

Презентация по лабораторной работе

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Цель работы

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

```

nalukashov@dk5n55 ~ $ touch lab10.sh
nalukashov@dk5n55 ~ $ emacs
bash: emacs: команда не найдена
nalukashov@dk5n55 ~ $ emacs lab10.sh
nalukashov@dk5n55 ~ $ rm -r lab10.sh
nalukashov@dk5n55 ~ $ ls
abc1      GNUstep      lab2.asm      play        qwert.map    tmp          лаба10П      Шаблоны
asdfg     lab03-1.asm  laboratory    public      README.md    work         лаба20П
asdfg.asm lab07        makefile     public_html reports       Видео        Музыка
australia lab07.asm    may          qwert       script.sh    Документы    Общедоступные
c++       lab07.sh     monthly      qwert.asm   ski.plases  Загрузки     отчет_лаб_шаблон.odt
feathers   lab07.sh~    my_os        qwert.lst   '#ript.sh#' Изображения  'Рабочий стол'

nalukashov@dk5n55 ~ $ touch lab10.sh
nalukashov@dk5n55 ~ $ emacs
bash: emacs: команда не найдена
nalukashov@dk5n55 ~ $ emacs lab10.sh
nalukashov@dk5n55 ~ $ lab10.sh
bash: lab10.sh: команда не найдена
nalukashov@dk5n55 ~ $ chmod +x lab10.sh
nalukashov@dk5n55 ~ $ lab10.sh
bash: lab10.sh: команда не найдена
nalukashov@dk5n55 ~ $ ./
asdfg     .enupg/      lab10.sh     .pki/        .sage/        .vscode/     лаба10П/
australia/ GNUstep/     laboratory/   play/        script.sh     work/        лаба20П/
c++/      .gphoto/     .local/      public/      ski.plases/   Видео/       Музыка/
.config/   .ipython/    monthly/     public_html/ .ssh/         Документы/   Общедоступные/
.emacs.d/  .kde4/       .mozilla/    qwert        .texlive2020/ Загрузки/     Рабочий стол/
.git/      lab07.asm    my_os        reports/     tmp/          Изображения/ Шаблоны/

nalukashov@dk5n55 ~ $ ./lab10.sh
nalukashov@dk5n55 ~ $ bash lab10.sh
nalukashov@dk5n55 ~ $ emacs lab10.sh
nalukashov@dk5n55 ~ $ ./lab10.sh
lock
work
work
work
work
work
work

```

```
emacs@dk5n55
File Edit Options Buffers Tools Sh-Script Help
#!/bin/bash
lockfile="./lockfile"
exec {fn}>$lockfile
echo "lock"
until flock -n ${fn}
do
    echo "not lock"
    sleep 1
    flock -n ${fn}
done
for ((i=0;i<=5;i++))
do
    echo "work"
    sleep 1
done

-:--- lab10.sh All L1 (Shell-script[bash]) Чт июн 3 11:03 1.63
```

```

man1: lab100.sh — Konsole
Файл Правка Вид Закладки Настройка Справка
LESS(1)
NAME
less - opposite of more
SYNOPSIS
less -?
less --help
less -v
less --version
less [-+jabcdCdeEffgIiJLlMmNnOoQqRrsuVvwXx-]
[-b space] [-h lines] [-j line] [-k keyfile]
[-(od) keyfile] [-n pattern] [-p prompt] [-t tag]
[-T tagfile] [-x tab,...] [-y lines] [-z lines]
[-r shift] [+(-)cmd] [-(-) filename]...
(See the OPTIONS section for alternate option syntax with long option names.)
DESCRIPTION
less is a program similar to more(1), but which allows backward movement in the file as well as forward movement. Also, less does not have to read the entire input file before starting, so with large input files it starts up faster than text editors like vi(1). Less uses termcap (or terminfo on some systems), so it can run on a variety of terminals. There is even limited support for hardcopy terminals. (On a hardcopy terminal, lines which should be printed at the top of the screen are prefixed with a caret.)
Commands are based on both more and vi. Commands may be preceded by a decimal number, called N in the descriptions below. The number is used by some commands, as indicated.
COMMANDS
In the following descriptions, "X" means control-X. ESC stands for the ESCAPE key; for example ESC-v means the two character sequence "ESCAPE", then "v".
h or H Help: display a summary of these commands. If you forget all the other commands, remember this one.
SPACE or "v" or "f" or "F"
Scroll forward N lines, default one window (see option -z below). If N is more than the screen size, only the final screenful is displayed. Warning: some systems use "v" as a special literalization character.
z
Like SPACE, but if N is specified, it becomes the new window size.
ESC-SPACE
Like SPACE, but scrolls a full screenful, even if it reaches end-of-file in the process.
ENTER or RETURN or "n" or "e" or "E" or "j" or "J"
Scroll forward N lines, default 1. The entire N lines are displayed, even if N is more than the screen size.
d or "D"
Scroll forward N lines, default one half of the screen size. If N is specified, it becomes the new default for subsequent d and u commands.
b or "B" or ESC-v
Scroll backward N lines, default one window (see option -z below). If N is more than the screen size, only the final screenful is displayed.
w
Like ESC-v, but if N is specified, it becomes the new window size.
y or "Y" or "P" or "K" or "K"
Scroll backward N lines, default 1. The entire N lines are displayed, even if N is more than the screen size. Warning: some systems use "Y" as a special job control character.
u or "U"
Scroll backward N lines, default one half of the screen size. If N is specified, it becomes the new default for subsequent d and u commands.
less:1.602 (file 1 of 3) lines 3-51
~:~$ man1: lab100.sh
OBS 26.1.2 (Rux) - Профнужа: Баз... 010-lab_the1_prog_3.pdf — Mozilla lab13 *report.md (/laboratory/OSLAB/...
```

```
nalukashov@dk5n55 ~ $ touch lab100.sh
nalukashov@dk5n55 ~ $ chmod +x lab100.sh
nalukashov@dk5n55 ~ $ emacs lab100.sh
nalukashov@dk5n55 ~ $ ./lab100.sh
./lab100.sh: строка 2: cd: usr/share/man/man1: Нет такого файла или каталога
nalukashov@dk5n55 ~ $ ./lab100.sh less
./lab100.sh: строка 2: cd: usr/share/man/man1: Нет такого файла или каталога
less*: Нет такого файла или каталога
nalukashov@dk5n55 ~ $ ./lab100.sh ls
./lab100.sh: строка 2: cd: usr/share/man/man1: Нет такого файла или каталога
ls*: Нет такого файла или каталога
nalukashov@dk5n55 ~ $ emacs lab100.sh
nalukashov@dk5n55 ~ $ cd usr
bash: cd: usr: Нет такого файла или каталога
nalukashov@dk5n55 ~ $ pwd
/afs/.dk.sci.pfu.edu.ru/home/n/a/nalukashov
nalukashov@dk5n55 ~ $ cd afs
bash: cd: afs: Нет такого файла или каталога
nalukashov@dk5n55 ~ $ emacs lab100.sh
nalukashov@dk5n55 ~ $ ./lab100.sh less
```

Слайд 5

```
emacs@dk5n55
File Edit Options Buffers Tools Sh-Script Help
#!/bin/bash
M=10
c=1
d=1
echo
echo "10 random words: "
while (($c!=($M+1)))
do
    echo $(for((i=1;i<=10;i++)); do printf '%s' "${RANDOM:0:1}"; done) | tr '[:0-9]' '[:a-z]'
    echo $d
    ((c+=1))
    ((d+=1))
done

-:--- lab1000.sh All L1 (Shell-script[bash]) Чт июн 3 11:07 0.89
```

##Слайд 6

```
./lab1000.sh: строка 9: синтаксическая ошибка рядом с неожиданным маркером «do»
./lab1000.sh: строка 9: `    echo $(for((i=1;i<=10;i++)); do prinf '%s' "${RANDOM:0:1}"; done | tr '[:0-9]' '[:a-z]''
nalukashov@dk5n55 ~$ emacs lab1000.sh
nalukashov@dk5n55 ~$ ./lab1000.sh

10 random words:
./lab1000.sh: строка 9: неожиданный конец файла во время поиска «)»
./lab1000.sh: строка 15: синтаксическая ошибка: неожиданный конец файла
nalukashov@dk5n55 ~$ emacs lab1000.sh
nalukashov@dk5n55 ~$ ./lab1000.sh

10 random words:
```


Выводы

Я изучил основы программирования в оболочке ОС UNIX, научился писать более сложные командные файлы с использованием логических управляющих конструкций и циклов.