44 | Architecture_PC | main     | newdir | public_html | Видео     | Изображения   | 'Рабочий стол' |
| 5  | GNUstep         | main.cpp | nisk   | tmp         | Документы | Музыка        | Шаблоны        |
| 6  | letters         | nemos    | public | work        | Загрузки  | Общедоступные |                |

. 19: man mkdir

```
aagorbachev@dk2n27 ~ $ mkdir letters nemos nisk
aagorbachev@dk2n27 ~ $ ls
44 Architecture_PC  main      newdir    public_html  Видео      Изображения  'Рабочий стол'
5  GNUstep           main.cpp  nisk      tar          Документы   Музыка       Шаблоны
6  letters          nemos    public    work        Загрузки    Общедоступные
```

. 20:      man rmdir

```
aaqorbahev@dk2n27 ~ $ rm -r letters nemos nisk
aaqorbahev@dk2n27 ~ $ ls
44  Architecture_PC  main.cpp  public_html  Видео  Изображения  'Рабочий стол'
5   GNUstep          newdir   tap          Документы  Музыка        Шаблоны
6   main            public   work        Загрузки   Общедоступные
```

. 21:      man rm





```
. 22: history
```

```
. 23: history
```

```

aagorbachev@dk2n27 ~ $ ls -a
.          .bashrc      .ICEauthority  public      Документы
.          .cache       .local         public_html  Загрузки
44         .config      main          .ssh        Изображения
5         .fr-1476J2  main.cpp      tmp         Музыка
6         .gitconfig .mozilla      work        Общедоступные
Architecture_PC .gnupg      newdir       .Xauthority 'Рабочий стол'
.bash_history GNUstep     .pki         .xsession-errors.old Шаблоны

```

. 24:

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