

№4

Unix

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-03-23



Linux

- .

shell: /bin/sh;

/bin/csh; /bin/ksh.

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()

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







```
iyzelenko@dk2n22 ~ $ cd  
iyzelenko@dk2n22 ~ $ pwd  
/afs/.dk.sci.pfu.edu.ru/home/i/y/iyzelenko
```

. 1:



/tmp

```
iyzelenko@dk2n22 ~ $ cd /tmp
```

. 2:

/tmp

/tmp

ls

```

lyonel@b8b2422: /tmp$ ls
lsanleak      cddr-8-maffin
lsbnc_5535_8y82  cddr-auth-957a932-4113-6652-9da3-3064393f976b
lsr5cc_5535_8c7c7f  systemd-private-6af4559e81bf4f70947be6c024c2164-c0zard.service-bpau6d
portage       systemd-private-6af4559e81bf4f70947be6c024c2164-p0k11t.service-h8dtd
pulze-P5dH18Mr18s  systemd-private-6af4559e81bf4f70947be6c024c2164-power-profiles-daemon.service-214679
root         systemd-private-6af4559e81bf4f70947be6c024c2164-systemd-logind.service-E93ow
screen      systemd-private-6af4559e81bf4f70947be6c024c2164-systemd-resolved.service-q113k2
systemd-private-6af4559e81bf4f70947be6c024c2164-systemd-timesyncd.service-9TC300
systemd-private-6af4559e81bf4f70947be6c024c2164-upower.service-8u38t
Temp-5ab692db-cact-43ac-a008-f05f4eeccda2
tmpx-8
xauth_36xCyF

```

. 3: ls

ls -a ls -F

```
ls -a
```

ls

-a

[illegible]

```
. 4: ls -a
```


ls -F

ls -F

```
lyonel@kali:~$ /tmp $ ls -l
lsanlsb/      addn~8-naFF19+
krbkrcc_3535_0CjpeY  addn~auth-951a9102-4112-4b53-af62-2b64239f870b+
krbkrcc_3535_0CjpeY  system-private-6af455bed1b4f70947b6c0824c21d4~oslord.service-67c366/
perltag/       system-private-6af455bed1b4f70947b6c0824c21d4~oslord.service-6b378c/
perltag/       Temp-6a6e20d-cac1~class-ee8f-f95f4ee51dc2/
perltag/       system-private-6af455bed1b4f70947b6c0824c21d4~power-profiles-daemon.service-214479/
perltag/       xauth_3McGV
root/          system-private-6af455bed1b4f70947b6c0824c21d4~systemd-logind.service-E353aw/
screen/        system-private-6af455bed1b4f70947b6c0824c21d4~systemd-resolved.service-9d120e/
```

. 5: ls -F

, /var/spool cron

```
iyzelenko@dk2n22 /tmp $ ls /var/spool
```

```
cups
```

```
iyzelenko@dk2n22 /tmp $ cd
```

```
iyzelenko@dk2n22 ~ $ ls
```

```
'2024-03-07 12-35-54.mkv'  GNUstep  public  public_html  tmp  work  Видео  Документы  Загрузки  Изображения  Музыка  Общедоступные  'Рабочий стол'  'Снимки экрана'  Шаблоны
```

. 6: /var/spool

```

iyzenko@04k2n22 ~ $ ls -l
итого 65047
-rw-r--r-- 1 iyzenko studsci 66580480 мар. 7 12:39 '2024-03-07 12-35-54.mkv'
drwxr-xr-x 3 iyzenko studsci 2048 фев 27 15:38 QUnit
drwxr-xr-x 3 iyzenko root 2048 сен. 7 11:35 public
lrwxr-xr-x 1 iyzenko root 18 фев 15 21:12 public_html -> public/public_html
drwxr-xr-x 2 iyzenko studsci 2048 фев 27 15:29 tmp
drwxr-xr-x 7 iyzenko studsci 2048 фев 29 16:41 work
drwxr-xr-x 2 iyzenko studsci 2048 сен. 7 10:42 Видео
drwxr-xr-x 3 iyzenko studsci 2048 фев 29 18:45 Документы
drwxr-xr-x 3 iyzenko studsci 2048 фев 29 19:23 Загрузки
drwxr-xr-x 3 iyzenko studsci 2048 ноя. 6 15:45 Изображения
drwxr-xr-x 2 iyzenko studsci 2048 сен. 7 10:42 Музыка
drwxr-xr-x 2 iyzenko studsci 2048 сен. 7 10:42 Общедоступные
drwxr-xr-x 2 iyzenko studsci 2048 сен. 7 10:42 'Рабочий стол'
drwxr-xr-x 2 iyzenko studsci 2048 фев 26 13:39 'Снимки экрана'
drwxr-xr-x 2 iyzenko studsci 2048 сен. 7 10:42 Шаблоны

```

. 7:

ls -l

```
iyzelenko@dk2n22 ~/newdir $ mkdir morefun  
iyzelenko@dk2n22 ~/newdir $ ls  
morefun
```

. 8:



newdir.

```
iyzelenko@dk2n22 ~/newdir $ cd
iyzelenko@dk2n22 ~ $ mkdir letters memos misk
iyzelenko@dk2n22 ~ $ ls
'2024-03-07 12-35-54.mkv'  GNUstep  memos  newdir  public_html  work  Документы  Изображения  Общедоступные  'Снимки экрана'
'2024-03-07 12-40-24.mkv'  letters  misk   public  tmp          Видео    Загрузки    Музыка      'Рабочий стол'  Шаблоны
```

. 9:

newdir

~/newdir

morefun.

```

iyzelenko@dk2n22 ~ $ mkdir letters memos misk
iyzelenko@dk2n22 ~ $ ls
'2024-03-07 12-35-54.mkv'  GNUstep  memos  newdir  public_html  work  Документы  Изображения  Общедоступные  'Снимки экрана'
'2024-03-07 12-40-24.mkv'  letters  misk  public  tmp        Видео  Загрузки  Музыка      'Рабочий стол'  Шаблоны
iyzelenko@dk2n22 ~ $ rm letters memos misk
rm: невозможно удалить 'letters': Это каталог
rm: невозможно удалить 'memos': Это каталог
rm: невозможно удалить 'misk': Это каталог
iyzelenko@dk2n22 ~ $ rm -r letters memos misk
iyzelenko@dk2n22 ~ $ ls
'2024-03-07 12-35-54.mkv'  GNUstep  public  tmp  Видео  Загрузки  Музыка      'Рабочий стол'  Шаблоны
'2024-03-07 12-40-24.mkv'  newdir   public_html  work  Документы  Изображения  Общедоступные  'Снимки экрана'
iyzelenko@dk2n22 ~ $ rm -r newdir
iyzelenko@dk2n22 ~ $ ls
'2024-03-07 12-35-54.mkv'  GNUstep  public_html  work  Документы  Изображения  Общедоступные  'Снимки экрана'
'2024-03-07 12-40-24.mkv'  public   tmp          Видео  Загрузки  Музыка      'Рабочий стол'  Шаблоны

```

. 10:

morefun

letters, memos, misk.

```
iyzelenko@dk2n22 ~ $ rm -r newdir
iyzelenko@dk2n22 ~ $ ls
'2024-03-07 12-35-54.mkv'  GNUstep  public_html  work  Документы  Изображения  Общедоступные  'Снимки экрана'
'2024-03-07 12-40-24.mkv'  public   tmp          Видео  Загрузки   Музыка       'Рабочий стол'  Шаблоны
```

. 11:

~/newdir/morefun

```
iyzelenko@dk2n22 ~ $ man
```

Какая справочная страница вам нужна?

Например, попробуйте ввести «man man».

```
iyzelenko@dk2n22 ~ $ man ls
```

. 12: newdir



man

ls

-

```

LS(1)                                User Commands

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 -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 information); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first

  -C      list entries by columns

  --color[=WHEN]
      color the output WHEN; more info below

  -d, --directory
      list directories themselves, not their contents

  -D, --dired
Manual page ls(1) line 1 (press h for help or q to quit)

```

```

--show-control-char
show nonprintable characters as-is (the default), unless program is 'ls' and output is a terminal)

-Q, --quote-name
quote entry names in double quotes

--quote-style=STYLE
use quoting style STYLE for entry names: literal, escape, shell, escape-shell, shell-escape, shell-escape-always, c, escape (overrides QFTW,FTW,FTW2 environment variables)

-r, --reverse
reverse order of ls listing

# ls -lR /etc
(Use tab completion frequently)

-l, --long
print the allocated size of each file, in blocks

-s, --sort=FILE-SIZE
sort by file size, largest first

--sort=KEY
sort by KEY (instead of name: none [-N], size [-S], time [-t], version [-V], extension [-X], width)

--time=KEY
select which timestamp used to display or sort: access time [-a] atime, access, use; metadata change time [-c] ctime, status; modified time (default) mtime, modification; birth time btime, creation;

with -L, BSD determines which time to show, with --sort=time, sort by MTIME (instead of time)

--time-style=FORMAT
timestamp format with -l; see TIME_STYLE below

-t, --sort=time, reverse first; use --time

-T, --tabular
show tab stops at each COL instead of 8

-z, --with-tls, sort by, and show, access times; with -l show access time and sort by name; otherwise, sort by access time, reverse first

-o, --do-not-sort, don't recurse in directory order

ls -lR /etc | sort -t / -k 10 -n -r | head -n 10

```

. 14: man ls

```
-l, --long
    print the allocated size of each file, in blocks
-b
    sort by file size, largest first
--sort=NAME
    sort by NAME (instead of name: none (-lt), size (-s), time (-t), version (-V), extension (-X), none)
--sort=NUM
    select which NUMBERING sort to display or sort: access time (-t): atime, access, etc; atime change time (-T): ctime, ctimes; modified time (default): mtime, modification; birth time
    birth, creation
    with -l, NUM determines which time to show, with --sort=NUM, sort by NUM (lowest first)

--recursive
    recursively sub-directories
    recursive search with -R, see the next section

-t
    sort by time, newest first; see --time
--timeformat=FORMAT
    assume tab stops at each COL instead of 8
%u
    with -ls: sort by, and show, access time; with -l: show access time and sort by none; otherwise sort by access time, newest first
%U
    do not sort; list entries in directory order
%v
    natural sort of (version) numbers within text
--width=COLS
    set output width to COLS. 0 means no limit
%+
    list entries by lines instead of by columns
-k
    sort alphabetically by entry extension
--random
    print any security context of each file
--zero
    end each output line with NUL, not newline
-lT
    list one file per line
ls -lR /etc/hosts && ls -lR /etc/hosts && ls -lR /etc/hosts && ls -lR /etc/hosts &&
```

. 15: -R, --recursive

ls -R



man

ls,

-

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```
[C97]                                                     POSIX Programmer's Manual                                [C97D]

PRO.0
This manual page is part of the POSIX Programmer's Manual.  The Linux implementation of this interface may differ from 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 [-v|-P] [pathname]
  cd -

DESCRIPTION
  The cd utility shall change the working directory of the current shell execution environment (see Section 1.11, Shell Execution Environment) by executing the following steps, in sequence.  (In the
  following steps, the symbol newpath represents an intermediate value used to simplify the description of the algorithm used by cd.  There is no requirement that newpath be made visible to the appli-
  cation.)

  1. If no pathname operand is given and the OLDPWD environment variable is empty or undefined, the default behavior is implementation-defined and no further steps shall be taken.

  2. If no pathname operand is given and the OLDPWD environment variable is set to a non-empty value, the cd utility shall behave as if the directory named in the OLDPWD environment variable was speci-
  fied as the pathname operand.

  3. If the pathname operand begins with a tilde character, set newpath to the operand and proceed to step 1.

  4. If the first component of the pathname operand is dot or double-dot, proceed to step 5.

  5. Starting with the first pathname in the slash-separated pathnames of pathname (see the ENVIRONMENT VARIABLES section) if the pathname is non-null, test if the concatenation of that pathname, a
  tilde character if that pathname did not end with a tilde character, and the pathname operand names a directory.  If the pathname is null, test if the concatenation of this, a tilde charac-
  ter, and the operand names a directory.  In either case, if the resulting string names an existing directory, set newpath to that string and proceed to step 1.  Otherwise, repeat this step with
  the next pathname of pathname until all pathnames have been tested.

  6. Set newpath to the pathname operand.

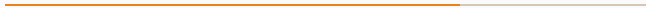
  7. If the -P option is in effect, proceed to step 18.  If newpath does not begin with a tilde character, set newpath to the string formed by the concatenation of the value of pwd, a tilde char-
  acter if the value of pwd did not end with a tilde character, and newpath.

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

     a. Dot components and any tilde characters that separate them from the next component shall be deleted.

     b. Remove pathnames of the form pathname/.. and ../pathname.
```

. 16: -time-style=TIME_STYLE



man

: cd, pwd, mkdir, rmdir, rm.

.

```
└─$ cd /etc/passwd && cat /etc/passwd  
root:x:0:0:root:/root:/bin/bash  
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin  
└─$
```

. 17: man cd

```

BUGS()
User Comments
BUGS()

NAME
  mkdir - make directories

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

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

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

  -m, --mode=MODE
      set FILE mode (as in chmod), not rwx - mode

  -p, --parents
      no error if existing, make parent directories as needed, with their file mode unaffected by any -m option.

  -v, --verbose
      print a message for each created directory.

  -Z, --security
      set UMLinux security context of each created directory to the default type

  --context=CONTEXT
      like -Z, or if CTX is specified then set the UMLinux or SMKS security context to CTX

  --help
      display this help and exit

  --version
      output version information and exit

AUTHOR
  Written by David Rudnick.

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

SEE ALSO
  mkdir(1)

```

. 18: man pwd

```

mkdir(1)                                User Commands                                mkdir(1)

NAME
  mkdir - create empty directories

SYNOPSIS
  mkdir [-options]... [-verbose]...

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

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

  -v, --verbose
      Remove DIRECTORY and its ancestors, e.g., 'mkdir -p abc' is similar to 'mkdir -pv'

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

  --help
      display this help and exit

  --version
      output version information and exit

AUTHOR
  Written by David Rudemoen.

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

SEE ALSO
  rmdir(1)

Full documentation: https://www.gnu.org/software/coreutils/mkdir/
or available locally via: info "(coreutils) mkdir invocation"

Package is licensed to users (S) 4 GPLv3
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License GPLv3: GNU GPL version 3 or later https://www.gnu.org/licenses/gpl.html.
This is free software: you are free to change and redistribute it.
See the GNU General Public License for more details.

```

. 19: man mkdir

```

NAME
    rm - remove files or directories

SYNOPSIS
    rm [-options]... [-r] 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 option is given, and there are more than three files or the -r, -d, 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 deletable, standard input is a terminal, and the -i or --interactive option is not given, or the -i or --interactive 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=MODE
        prompt according to MODE: never, once (-I), or always (-i); without MODE, 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

    --preserve-root
        do not treat '/' specially

    --preserve-root=NO
        do not remove '/' (default); with 'all', reject any command line argument as a separate device from its parent

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

    --help
        display this help message and exit

```

. 20: man rmdir

```

(josh@centos6) ~ - ssh history
1: git clone --recursive git@github.com:joshenko/My git
2: Pa quota
3: Pa quota
4: Pa quota
5: Pa quota
6: Pa quota
7: Pa
8: Pa
9: Pa
10: git clone --recursive git@github.com:joshenko/My git
11: Pa
12: cd /tmp
13: ~$ls -l
14: make use install pa
15: ~$ls -l
16: Pa quota
17: ~$ls -l
18: ~$ls -l
19: git clone --recursive git@github.com:joshenko/My git
20: Pa
21: cd /tmp
22: ~$ls -l
23: ~$ls -l
24: ~$ls -l
25: Pa
26: ~$ls -l
27: Pa
28: Pa
29: make in /tmp
30: make in /tmp
31: make in /tmp
32: Pa
33: cd /tmp
34: cd /tmp
35: cd /tmp
36: Pa
37: git clone --recursive git@github.com:joshenko/My git
38: Pa
39: cd /tmp
40: ~$ls -l

```

. 21: man rm





```

iyzelenko@dk2n22 ~ $ ls -a
.          .gnupg          .java          .pki           .ssh           .xsession-errors.old  Изображения  'Снимки экрана'
.          GNUstep        lessht         .profile       tmp            Видео          Музыка        'Шаблоны'
'2024-03-07 12-49-05.mkv' .bash_history  .git           .gtkrc-2.0     local          public         work          Документы
'2024-03-07 12-35-54.mkv' .bash_profile  .gitconfig     .ICEauthority  .mozilla       public_html    .Xauthority   Загрузки
'2024-03-07 12-40-24.mkv' .bashrc
iyzelenko@dk2n22 ~ $

```

. 24:

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