

РОССИЙСКИЙ УНИВЕРСИТЕТ ДРУЖБЫ НАРОДОВ
презентация **ПО ЛАБОРАТОРНОЙ РАБОТЕ № 4**

дисциплина: *Операционные системы*

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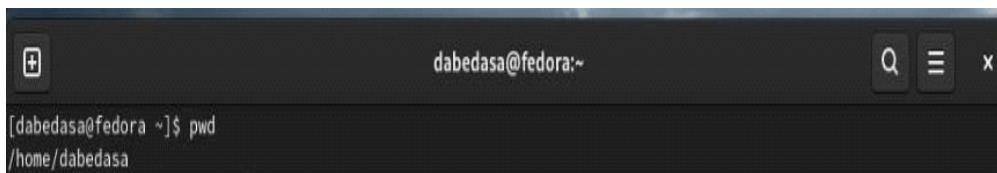
Группа: нпи -01-21

МОСКВА

2022 г.

4.1. Цель работы Приобретение практических навыков взаимодействия пользователя с системой посредством командной строки

- Определите полное имя вашего домашнего каталога. Далее относительно этого каталога будут выполняться последующие



A screenshot of a terminal window titled "dabedasa@fedora:~". The window shows the command "pwd" being run, followed by the output "/home/dabedasa". The terminal has a dark theme with light-colored text. It includes standard window controls (minimize, maximize, close) and a search bar.

- Выполните следующие действия:
- Перейдите в каталог /tmp.

- Выведите на экран содержимое каталога /tmp. Для этого используйте команду ls с различными опциями. Поясните разницу в выводимой на экран информации.

```
[dabedasa@fedora ~]$ pwd
/home/dabedasa
[dabedasa@fedora ~]$ cd /tmp
[dabedasa@fedora tmp]$ ls
systemd-private-930787294c5f4f9cb046664e702cda6c-chrony.service-TI8Jr7
systemd-private-930787294c5f4f9cb046664e702cda6c-colorerd.service-BujAF7
systemd-private-930787294c5f4f9cb046664e702cda6c-dbus-broker.service-PszjSl
systemd-private-930787294c5f4f9cb046664e702cda6c-fwupd.service-q5uv63
systemd-private-930787294c5f4f9cb046664e702cda6c-geoclue.service-IEscfe
systemd-private-930787294c5f4f9cb046664e702cda6c-low-memory-monitor.service-ZLkg6q
systemd-private-930787294c5f4f9cb046664e702cda6c-ModemManager.service-xGtta8
systemd-private-930787294c5f4f9cb046664e702cda6c-power-profiles-daemon.service-HNmHzU
systemd-private-930787294c5f4f9cb046664e702cda6c-rtkit-daemon.service-qlfxKB
systemd-private-930787294c5f4f9cb046664e702cda6c-switcheroo-control.service-1nZ1f
systemd-private-930787294c5f4f9cb046664e702cda6c-systemd-logind.service-xlFym2
systemd-private-930787294c5f4f9cb046664e702cda6c-systemd-oomd.service-fMA94E
systemd-private-930787294c5f4f9cb046664e702cda6c-systemd-resolved.service-7uFdlo
systemd-private-930787294c5f4f9cb046664e702cda6c-upower.service-8d8XR0
```

- Определите, есть ли в каталоге /var/spool подкаталог с именем cron?
- Перейдите в Ваш домашний каталог и выведите на экран его содержимое. Определите, кем является владельцем файлов и подкаталогов

```
[dabedasa@fedora tmp]$ cd /var/spool
[dabedasa@fedora spool]$ ls
abrt abrt-upload cups lpd mail plymouth
[dabedasa@fedora spool]$ cd
[dabedasa@fedora ~]$ ls
ab branches description Documents HEAD info objects Public Refs Videos
abd config Desktop Downloads hooks Music Pictures r Templates work
[dabedasa@fedora ~]$
```

- Выполните следующие действия:
- В домашнем каталоге создайте новый каталог с именем newdir.
- В каталоге ~/newdir создайте новый каталог с именем morefun.

Activities Terminal Apr 30 16:29

```
[dabedasa@fedora ~]$ mkdir newdir
[dabedasa@fedora ~]$ cd ~/newdir
[dabedasa@fedora newdir]$ mkdir morefun
[dabedasa@fedora newdir]$
```

Activities Terminal Apr 30 17:08

```
[dabedasa@fedora ~]$ mkdir letters
[dabedasa@fedora ~]$ mkdir memos
[dabedasa@fedora ~]$ mkdir misk
[dabedasa@fedora ~]$ ls
Desktop Downloads info memos Music objects Public Templates
Documents hooks letters misk newdir Pictures refs Videos
[dabedasa@fedora ~]$ rm -r letters memos misk
[dabedasa@fedora ~]$ ls
Desktop Documents Downloads hooks info Music newdir objects Pictures Public refs Templates Videos
```

• домашнем каталоге создайте одной командой три новых каталога с именами letters, memos, misk. Затем удалите эти каталоги одной командой.

S

- Попробуйте удалить ранее созданный каталог `~/newdir` командой `rm`. Проверьте, был ли каталог удалён.
- Удалите каталог `~/newdir/morefun` из домашнего каталога. Проверьте, был ли каталог удален.

```
[dabedasa@fedora ~]$ rm newdir
rm: cannot remove 'newdir': Is a directory
[dabedasa@fedora ~]$ ls
Desktop Documents Downloads hooks info Music newdir objects Pictures Public refs Templates Videos
[dabedasa@fedora ~]$ rm -r newdir
[dabedasa@fedora ~]$ ls
Desktop Documents Downloads hooks info Music objects Pictures Public refs Templates Videos
[dabedasa@fedora ~]$
```

- С помощью команды `man` определите, какую опцию команды `ls` нужно использовать для просмотра содержимое не только указанного каталога, но и подкаталогов, входящих в него

```
dabedasa@fedora:~
```

```
[dabedasa@fedora ~]$ ls -R
.:
Desktop Documents Downloads hooks info Music objects Pictures Public refs Templates Videos

./Desktop:
./Documents:
./Downloads:
./hooks:
applypatch-msg.sample    pre-applypatch.sample    pre-push.sample        update.sample
commit-msg.sample         pre-commit.sample     pre-rebase.sample
fsmonitor-watchman.sample pre-merge-commit.sample pre-receive.sample
post-update.sample        prepare-commit-msg.sample push-to-checkout.sample

./info:
exclude

./Music:
./objects:
info pack

./objects/info:
./objects/pack:

./Pictures:
./objects/pack:
./Pictures:
'Screenshot from 2022-04-22 20:42:20.png'  'Screenshot from 2022-04-23 22:06:41.png'
'Screenshot from 2022-04-22 21:35:24.png'  'Screenshot from 2022-04-23 22:13:39.png'
'Screenshot from 2022-04-23 10:12:02.png'  'Screenshot from 2022-04-30 16:19:33.png'
'Screenshot from 2022-04-23 10:16:06.png'  'Screenshot from 2022-04-30 16:29:56.png'
'Screenshot from 2022-04-23 10:17:58.png'  'Screenshot from 2022-04-30 17:08:52.png'
'Screenshot from 2022-04-23 10:23:48.png'  'Screenshot from 2022-04-30 18:57:18.png'
'Screenshot from 2022-04-23 10:24:32.png'  'Screenshot from 2022-04-30 18:57:46.png'
'Screenshot from 2022-04-23 10:48:03.png'  'Screenshot from 2022-04-30 18:58:15.png'
'Screenshot from 2022-04-23 10:48:13.png'  'Screenshot from 2022-04-30 18:58:54.png'
'Screenshot from 2022-04-23 10:48:57.png'  'Screenshot from 2022-04-30 18:59:11.png'
'Screenshot from 2022-04-23 20:03:48.png'  'Screenshot from 2022-04-30 18:59:51.png'
'Screenshot from 2022-04-23 20:04:03.png'  'Screenshot from 2022-04-30 19:02:02.png'
'Screenshot from 2022-04-23 22:05:45.png'

./Public:
./refs:
heads tags

./refs/heads:
./refs/tags:
./Templates:
./Videos:
```

5 С помощью команды man определите набор опций команды ls, позволяющий отсортировать по времени последнего изменения выводимый список содержимого каталога с развернутым описанием файлов.

```
[dabedasa@fedora ~]$ ls -ltr
total 0
drwxr-xr-x. 1 dabedasa dabedasa 0 Apr 22 11:56 Desktop
drwxr-xr-x. 1 dabedasa dabedasa 0 Apr 22 11:56 Videos
drwxr-xr-x. 1 dabedasa dabedasa 0 Apr 22 11:56 Templates
drwxr-xr-x. 1 dabedasa dabedasa 0 Apr 22 11:56 Public
drwxr-xr-x. 1 dabedasa dabedasa 0 Apr 22 11:56 Music
drwxr-xr-x. 1 dabedasa dabedasa 0 Apr 22 11:56 Downloads
drwxr-xr-x. 1 dabedasa dabedasa 0 Apr 22 11:56 Documents
drwxrwxr-x. 1 dabedasa dabedasa 506 Apr 23 20:15 hooks
drwxrwxr-x. 1 dabedasa dabedasa 18 Apr 23 20:15 refs
drwxrwxr-x. 1 dabedasa dabedasa 14 Apr 23 20:15 info
drwxrwxr-x. 1 dabedasa dabedasa 16 Apr 23 20:15 objects
drwxr-xr-x. 1 dabedasa dabedasa 2106 Apr 30 19:14 Pictures
[dabedasa@fedora ~]$
```

Используйте команду man для просмотра описания следующих команд: cd, pwd, mkdir, rmdir, rm.
Поясните основные опции этих команд

ОПЦИИ ЭТИХ КОМАНД cd

```
dabedasa@fedora:~ — man cd
```

SH_BUILTINS(1) General Commands Manual BASH_BUILTINS(1)

ME

bash, :, ., [, alias, bg, bind, break, builtin, caller, cd, command, compgen, complete, compopt, continue, declare, dirs, disown, echo, enable, eval, exec, exit, export, false, fc, fg, getopt, hash, help, history, jobs, kill, let, local, logout, mapfile, popd, printf, pushd, pwd, read, 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)**

SH 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 :, 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 requiring --. Other builtins that accept arguments but are not specified as accepting options interpret arguments beginning with - as invalid options and require -- to prevent this interpretation.

: [arguments]

No effect; the command does nothing beyond expanding **arguments** and performing any specified 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**. The file searched for in **PATH** need not be executable. When **bash** is not in **posix mode**, the current directory is searched if no file is found in **PATH**. If the **sourcpath** 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 en-

ОПЦИИ ЭТИХ КОМАНД mkdir

dabedasa@fedora:~ — 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

-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

ОПЦИИ ЭТИХ КОМАНД pwd

dabedasa@fedora:~ — 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

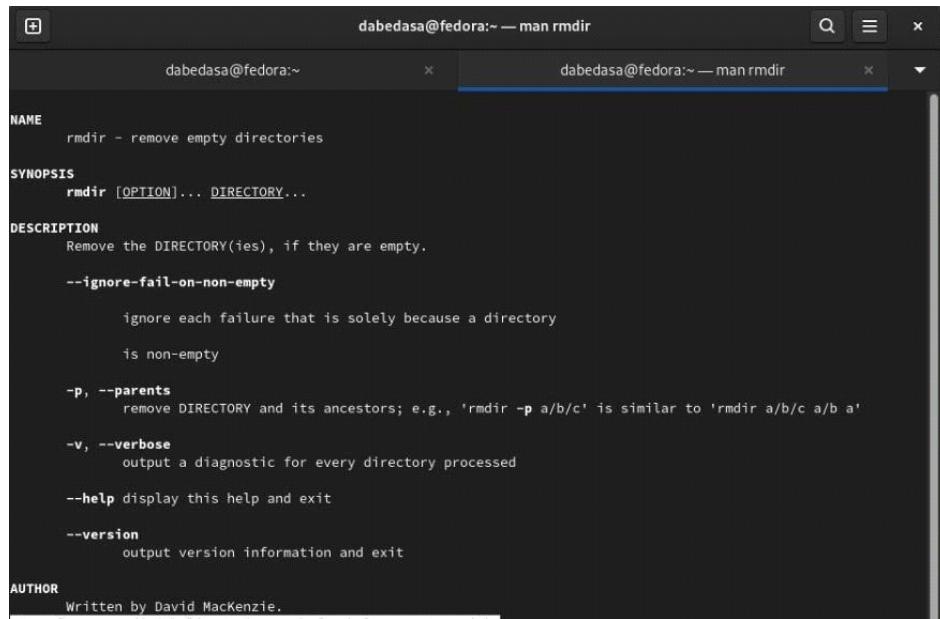
--version
output version information and exit

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.

ОПЦИИ ЭТИХ КОМАНД rmdir



dabedasa@fedora:~ — man rmdir

```
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'

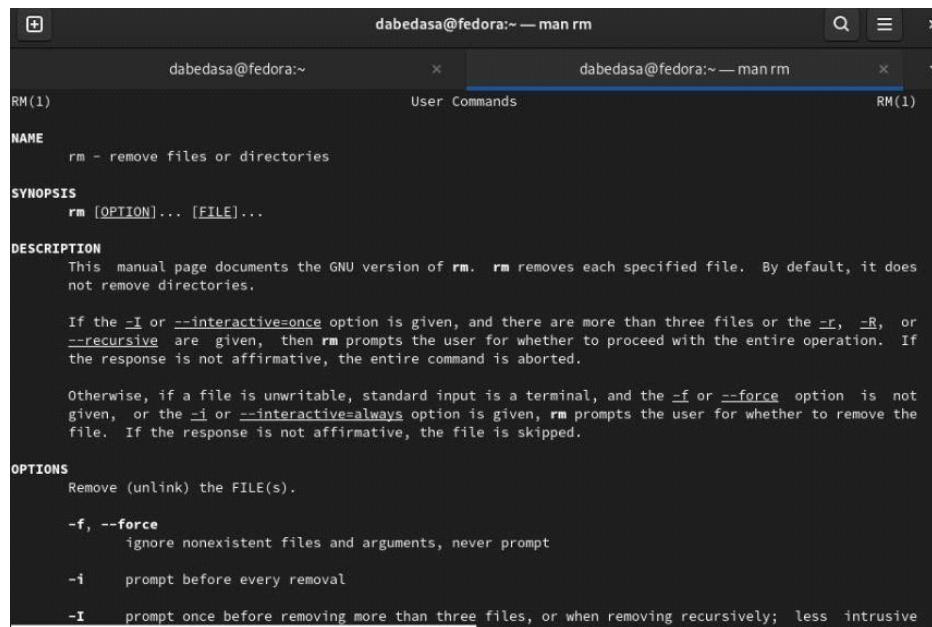
    -v, --verbose
        output a diagnostic for every directory processed

    --help
        display this help and exit

    --version
        output version information and exit

AUTHOR
    Written by David MacKenzie.
```

ОПЦИИ ЭТИХ КОМАНД rm



dabedasa@fedora:~ — 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 unwriteable, 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.

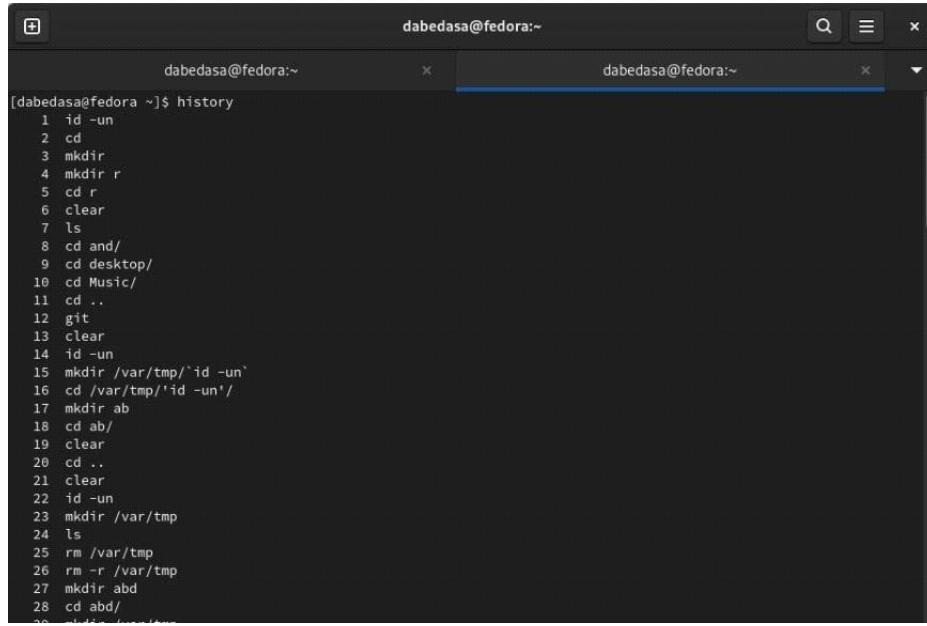
OPTIONS
    Remove (unlink) the FILE(s).

    -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 intrusive
```

Используя информацию, полученную при помощи команды history, выполните модификацию исполнение нескольких команд из буфера команд.



```
[dabeledasa@fedora ~]$ history
1 id -un
2 cd
3 mkdir
4 mkdir r
5 cd r
6 clear
7 ls
8 cd and/
9 cd desktop/
10 cd Music/
11 cd ..
12 git
13 clear
14 id -un
15 mkdir /var/tmp/'id -un'
16 cd /var/tmp/'id -un'/
17 mkdir ab
18 cd ab/
19 clear
20 cd ..
21 clear
22 id -un
23 mkdir /var/tmp
24 ls
25 rm /var/tmp
26 rm -r /var/tmp
27 mkdir abd
28 cd abd/
29 cd abd/
```

Выходы

Мы приобрели навыки взаимодействия с системой Unix с помощью командной строки