

# Основы интерфейса взаимодействия пользователя с системой Unix на уровне командной строки

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# Цели и задачи работы

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# Цель лабораторной работы

Приобретение практических навыков взаимодействия пользователя с системой посредством командной строки.

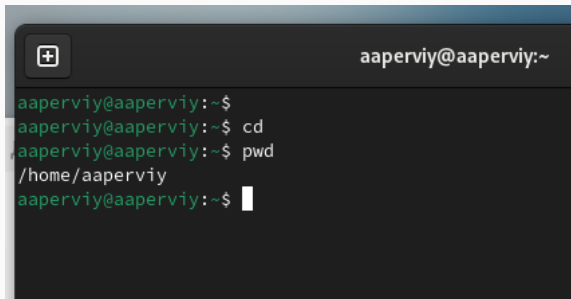
# Задачи лабораторной работы

- 1 Определить имя и путь домашнего каталога
- 2 Изучить команду `ls`.
- 3 Выполнить действия с каталогами.
- 4 Получить дополнительные сведения при помощи справки по командам.
- 5 Изучить команду `history`.

# **Процесс выполнения лабораторной работы**

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# Имя и путь к домашнему каталогу



```
aaperviy@aaperviy:~$  
aaperviy@aaperviy:~$ cd  
aaperviy@aaperviy:~$ pwd  
/home/aaperviy  
aaperviy@aaperviy:~$
```

The image shows a terminal window with a dark background. The title bar at the top contains a plus icon in a square on the left and the text 'aaperviy@aaperviy:~' on the right. The terminal content shows a series of commands and their outputs: the prompt 'aaperviy@aaperviy:~\$' is followed by 'cd', then 'pwd', which outputs '/home/aaperviy', and finally another 'aaperviy@aaperviy:~\$' prompt with a cursor.

Рис. 1: Путь к домашнему каталогу

# Опции команды ls

```
aaperviy@aaperviy:~$  
aaperviy@aaperviy:~$ cd /tmp  
aaperviy@aaperviy:/tmp$ ls  
dbus-nCK6IWe8  
dbus-QRIOv11Y  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-chronyd.service-Axyugi  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-colord.service-630R5T  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-dbus-broker.service-UClfy9  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-fwupd.service-dut06A  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-low-memory-monitor.service-0t2gLf  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-ModemManager.service-S2AFHy  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-polkit.service-Bx5jPV  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-power-profiles-daemon.service-clXPfi  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-rtkit-daemon.service-wqEyEx  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-switcheroo-control.service-ATJhi1  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-logind.service-BveH7R  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-oomd.service-HmXdYH  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-resolved.service-RSoJYd  
systemd-private-b8c8673295f84deaacfea2b355e2cbec-upower.service-EFrGnG  
vmware-root_916-2689078442  
aaperviy@aaperviy:/tmp$
```

Рис. 2: Команда ls

# Опции команды ls

```
aaperviy@aaperviy: /tmp$ ls -la
total 12
drwxr-xr-x 2 aaperviy aaperviy 4096 Aug 11 12:54 .
drwxr-xr-x 1 aaperviy aaperviy 4096 Aug 11 12:54 ..
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 dbus-nCKGIWe8
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 dbus-QRIOv11Y
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 .font-unix
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 .ICE-unix
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-chrony.service-AxyugI
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-colord.service-630R5T
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-dbus-broker.service-UCLfy9
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-fwupd.service-dut06A
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-low-memory-monitor.service-6t2gLf
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-ModemManager.service-S2AfMy
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-polkit.service-Bx5jPV
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-power-profiles-daemon.service-clXPfi
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-rtkit-daemon.service-wqEYeX
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-switcheroo-control.service-ATJh1l
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-logind.service-BveH7R
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-oomd.service-HmXdYN
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-resolved.service-RSoJYd
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 systemd-private-b8c8673295f84deaacfea2b355e2cbec-upower.service-EFRGnG
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 vmware-root_916-2689678442
-rw-r--r-- 1 aaperviy aaperviy  100 Aug 11 12:54 .X0-Lock
```

Рис. 3: Команда ls -la

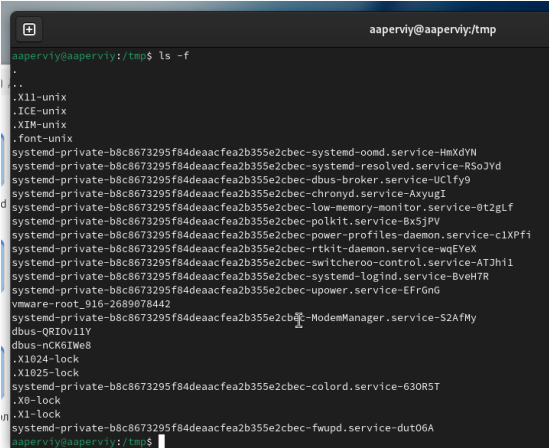


# Опции команды ls

```
aservly@aservlyz:/tmp$ ls -l
total 0
srw-rw-rw-. 1 root root 0 map 11 11:16 dbus-nCK6Twe8
srw-rw-rw-. 1 root root 0 map 11 11:16 dbus-QR10v11V
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-chromyd.service-AxyuI
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-colord.service-630H5T
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-dbus-broker.service-uClfy9
drwx----- 3 root root 60 map 11 11:21 systemd-private-b8c8673295f84deaacfea2b355e2cbec-fwupd.service-dut06A
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-low-memory-monitor.service-0t2GLf
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-ModemManager.service-S2AFMy
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-polkit.service-0s1jPv
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-power-profiles-daemon.service-c1XPfi
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-rtkit-daemon.service-wqYvX8
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-switcheroo-control.service-ATJh1l
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-logind.service-Bv0H7R
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-oom.service-ImXdy8
drwx----- 3 root root 60 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-resolved.service-R5o3Yd
drwx----- 2 root root 40 map 11 11:16 systemd-private-b8c8673295f84deaacfea2b355e2cbec-upower.service-Efr6G6
aservly@aservlyz:/tmp$
```

Рис. 4: Команда ls -l

# Опции команды ls

A terminal window with a dark background and light blue text. The title bar at the top right says 'aaperviy@aaperviy:/tmp'. The prompt is 'aaperviy@aaperviy:/tmp\$'. The command 'ls -f' has been entered, and the output is a long list of files and directories. The files include various systemd-private directories, .X11-unix, .ICE-unix, .XIM-unix, .font-unix, vmware-root\_916-2689078442, dbus-QRI0v11Y, dbus-nCK6IWe8, .X1024-lock, .X1025-lock, .X0-lock, .X1-lock, and another systemd-private directory. The cursor is at the end of the last line of output.

```
aaperviy@aaperviy:/tmp$ ls -f
.
..
.X11-unix
.ICE-unix
.XIM-unix
.font-unix
systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-oomd.service-HmXdYN
systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-resolved.service-RSoJYd
systemd-private-b8c8673295f84deaacfea2b355e2cbec-dbus-broker.service-UClfy9
systemd-private-b8c8673295f84deaacfea2b355e2cbec-chronyd.service-AxyugI
systemd-private-b8c8673295f84deaacfea2b355e2cbec-low-memory-monitor.service-0t2gLf
systemd-private-b8c8673295f84deaacfea2b355e2cbec-polkit.service-Bx5jPV
systemd-private-b8c8673295f84deaacfea2b355e2cbec-power-profiles-daemon.service-c1XPfi
systemd-private-b8c8673295f84deaacfea2b355e2cbec-rtkit-daemon.service-wqEYeX
systemd-private-b8c8673295f84deaacfea2b355e2cbec-switcheroo-control.service-ATJh1l
systemd-private-b8c8673295f84deaacfea2b355e2cbec-systemd-logind.service-BveH7R
systemd-private-b8c8673295f84deaacfea2b355e2cbec-upower.service-EFR6nG
vmware-root_916-2689078442
systemd-private-b8c8673295f84deaacfea2b355e2cbec-ModemManager.service-S2AfMy
dbus-QRI0v11Y
dbus-nCK6IWe8
.X1024-lock
.X1025-lock
systemd-private-b8c8673295f84deaacfea2b355e2cbec-colord.service-630R5T
.X0-lock
.X1-lock
systemd-private-b8c8673295f84deaacfea2b355e2cbec-fwupd.service-dut06A
aaperviy@aaperviy:/tmp$
```

Рис. 5: Команда ls -f

# Каталог /var/spool

```
aaпerviy@aaпerviy:/tmp$ cd /var/spool
aaпerviy@aaпerviy:/var/spool$ ls -l
итого 0
drwxr-x--x. 1 root abrt 1510 мар 10 12:45 abrt
drwx-----. 1 abrt abrt  0 июл 19 2023 abrt-upload
drwx--x---. 1 root lp    6 фев 16 03:00 cups
drwxr-xr-x. 1 root root  0 июл 21 2023 lpd
л drwxrwxr-x. 1 root mail 1222 мар  8 17:40 mail
drwxr-xr-x. 1 root root  0 июл 21 2023 plymouth
aaпerviy@aaпerviy:/var/spool$
```

Рис. 6: Каталог /var/spool

```
aaerviy@aaerviy: /var/spool$ cd
aaerviy@aaerviy:~$ ls
git-extended  work  Видео  Документы  Загрузки  Изображения  Музыка  Общедоступные  'Рабочий стол'  Шаблоны
aaerviy@aaerviy:~$ ls -al
итого 20
drwx----- 1 aaerviy aaerviy 498 мар 5 11:24 .
drwxr-xr-x 1 root    root    1216 мар 8 17:40 ..
-rw----- 1 aaerviy aaerviy 193 мар 5 11:24 .bash_history
-rw-r--r-- 1 aaerviy aaerviy 18 июл 19 2023 .bash_logout
-rw-r--r-- 1 aaerviy aaerviy 144 июл 19 2023 .bash_profile
-rw-r--r-- 1 aaerviy aaerviy 678 мар 5 11:13 .bashrc
drwx----- 1 aaerviy aaerviy 452 мар 11 11:21 .cache
drwx----- 1 aaerviy aaerviy 402 мар 5 11:15 .config
-rw-r--r-- 1 aaerviy aaerviy 232 мар 5 11:24 .gitconfig
drwxr-xr-x 1 aaerviy aaerviy 74 мар 5 11:19 git-extended
drwx----- 1 aaerviy aaerviy 136 фев 28 21:30 .gnupg
drwx----- 1 aaerviy aaerviy 20 фев 28 21:22 .local
drwxr-xr-x 1 aaerviy aaerviy 48 фев 28 21:25 .mozilla
drwx----- 1 aaerviy aaerviy 132 фев 28 21:31 .ssh
drwxr-xr-x 1 aaerviy aaerviy 10 фев 28 21:31 work
drwxr-xr-x 1 aaerviy aaerviy 0 фев 28 21:22 Видео
drwxr-xr-x 1 aaerviy aaerviy 0 фев 28 21:22 Документы
drwxr-xr-x 1 aaerviy aaerviy 0 фев 28 21:22 Загрузки
drwxr-xr-x 1 aaerviy aaerviy 0 фев 28 21:22 Изображения
drwxr-xr-x 1 aaerviy aaerviy 0 фев 28 21:22 Музыка
drwxr-xr-x 1 aaerviy aaerviy 0 фев 28 21:22 Общедоступные
```

Рис. 7: Файлы в домашнем каталоге

```
aaperviy@aaperviy:~$  
aaperviy@aaperviy:~$ mkdir newdir  
aaperviy@aaperviy:~$ mkdir newdir/morefun  
aaperviy@aaperviy:~$ mkdir letters memos misk  
aaperviy@aaperviy:~$ ls  
git-extended  memos  newdir  Видео  Загрузки  Музыка  'Рабочий стол'  
letters       misk   work    Документы  Изображения  Общедоступные  Шаблоны  
aaperviy@aaperviy:~$ rm letters/ memos/ misk/  
rm: невозможно удалить 'letters/': Это каталог  
rm: невозможно удалить 'memos/': Это каталог  
rm: невозможно удалить 'misk/': Это каталог  
aaperviy@aaperviy:~$ rm -r letters/ memos/ misk/  
aaperviy@aaperviy:~$ rm -r newdir/  
aaperviy@aaperviy:~$ ls  
git-extended  Видео  Загрузки  Музыка  'Рабочий стол'  
work          Документы  Изображения  Общедоступные  Шаблоны  
aaperviy@aaperviy:~$  
aaperviy@aaperviy:~$
```

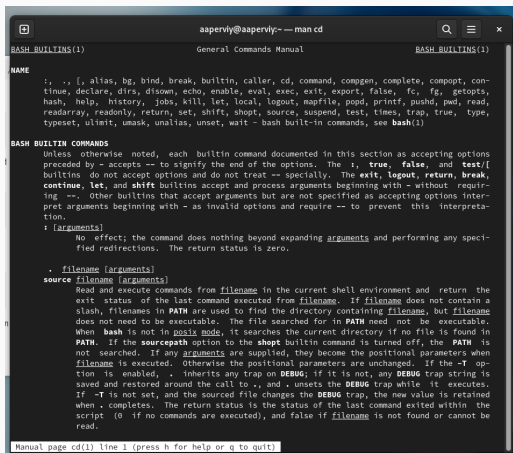
Рис. 8: Действия с каталогами

# Опции команды ls

```
'./work/study/2023-2024/Операционные системы/os-intro/template/report/scripts':  
image-report mpv-shot  
  
./Видео:  
  
./Документы:  
  
./Загрузки:  
  
./Изображения:  
  
./Музыка:  
  
./Общедоступные:  
  
'./Рабочий стол':  
  
./Шаблоны:  
aaperviy@aaperviy:~$ ls -lt  
git-extended Видео Загрузки Музыка Шаблоны  
work Документы Изображения Общедоступные 'Рабочий стол'  
aaperviy@aaperviy:~$
```

Рис. 9: Команда ls -R и ls -t

# Справка по командам



```
aasperviy@aasperviy:~ — man cd
BASH_BUILTINS(1)
General Commands Manual
BASH_BUILTINS(1)

NAME
:, ., [, alias, bg, bind, break, builtin, caller, cd, command, compgen, complete, compopt, con-
tinue, declare, dirs, disown, echo, enable, eval, exec, exit, export, false, fc, fg, getopts,
hash, help, history, jobs, kill, let, local, logout, mapfile, popd, printf, pushd, pwd, read,
readarray, readonly, return, set, shift, shopt, source, suspend, test, times, trap, true, type,
typeset, ulimit, umask, unalias, unset, wait - bash built-in commands, see bash(1)

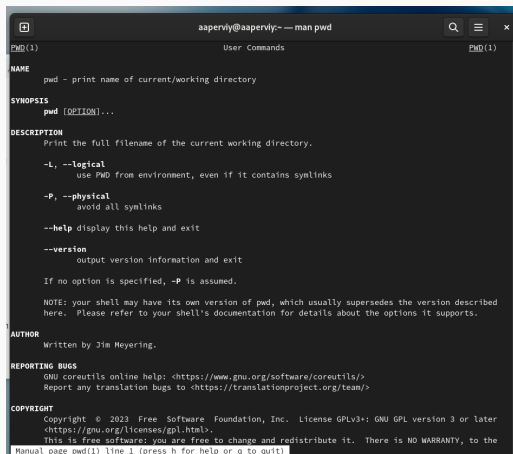
BASH BUILTIN COMMANDS
Unless otherwise noted, each builtin command documented in this section as accepting options
preceded by - accepts -- to signify the end of the options. The set, true, false, and test
builtins do not accept options and do not treat -- specially. The exit, logout, return, break,
continue, let, and shift builtins accept and process arguments beginning with - without requir-
ing --. Other builtins that accept arguments but are not specified as accepting options inter-
pret arguments beginning with - as invalid options and require -- to prevent this interpreta-
tion.

: [arguments]
No effect; the command does nothing beyond expanding arguments and performing any speci-
fied redirections. The return status is zero.

. filename [arguments]
source filename [arguments]
Read and execute commands from filename in the current shell environment and return the
exit status of the last command executed from filename. If filename does not contain a
slash, filenames in PATH are used to find the directory containing filename, but filename
does not need to be executable. The file searched for in PATH need not be executable.
When bash is not in posix mode, it searches the current directory if no file is found in
PATH. If the sourcepath option to the shopt builtin command is turned off, the PATH is
not searched. If any arguments are supplied, they become the positional parameters when
filename is executed. Otherwise the positional parameters are unchanged. If the -T option
is enabled, . inherits any trap on DEBUG; if it is not, any DEBUG trap string is
saved and restored around the call to ., and . unsets the DEBUG trap while it executes.
If -T is not set, and the sourced file changes the DEBUG trap, the new value is retained
when . completes. The return status is the status of the last command exited within
the script (0 if no commands are executed), and false if filename is not found or cannot be
read.

Manual page cd(1) line 1 (press h for help or q to quit)
```

Рис. 10: Справка по команде cd



```
aapervily@aapervily:~ -- man pwd
PWD(1) User Commands PWD(1)

NAME
    pwd - print name of current/working directory

SYNOPSIS
    pwd [OPTION]...

DESCRIPTION
    Print the full filename of the current working directory.

    -L, --logical
        use PWD from environment, even if it contains symlinks

    -P, --physical
        avoid all symlinks

    --help display this help and exit

    --version
        output version information and exit

    If no option is specified, -P is assumed.

    NOTE: your shell may have its own version of pwd, which usually supersedes the version described
    here. Please refer to your shell's documentation for details about the options it supports.

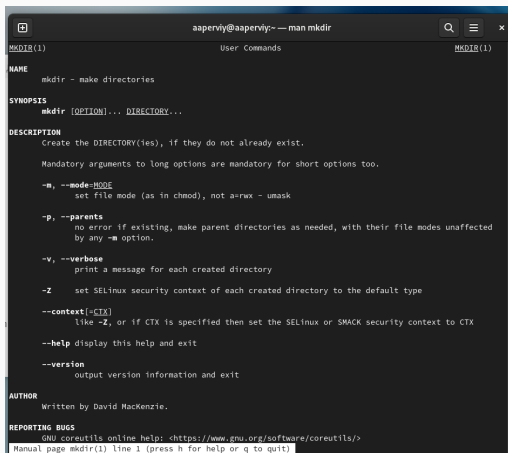
AUTHOR
    Written by Jim Meyering.

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

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    <https://gnu.org/licenses/gpl.html>.
    This is free software; you are free to change and redistribute it. There is NO WARRANTY, to the
    Manual page pwd(1) line 1 (press h for help or q to quit)
```

Рис. 11: Справка по команде pwd





```
aaperviy@aaperviy:~ -- man mkdir
MKDIR(1) User Commands MKDIR(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 unaffected
        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

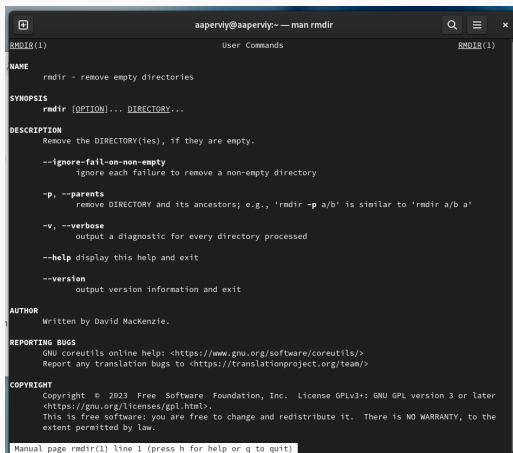
  --help
        display this help and exit

  --version
        output version information and exit

AUTHOR
  Written by David MacKenzie.

REPORTING BUGS
  GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
  Manual page mkdir(1) line 1 (press h for help or q to quit)
```

Рис. 12: Справка по команде mkdir



```
aaperviy@aaperviy:~ -- man rmdir
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

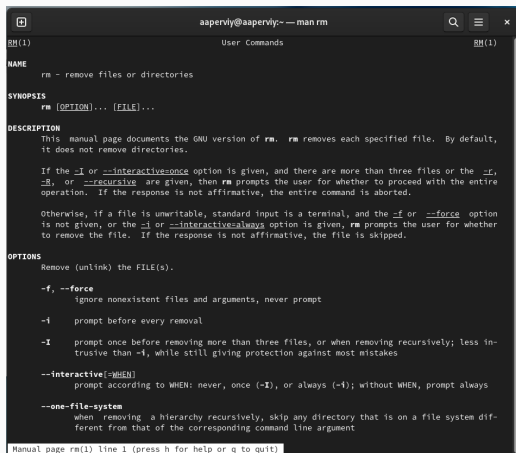
AUTHOR
    Written by David MacKenzie.

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

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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.

Manual page rmdir(1) line 1 (press h for help or q to quit)
```

Рис. 13: Справка по команде rmdir



```
aaperviy@aaperviy:~ -- man rm
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 in-
    trusive than -i, while still giving protection against most mistakes

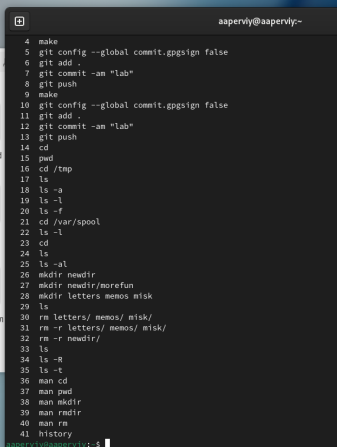
--interactive=WHEN
    prompt according to WHEN: never, once (-I), or always (-i); without WHEN, prompt always

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

Manual page rm(1) line 1 (press h for help or q to quit)
```

Рис. 14: Справка по команде rm

# История командной строки

A terminal window with a dark background and light-colored text. The window title is 'aaperviy@aaperviy:~'. It displays a list of 41 commands entered in a shell, numbered 4 through 41. The commands include 'make', 'git config', 'git add', 'git commit', 'git push', 'cd', 'pwd', 'ls', 'rm', 'mkdir', 'man', and 'history'. The 'history' command at the bottom shows the list of previously entered commands. The prompt 'aaperviy@aaperviy:~\$' is visible at the bottom left.

```
aaperviy@aaperviy:~$
4 make
5 git config --global commit.gpgsign false
6 git add .
7 git commit -am "lab"
8 git push
9 make
10 git config --global commit.gpgsign false
11 git add .
12 git commit -am "lab"
13 git push
14 cd
15 pwd
16 cd /tmp
17 ls
18 ls -a
19 ls -l
20 ls -f
21 cd /var/spool
22 ls -l
23 cd
24 ls
25 ls -al
26 mkdir newdir
27 mkdir newdir/morefun
28 mkdir letters memos misk
29 ls
30 rm letters/ memos/ misk/
31 rm -r letters/ memos/ misk/
32 rm -r newdir/
33 ls
34 ls -R
35 ls -t
36 man cd
37 man pwd
38 man mkdir
39 man rm
40 man rm
41 history
aaperviy@aaperviy:~$
```

Рис. 15: Команда history

## **Выводы по проделанной работе**

---

Мы приобрели практические навыки взаимодействия пользователя с системой посредством командной строки.