О Т Ч Е Т

о выполнении лабароторной работы №3

по дисциплине «**Операционные системы**»

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Текстовые файлы

Чтение текстовых файлов

```
sasha@debian:~$ cat /etc/hosts
127.0.0.1       localhost
127.0.1.1       debian

# The following lines are desirable for IPv6 capable hosts
::1     localhost ip6-localhost ip6-loopback
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
sasha@debian:~$ tac /etc/hosts
ff02::2 ip6-allrouters
ff02::1 ip6-allnodes
::1     localhost ip6-localhost ip6-loopback
# The following lines are desirable for IPv6 capable hosts

127.0.1.1       debian
127.0.0.1       localhost
sasha@debian:~$ tail -3 /etc/hosts
::1     localhost ip6-localhost ip6-loopback
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
sasha@debian:~$ head -3 /etc/hosts
127.0.0.1       localhost
127.0.1.1       debian

sasha@debian:~$ head -n 2 /etc/hosts | tail -n 1
127.0.1.1       debian
sasha@debian:~$ less /etc/hosts
127.0.0.1       localhost
127.0.1.1       debian

# The following lines are desirable for IPv6 capable hosts
::1     localhost ip6-localhost ip6-loopback
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
/etc/hosts (END)
sasha@debian:~$ ls -l | tail -n 2
drwxr-xr-x 2 sasha sasha 4096 сен  8 21:30 Рабочий стол
drwxr-xr-x 2 sasha sasha 4096 сен  8 21:30 Шаблоны
sasha@debian:~$ █
```

Манипуляции с тестовым файлом

```
sasha@debian:~$ cat test.txt | tr a-z A-Z
TOM
BOB
SAM
ALICE
KATE
sasha@debian:~$ cat test.txt | tr a-z A-Z > test2.txt
sasha@debian:~$ cat test.txt | sort
alice
bob
kate
sam
tom
sasha@debian:~$ ls | sort
etc
test
test2.txt
test.txt
Видео
Документы
Загрузки
Изображения
Музыка
Общедоступные
Рабочий стол
Шаблоны
```

```
Открыть ∨    ⊞                          test2.txt
                                        ~/
TOM
BOB
SAM
ALICE
KATE
```

```
sasha@debian:~$ cat test.txt | sort
11
12
17
4
56
sasha@debian:~$ cat test.txt | sort -n
4
11
12
17
56
sasha@debian:~$ cut -d : -f 1 test.txt
Tom
Bob
Sam
Alice
Kate
sasha@debian:~$ cut -d : -f 1,3 test.txt
Tom:Microsoft
Bob:Google
Sam:Jetbrains
Alice:Oracle
Kate:Google
sasha@debian:~$ cut -d : -f 1-2 test.txt
Tom:39
Bob:43
Sam:28
Alice:34
Kate:25
sasha@debian:~$ cat test.txt | cut -d : -f 1 | sort | head -3
Alice
Bob
Kate
sasha@debian:~$ █
```

Команда grep. Поиск в тексте.

```
sasha@debian:~$ grep "127.0." /etc/hosts
127.0.0.1       localhost
127.0.1.1       debian
sasha@debian:~$ ls ~ | grep "До"
Документы
sasha@debian:~$ ls ~ | grep "^s"
sasha@debian:~$ ls ~ | grep "^t"
test
test2.txt
test.txt
sasha@debian:~$ ls ~ | grep ".txt$"
test2.txt
test.txt
sasha@debian:~$ grep "T.m" test.txt
Tom
Tim
Tomas
sasha@debian:~$ grep "T[ou]m" test.txt
Tom
Tomas
sasha@debian:~$ grep "T[^ou]m" test.txt
Tim
sasha@debian:~$ grep "^0-9" test.txt
sasha@debian:~$ ls ~/Загрузки | grep "\.tar\.gz"
sasha@debian:~$ grep "o\{2\}" test.txt
```

Введение в Линукс - Полный Курс для Начинающих

Операции в командной строке:

```
labex:project/ $ cd /tmp
labex:/tmp/ $ pwd
/tmp
labex:/tmp/ $ cd $HOME
labex:~/ $ pwd
/home/labex
labex:~/ $ cd ..
labex:/home/ $ pwd
/home
labex:/home/ $ pushd /tmp
/tmp /home ~ ~/project
labex:/tmp/ $ popd
/home ~ ~/project
labex:/home/ $ cd ~
labex:~/ $ cd -
/home
```

```
labex:~/ $ cd /usr/local/lib
labex:lib/ $ cd /usr
labex:/usr/ $ cd local/lib
labex:lib/ $ cd /
labex:// $ ls
bin  boot  code-server_4.18.0_amd64.deb  data  dev  etc  home  lib  lib32  lib64  libx32
labex:// $ ls -a
.    .dockerenv   boot                              data  etc   lib    lib64  mariadb_repo_se
..   bin          code-server_4.18.0_amd64.deb  dev   home  lib32  libx32  media
labex:// $
```

```
# file -i * | grep " text/plain;"
conkyrc:            text/plain; charset=us-ascii
# wc conkyrc
 195  666 6654 conkyrc
# head conkyrc
# Use Xft?
use_xft yes
xftfont DejaVuSans:size=9
xftalpha 0.8
text_buffer_size 2048

# Update interval in seconds
update_interval 1

# This is the number of times Conky will update before quitting.
# tail -7 conkyrc
${color2} Down: ${color2}${downspeed ath1}k/s${color}
${color1}${alignr}${downspeedgraph ath1 10,170 000000}
${color2}TDown:${totaldown ath1}${alignr}TUp:${totalup ath1}${endif}
####don't write below this line as used for conky gui weather
${color1}${voffset 2}${hr 2}
#
#
# tail -7 -n conkyrc
tail: option used in invalid context -- 7
# tac conkyrc
#
#
${color1}${voffset 2}${hr 2}
####don't write below this line as used for conky gui weather
${color2}TDown:${totaldown ath1}${alignr}TUp:${totalup ath1}${endif}
${color1}${alignr}${downspeedgraph ath1 10,170 000000}
${color2} Down: ${color2}${downspeed ath1}k/s${color}
${color1}${alignr}${upspeedgraph ath1 10,170 000000}
```

```
# ls
Choices   Downloads  file2          my-documents    spot      Templates
conkyrc   file1      my-applications puppy-reference  Startup
# du -sh a *
du: cannot access 'a': No such file or directory
11K       Choices
4,0K      conkyrc
0         Downloads
4,0K      file1
0         file2
1,0K      my-applications
741K      my-documents
0         puppy-reference
0         spot
3,5K      Startup
0         Templates
# echo > file1
# ls -l file1 file2
-rw-r--r-- 1 root root 1 окт  2 15:42 file1
-rw-r--r-- 1 root root 0 окт  2 15:42 file2
# locate conkyrc
/root/conkyrc
/root/.config/conky/conkyrc.bak
/usr/share/vim/addons/ftdetect/conkyrc.vim
/usr/share/vim/addons/syntax/conkyrc.vim
# find . -name "conkyrc"
./conkyrc
# echo > conkyrc
# find . -name "conkyrc" -ls
6917529027641083874      4 -rw-r--r--   1 root      root           1 окт  2 15:45 ./conkyrc
```

```
# sudo apt-get install vmware*
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'xserver-xorg-video-vmware' for regex 'vmware*'
xserver-xorg-video-vmware is already the newest version (1:13.3.0-3.1+b1).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```

```
# find /usr -name gcc
/usr/lib/gcc
/usr/bin/gcc
/usr/share/lintian/overrides/gcc
/usr/share/bash-completion/completions/gcc
/usr/share/gcc
/usr/src/kbuild-6.1.124/scripts/dummy-tools/gcc
# find /usr -type d -name gcc
/usr/lib/gcc
/usr/share/gcc
# find /usr -type f -name gcc
/usr/share/lintian/overrides/gcc
/usr/share/bash-completion/completions/gcc
/usr/src/kbuild-6.1.124/scripts/dummy-tools/gcc
```

Поиск Документации по Linux:

```
prnaoaik@Linux:~$ man -a socket
--Man-- next: socket(7) [ view (return) | skip (Ctrl-D) | quit (Ctrl-C) ]
prnaoaik@Linux:~$ 
```

Процессы:

```
prnaoaik@Linux:~$ ps
    PID TTY          TIME CMD
   2672 pts/0    00:00:00 bash
   3084 pts/0    00:00:00 ps
prnaoaik@Linux:~$ ps lf
F   UID      PID    PPID PRI  NI    VSZ    RSS WCHAN   STAT TTY       TIME COMMAND
0   1000    2672    2665  20   0  19692   4988 do_wai  Ss   pts/0     0:00 bash
0   1000    3085    2672  20   0  22316   4432 -       R+   pts/0     0:00  \_ ps
4   1000    1818    1724  20   0 244336   6032 do_pol  Ssl+ tty2      0:00 /usr/li
0   1000    1830    1818  20   0 306904  16312 do_pol  Sl+  tty2      0:00  \_ /us
prnaoaik@Linux:~$ renice +5 2672
2672 (process ID) old priority 0, new priority 5
prnaoaik@Linux:~$ ps lf
F   UID      PID    PPID PRI  NI    VSZ    RSS WCHAN   STAT TTY       TIME COMMAND
0   1000    2672    2665  25   5  19692   4988 do_wai  SNs  pts/0     0:00 bash
0   1000    3087    2672  25   5  22316   4432 -       RN+  pts/0     0:00  \_ ps
4   1000    1818    1724  20   0 244336   6032 do_pol  Ssl+ tty2      0:00 /usr/li
0   1000    1830    1818  20   0 306904  16312 do_pol  Sl+  tty2      0:00  \_ /us
prnaoaik@Linux:~$ 
```
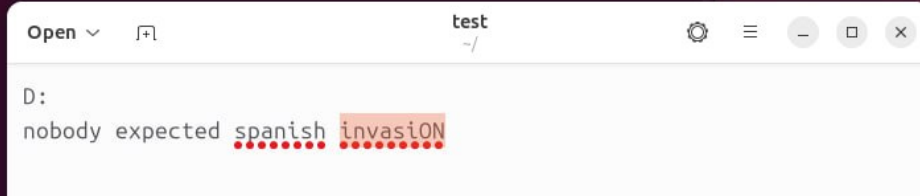
Операции с файлами:

```
prnaoaik@Linux:/boot$ ls -l
total 96080
-rw-r--r-- 1 root root   296143 Aug 14 15:02 config-6.14.0-29-generic
drwxr-xr-x 5 root root     4096 Sep  5 11:40 grub
lrwxrwxrwx 1 root root       28 Sep  5 11:39 initrd.img -> initrd.img-6.14.0-29-generic
-rw-r--r-- 1 root root 72797576 Sep  5 11:39 initrd.img-6.14.0-29-generic
lrwxrwxrwx 1 root root       28 Sep  5 11:39 initrd.img.old -> initrd.img-6.14.0-29-generic
-rw-r--r-- 1 root root   142796 Apr  8  2024 memtest86+ia32.bin
-rw-r--r-- 1 root root   143872 Apr  8  2024 memtest86+ia32.efi
-rw-r--r-- 1 root root   147744 Apr  8  2024 memtest86+x64.bin
-rw-r--r-- 1 root root   148992 Apr  8  2024 memtest86+x64.efi
-rw------- 1 root root  9148044 Aug 14 15:02 System.map-6.14.0-29-generic
lrwxrwxrwx 1 root root       25 Sep  5 11:39 vmlinuz -> vmlinuz-6.14.0-29-generic
-rw------- 1 root root 15546760 Aug 14 15:08 vmlinuz-6.14.0-29-generic
lrwxrwxrwx 1 root root       25 Sep  5 11:39 vmlinuz.old -> vmlinuz-6.14.0-29-generic
```

Текстовые редакторы:

```
D:
nobody expected spanish invasiON
~
```

```
prnaoaik@Linux:~$ vi test
prnaoaik@Linux:~$ []
```

Open ∨ ⊞	test ~/	⚙ ≡ — □ ×

```
D:
nobody expected spanish invasiON
```

Пользовательское окружение:

```
prnaoaik@Linux:~$ who
prnaoaik seat0         2025-10-15 09:11 (login screen)
prnaoaik tty2          2025-10-15 09:11 (tty2)
prnaoaik@Linux:~$ sudo useradd -m -c "Alex" -s /bin/bash alexk
[sudo] password for prnaoaik:
prnaoaik@Linux:~$ sudo passwd alexk
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
prnaoaik@Linux:~$ grep alexk /etc/passwd /etc/group
/etc/passwd:alexk:x:1001:1001:Alex:/home/alexk:/bin/bash
/etc/group:alexk:x:1001:
```

Манипуляции с текстом:

```
prnaoaik@Linux:~$ cat test
D:
nobody expected spanish invasiON
prnaoaik@Linux:~$ tac test
nobody expected spanish invasiON
D:
```

```
prnaoaik@Linux:~$ sed -e s/d/vi/g test
D:
noboviy expectevi spanish invasiON
prnaoaik@Linux:~$
```

Сетевые операции:

```
prnaoaik@Linux:~/Desktop$ cat /etc/hosts
127.0.0.1          localhost.localdomain    localhost
::1                localhost6.localdomain6 localhost6

# The following lines are desirable for IPv6 capable hosts
::1      localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
prnaoaik@Linux:~/Desktop$
```

```
prnaoaik@Linux:~/Desktop$ host linuxfoundation.org
linuxfoundation.org has address 3.131.150.69
linuxfoundation.org mail is handled by 5 ALT2.ASPMX.L.GOOGLE.COM.
linuxfoundation.org mail is handled by 10 ALT3.ASPMX.L.GOOGLE.COM.
linuxfoundation.org mail is handled by 10 ALT4.ASPMX.L.GOOGLE.COM.
linuxfoundation.org mail is handled by 1 ASPMX.L.GOOGLE.COM.
linuxfoundation.org mail is handled by 5 ALT1.ASPMX.L.GOOGLE.COM.
```

```
prnaoaik@Linux:~/Desktop$ ip --brief addr show
lo               UNKNOWN         127.0.0.1/8 ::1/128
enp0s3           UP              10.0.2.15/24 fd17:625c:f037:2:b80f:f7fd:fc71:8d5
0/64 fd17:625c:f037:2:a00:27ff:fe34:d2be/64 fe80::a00:27ff:fe34:d2be/64
prnaoaik@Linux:~/Desktop$
```