

# Основы интерфейса взаимодействия пользователя с системой Unix на уровне командной строки

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# Цели и задачи работы

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## Цель лабораторной работы

Приобретение практических навыков взаимодействия пользователя с системой посредством командной строки.

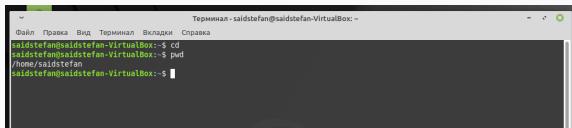
# Задачи лабораторной работы

- 1 Определить имя и путь домашнего каталога
- 2 Изучить команду `ls`.
- 3 Выполнить действия с каталогами.
- 4 Получить дополнительные сведения при помощи справки по командам.
- 5 Изучить команду `history`.

# **Процесс выполнения лабораторной работы**

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# Имя и путь к домашнему каталогу



```
Терминал - saidstefan@saidstefan-VirtualBox: ~  
Файл  Правка  Вид  Терминал  Вкладки  Справка  
saidstefan@saidstefan-VirtualBox:~$ cd  
saidstefan@saidstefan-VirtualBox:~$ pwd  
/home/saidstefan  
saidstefan@saidstefan-VirtualBox:~$
```

**Figure 1:** Путь к домашнему каталогу

# Опции команды ls

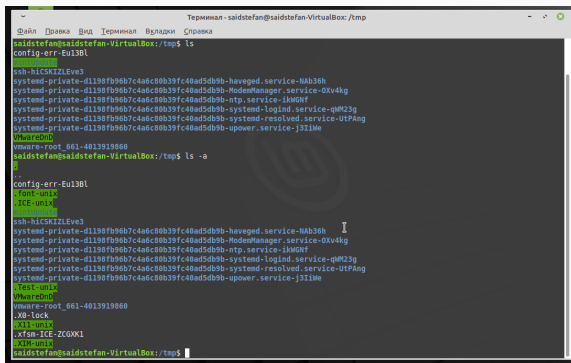


The image shows a terminal window titled "Терминал - saidstefan@saidstefan-VirtualBox: /tmp". The terminal has a menu bar with "Файл", "Правка", "Вид", "Терминал", "Вкладки", and "Справка". The command history is as follows:

```
saidstefan@saidstefan-VirtualBox:~$ cd
saidstefan@saidstefan-VirtualBox:~$ pwd
/home/saidstefan
saidstefan@saidstefan-VirtualBox:~$ cd /tmp
saidstefan@saidstefan-VirtualBox:/tmp$ ls
config-err-Eu13Bl
git10100d57e
ssh-hiCSKIZLEve3
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-haveged.service-NAb36h
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ModemManager.service-0Xv4kg
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ntp.service-ikWGNu
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-systemd-logind.service-qNM23g
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-systemd-resolved.service-UtPang
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3iWe
VhwareDnD
vmware-root_661-4013919860
saidstefan@saidstefan-VirtualBox:/tmp$
```

Figure 2: Команда ls

# Опции команды ls



```
Терминал - saidstefan@saidstefan-VirtualBox: /tmp
saidstefan@saidstefan-VirtualBox: /tmp$ ls
config-err-Eu13bl
.ssh
.ssh-biCSKIZLeve3
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-havedged.service-NAb36h
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ModenManager.service-0Xv4kg
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ntp.service-ikMGNHf
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-systemd-logind.service-qWm23g
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-systemd-resolved.service-UTPAng
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3lIwe
.VMwareDnD
.VMware-root_661-4013919860
saidstefan@saidstefan-VirtualBox: /tmp$ ls -a
.
.
config-err-Eu13bl
.font-unix
.ICE-unix
.ssh
.ssh-biCSKIZLeve3
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-havedged.service-NAb36h
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ModenManager.service-0Xv4kg
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ntp.service-ikMGNHf
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-systemd-logind.service-qWm23g
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-systemd-resolved.service-UTPAng
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3lIwe
.X-test-unix
.VMwareDnD
.VMware-root_661-4013919860
.X0-lock
.X11-unix
.xfsn-ICE-ZCXXK1
.XIM-unix
saidstefan@saidstefan-VirtualBox: /tmp$
```

Figure 3: Команда ls -a



## Опции команды ls

```

Terminale - saidstefan@saidstefan-VirtualBox:/tmp$
Файл  Правка  Вид  Терминал  Вкладки  Справка

font-unix
ICE-unix
libxcb0
ssh-hiCSKZLve3
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-havedge.service-Nab36h
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ModemManager.service-0Xv4kg
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ntp.service-iKwGf
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-systemd-logind.service-qW23g
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-systemd-resolved.service-UPtAng
systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3lIWe

Test-unix
libasound0
vmware-root_661-4013919860
X8-lock
X11-unix
xfsm-ICE-ZCGXKI
XIM-unix

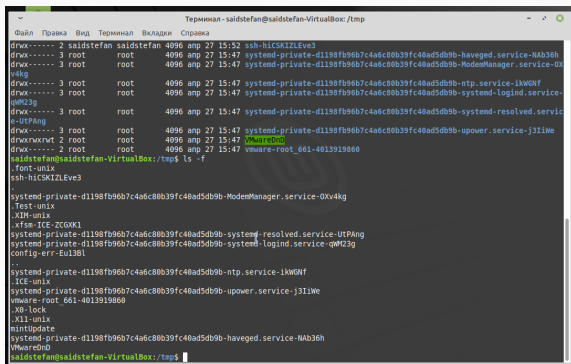
saidstefan@saidstefan-VirtualBox:/tmp$ ls -l
total 40
drwxr-xr-x 1 saidstefan saidstefan  0 2025-01-17 15:52 config-err-Eu138L
drwxr-xr-x 2 saidstefan saidstefan 4096 2025-01-17 15:52 libasound0
drwxr-xr-x 2 saidstefan saidstefan 4096 2025-01-17 15:52 ssh-hiCSKZLve3
drwxr-xr-x 3 root      root      4096 2025-01-17 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-havedge.service-Nab36h
drwxr-xr-x 3 root      root      4096 2025-01-17 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ModemManager.service-0X
drwxr-xr-x 3 root      root      4096 2025-01-17 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ntp.service-iKwGf
drwxr-xr-x 3 root      root      4096 2025-01-17 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-systemd-logind.service-
qW23g
drwxr-xr-x 3 root      root      4096 2025-01-17 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-systemd-resolved.servic
e-UPtAng
drwxr-xr-x 3 root      root      4096 2025-01-17 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3lIWe
drwxr-xr-x 2 root      root      4096 2025-01-17 15:47 vmware-root_661-4013919860

saidstefan@saidstefan-VirtualBox:/tmp$

```

### Figure 4: Команда ls -l

# Опции команды ls

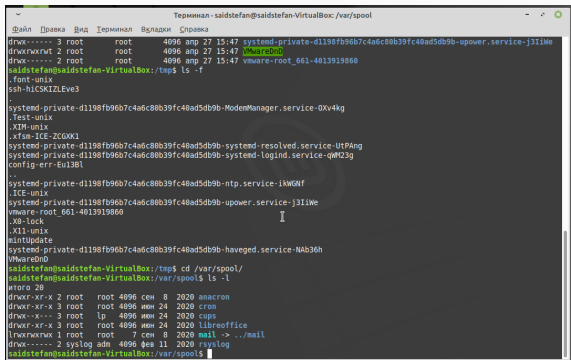


The screenshot shows a terminal window titled "Терминал - saidstefan@saidstefan-VirtualBox: /tmp". The window contains the output of the command `ls -l` executed by the user `saidstefan`. The output lists various system files and directories with their permissions, owners, sizes, and names. The files are listed in a table-like format with columns for permissions, user, group, size, date, and filename. The files include `ssh-hicSKIZLeve3`, `systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-haveged.service-Nab36h`, `systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ModemManager.service-0Xv4kg`, `systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ntp.service-1kWGNf`, `systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-system-logind.service-qM23g`, `systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-system-resolved.service-UTPAng`, `systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3IiWe`, `vmware-root_661-4013919860`, `font-unix`, `Test-unix`, `.XIM-unix`, `.xfsm-ICE-ZCGKK1`, `config-err-Eu13B1`, `mintUpdate`, and `VMwareDnD`.

```
Терминал - saidstefan@saidstefan-VirtualBox: /tmp
Файл  Правка  Вид  Терминал  Вкладки  Справка
drwx----- 2 saidstefan saidstefan 4096 anp 27 15:52 ssh-hicSKIZLeve3
drwx----- 3 root      root      4096 anp 27 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-haveged.service-Nab36h
drwx----- 3 root      root      4096 anp 27 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ModemManager.service-0Xv4kg
drwx----- 3 root      root      4096 anp 27 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ntp.service-1kWGNf
drwx----- 3 root      root      4096 anp 27 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-system-logind.service-qM23g
drwx----- 3 root      root      4096 anp 27 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-system-resolved.service-UTPAng
drwx----- 3 root      root      4096 anp 27 15:47 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3IiWe
drwxrwxrwt 2 root      root      4096 anp 27 15:47 VMwareDnD
drwx----- 2 root      root      4096 anp 27 15:47 vmware-root_661-4013919860
saidstefan@saidstefan-VirtualBox: /tmp$ ls -l
-rw-r--r-- 1 font-unix
-rw-r--r-- 1 ssh-hicSKIZLeve3
-rw-r--r-- 1 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ModemManager.service-0Xv4kg
-rw-r--r-- 1 Test-unix
-rw-r--r-- 1 .XIM-unix
-rw-r--r-- 1 .xfsm-ICE-ZCGKK1
-rw-r--r-- 1 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-system-logind.service-qM23g
-rw-r--r-- 1 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-system-resolved.service-UTPAng
-rw-r--r-- 1 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3IiWe
-rw-r--r-- 1 vmware-root_661-4013919860
-rw-r--r-- 1 config-err-Eu13B1
-rw-r--r-- 1 ..
-rw-r--r-- 1 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ntp.service-1kWGNf
-rw-r--r-- 1 .ICE-unix
-rw-r--r-- 1 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3IiWe
-rw-r--r-- 1 vmware-root_661-4013919860
-rw-r--r-- 1 .X0-lock
-rw-r--r-- 1 .X11-unix
-rw-r--r-- 1 mintUpdate
-rw-r--r-- 1 systemd-private-d1198fb96b7c4a6c80b39fc40ad5db9b-haveged.service-Nab36h
-rw-r--r-- 1 VMwareDnD
saidstefan@saidstefan-VirtualBox: /tmp$
```

Figure 5: Команда `ls -l`

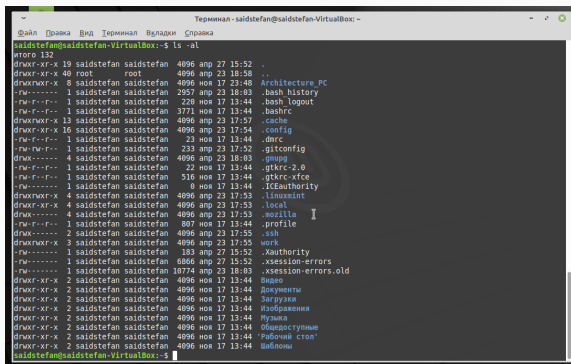
# Каталог cron



```
Терминал - saidstefan@saidstefan-VirtualBox: /var/spool
Файл  Правка  Вид  Терминал  Вкладки  Справка
drwx----- 3 root    root    4096 апр 27 15:47 system-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3IiWe
drwxrwxrwt  2 root    root    4096 апр 27 15:47 VMwareDnD
drwx----- 2 root    root    4096 апр 27 15:47 VMware-root_661-4013919860
saidstefan@saidstefan-VirtualBox:/tmp$ ls -l
total 4
-rw-r--r-- 1 saidstefan saidstefan 0 апр 27 15:47 .font-unix
-rw-r--r-- 1 saidstefan saidstefan 0 апр 27 15:47 .ssh-h1CSKIZLEve3
system-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ModemManager.service-0Xv4kg
Test-unix
XIM-unix
xfsm-ICE-ZC0XK1
system-private-d1198fb96b7c4a6c80b39fc40ad5db9b-system-resolved.service-UtPAng
system-private-d1198fb96b7c4a6c80b39fc40ad5db9b-system-logind.service-qM23g
config-err-Eu138l
..
system-private-d1198fb96b7c4a6c80b39fc40ad5db9b-ntp.service-ikMGNf
ICE-unix
system-private-d1198fb96b7c4a6c80b39fc40ad5db9b-upower.service-j3IiWe
vmware-root_661-4013919860
XB-lock
Xlib-unix
mintupdate
system-private-d1198fb96b7c4a6c80b39fc40ad5db9b-havedged.service-NAb36h
VMwareDnD
saidstefan@saidstefan-VirtualBox:/tmp$ cd /var/spool/
saidstefan@saidstefan-VirtualBox:/var/spool$ ls -l
total 28
drwxr-xr-x 2 root    root    4096 сен  8 2020 anacron
drwxr-xr-x 3 root    root    4096 июн 24 2020 cron
drwx-xr-x  3 root    lp      4096 июн 24 2020 cups
drwxr-xr-x 3 root    root    4096 июн 24 2020 libreoffice
drwxrwxrwx 1 root    root     7 сен  8 2020 mail -> ../mail
drwx----- 2 syslog adm    4096 фев 11 2020 syslog
saidstefan@saidstefan-VirtualBox:/var/spool$
```

Figure 6: Каталог cron

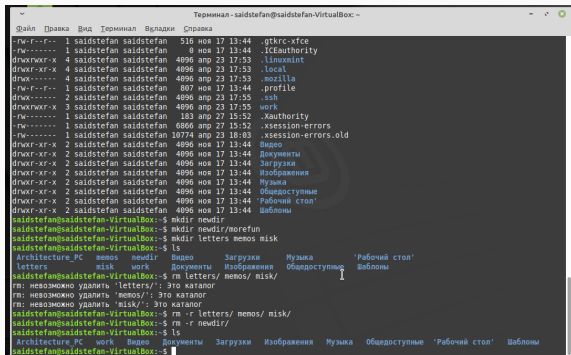
# Домашний каталог



```
Терминал - saidstefan@saidstefan-VirtualBox: ~
@файл Правка Вид Терминал Вкладки Справка
saidstefan@saidstefan-VirtualBox:~$ ls -al
итого 132
dnwkr-xr-x 19 saidstefan saidstefan 4096 авг 27 15:52 .
dnwkr-xr-x 40 root root 4096 авг 23 18:48 ..
dnwkr-xr-x 8 saidstefan saidstefan 4096 ноя 17 23:48 Architecture_PC
-rw-r----- 1 saidstefan saidstefan 2957 авг 23 18:03 .bash_history
-rw-r--r-- 1 saidstefan saidstefan 228 ноя 17 13:44 .bash_logout
-rw-r--r-- 1 saidstefan saidstefan 3771 ноя 17 13:44 .bashrc
dnwkr-xr-x 13 saidstefan saidstefan 4096 авг 23 17:57 .cache
dnwkr-xr-x 16 saidstefan saidstefan 4096 авг 23 17:54 .config
-rw-r--r-- 1 saidstefan saidstefan 23 ноя 17 13:44 .dnrc
-rw-r--r-- 1 saidstefan saidstefan 233 авг 23 17:52 .gitconfig
dnwkr----- 4 saidstefan saidstefan 4096 авг 23 18:03 .gnupg
-rw-r--r-- 1 saidstefan saidstefan 22 ноя 17 13:44 .gtkrc-2.0
-rw-r--r-- 1 saidstefan saidstefan 516 ноя 17 13:44 .gtkrc-xfce
-rw-r----- 1 saidstefan saidstefan 0 ноя 17 13:44 .lctdauthority
dnwkr-xr-x 4 saidstefan saidstefan 4096 авг 23 17:53 .linuxmint
dnwkr-xr-x 4 saidstefan saidstefan 4096 авг 23 17:53 .local
dnwkr----- 4 saidstefan saidstefan 4096 авг 23 17:53 .mozilla
-rw-r--r-- 1 saidstefan saidstefan 887 ноя 17 13:44 .profile
dnwkr----- 2 saidstefan saidstefan 4096 авг 23 17:55 .ssh
dnwkr-xr-x 3 saidstefan saidstefan 4096 авг 23 17:55 work
-rw-r----- 1 saidstefan saidstefan 183 авг 27 15:52 .xauthority
-rw-r----- 1 saidstefan saidstefan 6866 авг 27 15:52 .xsession-errors
-rw-r----- 1 saidstefan saidstefan 10774 авг 23 18:03 .xsession-errors.old
dnwkr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Видео
dnwkr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Документы
dnwkr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Загрузки
dnwkr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Изображения
dnwkr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Музыка
dnwkr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Общедоступные
dnwkr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 'Рабочий стол'
dnwkr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Шаблоны
saidstefan@saidstefan-VirtualBox:~$
```

Figure 7: Файлы в домашнем каталоге

# Работа с каталогами

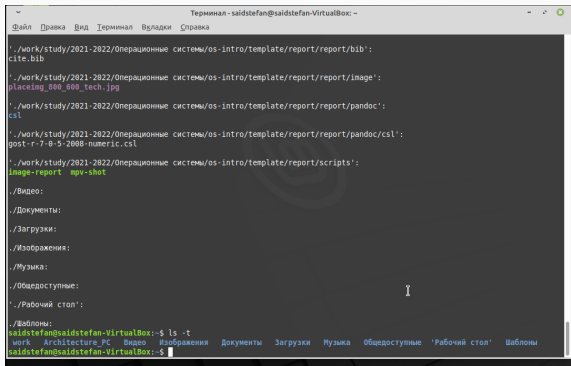


The screenshot shows a terminal window titled "Терминал - saidstefan@saidstefan-VirtualBox -". The terminal displays a series of commands and their outputs, including file permissions, directory creation, and file removal. The output of the 'ls' command shows a directory structure with subdirectories like 'Architecture\_PC', 'memos', 'newdir', 'work', 'Видео', 'Документы', 'Загрузки', 'Изображения', 'Музыка', 'Общедоступные', 'Рабочий стол', and 'Шаблоны'. The terminal also shows error messages for 'rm' commands that fail to remove directories that are not empty.

```
Терминал - saidstefan@saidstefan-VirtualBox -
Файл Правка Вид Терминал Вкладки Справка
-rw-r--r-- 1 saidstefan saidstefan 516 ноя 17 13:44 .gtkrc-xfce
-rw-r----- 1 saidstefan saidstefan 0 ноя 17 13:44 .ICEauthority
drwxrwxr-x 4 saidstefan saidstefan 4096 авг 23 17:53 .linuxmint
drwxr-xr-x 4 saidstefan saidstefan 4096 авг 23 17:53 .local
drwxr-xr-x 4 saidstefan saidstefan 4096 авг 23 17:53 .mozilla
-rw-r--r-- 1 saidstefan saidstefan 807 ноя 17 13:44 .profile
drwxr-xr-x 2 saidstefan saidstefan 4096 авг 23 17:55 .ssh
drwxrwxr-x 3 saidstefan saidstefan 4096 авг 23 17:55 work
-rw-r----- 1 saidstefan saidstefan 183 авг 27 15:52 .Xauthority
-rw-r----- 1 saidstefan saidstefan 6868 авг 27 15:52 .xsession-errors
-rw-r----- 1 saidstefan saidstefan 10774 авг 23 18:03 .xsession-errors.old
drwxr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Видео
drwxr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Документы
drwxr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Загрузки
drwxr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Изображения
drwxr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Музыка
drwxr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Öffentlich
drwxr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 'Рабочий стол'
drwxr-xr-x 2 saidstefan saidstefan 4096 ноя 17 13:44 Шаблоны
saidstefan@saidstefan-VirtualBox:~$ mkdir newdir
saidstefan@saidstefan-VirtualBox:~$ mkdir newdir/morefun
saidstefan@saidstefan-VirtualBox:~$ mkdir letters memos misk
saidstefan@saidstefan-VirtualBox:~$ ls
Architecture_PC  memos  newdir  work      Видео  Документы  Загрузки  Изображения  Музыка  Öffentlich  'Рабочий стол'  Шаблоны
letters          misk   work
saidstefan@saidstefan-VirtualBox:~$ rm letters/ memos/ misk/
rm: невозможно удалить 'letters/': Это каталог
rm: невозможно удалить 'memos/': Это каталог
rm: невозможно удалить 'misk/': Это каталог
saidstefan@saidstefan-VirtualBox:~$ rm -r letters/ memos/ misk/
saidstefan@saidstefan-VirtualBox:~$ rm -r newdir/
saidstefan@saidstefan-VirtualBox:~$ ls
Architecture_PC  work  Видео  Документы  Загрузки  Изображения  Музыка  Öffentlich  'Рабочий стол'  Шаблоны
saidstefan@saidstefan-VirtualBox:~$
```

Figure 8: Действия с каталогами

# Опции команды ls



```
Терминал - saidstefan@saidstefan-VirtualBox: -
Файл  Правка  Вид  Терминал  Вкладки  Справка

'./work/study/2021-2022/Операционные системы/os-intro/template/report/report/bib':
cite.bib

'./work/study/2021-2022/Операционные системы/os-intro/template/report/report/image':
placeimg_800_600_tech.jpg

'./work/study/2021-2022/Операционные системы/os-intro/template/report/report/pandoc':
csl

'./work/study/2021-2022/Операционные системы/os-intro/template/report/report/pandoc/csl':
gost-r-7-8-5-2008-numeric.csl

'./work/study/2021-2022/Операционные системы/os-intro/template/report/scripts':
image-report  mpv-shot

./Видео:

./Документы:

./Загрузки:

./Изображения:

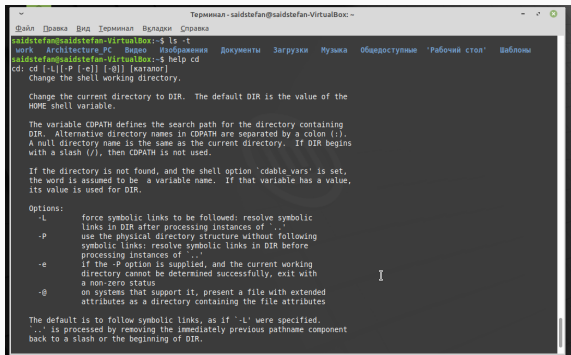
./Музыка:

./Общедоступные:

'./Рабочий стол':

./Шаблоны:
saidstefan@saidstefan-VirtualBox:~$ ls -t
work  Architecture  PC  Видео  Изображения  Документы  Загрузки  Музыка  Öffentlich  'Рабочий стол'  Шаблоны
saidstefan@saidstefan-VirtualBox:~$
```

Figure 9: Команда ls -R и ls -t



```
Терминал - saidstefan@saidstefan-VirtualBox: -
saidstefan@saidstefan-VirtualBox:~$ ls -lt
work Architecture_PC Видео Изображения Документы Загрузки Музыка Общедоступные "Рабочий стол" Шаблоны
saidstefan@saidstefan-VirtualBox:~$ help cd
cd: cd [-L|-P] [-e] [-@] [pathname]
    Change the shell working directory.

    Change the current directory to DIR.  The default DIR is the value of the
    HOME shell variable.

    The variable CDPATH defines the search path for the directory containing
    DIR.  Alternative directory names in CDPATH are separated by a colon (:).
    A null directory name is the same as the current directory.  If DIR begins
    with a slash (/), then CDPATH is not used.

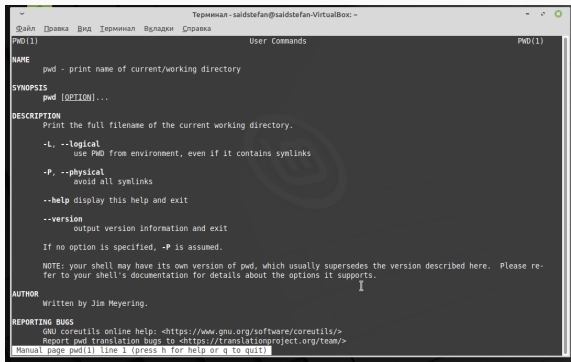
    If the directory is not found, and the shell option 'cdable vars' is set,
    the word is assumed to be a variable name.  If that variable has a value,
    its value is used for DIR.

Options:
  -L      force symbolic links to be followed: resolve symbolic
          links in DIR after processing instances of '..'
  -P      use the physical directory structure without following
          symbolic links: resolve symbolic links in DIR before
          processing instances of '..'
  -e      If the -P option is supplied, and the current working
          directory cannot be determined successfully, exit with
          a non-zero status
  -@      on systems that support it, present a file with extended
          attributes as a directory containing the file attributes

The default is to follow symbolic links, as if '-L' were specified.
'..' is processed by removing the immediately previous pathname component
back to a slash or the beginning of DIR.
```

Figure 10: Справка по команде cd

# Справка по командам



```
Терминал - saidstefan@saidstefan-VirtualBox: ~
Файл  Правка  Вид  Терминал  Вкладки  Справка
PwD(1)                                     User Commands                                     PwD(1)

NAME
  pwd - print name of current/working directory

SYNOPSIS
  pwd [OPTION]...

DESCRIPTION
  Print the full filename of the current working directory.

  -L, --logical
        use PwD from environment, even if it contains symlinks

  -P, --physical
        avoid all symlinks

  --help
        display this help and exit

  --version
        output version information and exit

  If no option is specified, -P is assumed.

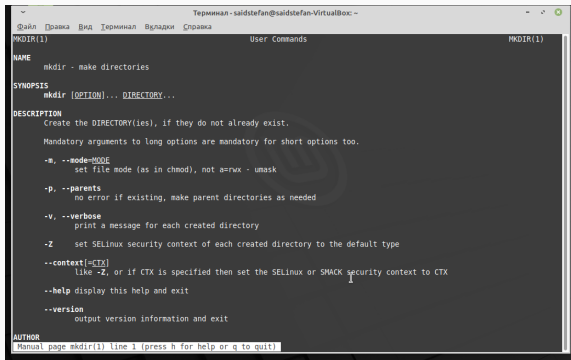
NOTE: your shell may have its own version of pwd, which usually supersedes the version described here. Please refer to your shell's documentation for details about the options it supports.

AUTHOR
  Written by Jim Meyering.

REPORTING BUGS
  GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
  Report pwd translation bugs to <https://translationproject.org/team/>
  Manual page pwd(1) line 1 (press h for help or q to quit)
```

Figure 11: Справка по команде pwd





```
Терминал - saidstefan@saidstefan-VirtualBox: ~
Файл Правка Вид Терминал Вкладки Справка
mkdir(1) User Commands mkdir(1)

NAME
  mkdir - make directories

SYNOPSIS
  mkdir [OPTION]... DIRECTORY...

DESCRIPTION
  Create the DIRECTORY(ies), if they do not already exist.

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

  -m, --mode=MODE
      set file mode (as in chmod), not a=rwx - umask

  -p, --parents
      no error if existing, make parent directories as needed

  -v, --verbose
      print a message for each created directory

  -Z
      set SELinux security context of each created directory to the default type

  --context[=CTX]
      like -Z, or if CTX is specified then set the SELinux or SMACK security context to CTX

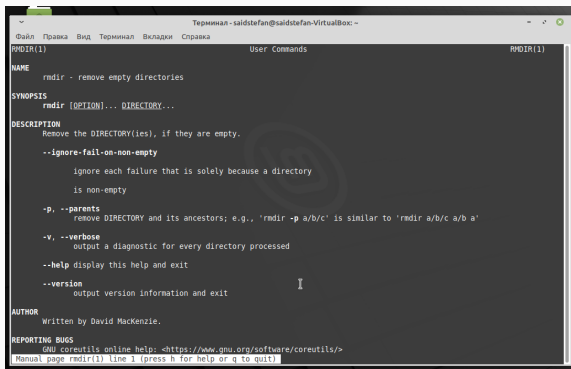
  --help
      display this help and exit

  --version
      output version information and exit

AUTHOR
  Manual page mkdir(1) line 1 (press h for help or q to quit)
```

Figure 12: Справка по команде mkdir

# Справка по командам



```
Терминал - saidstefan@saidstefan-VirtualBox: ~
Файл  Правка  Вид  Терминал  Вкладки  Справка

rmdir(1)                                User Commands                                rmdir(1)

NAME
  rmdir - remove empty directories

SYNOPSIS
  rmdir [OPTION]... DIRECTORY...

DESCRIPTION
  Remove the DIRECTORY(ies), if they are empty.

  --ignore-fail-on-non-empty
      ignore each failure that is solely because a directory
      is non-empty

  -p, --parents
      remove DIRECTORY and its ancestors; e.g., 'rmdir -p a/b/c' is similar to 'rmdir a/b/c a/b'

  -v, --verbose
      output a diagnostic for every directory processed

  --help
      display this help and exit

  --version
      output version information and exit

AUTHOR
  Written by David MacKenzie.

REPORTING BUGS
  GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
  Manual page rmdir(1) line 1 (press h for help or q to quit)
```

Figure 13: Справка по команде rmdir

# Справка по командам

```
Терминал - saidstefan@saidstefan-VirtualBox: -
Файл  Правка  Вид  Терминал  Вкладки  Справка
RM(1)                                     User Commands                                     RM(1)

NAME
  rm - remove files or directories

SYNOPSIS
  rm [OPTION]... [FILE]...

DESCRIPTION
  This manual page documents the GNU version of rm.  rm removes each specified file.  By default, it does not remove
  directories.

  If the -i or --interactive=once option is given, and there are more than three files or the -r, -B, or --recursive
  are given, then rm prompts the user for whether to proceed with the entire operation.  If the response is not af-
  firmative, the entire command is aborted.

  Otherwise, if a file is unwritable, standard input is a terminal, and the -f or --force option is not given, or
  the -i or --interactive=always option is given, rm prompts the user for whether to remove the file.  If the re-
  sponse is not affirmative, the file is skipped.

OPTIONS
  Remove (un)link the FILE(s).

  -f, --force
    ignore nonexistent files and arguments, never prompt

  -i
    prompt before every removal

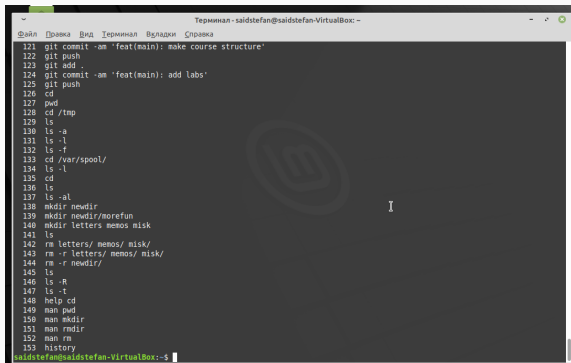
  -I
    prompt once before removing more than three files, or when removing recursively; less intrusive than -i,
    while still giving protection against most mistakes

  --interactive=WHEN
    prompt according to WHEN: never, once (-I), or always (-i); without WHEN, prompt always

Manual page rm(1) line 1 (press h for help or q to quit)
```

Figure 14: Справка по команде rm

# История командной строки



```
Терминал - saidstefan@saidstefan-VirtualBox: ~
@файл Правка Вид Терминал Вкладки Справка
121 git commit -am 'feat(main): make course structure'
122 git push
123 git add .
124 git commit -am 'feat(main): add labs'
125 git push
126 cd
127 pwd
128 cd /tmp
129 ls
130 ls -a
131 ls -l
132 ls -T
133 cd /var/spool/
134 ls -l
135 cd
136 ls
137 ls -al
138 mkdir newdir
139 mkdir newdir/morefun
140 mkdir letters memos misk
141 ls
142 rm letters/ memos/ misk/
143 rm -r letters/ memos/ misk/
144 rm -r newdir/
145 ls
146 ls -R
147 ls -t
148 help cd
149 man pwd
150 man mkdir
151 man rmdir
152 man rm
153 history
saidstefan@saidstefan-VirtualBox:~$
```

Figure 15: Команда history

## **Выводы по проделанной работе**

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Мы приобрели практические навыки взаимодействия пользователя с системой посредством командной строки.