

# Лабораторная работа №4.

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# Цели и задачи работы

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Приобретение практических навыков взаимодействия пользователя с системой посредством командной строки

# **Процесс выполнения лабораторной работы**

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# Определим полное имя вашего домашнего каталога.

```
zfasurov@ds04 ~ $ pwd  
/afs/ds.sci.pfu.edu.ru/home/z/f/zfasurov
```

**Рис. 1:** Имя домашнего каталога

# Перейдём в каталог /tmp

A horizontal terminal window with a dark background. The prompt is a green character, followed by the command 'cd /tmp' in white text.

```
~fashurov@bbln04 ~ % cd /tmp
```

**Рис. 2:** Переход в каталог /tmp







# Переходим в домашний каталог

```
ifashirov@00004 ~$ cd  
ifashirov@00004 ~$ ls  
bin  cluster  jobs  public  public_html  temp  tmp  work  Видео  Документы  Загрузки  Изображения  Музыка  Общедоступные  'Рабочий стол'  Временные файлы
```

Рис. 5: Домашний каталог

# Определим, кто является владельцем файлов и подкаталогов с помощью команды `ls -l`

```
zfasheurov@kln04 ~ % ls -l
total 31
drwxr-xr-x 2 zfasheurov studsci 2048 фев 29 13:02 bin
drwxr-xr-x 3 zfasheurov studsci 2048 окт 12 10:25 GNStep
drwxr-xr-x 5 zfasheurov studsci 2048 сен 14 10:22 lab4
drwxr-xr-x 3 zfasheurov root 2048 сен 5 20:23 public
lrwxr-xr-x 1 zfasheurov root 10 фев 13 19:46 public_html -> public/public_html
drwxr-xr-x 2 zfasheurov studsci 2048 сен 14 09:57 tmp
drwxr-xr-x 2 zfasheurov studsci 2048 сен 13 23:31 tmp
drwxr-xr-x 6 zfasheurov studsci 2048 фев 25 13:32 work
drwxr-xr-x 2 zfasheurov studsci 2048 ноя 10 16:00 video
drwxr-xr-x 2 zfasheurov studsci 2048 сен 7 09:13 документы
drwxr-xr-x 2 zfasheurov studsci 4096 июл 7 12:40 загрузки
drwxr-xr-x 4 zfasheurov studsci 2048 ноя 30 18:06 изображения
drwxr-xr-x 2 zfasheurov studsci 2048 сен 7 09:13 музыка
drwxr-xr-x 2 zfasheurov studsci 2048 сен 7 09:13 Общедоступные
drwxr-xr-x 2 zfasheurov studsci 2048 фев 27 16:23 Рабочий стол
drwxr-xr-x 2 zfasheurov studsci 2048 сен 7 09:13 Шаблоны
```

Рис. 6: Имя домашнего каталога

**В домашнем каталоге создаём новый каталог с именем newdir.**

```
ifashurov@skln64 ~ % mkdir newdir
```

```
ifashurov@skln64 ~ % ls
```

```
bin  GNUstep  Labs  newdir  public  public_html  tmp  tmp  work  Видео  Документы  Загрузки  Изображения  Музыка  Общедоступный  "Рабочий стол"  Шаблоны
```

**Рис. 7: Создание каталога newdir**

В каталоге ~/newdir создаём новый каталог с именем morefun.

```
ifashurov@kik044 ~$ mkdir morefun
ifashurov@kik044 ~$ ls
morefun
ifashurov@kik044 ~$ mkdir letters newsos nixk
ifashurov@kik044 ~$ ls
letters morefun newsos nixk
```

Рис. 8: Создание каталога morefun

# Создаём одной командой три новых каталога с именами

```
faustorodrikidit ~ $ rm -r test1/
faustorodrikidit ~ $ ls
bin  Desktop  Downloads  public  public_html  temp  tmp  work  Desktop  Documents  Downloads  Избранное  Музыка  Общедоступные  Рабочий стол  Шаблоны
```

Рис. 9: Создание каталогов и их удаление

```

(1) User Commands (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 -tfduX 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 nongraphical 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 -li: 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
    generate output designed for Emacs' dired mode
    list all entries in directory order

```

Press: page left) show 8 pages 9 for more or q to quit

Рис. 10: Команда `man ls`

```

append / indicator to directories

-R, --recursive
    print 7 instead of non-graphic characters

--show-control-chars
    show non-graphic characters as-is (the default, unless program is 'ls' and output is a terminal)

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

--quoting-style=STYLE
    use quoting style WORD for entry names: literal, locale, shell, shell-always, shell-escape, shell-escape-always, c, escape (overrides QUOTING_STYLE environment variable)

-r, --reverse
    reverse order while sorting

-R, --recursive
    list subdirectories recursively

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

-S
    sort by file size, largest first

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

--time=WORD
    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;
    birth, creation;
    with -l, WORD determines which time to show, with --sort=WORD, sort by WORD (newest first)

--time-style=TIME_STYLE
    time/date format with -l; see TIME_STYLE below

-t
    sort by time, newest first; see --time

-T, --tabsize=COLS
    assume tab stops at each COLS instead of 8

-w, --width=WIDTH
    with -lt: sort by, and show, access time; with -l: show access time and sort by name; otherwise: sort by access time, newest first

GNU ls and sort will refuse to list directories if you

```

Рис. 11: -R, --recursive

```

recursive order while sorting
-R, --recursive
    list subdirectories recursively
-T, --size
    print the allocated size of each file, in blocks
-S
    sort by file size, largest first
--portable
    sort by NOD instead of name: name (%N), size (%S), time (%t), version (%v), extension (%E), width
--time=COL
    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:
    birth, creation;
    with -l, NOD determines which time to show; with --sort=time, sort by NOD (newest first)
--time-style=TIME_STYLE
    time/date format with %F, see TIME_STYLE below
-t
    sort by time, newest first; see --time
-T, --tabsize=COL
    assume tab stops at each COL instead of 8
-u
    with -lt: sort by, and show, access time; with -l: show access time and sort by same; 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=COL
    set output width to COL. 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
--zero
    and each output line with NUL, not newline

```

[man page listing time 1.7.7211.70 \(press n for help or q to quit\)](#)

**Рис. 12: --time-style=TIME\_STYLE**



### Рис. 13: Команда `man cd`

```
root@kali:~# man pwd
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 Jia Heyring.

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

SEE ALSO
  getcwd(3)

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

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  There is NO WARRANTY, to the extent permitted by law.

(Press page down) Use F or help to go to next
```

Рис. 14: Команда man pwd

```

man(1)                                     User Commands                               mkdir(1)

NAME
  mkdir - make directories

SYNOPSIS
  mkdir [-p]... [-m]... 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 -rw-rw-r -- unless
  -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
  Use coreutils online help: https://www.gnu.org/software/coreutils/mkdir
  Report any translation bugs to https://translationproject.org/team/

SEE ALSO
  mkdir(2)

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

Please see mkdir(1) line 5: press h for help or q to quit.

```

**Рис. 15:** Команда man mkdir

```
root@10:~# man rmdir
rmdir(1)
NAME
    rmdir - remove empty directories
SYNOPSIS
    rmdir [-options]... 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
        output 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. (information)
    Packaged by Gentoo (14.062)
    Copyright © 2023 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.
GNU coreutils 9.4
Thomas G. Schiavone 1 Jan 8: press h for help or q to quit
```

Рис. 16: Команда man rmdir

```
root@kali:~# man rm
User Commands  rm(1)

NAME
  rm - remove files or directories

SYNOPSIS
  rm [-options]... 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[=how] 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 -i or --interactive option is not given, or the -i or --interactive[=how] 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[=how]
    prompt according to HOW: never, once (-I), or always (-i); without HOW, prompt always

  --no-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[=all]
    do not remove '/' (Default); with "all", reject any command line argument on a separate device from its parent

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

  -d, --dir
    remove empty directories

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

Рис. 17: Команда man rm

# Получим при помощи команды history

```
faust@root@kali:~$ history
```

```
456 git push
457 fs quota
458 wc
459 fs quota
460 clear
461 pwd
462 cd /tmp
463 ls
464 ls -o
465 ls -f
466 ls /var/spool
467 cd
468 ls
469 ls -l
470 mkdir newdir
471 ls
472 mkdir morefun
473 ls
474 mkdir letters remos nish
475 ls
476 ls
477 cd newdir
478 mkdir morefun
479 ls
480 mkdir letters remos nish
481 ls
482 cd
483 rm -r newdir
484 ls
485 man ls
486 man cd
487 man pwd
488 man mkdir
489 man rm
490 man rm
491 history
```

## Выполним модификацию и исполнение нескольких команд из буфера команд

```
zfasheurov@bk8n64 - $ ls -l
```

```
Zsh@root@kali:~$ ls -la
```

bin	config	.gnssg	.gtkrc-2.0	labs	mozilla	.ssh	tftp	.authrity	Документы	Изображения	Общедоступные	Выборки
.cache	gitconfig	(Mist)	.lcfAuthrity	local	skl	public_html	temp	work	Загрузки	Музыка	"Рабочий стол"	

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