

Лабораторная работа №4

Операционные системы

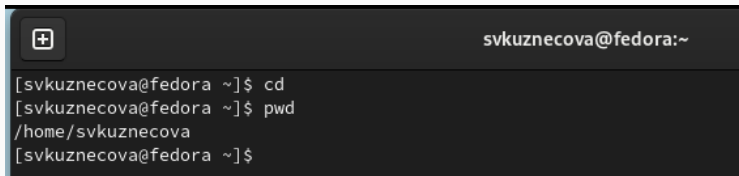
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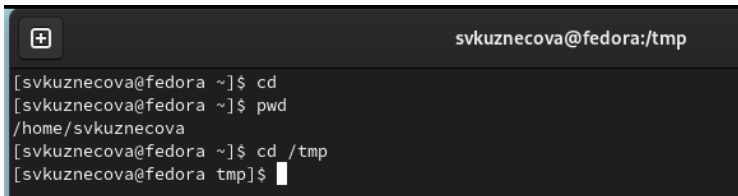
Приобретение навыков работы с системой с помощью командной строки.

Выполнение лабораторной работы

A terminal window with a dark background. The title bar shows a window icon on the left and the text 'svkuznecova@fedora:~' on the right. The terminal content shows a series of commands and their outputs: a prompt '[svkuznecova@fedora ~]\$' followed by 'cd', another prompt '[svkuznecova@fedora ~]\$' followed by 'pwd', and the output '/home/svkuznecova'. The final prompt is '[svkuznecova@fedora ~]\$'.

```
[svkuznecova@fedora ~]$ cd
[svkuznecova@fedora ~]$ pwd
/home/svkuznecova
[svkuznecova@fedora ~]$
```

Рис. 1: Имя каталога

A terminal window with a dark background. The title bar shows a window icon and the text 'svkuznecova@fedora:/tmp'. The terminal content shows a series of commands and their outputs: 'cd' changes the directory to '~', 'pwd' shows '/home/svkuznecova', and 'cd /tmp' changes the directory to '/tmp'. The prompt is now '[svkuznecova@fedora tmp]\$' with a cursor.

```
[svkuznecova@fedora ~]$ cd  
[svkuznecova@fedora ~]$ pwd  
/home/svkuznecova  
[svkuznecova@fedora ~]$ cd /tmp  
[svkuznecova@fedora tmp]$
```

Рис. 2: Каталог tmp

```
[svkuznecova@fedora ~]$ cd /tmp
[svkuznecova@fedora tmp]$ ls
hsperfdata_root
systemd-private-0bf569f86c7549f6a874c16941a33e0f-chronyd.service-795zhS
systemd-private-0bf569f86c7549f6a874c16941a33e0f-colord.service-EsKrio
systemd-private-0bf569f86c7549f6a874c16941a33e0f-dbus-broker.service-23zoHK
systemd-private-0bf569f86c7549f6a874c16941a33e0f-low-memory-monitor.service-2HNFFb
systemd-private-0bf569f86c7549f6a874c16941a33e0f-ModemManager.service-7ewfLd
systemd-private-0bf569f86c7549f6a874c16941a33e0f-power-profiles-daemon.service-5JExSZ
systemd-private-0bf569f86c7549f6a874c16941a33e0f-rtkit-daemon.service-HYNY0W
systemd-private-0bf569f86c7549f6a874c16941a33e0f-switcheroo-control.service-pWgB0j
systemd-private-0bf569f86c7549f6a874c16941a33e0f-systemd-logind.service-mN3yaP
systemd-private-0bf569f86c7549f6a874c16941a33e0f-systemd-oomd.service-i0HG1N
systemd-private-0bf569f86c7549f6a874c16941a33e0f-systemd-resolved.service-Lprbg1
systemd-private-0bf569f86c7549f6a874c16941a33e0f-upower.service-kZQniq
Temp-bf48011b-78ee-405d-b74d-6d188350e36c
tmux-1000
[svkuznecova@fedora tmp]$ ls -la
.
..
.font-unix
hsperfdata_root
.ICE-unix
systemd-private-0bf569f86c7549f6a874c16941a33e0f-chronyd.service-795zhS
systemd-private-0bf569f86c7549f6a874c16941a33e0f-colord.service-EsKrio
systemd-private-0bf569f86c7549f6a874c16941a33e0f-dbus-broker.service-23zoHK
systemd-private-0bf569f86c7549f6a874c16941a33e0f-low-memory-monitor.service-2HNFFb
systemd-private-0bf569f86c7549f6a874c16941a33e0f-ModemManager.service-7ewfLd
systemd-private-0bf569f86c7549f6a874c16941a33e0f-power-profiles-daemon.service-5JExSZ
systemd-private-0bf569f86c7549f6a874c16941a33e0f-rtkit-daemon.service-HYNY0W
systemd-private-0bf569f86c7549f6a874c16941a33e0f-switcheroo-control.service-pWgB0j
systemd-private-0bf569f86c7549f6a874c16941a33e0f-systemd-logind.service-mN3yaP
systemd-private-0bf569f86c7549f6a874c16941a33e0f-systemd-oomd.service-i0HG1N
systemd-private-0bf569f86c7549f6a874c16941a33e0f-systemd-resolved.service-Lprbg1
systemd-private-0bf569f86c7549f6a874c16941a33e0f-upower.service-kZQniq
Temp-bf48011b-78ee-405d-b74d-6d188350e36c
tmux-1000
.X0-lock
.X1024-lock
.X1025-lock
.X1026-lock
.X1027-lock
.X11-unix
.X1-lock
.XTMM-unix
```

```
[svkuznecova@fedora tmp]$ cd
[svkuznecova@fedora ~]$ cd /var/spool
[svkuznecova@fedora spool]$ ls
abrt  abrt-upload  cups  lpd  mail  plymouth
[svkuznecova@fedora spool]$ ls -a
.  ..  abrt  abrt-upload  cups  lpd  mail  plymouth
[svkuznecova@fedora spool]$
```

Рис. 5: Каталог spool


```
[svkuznecova@fedora ~]$ cd
[svkuznecova@fedora ~]$ mkdir newdir
[svkuznecova@fedora ~]$ ls
id_rsa.pub  -o      os-intro  Видео      Загрузки   Музыка     'Рабочий стол'
newdir      -o.pub  work     Документы  Изображения  Общедоступные  Шаблоны
[svkuznecova@fedora ~]$
```

Рис. 6: Создание каталога newdir

```
[svkuznecova@fedora ~]$ cd newdir/  
[svkuznecova@fedora newdir]$ mkdir morefun  
[svkuznecova@fedora newdir]$ ls  
morefun  
[svkuznecova@fedora newdir]$
```

Рис. 7: Создание каталога morefun

Создание 3 каталогов

```
[svkuznecova@fedora ~]$ cd
[svkuznecova@fedora ~]$ mkdir letters memos misk
[svkuznecova@fedora ~]$ ls
id_rsa.pub  memos  newdir  -o.pub  work  Документы  Изображения  Общедоступные  Шаблоны
letters     misk   -o      os-intro Видео  Загрузки  Музыка      'Рабочий стол'
[svkuznecova@fedora ~]$ rmdir letters memos misk
[svkuznecova@fedora ~]$ ls
id_rsa.pub  -o      os-intro  Видео  Загрузки  Музыка      'Рабочий стол'
newdir      -o.pub  work      Документы  Изображения  Общедоступные  Шаблоны
[svkuznecova@fedora ~]$
```

Рис. 8: Создание 3 каталогов

```
[svkuznecova@fedora ~]$ rm ~/newdir/
rm: невозможно удалить '/home/svkuznecova/newdir/': Это каталог
[svkuznecova@fedora ~]$ ls
id_rsa.pub  -o      os-intro  Видео      Загрузки   Музыка     'Рабочий стол'
newdir      -o.pub  work      Документы  Изображения  Общедоступные  Шаблоны
[svkuznecova@fedora ~]$
```

Рис. 9: Удаление каталогов

Удаление каталога morefun.

```
[svkuznecova@fedora ~]$ rmdir ~/newdir/morefun/
[svkuznecova@fedora ~]$ ls
id_rsa.pub  -o      os-intro  Видео      Загрузки   Музыка      'Рабочий стол'
newdir      -o.pub   work      Документы  Изображения  Общедоступные  Шаблоны
[svkuznecova@fedora ~]$ rmdir ~/newdir/morefun/
rmdir: не удалось удалить '/home/svkuznecova/newdir/morefun/': Нет такого файла или каталога
[svkuznecova@fedora ~]$ cd newdir/
[svkuznecova@fedora newdir]$ ls
[svkuznecova@fedora newdir]$
```

Рис. 10: Удаление каталогов_2

```
[svkuznecova@fedora newdir]$ man ls  
[svkuznecova@fedora newdir]$ cd  
[svkuznecova@fedora ~]$ ls -R  
.:
```

Рис. 11: Команда man

Содержимое подкаталогов

```
-k, --kibibytes
    default to 1024-byte blocks for file system usage; used only with -s and per directory totals

-l      use a long listing format

-L, --dereference
    when showing file information for a symbolic link, show information for the file the link references rather than for the link itself

-m      fill width with a comma separated list of entries

-n, --numeric-uid-gid
    like -l, but list numeric user and group IDs

-M, --literal
    print entry names without quoting

-o      like -l, but do not list group information

-p, --indicator-style=slash
    append / indicator to directories

-q, --hide-control-chars
    print ? instead of nongraphic characters

--show-control-chars
    show nongraphic characters as-is (the default, unless program is 'ls' and output is a terminal)

-Q, --quote-name
    enclose entry names in double quotes

--quoting-style=WORD
    use quoting style WORD for entry names: literal, locale, shell, shell-always, shell-escape, shell-escape-always, c, escape (overrides QUOTING_STYLE environment variable)

-r, --reverse
    reverse order while sorting

-R, --recursive
    list subdirectories recursively

-s, --size
    print the allocated size of each file, in blocks

-S      sort by file size, largest first

--sort=WORD
    sort by WORD instead of name: none (-U), size (-S), time (-t), version (-V), extension (-X), width

--time=WORD
Manual page ls(1) line 91 (press h for help or q to quit)
```

Рис. 12: Команда man -r

```
[svkuznecova@fedora ~]$ man ls
[svkuznecova@fedora ~]$ ls -lt
итого 12
drwxr-xr-x. 1 svkuznecova svkuznecova    0 мар 5 05:30 newdir
drwxr-xr-x. 1 svkuznecova svkuznecova   50 мар 5 04:54 Изображения
drwxr-xr-x. 1 svkuznecova svkuznecova  114 мар 5 03:13 Загрузки
drwxr-xr-x. 1 svkuznecova svkuznecova  328 мар 5 02:41 os-intro
-rw- - - - - 1 svkuznecova svkuznecova 2655 мар 5 02:35 -o
-rw-r--r--. 1 svkuznecova svkuznecova   572 мар 5 02:35 -o.pub
-rw- - - - - 1 svkuznecova svkuznecova 2700 мар 5 02:22 id_rsa.pub
drwxr-xr-x. 1 svkuznecova svkuznecova   10 мар 5 01:16 work
drwxr-xr-x. 1 svkuznecova svkuznecova    0 мар 5 00:12 Видео
drwxr-xr-x. 1 svkuznecova svkuznecova    0 мар 5 00:12 Документы
drwxr-xr-x. 1 svkuznecova svkuznecova    0 мар 5 00:12 Музыка
drwxr-xr-x. 1 svkuznecova svkuznecova    0 мар 5 00:12 Общедоступные
drwxr-xr-x. 1 svkuznecova svkuznecova    0 мар 5 00:12 'Рабочий стол'
drwxr-xr-x. 1 svkuznecova svkuznecova    0 мар 5 00:12 Шаблоны
[svkuznecova@fedora ~]$
```

Рис. 13: Команда man -lt

Опции команд cd, pwd, mkdir, rmdir, rm

```
[svkuznecova@fedora ~]$ man cd
[svkuznecova@fedora ~]$ man pwd
[svkuznecova@fedora ~]$ man mkdir
[svkuznecova@fedora ~]$ man rmdir
[svkuznecova@fedora ~]$ man rm
[svkuznecova@fedora ~]$
```

Рис. 14: Команды man

```
-m keymap
    Use keymap as the keymap to be affected by the subsequent bindings. Acceptable keymap
    names are emacs, emacs-standard, emacs-meta, emacs-ctlx, vi, vi-move, vi-command, and
    vi-insert. vi is equivalent to vi-command (vi-move is also a synonym); emacs is
    equivalent to emacs-standard.

-l
    List the names of all readline functions.

-p
    Display readline function names and bindings in such a way that they can be re-read.

-P
    List current readline function names and bindings.

-s
    Display readline key sequences bound to macros and the strings they output in such a
    way that they can be re-read.

-S
    Display readline key sequences bound to macros and the strings they output.

-v
    Display readline variable names and values in such a way that they can be re-read.

-V
    List current readline variable names and values.

-f filename
    Read key bindings from filename.

-q function
    Query about which keys invoke the named function.

-u function
    Unbind all keys bound to the named function.

-r keyseq
    Remove any current binding for keyseq.

-x keyseq:shell-command
    Cause shell-command to be executed whenever keyseq is entered. When shell-command is
    executed, the shell sets the READLINE_LINE variable to the contents of the readline
    line buffer and the READLINE_POINT and READLINE_MARK variables to the current location
    of the insertion point and the saved insertion point (the mark), respectively. If the
```

Команда history

```
159 ls -l
160 cd
161 cd /var/spool
162 ls
163 ls -a
164 cd
165 lc -l
166 ls -l
167 cd
168 mkdir newdir
169 ls
170 cd newdir/
171 mkdir morefun
172 ls
173 cd
174 mkdir letters misk
175 rkdir letters misk
176 rkdir letters misk
177 rmdir letters misk
178 mkdir letters memos misk
179 rmdir letters memos misk
180 cd
181 mkdir letters memos misk
182 ls
183 rmdir letters memos misk
184 ls
185 rm ~/newdir/
186 ls
187 rmdir ~/newdir/morefun/
188 ls
189 rmdir ~/newdir/morefun/
190 cd newdir/
191 ls
192 man ls
193 cd
194 ls -R
195 man ls
196 ls -t
197 man ls
198 ls -lt
199 man cd
200 man pwd
201 man mkdir
202 man rmdir
203 man rm
204 history
[svkuznecova@fedora ~]$ !194:s/R/F
ls -F
  id_rsa.pub  -o      os-intro/  Видео/      Загрузки/   Музыка/     'Рабочий стол'/
  newdir/     -o.pub   work/      Документы/  Изображения/ Общедоступные/ Шаблоны/
[svkuznecova@fedora ~]$ !195:s/ls/pwd
man pwd
```

По результатам выполнения работы были получены навыки работы с командной строкой.