

Лабораторная работа №2

Первоначальная настройка git

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Информация

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Цели и задачи работы

Приобретение практических навыков взаимодействия пользователя с системой по- средством командной строки

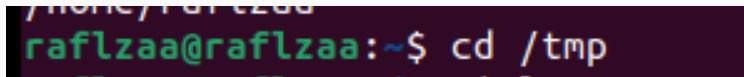
Процесс выполнения лабораторной работы

Определим полное имя вашего домашнего каталога.

```
2/report$ cd  
raflzaa@raflzaa:~$ cd  
raflzaa@raflzaa:~$ pwd  
/home/raflzaa
```

Рис. 1: Имя домашнего каталога

Перейдём в каталог /tmp

A terminal window with a dark background. The prompt is 'raflzaa@raflzaa:~\$'. The command 'cd /tmp' has been entered and executed. The text is displayed in a monospaced font with color coding: the prompt and command are green, and the shell characters are red.

```
/home/raflzaa  
raflzaa@raflzaa:~$ cd /tmp
```

Рис. 2: Переход в каталог /tmp

Выведем на экран содержимое каталога /tmp с помощью команды ls

```
raflzaa@raflzaa:/tmp$ ls
evince-27301
snap-private-tmp
systemd-private-9df61f62fa45439d9c6186067ba36f32-color.service-VKJrHa
systemd-private-9df61f62fa45439d9c6186067ba36f32-fwupd.service-BGLEXX
systemd-private-9df61f62fa45439d9c6186067ba36f32-ModemManager.service-u6a2IO
systemd-private-9df61f62fa45439d9c6186067ba36f32-power-profiles-daemon.service
-bowfFe
systemd-private-9df61f62fa45439d9c6186067ba36f32-switcheroo-control.service-1M
Sfth
systemd-private-9df61f62fa45439d9c6186067ba36f32-systemd-logind.service-woCXwY
systemd-private-9df61f62fa45439d9c6186067ba36f32-systemd-oond.service-lB9SsP
systemd-private-9df61f62fa45439d9c6186067ba36f32-systemd-resolved.service-ewLs
IU
systemd-private-9df61f62fa45439d9c6186067ba36f32-systemd-timesyncd.service-zPR
Hbj
systemd-private-9df61f62fa45439d9c6186067ba36f32-upower.service-WlNptP
VMwareDnD
raflzaa@raflzaa:/tmp$ ls -la
.
..
evince-27301
.font-unix
.ICE-unix
```

Рис. 3: ls

Сравним команды ls -a и ls -F

```
raflzaa@raflzaa:/tmp$ ls -a
.
..
evince-27301
.font-unix
.ICE-unix
snap-private-tmp
systemd-private-9df61f62fa45439d9c6186067ba36f32-colord.service-VKJrHa
systemd-private-9df61f62fa45439d9c6186067ba36f32-fwupd.service-BGLEXX
systemd-private-9df61f62fa45439d9c6186067ba36f32-ModemManager.service-u6a2IO
systemd-private-9df61f62fa45439d9c6186067ba36f32-power-profiles-daemon.service
-bowfFe
systemd-private-9df61f62fa45439d9c6186067ba36f32-switcheroo-control.service-1M
Sfth
systemd-private-9df61f62fa45439d9c6186067ba36f32-systemd-logind.service-woCXWY
systemd-private-9df61f62fa45439d9c6186067ba36f32-systemd-oond.service-lB9SsP
systemd-private-9df61f62fa45439d9c6186067ba36f32-systemd-resolved.service-ewLs
IU
systemd-private-9df61f62fa45439d9c6186067ba36f32-systemd-timesyncd.service-zPR
Hbj
systemd-private-9df61f62fa45439d9c6186067ba36f32-upower.service-WlNptP
.Test-unix
VMwareDnD
.X0-lock
.X1024-lock
.X1025-lock
.X11-unix
.X1-lock
.XIM-unix
raflzaa@raflzaa:/tmp$ ls -F
raflzaa@raflzaa:/tmp$ ls -F
evince-27301/
```

Переходим в домашний каталог

```
raflzaa@raflzaa:/tmp$ cd
raflzaa@raflzaa:~$ ls
Desktop    Music      Public     Templates
Documents  pandoc-crossref  snap       Videos
Downloads  Pictures    study_2023-2024_os-intro  work
```

Рис. 5: Домашний каталог

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

```
raflzaa@raflzaa:~$ ls -l
total 48
drwxr-xr-x  2 raflzaa raflzaa 4096 map  1 00:59 Desktop
drwxr-xr-x  2 raflzaa raflzaa 4096 map  1 00:59 Documents
drwxr-xr-x  4 raflzaa raflzaa 4096 map  2 18:53 Downloads
drwxr-xr-x  2 raflzaa raflzaa 4096 map  1 00:59 Music
drwxrwxr-x 10 raflzaa raflzaa 4096 map  1 14:01 pandoc-crossref
drwxr-xr-x  3 raflzaa raflzaa 4096 map  2 08:24 Pictures
drwxr-xr-x  2 raflzaa raflzaa 4096 map  1 00:59 Public
drwx----- 5 raflzaa raflzaa 4096 map  2 19:02 snap
drwxrwxr-x  8 raflzaa raflzaa 4096 map  2 17:35 study_2023-2024_os-intro
drwxr-xr-x  2 raflzaa raflzaa 4096 map  1 00:59 Templates
drwxr-xr-x  2 raflzaa raflzaa 4096 map  1 00:59 Videos
drwxrwxr-x  3 raflzaa raflzaa 4096 map  1 12:04 work
```

Рис. 6: Имя домашнего каталога

В домашнем каталоге создаём новый каталог с именем newdir.

```
raflzaa@raflzaa:~$ mkdir morefun
raflzaa@raflzaa:~$ ls
Desktop  morefun  pandoc-crossref  snap          Videos
Documents Music    Pictures          study_2023-2024_os-intro  work
Downloads newdir   Public            Templates
```

Рис. 7: Создание каталога newdir

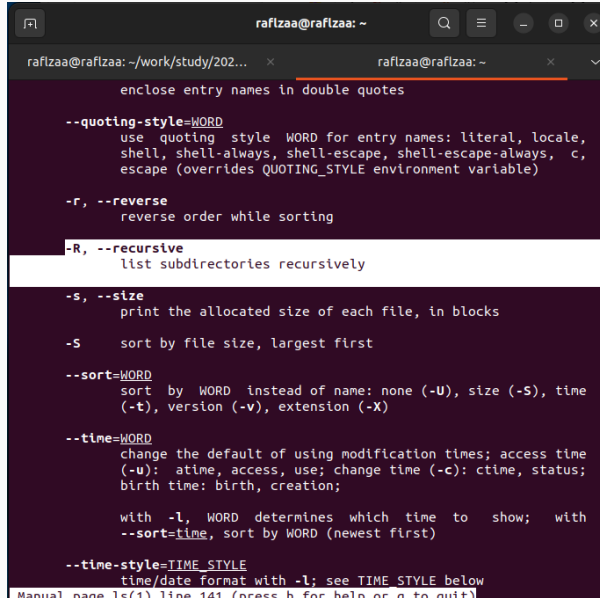
В каталоге ~/newdir создаём новый каталог с именем morefun.

```
raflzaa@raflzaa:~$ rm -r newdir
raflzaa@raflzaa:~$ ls
Desktop  morefun  Pictures  study_2023-2024_os-intro  work
Documents Music    Public    Templates
Downloads pandoc-crossref snap      Videos
```

Рис. 8: Создание каталога morefun

Создаём одной командой три новых каталога с именами

```
raflzaa@raflzaa: ~  
raflzaa@raflzaa: ~/work/study/202... x raflzaa@raflzaa: ~ x v  
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 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
```



```
raf1zaa@raf1zaa: ~  
raf1zaa@raf1zaa: ~/work/study/202... x raf1zaa@raf1zaa: ~ x v  
enclose entry names in double quotes  
  
--quoting-style=WORD  
    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  
  
-s, --size  
    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 (-U), size (-S), time  
    (-t), version (-v), extension (-X)  
  
--time=WORD  
    change the default of using modification times; access time  
    (-u): atime, access, use; change time (-c): ctime, status;  
    birth time: birth, creation;  
  
    with -l, WORD determines which time to show; with  
    --sort=time, sort by WORD (newest first)  
  
--time-style=TIME_STYLE  
    time/date format with -l; see TIME_STYLE below  
Manual page ls(1) line 141 (press h for help or q to quit)
```

Рис. 10: Команда man ls


```
raflzaa@raflzaa: ~  
raflzaa@raflzaa: ~/work/study/202... x raflzaa@raflzaa: ~ x v  
(-t), version (-v), extension (-X)  
  
--time=WORD  
change the default of using modification times; access time  
(-u): atime, access, use; change time (-c): ctime, status;  
birth time: birth, creation;  
  
with -l, WORD determines which time to show; with  
--sort=time, 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  
  
-u with -lt: sort by, and show, access time; with -l: show ac-  
cess time and sort by name; 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=COLS  
set output width to COLS. 0 means no limit  
  
-x list entries by lines instead of by columns  
  
-X sort alphabetically by entry extension  
Manual page ls(1) line 161 (press h for help or q to quit)
```

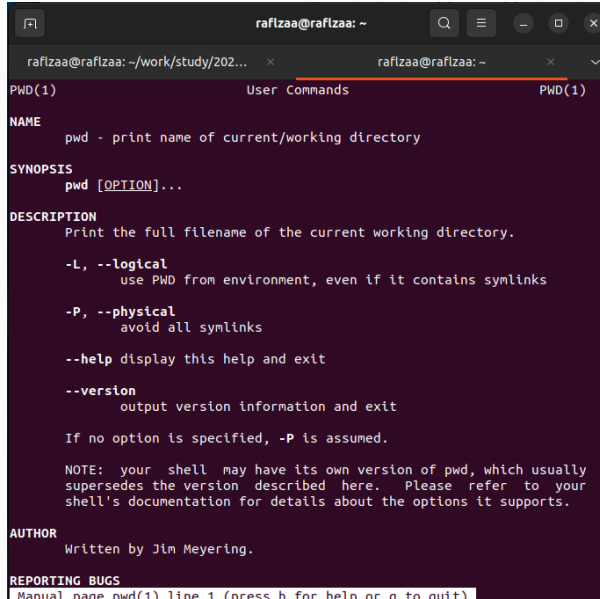
Рис. 11: -R, -recursive

routine call or expr does not correspond to a valid position in the call stack.

cd [-L][-P [-e]] [-@] [dir]

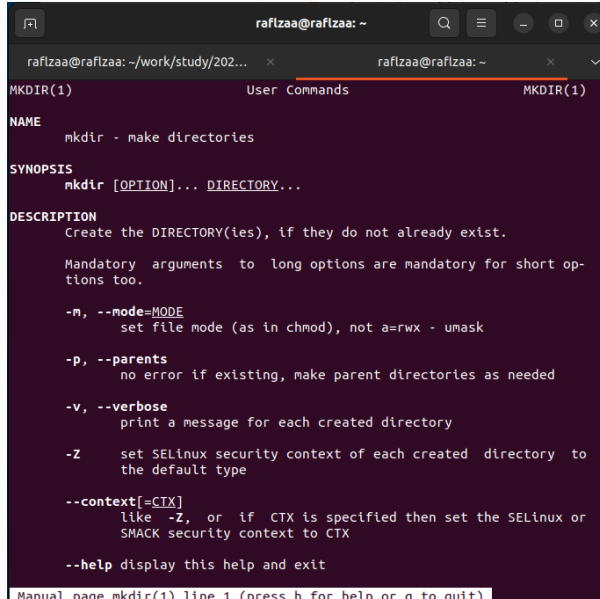
Change the current directory to dir. If dir is not supplied, the value of the **HOME** shell variable is the default. Any additional arguments following dir are ignored. The variable **CDPATH** defines the search path for the directory containing dir: each directory name in **CDPATH** is searched for dir. Alternative directory names in **CDPATH** are separated by a colon (:). A null directory name in **CDPATH** is the same as the current directory, i.e., `''`. If dir begins with a slash (/), then **CDPATH** is not used. The **-P** option causes **cd** to use the physical directory structure by resolving symbolic links while traversing dir and before processing instances of `..` in dir (see also the **-P** option to the **set** builtin command); the **-L** option forces symbolic links to be followed by resolving the link after processing instances of `..` in dir. If `..` appears in dir, it is processed by removing the immediately previous pathname component from dir, back to a slash or the beginning of dir. If the **-e** option is supplied with **-P**, and the current working directory cannot be successfully determined after a successful directory change, **cd** will return an unsuccessful status. On systems that support it, the **-@** option presents the extended attributes associated with a file as a directory. An argument of **-** is converted to **\$OLDPWD** before the directory change is attempted. If a non-empty directory name from **CDPATH** is used, or if **-** is the first argument, and the directory change is successful, the absolute pathname of the new working directory is written to the standard output. The return value is true if the directory was

Manual page builtins(7) line 157 (press h for help or q to quit)



```
raflzaa@raflzaa: ~  
raflzaa@raflzaa: ~/work/study/202... x raflzaa@raflzaa: ~ x v  
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  
    Manual page pwd(1) line 1 (press h for help or q to quit)
```

Рис. 13: Команда man cd



The image shows a terminal window with a dark background. At the top, there's a title bar with the text 'raflzaa@raflzaa: ~' and some window control icons. Below the title bar, there's a tab bar with two tabs: 'raflzaa@raflzaa: ~/work/study/202...' and 'raflzaa@raflzaa: ~'. The main content of the terminal is the man page for the 'mkdir' command. It is titled 'MKDIR(1)' on both the left and right sides. The page is divided into sections: 'NAME', 'SYNOPSIS', and 'DESCRIPTION'. The 'NAME' section says 'mkdir - make directories'. The 'SYNOPSIS' section shows 'mkdir [OPTION]... DIRECTORY...'. The 'DESCRIPTION' section explains that 'mkdir' creates directories if they don't exist, lists mandatory arguments, and then lists various options: '-m, --mode=MODE' (set file mode), '-p, --parents' (no error if existing, make parent directories), '-v, --verbose' (print a message), '-Z' (set SELinux security context), '--context[=CTX]' (like -Z, or if CTX is specified then set the SELinux or SMACK security context), and '--help' (display this help and exit). At the bottom of the terminal, there's a status bar that says 'Manual page mkdir(1) line 1 (press h for help or q to quit)'.

```
raflzaa@raflzaa: ~
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

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

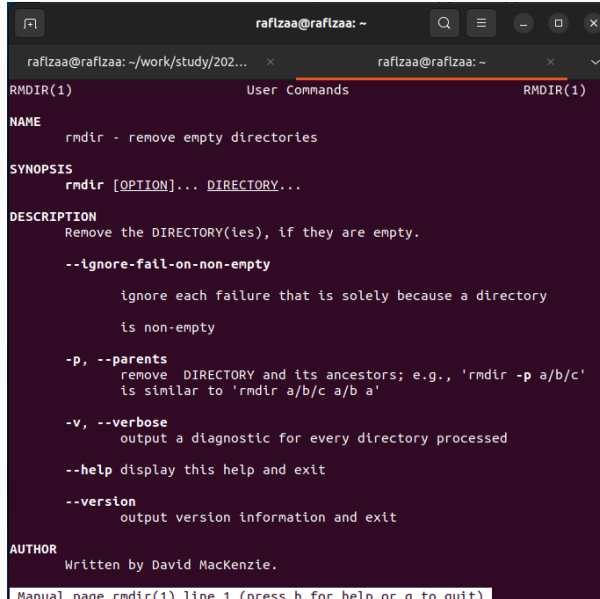
    -Z
        set SELinux security context of each created directory to the default type

    --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

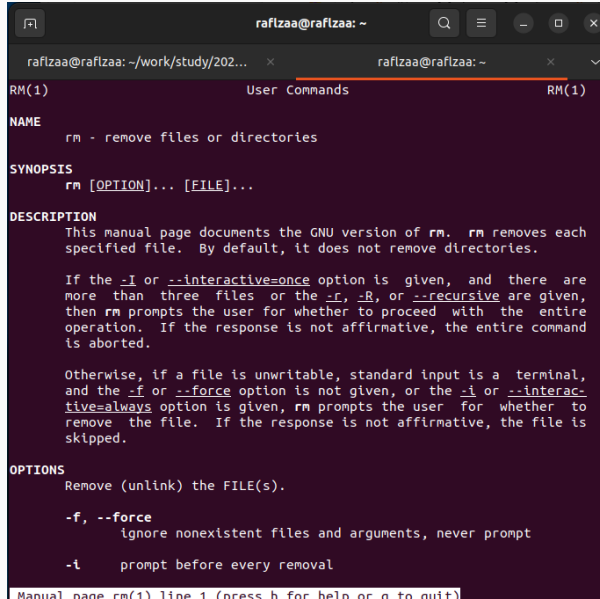
Manual page mkdir(1) line 1 (press h for help or q to quit)
```

Рис. 14: Команда man pwd




```
raflzaa@raflzaa: ~  
raflzaa@raflzaa: ~/work/study/202... x raflzaa@raflzaa: ~ x v  
rmkdir(1) User Commands rmkdir(1)  
  
NAME  
rmkdir - remove empty directories  
  
SYNOPSIS  
rmkdir [OPTION]... DIRECTORY...  
  
DESCRIPTION  
Remove the DIRECTORY(ies), if they are empty.  
  
--ignore-fail-on-non-empty  
ignore each failure that is solely because a directory  
is non-empty  
  
-p, --parents  
remove DIRECTORY and its ancestors; e.g., 'rmkdir -p a/b/c'  
is similar to 'rmkdir a/b/c 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.  
  
Manual page rmkdir(1) line 1 (press h for help or q to quit)
```

Рис. 15: Команда man mkdir



```
raflzaa@raflzaa: ~  
raflzaa@raflzaa: ~/work/study/202... x raflzaa@raflzaa: ~ x v  
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 --interac-  
tive=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  
  
Manual page rm(1) line 1 (press h for help or q to quit)
```

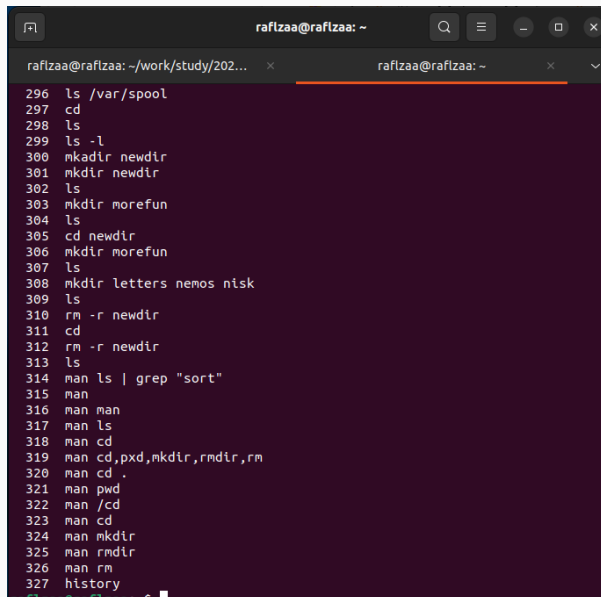
Рис. 16: Команда man rmdir

A terminal window with a dark purple background. The prompt 'raflzaa@raflzaa:~\$' is shown in green, followed by the command 'history' in white. The terminal output is not visible.

```
raflzaa@raflzaa:~$ history
```

Рис. 17: Команда `man rm`

Получим при помощи команды history

A terminal window with a dark purple background and white text. The window title is 'rafizaa@rafizaa: ~'. The terminal shows a list of commands entered, each preceded by a line number from 296 to 327. The commands include file system operations like 'ls', 'cd', 'mkdir', and 'rm', as well as 'man' lookups for various commands. The window has standard Linux terminal window controls at the top: a search icon, a menu icon, and window management icons (minimize, maximize, close).

```
rafizaa@rafizaa: ~  
296 ls /var/spool  
297 cd  
298 ls  
299 ls -l  
300 mkdir newdir  
301 mkdir newdir  
302 ls  
303 mkdir morefun  
304 ls  
305 cd newdir  
306 mkdir morefun  
307 ls  
308 mkdir letters nemos nisk  
309 ls  
310 rm -r newdir  
311 cd  
312 rm -r newdir  
313 ls  
314 man ls | grep "sort"  
315 man  
316 man man  
317 man ls  
318 man cd  
319 man cd,pxd,mkdir,rmdir,rm  
320 man cd .  
321 man pwd  
322 man /cd  
323 man cd  
324 man mkdir  
325 man rmdir  
326 man rm  
327 history
```


Выполним модификацию и исполнение нескольких команд из буфера команд

```
raflzaa@raflzaa:~$ ls -a
.          .gitconfig      Public
..         .gnupg          snap
.bash_history .lessht         .ssh
.bash_logout .local          .stack
.bashrc      morefun         study_2023-2024_os-intro
.cabal       .mozilla        .sudo_as_admin_successful
.cache       Music          Templates
.config      .pam_environment .thunderbird
Desktop      pandoc-crossref Videos
Documents    Pictures        .wget-hsts
Downloads    .profile        work
```

Рис. 18: Модификация команды №493

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