

Отчет по лабораторной работе №4

Кашкин Иван Евгеньевич

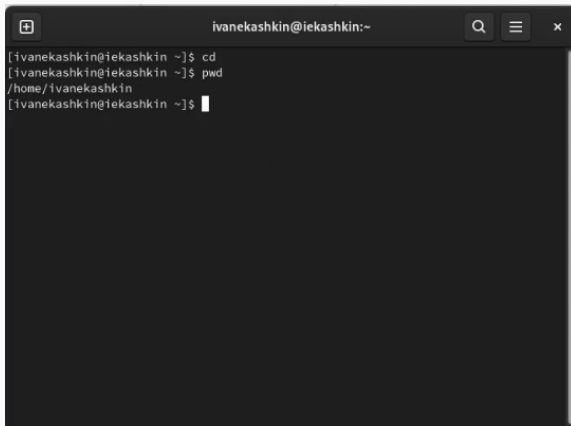
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РУДН, Москва, Россия

Приобретение практических навыков взаимодействия пользователя с системой посредством командной строки

Прописать несколько базовых команд, посмотреть что произойдет и у
знать подробную информацию об опциях каждой команды

Определяем полное имя нашего домашнего каталога (рис. 1)

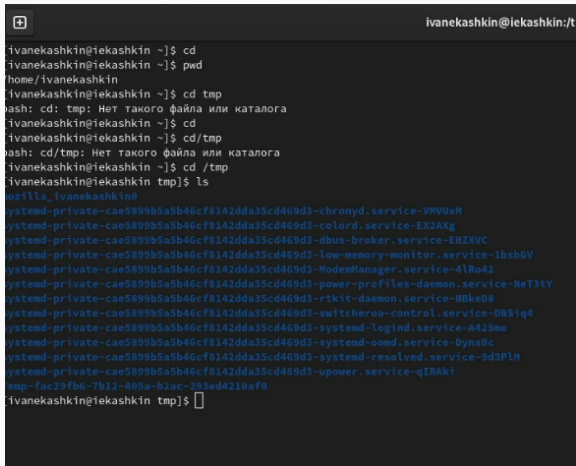
A terminal window with a dark background. The title bar shows 'ivanekashkin@iekashkin:~'. The terminal content shows three lines: a prompt '[ivanekashkin@iekashkin ~]\$' followed by 'cd', another prompt '[ivanekashkin@iekashkin ~]\$' followed by 'pwd', and the output '/home/ivanekashkin'. A third prompt '[ivanekashkin@iekashkin ~]\$' is visible with a cursor. The window has standard macOS-style window controls (red, yellow, green buttons) and a search icon on the right.

```
ivanekashkin@iekashkin:~  
[ivanekashkin@iekashkin ~]$ cd  
[ivanekashkin@iekashkin ~]$ pwd  
/home/ivanekashkin  
[ivanekashkin@iekashkin ~]$
```

Figure 1: Домашний каталог

Выполнены команды ls и её опций

Выполняем несколько команд

A terminal window with a dark background and light text. The title bar shows a window icon and the text 'ivanekashkin@iekashkin:/t'. The terminal content shows a series of commands and their outputs: 'cd' (no output), 'pwd' (output: /home/ivanekashkin), 'cd tmp' (output: bash: cd: tmp: Нет такого файла или каталога), 'cd' (no output), 'cd/tmp' (output: bash: cd/tmp: Нет такого файла или каталога), 'cd /tmp' (no output), 'ls' (output: mozilla_ivanekashkin0, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-chrond.service-VMWUXH, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-colord.service-EX2AXG, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-dbus-broker.service-EHZXVC, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-low-memory-monitor.service-lsbGV, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-ModemManager.service-4lRo42, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-power-profiles-daemon.service-NeT3tY, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-rtkit-daemon.service-HBkeD8, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-switcheroo-control.service-DNSiq4, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-systemd-logind.service-A425me, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-systemd-oomd.service-Dynx0c, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-systemd-resolved.service-9d3PlM, systemd-private-cae5899b5a5b46cf8142dda35cd469d3-upower.service-qIRAKi, tmp-fac29fb6-7b12-405a-b2ac-293ed4210af0), and 'ls' in the tmp directory (output:).

```
ivanekashkin@iekashkin ~]$ cd
ivanekashkin@iekashkin ~]$ pwd
/home/ivanekashkin
ivanekashkin@iekashkin ~]$ cd tmp
bash: cd: tmp: Нет такого файла или каталога
ivanekashkin@iekashkin ~]$ cd
ivanekashkin@iekashkin ~]$ cd/tmp
bash: cd/tmp: Нет такого файла или каталога
ivanekashkin@iekashkin ~]$ cd /tmp
ivanekashkin@iekashkin tmp]$ ls
mozilla_ivanekashkin0
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-chrond.service-VMWUXH
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-colord.service-EX2AXG
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-dbus-broker.service-EHZXVC
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-low-memory-monitor.service-lsbGV
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-ModemManager.service-4lRo42
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-power-profiles-daemon.service-NeT3tY
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-rtkit-daemon.service-HBkeD8
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-switcheroo-control.service-DNSiq4
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-systemd-logind.service-A425me
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-systemd-oomd.service-Dynx0c
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-systemd-resolved.service-9d3PlM
systemd-private-cae5899b5a5b46cf8142dda35cd469d3-upower.service-qIRAKi
tmp-fac29fb6-7b12-405a-b2ac-293ed4210af0
ivanekashkin@iekashkin tmp]$
```

Figure 2: Домашний каталог

[illegible]

Figure 3: Команды ls

```
ivanekashkin@iekashkin:/  
[ivanekashkin@iekashkin tnp]$ cd /  
[ivanekashkin@iekashkin /]$ ls  
bin boot dev etc home lib lib64 lost-found media net opt proc root run sbin srv sys tmp usr var  
[ivanekashkin@iekashkin /]$ ls -aF  
bash: ls -aF: command not found...  
[ivanekashkin@iekashkin /]$ ls -aF  
bash: ls -aF: command not found...  
[ivanekashkin@iekashkin /]$ ls -aF  
total 20  
dr-xr-xr-x. 1 root root 152 окт 26 2021 ./  
dr-xr-xr-x. 1 root root 152 окт 26 2021 ../  
lrwxrwxrwx. 1 root root 7 июл 22 2021 bin -> usr/bin/  
dr-xr-xr-x. 7 root root 4096 апр 20 17:27 boot/  
drwxr-xr-x. 19 root root 3888 апр 27 13:49 dev/  
drwxr-xr-x. 1 root root 4716 апр 26 10:45 etc/  
drwxr-xr-x. 1 root root 38 апр 23 23:14 home/  
lrwxrwxrwx. 1 root root 7 июл 22 2021 lib -> usr/lib/  
lrwxrwxrwx. 1 root root 9 июл 22 2021 lib64 -> usr/lib64/  
drwx----- 1 root root 0 окт 26 2021 lost-found/  
drwxr-xr-x. 1 root root 0 июл 22 2021 media/  
drwxr-xr-x. 1 root root 0 июл 22 2021 net/  
drwxr-xr-x. 1 root root 50 апр 21 08:51 opt/  
dr-xr-xr-x. 294 root root 0 апр 27 13:49 proc/  
dr-xr-xr-x. 1 root root 206 апр 26 10:41 root/  
drwxr-xr-x. 52 root root 1348 апр 27 13:53 run/  
lrwxrwxrwx. 1 root root 8 июл 22 2021 sbin -> usr/sbin/  
drwxr-xr-x. 1 root root 0 июл 22 2021 srv/  
dr-xr-xr-x. 13 root root 0 апр 27 13:49 sys/  
drwxrwxrwt. 21 root root 509 апр 27 14:25 tmp/  
drwxr-xr-x. 1 root root 100 окт 26 2021 usr/  
drwxr-xr-x. 1 root root 200 окт 26 2021 var/  
[ivanekashkin@iekashkin /]$
```

Figure 4: Еще команда ls

```

[ivanekashkin@ivanekashkin tmp]$ cd /var/spool
[ivanekashkin@ivanekashkin spool]$ ls
work  dist-upgrade  rpm  rpm  mail  plymouth
[ivanekashkin@ivanekashkin spool]$ cd
[ivanekashkin@ivanekashkin ~]$ ls
work  home  документы  загрузки  Изображения  Музыка  Общедоступные  "Рабочий стол"  Шаблоны
[ivanekashkin@ivanekashkin ~]$ ls -alF
итого 44
drwx----- 1 ivanekashkin ivanekashkin 766 апр 27 13:52 ./
drwxr-xr-x 1 root root 38 апр 23 23:14 ../
-rw----- 1 ivanekashkin ivanekashkin 1865 апр 25 09:26 .bash_history
-rw-r--r-- 1 ivanekashkin ivanekashkin 18 мая 21 2021 .bash_logout
-rw-r--r-- 1 ivanekashkin ivanekashkin 141 мая 21 2021 .bash_profile
-rw-r--r-- 1 ivanekashkin ivanekashkin 592 мая 21 2021 .bashrc
drwxrwxr-x 1 ivanekashkin ivanekashkin 444 апр 26 11:57 .cache/
drwx----- 1 ivanekashkin ivanekashkin 444 апр 23 23:47 .cache/
drwxr-xr-x 1 ivanekashkin ivanekashkin 266 апр 26 22:26 .config/
-rw-rw-r-- 1 ivanekashkin ivanekashkin 438 апр 23 22:40 .gitconfig
drwx----- 1 ivanekashkin ivanekashkin 134 апр 26 22:35 .gnome/
drwx----- 1 ivanekashkin ivanekashkin 20 апр 20 17:47 .local/
drwxr-xr-x 1 ivanekashkin ivanekashkin 48 апр 21 09:57 .local/
-rw-rw-r-- 1 ivanekashkin ivanekashkin 33 апр 23 20:24 .root_hist
drwx----- 1 ivanekashkin ivanekashkin 102 апр 21 12:26 .ssh/
drwxrwxr-x 1 ivanekashkin ivanekashkin 18 апр 26 22:08 .twilio2021/
-rw-r----- 1 ivanekashkin ivanekashkin 5 апр 27 13:51 .vboxclient-clipboard.pid
-rw-r----- 1 ivanekashkin ivanekashkin 6 апр 27 14:30 .vboxclient-display-svga-x11.pid
-rw-r----- 1 ivanekashkin ivanekashkin 5 апр 27 13:51 .vboxclient-draganddrop.pid
-rw-r----- 1 ivanekashkin ivanekashkin 5 апр 27 13:51 .vboxclient-seamless.pid
-rw-rw-r-- 1 ivanekashkin ivanekashkin 180 апр 21 10:37 .wget-hsts
drwxrwxr-x 1 ivanekashkin ivanekashkin 10 апр 21 12:01 work/
drwxr-xr-x 1 ivanekashkin ivanekashkin 0 апр 20 17:47 home/

```

Figure 5: Владелец каталога

Выполнение команд mkdir, rmdir, rm

Выполняем следующие команды

```
[ivaneekashking@ekashkin ~]$ mkdir newdir
[ivaneekashking@ekashkin ~]$ ls
newdir  work  Images  Документы  Загрузки  Избранное  Музыка  Общедоступные  'Рабочий стол'  Шаблоны
[ivaneekashking@ekashkin ~]$ cd /newdir
bash: cd: /newdir: Нет такого файла или каталога
[ivaneekashking@ekashkin ~]$ cd/newdir
[ivaneekashking@ekashkin ~]$ cd/newdir
[ivaneekashking@ekashkin ~]$ cd/newdir
[ivaneekashking@ekashkin ~]$ mkdir morefun
[ivaneekashking@ekashkin ~]$ ls
morefun
[ivaneekashking@ekashkin ~]$ cd
[ivaneekashking@ekashkin ~]$
```

Figure 6: Создание каталога

```
[ivaneekashking@ekashkin ~]$ cd
[ivaneekashking@ekashkin ~]$ mkdir letters memos misk
[ivaneekashking@ekashkin ~]$ ls
letters  memos  misk  newdir  work  Images  Документы  Загрузки  Избранное  Музыка  Общедоступные  'Рабочий стол'  Шаблоны
[ivaneekashking@ekashkin ~]$ rm letters memos misk
rm: невозможно удалить 'letters': это каталог
rm: невозможно удалить 'memos': это каталог
rm: невозможно удалить 'misk': это каталог
[ivaneekashking@ekashkin ~]$ rm -r letters memos misk
rm: невозможно удалить '-r': Нет такого файла или каталога
rm: невозможно удалить 'letters': это каталог
rm: невозможно удалить 'memos': это каталог
rm: невозможно удалить 'misk': это каталог
```

Figure 7: Создание letters,memos,misk

```
[ivaneekashking@ekashkin ~]$ rmdir letters memos misk
[ivaneekashking@ekashkin ~]$ ls
newdir  work  Images  Документы  Загрузки  Избранное  Музыка  Общедоступные  'Рабочий стол'  Шаблоны
[ivaneekashking@ekashkin ~]$ rmdir newdir
rmdir: не удалось удалить 'newdir': Каталог не пуст
[ivaneekashking@ekashkin ~]$ rm -r newdir
[ivaneekashking@ekashkin ~]$
```

Figure 8: Удаление каталогов

С помощью команды `man` определим, опцию `ls` для просмотра содержимое не только указанного каталога, но и подкаталогов, входящих в него. И также командой `man ls` узнаем опцию, позволяющий отсортировать по времени последнего изменения выводимый список содержимого каталога с развёрнутым описанием файлов.

Просмотр опций

```
ivanekashkin@iekashkin:~$ man cd

the current job is used.  bg jobspec returns 0 unless run when job control is disabled or, when run with job control enabled, any specified jobspec was not found or was started without job control.

bind [-m keymap] [-l typePATTERN]
bind [-m keymap] [-q function] [-w function] [-r keyseq]
bind [-m keymap] -f filename
bind [-m keymap] -k keyseq:shell-command
bind [-m keymap] keyseq:function-name
bind [-m keymap] keyseq:readline-command

Display current readline key and function bindings, bind a key sequence to a readline function or macro, or set a readline variable.
Each non-option argument is a command as it would appear in .inputrc, but each binding or command must be passed as a separate argument;
e.g., "!!C=!!C-r" re-reads init file".  Options, if supplied, have the following meanings:
-m keymap
    Use keymap as the keymap to be affected by the subsequent bindings.  Acceptable keymap names are emacs, emacs-standard,
emacs-text, emacs-tilde, vi, vi-mode, vi-command, and vi-insert.  vi is equivalent to vi-command (vi-move is also a synonym);
emacs is equivalent to emacs-standard.
-l
    List the names of all readline functions.
-p
    Display readline function names and bindings in such a way that they can be re-read.
-q
    List current readline function names and bindings.
-r
    Display readline key sequences bound to macros and the strings they output in such a way that they can be re-read.
-s
    Display readline key sequences bound to macros and the strings they output.
-v
    Display readline variable names and values in such a way that they can be re-read.
-w
    List current readline variable names and values.
-f filename
    Read key bindings from filename.
-q function
    Query about which keys invoke the named function.
-u function
    Unbind all keys bound to the named function.
```

Figure 9: Опции cd

```
ivanekashkin@iekashkin:~$ man pwd

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 documenta-
tion for details about the options it supports.

AUTHOR
    Written by Jim Meyering.

REPORTING BUGS
```

```
ivanekashkin@iekashkin:~ — man mkdir
MKDIR(1) User Commands

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

    --version
        output version information and exit

Manual page mkdir(1) line 1/50 58% (press h for help or q to quit)
```

Figure 11: Опции mkdir

```
ivanekashkin@iekashkin:~$ man rmdir
rmdir(1)                                User Commands

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 that is solely because a directory
        is non-empty

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

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

Figure 12: Опции rmdir

```
ivanekashkin@iekashkin:~$ man rm

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

--no-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

-v, --verbose
    explain what is being done

--help
    display this help and exit

--version
    output version information and exit

By default, rm does not remove directories. Use the --recursive (-r or -R) option to remove each listed directory, too, along with all of its contents.

To remove a file whose name starts with a '-', for example '-foo', use one of these commands:
```

Figure 13: Опции rm

Приобрел практические навыки взаимодействия пользователя с системой посредством командной строки

Спасибо за внимание!