

Лабораторная работа номер 12

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Изучить основы программирования в оболочке ОС UNIX.
Научится писать более сложные командные файлы с использованием логических управляющих конструкций и циклов.

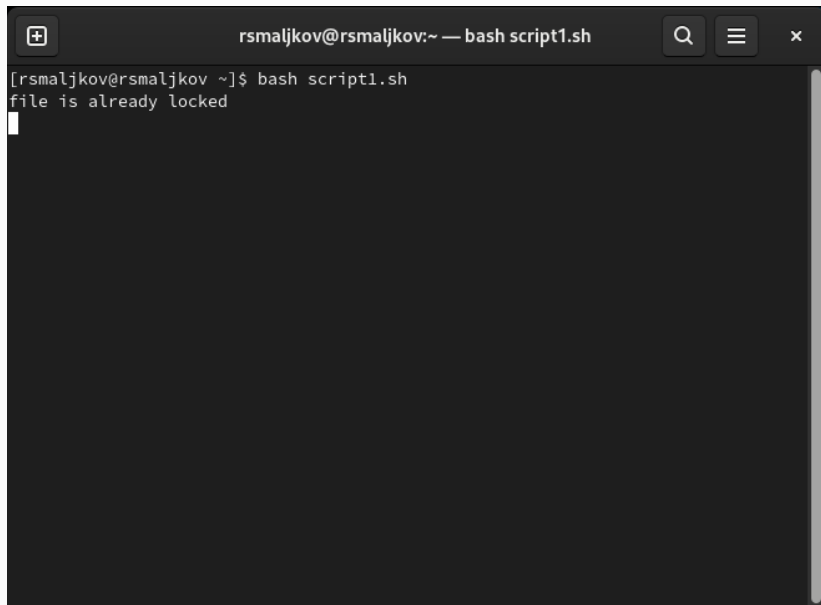
1. Код и результаты выполнения смотреть в скриншотах 1-3.

```
lockfile="./locking.file"
exec {fn}>"$lockfile"
if test -f "$lockfile"
then
    while [ 1!=0 ]
    do
        if flock -n ${fn}
        then
            echo "file is locked"
            sleep 4
            echo "unlocking"
            flock -u ${fn}

        else
            echo "file is already locked"
            sleep 3
        fi
    done
fi
```

```
[rsmaljkov@rsmaljkov ~]$ bash script1.sh  
file is locked  
unlocking  
file is locked  
unlocking  
file is locked
```

(Скриншот 2)



A terminal window with a dark background. The title bar at the top reads "rsmaljkov@rsmaljkov:~ — bash script1.sh". Inside the terminal, the command `[rsmaljkov@rsmaljkov ~]$ bash script1.sh` has been entered, and the output is `file is already locked`. A white cursor is visible on the line following the output. The window includes standard macOS-style window controls (red, yellow, green buttons) and search, menu, and close icons on the right side of the title bar.

```
[rsmaljkov@rsmaljkov ~]$ bash script1.sh
file is already locked
```

2. Код и результаты выполнения смотреть в скриншотах 4-5.

```
1 command = ""
2
3 while getopts :n: opt
4 do
5 case $opt in
6 n) command="$OPTARG";;
7 esac
8 done
9
10 if test -f "/usr/share/man/man1/$command.1.gz"
11 then less /usr/share/man/man1/$command.1.gz
12 else
13 echo "no such command"
14 fi
```

(Скриншот 4)

Ход работы

```
rsmaljkov@rsmaljkov:~ — bash script2.sh -n touch
```

TOUCH(1) User Commands TOUCH(1)

`ESC[1mNAMEESC[0m`
touch - change file timestamps

`ESC[1mSYNOPSISESC[0m`
`ESC[1mtouch ESC[22m[ESC[4mOPTIONESC[24m]... ESC[4mFILEESC[24m]...`

`ESC[1mDESCRIPTIONESC[0m`
Update the access and modification times of each FILE to the current time.

A FILE argument that does not exist is created empty, unless `ESC[1m-c`
`ESC[22mor ESC[1m-hESC[0m`
is supplied.

A FILE argument string of - is handled specially and causes touch to change the times of the file associated with standard output.

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

`ESC[1m-a ESC[22mchange only the access time`

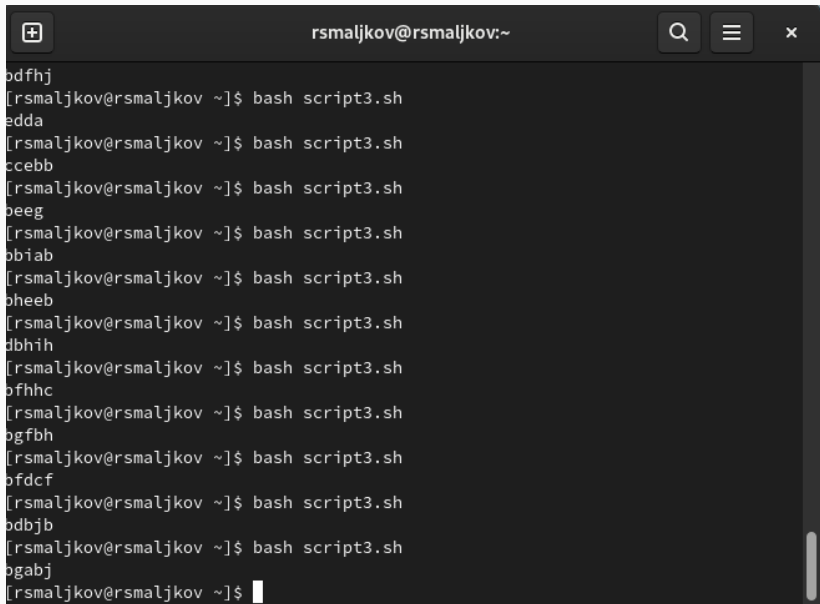
`ESC[1m-c`

3. Код и результаты выполнения смотреть в скриншотах 6-7.

```
1 echo $RANDOM | tr '0-9' 'a-zA-Z'
```

(Скриншот 6)

Ход работы



A terminal window titled "rsmaljkov@rsmaljkov:~" with search, menu, and close icons in the title bar. The terminal shows a series of commands and their outputs. Each line starts with a prompt "[rsmaljkov@rsmaljkov ~]\$". The first line shows "odfhj" followed by "bash script3.sh". The subsequent lines show the output of the script: "edda", "cceb", "beeg", "obiab", "pheeb", "dbhih", "ofhhc", "ogfbh", "ofdcf", "odbjb", and "ogabj". The final line shows the prompt "[rsmaljkov@rsmaljkov ~]\$" with a cursor.

```
odfhj
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
edda
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
cceb
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
beeg
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
obiab
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
pheeb
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
dbhih
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
ofhhc
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
ogfbh
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
ofdcf
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
odbjb
[rsmaljkov@rsmaljkov ~]$ bash script3.sh
ogabj
[rsmaljkov@rsmaljkov ~]$
```

Мы изучили основы программирования в оболочке ОС UNIX. Научились писать более сложные командные файлы с использованием логических управляющих конструкций и циклов.