

# Цель работы

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Ознакомление с инструментами поиска файлов и фильтрации текстовых данных. Приобретение практических навыков: по управлению процессами (и заданиями), по проверке использования диска и обслуживанию файловых систем.

## Задание

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1. Осуществите вход в систему, используя соответствующее имя пользователя.
2. Запишите в файл `file.txt` названия файлов, содержащихся в каталоге `/etc`. Допишите в этот же файл названия файлов, содержащихся в вашем домашнем каталоге.
3. Выведите имена всех файлов из `file.txt`, имеющих расширение `.conf`, после чего запишите их в новый текстовый файл `conf.txt`.
4. Определите, какие файлы в вашем домашнем каталоге имеют имена, начинавшиеся с символа `c`? Предложите несколько вариантов, как это сделать.
5. Выведите на экран (по странично) имена файлов из каталога `/etc`, начинающиеся с символа `h`.
6. Запустите в фоновом режиме процесс, который будет записывать в файл `~/logfile` файлы, имена которых начинаются с `log`.
7. Удалите файл `~/logfile`.
8. Запустите из консоли в фоновом режиме редактор `gedit`.
9. Определите идентификатор процесса `gedit`, используя команду `ps`, конвейер и фильтр `grep`. Как ещё можно определить идентификатор процесса?
10. Прочтите справку (`man`) команды `kill`, после чего используйте её для завершения процесса `gedit`.
11. Выполните команды `df` и `du`, предварительно получив более подробную информацию об этих командах, с помощью команды `man`.
12. Воспользовавшись справкой команды `find`, выведите имена всех директорий, имеющих в вашем домашнем каталоге.

## Выполнение лабораторной работы

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### Задание 1

- При запуске системы войдем в учетную запись `aepetrov`

### Задание 2.

- (рис. [-@fig:001]) Воспользуемся функциями команды `stdout >` и `>>`

```
1. cd
2. ls /etc > file.txt
3. ls >> file.txt
```

```
[aepetrov@fedora ~]$ cd
[aepetrov@fedora ~]$ ls /etc > file
[aepetrov@fedora ~]$ ls >>file
[aepetrov@fedora ~]$ cat file
abrt
adjtime
aliases
alsa
alternatives
anaconda
anthy-unicode.conf
appstream.conf
asound.conf
audit
authselect
avahi
bash_completion.d
bashrc
bindresvport.blacklist
binfmt.d
bluetooth
brlapi.key
brltty
brltty.conf
ceph
chkconfig.d
chromium
chrony.conf
chrony.keys
cifs-utils
containers
crypto-policies
crypttab
csh.cshrc
csh.login
cups
cupshelpers
dbus-1
dconf
debuginfod
default
depmod.d
dhcp
DIR_COLORS
DIR_COLORS.lightbgcolor
dley-na-renderer-service.conf
dley-na-server-service.conf
```

{#fig:001 width=70%}

## Задание 3

- Воспользуемся след. командами(рис. [-@fig:002]):

1. cd
2. cat file.txt | grep .conf > conf.txt
3. cat conf.txt

```
[aepetrov@fedora ~]$ cat file | grep .conf > conf.txt
[aepetrov@fedora ~]$ cat conf.txt
anthy-unicode.conf
appstream.conf
asound.conf
brltty.conf
chkconfig.d
chrony.conf
dconf
dleyna-renderer-service.conf
dleyna-server-service.conf
dnsmasq.conf
dracut.conf
dracut.conf.d
extlinux.conf
fprintd.conf
fuse.conf
host.conf
idmapd.conf
jwhois.conf
kdump.conf
krb5.conf
krb5.conf.d
ld.so.conf
ld.so.conf.d
libaudit.conf
libuser.conf
locale.conf
logrotate.conf
makedumpfile.conf.sample
man_db.conf
mke2fs.conf
mtools.conf
ndctl.conf.d
netconfig
nfs.conf
nfsmount.conf
nsswitch.conf
nsswitch.conf.bak
opensc.conf
opensc-x86_64.conf
passwdqc.conf
pkgconfig
radvd.conf
reader.conf.d
request-key.conf
resolv.conf
rsyncd.conf
rygel.conf
sestatus.conf
sudo.conf
systemd-locale.conf
```

{#fig:002 width=70%}

## Задание 4

- Для того, чтобы определить, какие файлы в домашнем каталоге начинаются с символа 'с', можно воспользоваться двумя самыми тривиальными способами:

1. (рис. [-@fig:003])

```
1. cd
2. find ~/ -name "c*" -print
```

Данный способ выведет нам все файлы, включая файлы директорий, которым ~/ приходится родительской, что не совсем удобно.

```
[aepetrov@fedora ~]$ cd
[aepetrov@fedora ~]$ find ~/ -name "c*" -print
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/crashes
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/compatibility.ini
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/cookies.sqlite
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/permanent/chrome
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++vk.com/cache
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++vk.com/cache/caches.sqlite
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++e.mail.ru/cache
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++e.mail.ru/cache/caches.sqlite
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++www.youtube.com/cache
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++www.youtube.com/cache/caches.sqlite
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++ask.fedoraproject.org/cache
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++ask.fedoraproject.org/cache/caches.sqlite
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++studio.youtube.com/cache
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++studio.youtube.com/cache/caches.sqlite
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++www.dns-shop.ru/cache
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/storage/default/https+++www.dns-shop.ru/cache/caches.sqlite
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/cert9.db
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/content-prefs.sqlite
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/containers.json
/home/aepetrov/.mozilla/firefox/5qziullu.default-release/cookies.sqlite-wal
/home/aepetrov/.cache/mesa_shader_cache/10/c140c9189d2d9fbb531506910e9b7472623a02
/home/aepetrov/.cache/mesa_shader_cache/10/ca6b8ba0887d9dc531d3910576776a059831ac
/home/aepetrov/.cache/mesa_shader_cache/9b/c7e18cf9c24b647cd6fa6f452ec11f8c043daf
/home/aepetrov/.cache/mesa_shader_cache/c9
/home/aepetrov/.cache/mesa_shader_cache/24/c8462f690839234d5ce5c4c82706c6463f23be
/home/aepetrov/.cache/mesa_shader_cache/94/c30b0234ce76d02629779bd305ee58b330bbf7
/home/aepetrov/.cache/mesa_shader_cache/de/c25f1fdae84ac4e4e3fc401503a6cb6ce41d45
/home/aepetrov/.cache/mesa_shader_cache/af/c184aec522f3a6c4720c6eb14e5df9737a9e5b
/home/aepetrov/.cache/mesa_shader_cache/cc
/home/aepetrov/.cache/mesa_shader_cache/64/c08c7f0802b25a482f144255bda8a560b7e049
/home/aepetrov/.cache/mesa_shader_cache/fb/c23ce548012daf64fe9f5ef30e9d417403cbab
/home/aepetrov/.cache/mesa_shader_cache/fb/c7a096e3a5293d1972b11814214b4c91a0bb88
/home/aepetrov/.cache/mesa_shader_cache/bb/c4645f1fa660e9145e227074e4e70d4b3be2ab
/home/aepetrov/.cache/mesa_shader_cache/ed
```

{#fig:003 width=70%}

2. (рис. [-@fig:004])

```
1. cd
2. ls | grep c*
```

Второй способ куда более подходит по формулировке задания.

```
[aepetrov@fedora ~]$ cd
[aepetrov@fedora ~]$ ls | grep c*
conf.txt
```

{#fig:004 width=70%}

## Задание 5

- Воспользуемся командой из прошлой лабораторной работы:

```
cd  
ls /etc > newfile | less newfile
```

(рис. [-@fig:005], (рис. [-@fig:006]))

```
aeurov@fedora ~]$ ls /etc > newfile | less newfile {#fig:005 width=70%}
```

```
abrt
adjtime
aliases
alsa
alternatives
anaconda
anthy-unicode.conf
appstream.conf
asound.conf
audit
authselect
avahi
bash_completion.d
bashrc
bindresvport.blacklist
binfmt.d
bluetooth
brlapi.key
brltty
brltty.conf
ceph
chkconfig.d
chromium
chrony.conf
chrony.keys
cifs-utils
containers
crypto-policies
crypttab
csh.cshrc
csh.login
cups
cupshelpers
dbus-1
dconf
debuginfod
default
depmod.d
dhcp
DIR_COLORS
DIR_COLORS.lightbgcolor
dleyna-renderer-service.conf
dleyna-server-service.conf
dnf
dnsmasq.conf
dnsmasq.d
dracut.conf
dracut.conf.d
egl
environment
ethertypes
exports
exports.d
extlinux.conf
```

{#fig:006 width=70%}

## Задание 6

- Воспользуемся командой find и &, чтобы запустить задачу в фоновом режиме(рис. [-@fig:007]):

```
1. cd
2. sudo find / -name "log*" -print > logfile &
```

```
[aepetrov@fedora ~]$ sudo find / -name "log*" -print > logfile &
[1] 80169
[aepetrov@fedora ~]$
```

{#fig:007 width=70%}

## Задание 7

- Удалим файл logfile(рис. [-@fig:008]):

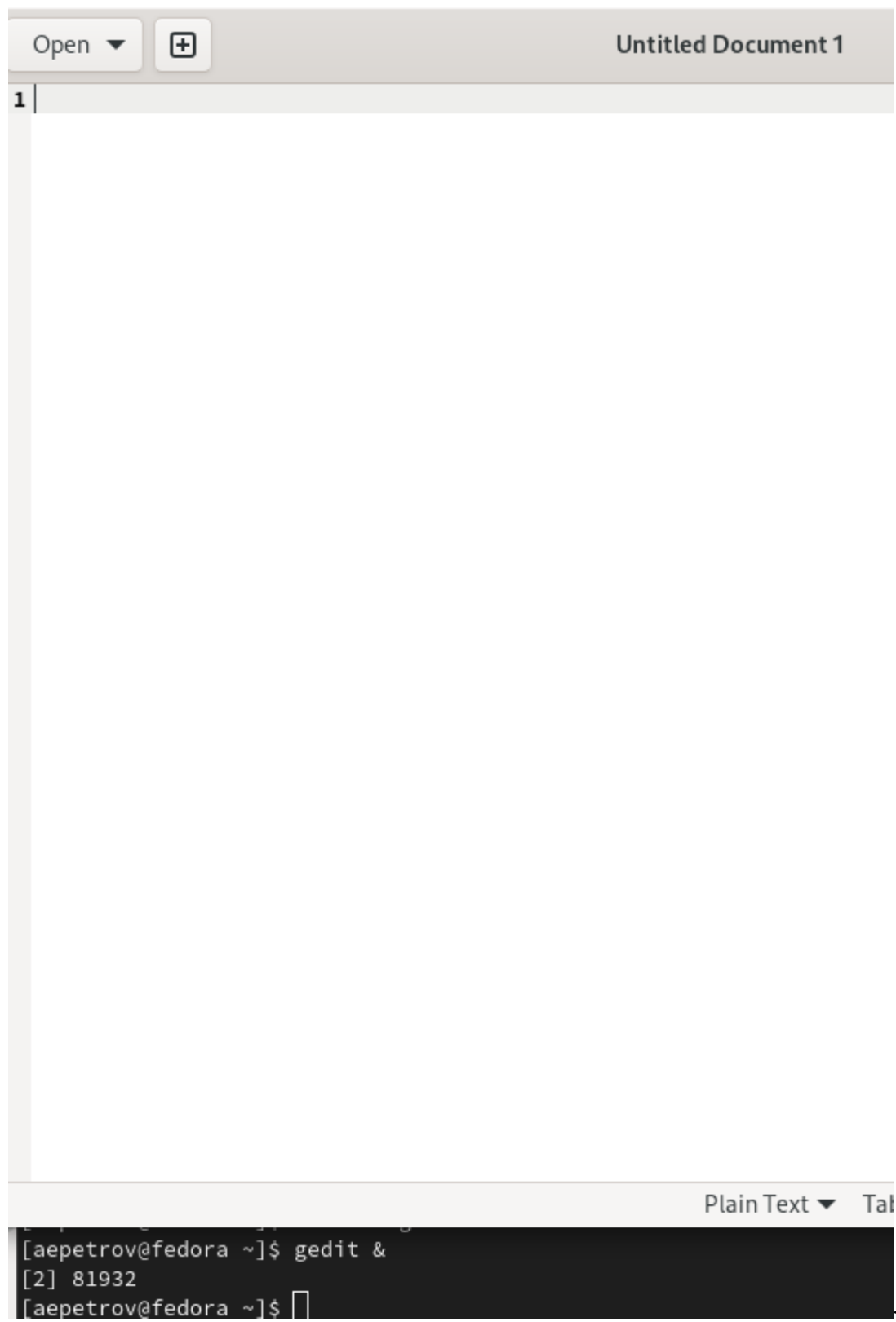
```
1. cd
2. rm -r logfile
```

```
[aepetrov@fedora ~]$ rm -r logfile
```

{#fig:008 width=70%}

## Задание 8

- Запустим gedit в фоновом режиме след. образом (рис. [-@fig:009]):



## Задание 9

- Выполним задание следующим образом(рис. [-@fig:010]):

```
ps aux | grep gedit
```



```
[aepetrov@fedora ~]$ ps aux | grep gedit
aepetrov  81932  0.1  0.3 780520 64616 pts/0    Sl   16:41   0:00 gedit
aepetrov  82780  0.0  0.0 221656  2408 pts/0    S+   16:49   0:00 grep --color=auto gedit
```

```
{#fig:010 width=70%}
```

## Задание 10

- Прочитаем справку с помощью `man`(рис. [-@fig:011]):

```
man kill
```

```
KILL(1) User Commands KILL(1)

NAME
    kill - terminate a process

SYNOPSIS
    kill [-signal|-s signal|-p] [-q value] [-a] [--timeout milliseconds signal] [--] pid|name...

    kill -l [number] | -L

DESCRIPTION
    The command kill sends the specified signal to the specified processes or process groups.

    If no signal is specified, the TERM signal is sent. The default action for this signal is to terminate the
    process. This signal should be used in preference to the KILL signal (number 9), since a process may install
    a handler for the TERM signal in order to perform clean-up steps before terminating in an orderly fashion.
    If a process does not terminate after a TERM signal has been sent, then the KILL signal may be used; be
    aware that the latter signal cannot be caught, and so does not give the target process the opportunity to
    perform any clean-up before terminating.

    Most modern shells have a builtin kill command, with a usage rather similar to that of the command described
    here. The --all, --pid, and --queue options, and the possibility to specify processes by command name, are
    local extensions.

    If signal is 0, then no actual signal is sent, but error checking is still performed.

ARGUMENTS
    The list of processes to be signaled can be a mixture of names and PIDs.

    pid
        Each pid can be expressed in one of the following ways:

        n
            where n is larger than 0. The process with PID n is signaled.

        0
            All processes in the current process group are signaled.

        -1
            All processes with a PID larger than 1 are signaled.

        -n
            where n is larger than 1. All processes in process group n are signaled. When an argument of the
            form '-n' is given, and it is meant to denote a process group, either a signal must be specified
            first, or the argument must be preceded by a '--' option, otherwise it will be taken as the signal
            to send.

    name
        All processes invoked using this name will be signaled.

OPTIONS
    -s, --signal signal
        The signal to send. It may be given as a name or a number.

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

```
{#fig:011 width=70%}
```

- Теперь закроем процесс gedit, его номер 83988 (рис. [-@fig:012]):

```
kill 83988
```

```
[aepetrov@fedora ~]$ gedit &
[2] 83988
[aepetrov@fedora ~]$ kill 83988 {#fig:012 width=70%}
```

## Задание 11

- Справка по командам df и du(рис. [-@fig:013] - [-@fig:014])

```
DF(1)                                     User Commands                                     DF(1)

NAME
    df - report file system disk space usage

SYNOPSIS
    df [OPTION]... [FILE]...

DESCRIPTION
    This manual page documents the GNU version of df. df displays the amount of disk space available on the
    file system containing each file name argument. If no file name is given, the space available on all cur-
    rently mounted file systems is shown. Disk space is shown in 1K blocks by default, unless the environment
    variable POSIXLY_CORRECT is set, in which case 512-byte blocks are used.

    If an argument is the absolute file name of a disk device node containing a mounted file system, df shows
    the space available on that file system rather than on the file system containing the device node. This
    version of df cannot show the space available on unmounted file systems, because on most kinds of systems
    doing so requires very nonportable intimate knowledge of file system structures.

OPTIONS
    Show information about the file system on which each FILE resides, or all file systems by default.

    Mandatory arguments to long options are mandatory for short options too.

    -a, --all
        include pseudo, duplicate, inaccessible file systems

    -B, --block-size=SIZE
        scale sizes by SIZE before printing them; e.g., '-BM' prints sizes in units of 1,048,576 bytes; see
        SIZE format below

    --direct
        show statistics for a file instead of mount point

    -h, --human-readable
        print sizes in powers of 1024 (e.g., 1023M)

    -H, --si
        print sizes in powers of 1000 (e.g., 1.1G)

    -i, --inodes
        list inode information instead of block usage

    -k
        like --block-size=1K

    -l, --local
        limit listing to local file systems

    --no-sync
        do not invoke sync before getting usage info (default)

    --output[=FIELD_LIST]
        use the output format defined by FIELD_LIST, or print all fields if FIELD_LIST is omitted.
```

{#fig:013 width=70%}

```

DU(1)                                     User Commands                                     DU(1)

NAME
    du - estimate file space usage

SYNOPSIS
    du [OPTION]... [FILE]...
    du [OPTION]... --files0-from=F

DESCRIPTION
    Summarize disk usage of the set of FILES, recursively for directories.

    Mandatory arguments to long options are mandatory for short options too.

    -0, --null
        end each output line with NUL, not newline

    -a, --all
        write counts for all files, not just directories

    --apparent-size
        print apparent sizes, rather than disk usage; although the apparent size is usually smaller, it may
        be larger due to holes in ('sparse') files, internal fragmentation, indirect blocks, and the like

    -B, --block-size=SIZE
        scale sizes by SIZE before printing them; e.g., '-BM' prints sizes in units of 1,048,576 bytes; see
        SIZE format below

    -b, --bytes
        equivalent to '--apparent-size --block-size=1'

    -c, --total
        produce a grand total

    -D, --dereference-args
        dereference only symlinks that are listed on the command line

    -d, --max-depth=N
        print the total for a directory (or file, with --all) only if it is N or fewer levels below the com-
        mand line argument; --max-depth=0 is the same as --summarize

    --files0-from=F
        summarize disk usage of the NUL-terminated file names specified in file F; if F is -, then read names
        from standard input

    -H
        equivalent to --dereference-args (-D)

    -h, --human-readable
        print sizes in human readable format (e.g., 1K 234M 2G)

    --inodes
        list inode usage information instead of block usage

    -k
        like --block-size=1K

```

{#fig:014 width=70%}

- Заныск du(пис. [-@fig:015])

du

Программа показывает, сколько килобайт информации занимает каждый файл

```
[aepetrov@fedora ~]$ du
0      ./mozilla/extensions/{ec8030f7-c20a-464f-9b0e-13a3a9e97384}
0      ./mozilla/extensions
0      ./mozilla/plugins
0      ./mozilla/firefox/Crash Reports/events
4      ./mozilla/firefox/Crash Reports
0      ./mozilla/firefox/Pending Pings
0      ./mozilla/firefox/5qziullu.default-release/minidumps
0      ./mozilla/firefox/5qziullu.default-release/crashes/events
8      ./mozilla/firefox/5qziullu.default-release/crashes
0      ./mozilla/firefox/5qziullu.default-release/storage/permanent/chrome/idb/3870112724rsegmnoittet-es.files
0      ./mozilla/firefox/5qziullu.default-release/storage/permanent/chrome/idb/3561288849sdhlie.files
0      ./mozilla/firefox/5qziullu.default-release/storage/permanent/chrome/idb/1657114595AmcateirvtiSty.files
0      ./mozilla/firefox/5qziullu.default-release/storage/permanent/chrome/idb/2918063365piupsah.files
0      ./mozilla/firefox/5qziullu.default-release/storage/permanent/chrome/idb/1451318868ntouromlalnodry--epcr.files
0      ./mozilla/firefox/5qziullu.default-release/storage/permanent/chrome/idb/2823318777ntouromlalnodry--naod.files
8564   ./mozilla/firefox/5qziullu.default-release/storage/permanent/chrome/idb
8568   ./mozilla/firefox/5qziullu.default-release/storage/permanent/chrome
8568   ./mozilla/firefox/5qziullu.default-release/storage/permanent
0      ./mozilla/firefox/5qziullu.default-release/storage/temporary
0      ./mozilla/firefox/5qziullu.default-release/storage/default/moz-extension+++44bf8a86-a307-43d7-9da1-ebab8f72f8
2d^userContextId=4294967295/idb/3647222921wleabcEoxlt-eengsairo.files
44     ./mozilla/firefox/5qziullu.default-release/storage/default/moz-extension+++44bf8a86-a307-43d7-9da1-ebab8f72f8
2d^userContextId=4294967295/idb
48     ./mozilla/firefox/5qziullu.default-release/storage/default/moz-extension+++44bf8a86-a307-43d7-9da1-ebab8f72f8
2d^userContextId=4294967295
36     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++www.google.com/ls
40     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++www.google.com
32     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++vk.com/cache/morgue/161
32     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++vk.com/cache/morgue
100    ./mozilla/firefox/5qziullu.default-release/storage/default/https+++vk.com/cache
0      ./mozilla/firefox/5qziullu.default-release/storage/default/https+++vk.com/idb/2419849403sbwd__kleayv.files
0      ./mozilla/firefox/5qziullu.default-release/storage/default/https+++vk.com/idb/644437569r1evf-obrdg-ed.files
96     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++vk.com/idb
596    ./mozilla/firefox/5qziullu.default-release/storage/default/https+++vk.com/ls
796    ./mozilla/firefox/5qziullu.default-release/storage/default/https+++vk.com
12     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++id.vk.com/ls
16     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++id.vk.com
12     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++mc.yandex.md^partitionKey=%28https%2Cmail.ru%29/ls
16     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++mc.yandex.md^partitionKey=%28https%2Cmail.ru%29
12     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++mail.ru/ls
16     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++mail.ru
12     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++account.mail.ru/ls
16     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++account.mail.ru
4      ./mozilla/firefox/5qziullu.default-release/storage/default/https+++e.mail.ru/cache/morgue/38
28     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++e.mail.ru/cache/morgue/57
32     ./mozilla/firefox/5qziullu.default-release/storage/default/https+++e.mail.ru/cache/morgue
136    ./mozilla/firefox/5qziullu.default-release/storage/default/https+++e.mail.ru/cache
0      ./mozilla/firefox/5qziullu.default-release/storage/default/https+++e.mail.ru/idb/465681810sgwn-ibgogxo.lmFa2i
%.files
0      ./mozilla/firefox/5qziullu.default-release/storage/default/https+++e.mail.ru/idb/576603840sgwn-ibgogxo.lmFa2i
```

{#fig:015 width=70%}

- Запуск df(рис. [-@fig:016])

df

Программа показывает, сколько килобайт информации занимает каждый раздел диска(ов).

```

DF(1)                                     User Commands                                     DF(1)

NAME
    df - report file system disk space usage

SYNOPSIS
    df [OPTION]... [FILE]...

DESCRIPTION
    This manual page documents the GNU version of df. df displays the
    amount of disk space available on the file system containing each file
    name argument. If no file name is given, the space available on all
    currently mounted file systems is shown. Disk space is shown in 1K
    blocks by default, unless the environment variable POSIXLY_CORRECT is
    set, in which case 512-byte blocks are used.

    If an argument is the absolute file name of a disk device node contain-
    ing a mounted file system, df shows the space available on that file
    system rather than on the file system containing the device node. This
    version of df cannot show the space available on unmounted file sys-
    tems, because on most kinds of systems doing so requires very non-
    portable intimate knowledge of file system structures.

OPTIONS
    Show information about the file system on which each FILE resides, or
    all file systems by default.

    Mandatory arguments to long options are mandatory for short options
    too.

    -a, --all
        include pseudo, duplicate, inaccessible file systems

    -B, --block-size=SIZE
        scale sizes by SIZE before printing them; e.g., '-BM' prints
        sizes in units of 1,048,576 bytes; see SIZE format below

    --direct
        show statistics for a file instead of mount point

    -h, --human-readable
        print sizes in powers of 1024 (e.g., 1023M)

    -H, --si
        print sizes in powers of 1000 (e.g., 1.1G)

    -i, --inodes
        list inode information instead of block usage

    -k
        like --block-size=1K

    -l, --local
        limit listing to local file systems

```

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## Задание 12

- Справка по команде `find` (рис. [-@fig:017])

```
man find
```

```
FIND(1)                                General Commands Manual                                FIND(1)

NAME
  find - search for files in a directory hierarchy

SYNOPSIS
  find [-H] [-L] [-P] [-D debugopts] [-Olevel] [starting-point...] [expression]

DESCRIPTION
  This manual page documents the GNU version of find. GNU find searches the directory tree rooted at each
  given starting-point by evaluating the given expression from left to right, according to the rules of prece-
  dence (see section OPERATORS), until the outcome is known (the left hand side is false for and operations,
  true for or), at which point find moves on to the next file name. If no starting-point is specified, .' is
  assumed.

  If you are using find in an environment where security is important (for example if you are using it to
  search directories that are writable by other users), you should read the 'Security Considerations' chapter
  of the findutils documentation, which is called Finding Files and comes with findutils. That document also
  includes a lot more detail and discussion than this manual page, so you may find it a more useful source of
  information.

OPTIONS
  The -H, -L and -P options control the treatment of symbolic links. Command-line arguments following these
  are taken to be names of files or directories to be examined, up to the first argument that begins with '-,
  or the argument '(' or '!'. That argument and any following arguments are taken to be the expression de-
  scribing what is to be searched for. If no paths are given, the current directory is used. If no expres-
  sion is given, the expression -print is used (but you should probably consider using -print0 instead, any-
  way).

  This manual page talks about 'options' within the expression list. These options control the behaviour of
  find but are specified immediately after the last path name. The five 'real' options -H, -L, -P, -D and -O
  must appear before the first path name, if at all. A double dash -- could theoretically be used to signal
  that any remaining arguments are not options, but this does not really work due to the way find determines
  the end of the following path arguments: it does that by reading until an expression argument comes (which
  also starts with a '-). Now, if a path argument would start with a '-, then find would treat it as ex-
  pression argument instead. Thus, to ensure that all start points are taken as such, and especially to pre-
  vent that wildcard patterns expanded by the calling shell are not mistakenly treated as expression argu-
  ments, it is generally safer to prefix wildcards or dubious path names with either ./ or to use absolute
  path names starting with /.

  -P      Never follow symbolic links. This is the default behaviour. When find examines or prints informa-
            tion about files, and the file is a symbolic link, the information used shall be taken from the prop-
            erties of the symbolic link itself.

  -L      Follow symbolic links. When find examines or prints information about files, the information used
            shall be taken from the properties of the file to which the link points, not from the link itself
            (unless it is a broken symbolic link or find is unable to examine the file to which the link points).
            Use of this option implies -noleaf. If you later use the -P option, -noleaf will still be in effect.
            If -L is in effect and find discovers a symbolic link to a subdirectory during its search, the subdi-
            rectory pointed to by the symbolic link will be searched.

            When the -L option is in effect, the -type predicate will always match against the type of the file
            that a symbolic link points to rather than the link itself (unless the symbolic link is broken). Ac-
            tions that can cause symbolic links to become broken while find is executing (for example -delete)

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

```
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```

- Вывод только имен файлов в домашнем каталоге будет производится следующим образом(рис. [-@fig:018]):

```
find ~ -maxdepth 1
```

```
[aepetrov@fedora ~]$ man find
[aepetrov@fedora ~]$ find ~ -maxdepth 1
/home/aepetrov
/home/aepetrov/.mozilla
/home/aepetrov/.bash_logout
/home/aepetrov/.bash_profile
/home/aepetrov/.bashrc
/home/aepetrov/.cache
/home/aepetrov/.config
/home/aepetrov/.local
/home/aepetrov/Desktop
/home/aepetrov/Downloads
/home/aepetrov/Templates
/home/aepetrov/Public
/home/aepetrov/Documents
/home/aepetrov/Music
/home/aepetrov/Pictures
/home/aepetrov/Videos
/home/aepetrov/.bash_history
/home/aepetrov/tutorial
/home/aepetrov/.ssh
/home/aepetrov/.gnupg
/home/aepetrov/.gitconfig
/home/aepetrov/work
/home/aepetrov/.gphoto
/home/aepetrov/2022-04-30_11-50-47.mkv
/home/aepetrov/.vscode
/home/aepetrov/.pki
/home/aepetrov/.wget-hsts
/home/aepetrov/.var
/home/aepetrov/.texlive2021
/home/aepetrov/bin
/home/aepetrov/aepetrov
/home/aepetrov/abc1
/home/aepetrov/may
/home/aepetrov/monthly
/home/aepetrov/reports
/home/aepetrov/ski.plases
/home/aepetrov/australia
/home/aepetrov/play
/home/aepetrov/my_os
/home/aepetrov/feathers
/home/aepetrov/file
/home/aepetrov/conf.txt
/home/aepetrov/newfile
/home/aepetrov/.lessht
```

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## Выводы

---

Сегодня на лабораторной работы мы научились пользоваться средствами потокового вывода, ввода. Кроме того, научились вычленять нужную нам информацию и управлять процессами в нашей системе.