

Лабораторная работа 12

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Изучить основы программирования в оболочке ОС UNIX/Linux. Научиться писать командные файлы.

Написать программы

Выполнение лабораторной работы

Первая программа-блокирует файл

```
avkrukhmalev@fedora: ~/work/study/2022-2023/Операци  
[avkrukhmalev@fedora lab12]$ ./1  
Файл заблокирован  
Файл разблокирован  
Файл заблокирован  
Файл разблокирован
```

Рис. 1: 1

```
#!/bin/bash  
  
LOCKFILE="./lock.file"  
exec {fn}>$LOCKFILE  
  
if test -f "$LOCKFILE"  
then  
  
    while  
        [ 1 = 1 ]  
    do  
        if flock -n ${fn}  
        then  
            echo "Файл заблокирован"        fi  
    done  
fi
```

Вторая программа

```
BASH_BUILTINS(1)          General Commands Manual          BASH_BUILTINS(1)

ESC[1mNAMEESC[0m
: , . , [ , alias, bg, bind, break, builtin, caller, cd, command, compgen,
complete, compopt, continue, declare, dirs, disown, echo, enable, eval,
exec, exit, export, false, fc, fg, getopts, hash, help, history, jobs,
kill, let, local, logout, mapfile, popd, printf, pushd, pwd, read,
readarray, readonly, return, set, shift, shopt, source, suspend, test,
times, trap, true, type, typeset, ulimit, umask, unalias, unset, wait -
bash built-in commands, see ESC[1mbashESC[22m(1)

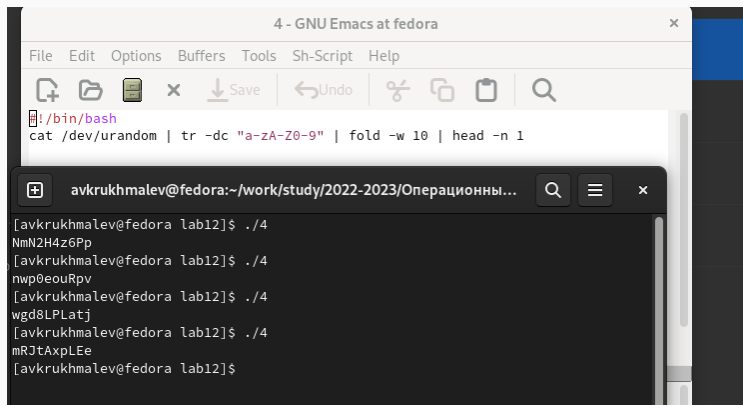
ESC[1mBASH BUILTIN COMMANDSESC[0m
Unless otherwise noted, each builtin command documented in this section
as accepting options preceded by ESC[1m--ESC[22maccepts ESC[1m--ESC[22mto signify the end of the
options. The ESC[1mESC[22m, ESC[1mtrueESC[22m, ESC[1mfalseESC[22m, and ESC[1mtestESC[22mESC[1mESC[22mbuiltins do not a
ccept options
and do not treat ESC[1m--ESC[22mspecially. The ESC[1mexitESC[22m, ESC[1mlogoutESC[22m, ESC[1mreturnESC[22m, ESC[1mbreakESC[22m,
ESC[1mincreaseESC[22m, ESC[1mletESC[22m, and ESC[1mshiftESC[22mbuiltins accept and process arguments beginning
with ESC[1mESC[22mwithout requiring ESC[1mESC[22m. Other builtins that accept arguments but
are not specified as accepting options interpret arguments beginning
with ESC[1mESC[22mas invalid options and require ESC[1m--ESC[22mto prevent this interpreta-
tion.
ESC[1mESC[22mESC[4argumentsESC[24m]
No effect; the command does nothing beyond expanding ESC[4argumentsESC[0m
and performing any specified redirections. The return status is
zero.

ESC[1mESC[4mESC[22mfilenameESC[24m ESC[4argumentsESC[24m]
ESC[1msourceESC[4mESC[22mfilenameESC[24m ESC[4argumentsESC[24m]
Read and execute commands from ESC[4filenameESC[24m in the current shell en-
vironment and return the exit status of the last command exe-
cuted from ESC[4filenameESC[24m. If ESC[4filenameESC[24m does not contain a slash,
filenames in ESC[1mPATHESC[22mare used to find the directory containing
ESC[4filenameESC[24m, but ESC[4filenameESC[24m does not need to be executable. The file
searched for in ESC[1mPATHESC[22mneed not be executable. When ESC[1mbashESC[22mis not
in ESC[4posixESC[24m ESC[4modeESC[24m, it searches the current directory if no file is
found in ESC[1mPATHESC[22m. If the ESC[1msourcepathESC[22moption to the ESC[1mshoptESC[22mbuiltin
```

```
2- GNU Emacs at fedora
File Edit Options Buffers Tools Help
[Icons] Save Undo [Icons] Search
#1/bin/bash
command=""

while getopts :n opt
do
    case $opt in
        n) command="$OPTARG";;
        esac
    done
if test -f "/usr/share/man/man1/$command.1.gz"
then less /usr/share/man/man1/$command.1.gz
else
echo "no such command"
fi
```

Третья программа-программа создает указанное чило пустых файлов



The image shows two overlapping windows from a Fedora Linux environment. The top window is the GNU Emacs editor, titled "4 - GNU Emacs at fedora". Its menu bar includes "File", "Edit", "Options", "Buffers", "Tools", "Sh-Script", and "Help". The toolbar contains icons for opening, saving, undo, redo, and search. The main text area shows a shell prompt `#!/bin/bash` followed by the command `cat /dev/urandom | tr -dc "a-zA-Z0-9" | fold -w 10 | head -n 1`. The bottom window is a terminal titled `avkrukhmalev@fedora:~/work/study/2022-2023/Операционны...`. It shows the execution of a script named `./4` five times, producing the following random strings: `NmN2H4z6Pp`, `nwp0eouRpv`, `wgd8LPLatj`, `mRJtAxpLEe`, and an empty line.

```
#!/bin/bash
cat /dev/urandom | tr -dc "a-zA-Z0-9" | fold -w 10 | head -n 1
```

```
[avkrukhmalev@fedora lab12]$ ./4
NmN2H4z6Pp
[avkrukhmalev@fedora lab12]$ ./4
nwp0eouRpv
[avkrukhmalev@fedora lab12]$ ./4
wgd8LPLatj
[avkrukhmalev@fedora lab12]$ ./4
mRJtAxpLEe
[avkrukhmalev@fedora lab12]$
```

Рис. 4: 3

Научился писать небольшие командные файлы