

# Командная оболочка Midnight Commander

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Борокова Дина, НПМбд-01-21<sup>1</sup>

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<sup>1</sup>Российский Университет Дружбы Народов

# Цели и задачи работы

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## Цель лабораторной работы

Ознакомление с файловой системой Linux, её структурой, именами и содержанием каталогов. Приобретение практических навыков по применению команд для работы с файлами и каталогами, по управлению процессами, по проверке использования диска и обслуживанию файловой системы.

# Задачи лабораторной работы

- 1 Изучить возможности Midnight Commander
- 2 Изучить редактор Midnight Commander

# **Процесс выполнения лабораторной работы**

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# Работа с Midnight Commander

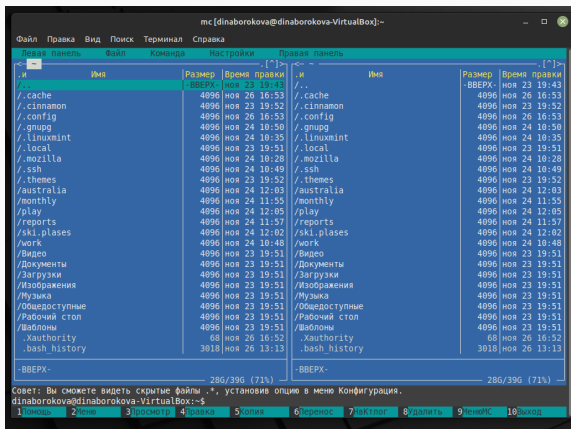


Figure 1: Запуск mc

# Работа с Midnight Commander

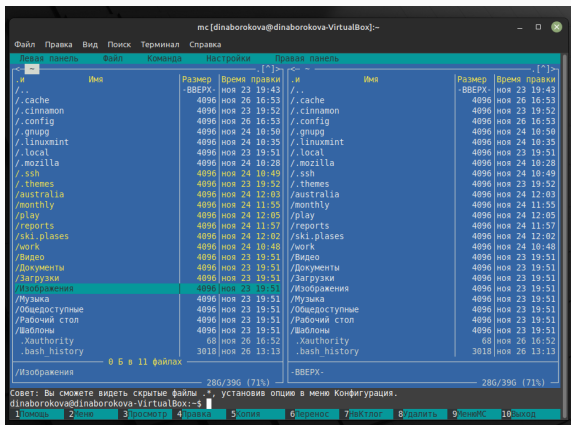


Figure 2: Выделение

# Работа с Midnight Commander

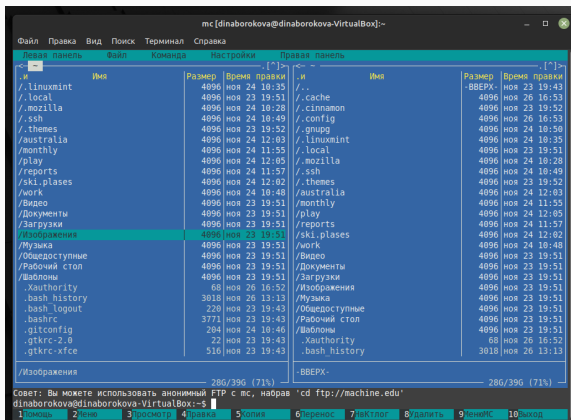


Figure 3: Отмена



# Работа с Midnight Commander

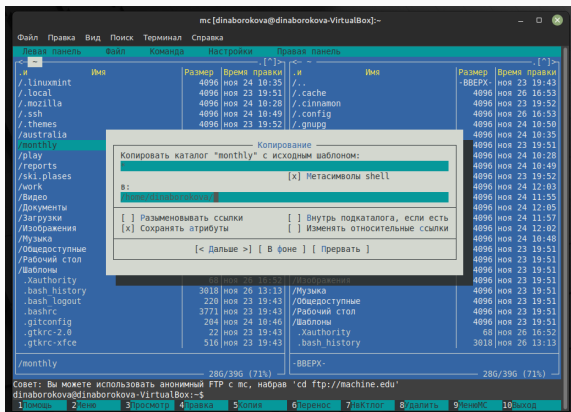


Figure 4: Копирование

# Работа с Midnight Commander

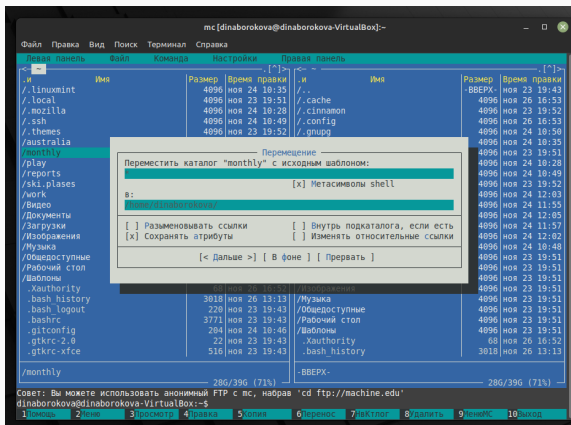


Figure 5: Перемещение

# Работа с Midnight Commander

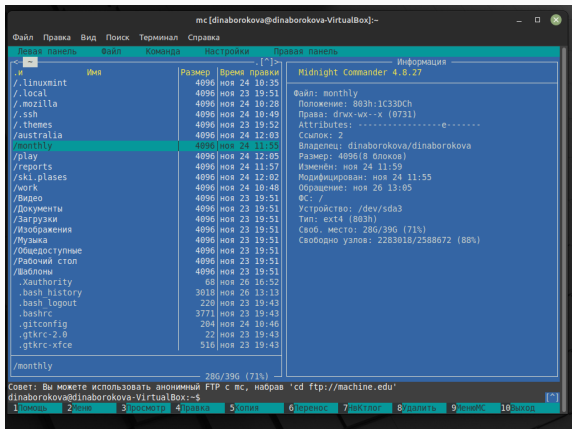


Figure 6: Информация

# Работа с Midnight Commander

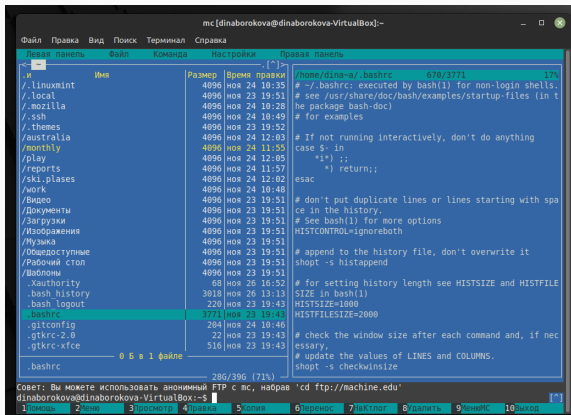


Figure 7: Быстрый просмотр

# Работа с Midnight Commander

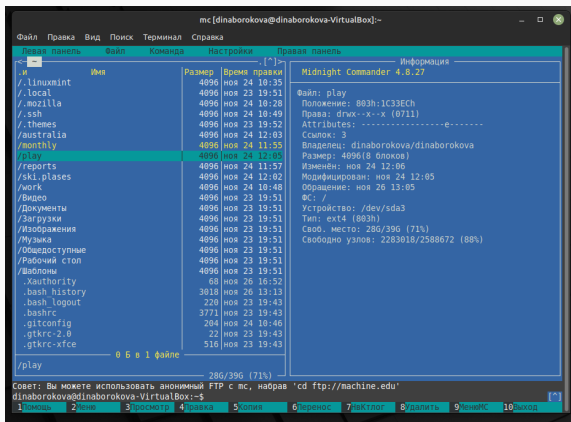


Figure 8: Информация

# Работа с Midnight Commander

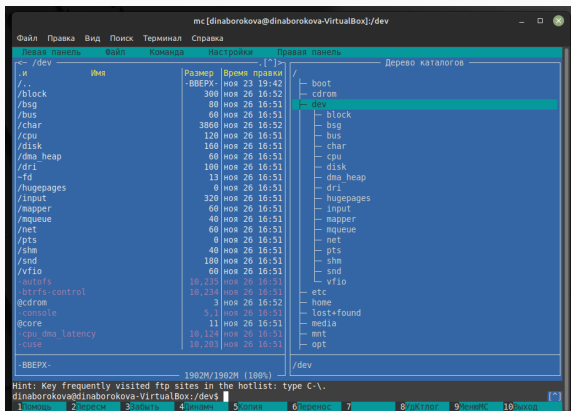
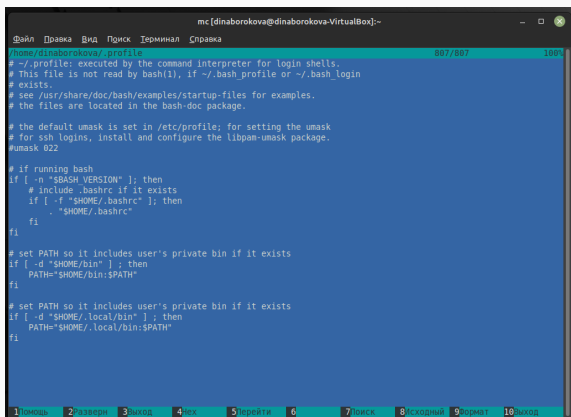


Figure 9: Дерево каталогов

# Работа с Midnight Commander



The screenshot shows a terminal window titled "mc[dinaborokova@dinaborokova-VirtualBox]~". The menu bar at the top includes "Файл", "Правка", "Вид", "Поиск", "Терминал", and "Справка". The main display area shows the contents of the file `/home/dinaborokova/.profile` at line 807 of 807. The file content is a shell profile script with various configuration lines and conditional blocks. At the bottom, a status bar shows navigation shortcuts: 1Помощь, 2Разверн, 3Выход, 4Нех, 5Перейти, 6, 7Поиск, 8Исходный, 9Формат, 10Выход.

```
mc[dinaborokova@dinaborokova-VirtualBox]~
Файл  Правка  Вид  Поиск  Терминал  Справка
/home/dinaborokova/.profile 807/807 100%
# ~/.profile: executed by the command interpreter for login shells.
# This file is not read by bash(1), if ~/.bash_profile or ~/.bash_login
# exists.
# see /usr/share/doc/bash/examples/startup-files for examples.
# the files are located in the bash-doc package.

# the default umask is set in /etc/profile; for setting the umask
# for ssh logins, install and configure the libpan-umask package.
#umask 022

# if running bash
if [ -n "$BASH_VERSION" ]; then
    # include .bashrc if it exists
    if [ -f "$HOME/.bashrc" ]; then
        . "$HOME/.bashrc"
    fi
fi

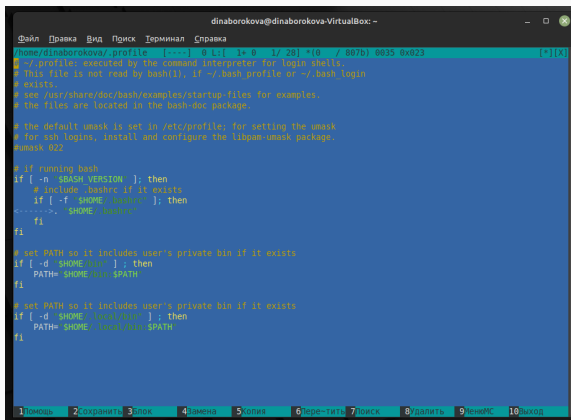
# set PATH so it includes user's private bin if it exists
if [ -d "$HOME/bin" ] ; then
    PATH="$HOME/bin:$PATH"
fi

# set PATH so it includes user's private bin if it exists
if [ -d "$HOME/.local/bin" ] ; then
    PATH="$HOME/.local/bin:$PATH"
fi
```

1Помощь 2Разверн 3Выход 4Нех 5Перейти 6 7Поиск 8Исходный 9Формат 10Выход

Figure 10: Просмотр содержимого текстового файла

# Работа с Midnight Commander



The screenshot shows a window titled "dinaborokova@dinaborokova-VirtualBox: -" with a menu bar (Файл, Правка, Вид, Поиск, Терминал, Справка). The main area displays the content of a file named "/home/dinaborokova/.profile". The text is as follows:

```
/home/dinaborokova/.profile: [----] 0 L: 1+ 0 1/ 28] *(0 / 807b) 0035 0x023 [*][X]
# ~/.profile: executed by the command interpreter for login shells.
# This file is not read by bash(1), if ~/.bash profile or ~/.bash_login
# exists.
# see /usr/share/doc/bash/examples/startup-files for examples.
# the files are located in the bash-doc package.

# the default umask is set in /etc/profile; for setting the umask
# for ssh logins, install and configure the libpan-umask package.
umask 022

# if running bash
if [ -n "$BASH_VERSION" ]; then
    # include .bashrc if it exists
    if [ -f "$HOME/.bashrc" ]; then
        . "$HOME/.bashrc"
    fi
fi

# set PATH so it includes user's private bin if it exists
if [ -d "$HOME/bin" ] ; then
    PATH=$HOME/bin:$PATH
fi

# set PATH so it includes user's private bin if it exists
if [ -d "$HOME/local/bin" ] ; then
    PATH=$HOME/local/bin:$PATH
fi
```

At the bottom, there is a toolbar with icons and labels: 1.Помощь, 2.Сохранить, 3.Блок, 4.Замена, 5.Копия, 6.Пере-тить, 7.Поиск, 8.Удалить, 9.ИменаИС, 10.Выход.

**Figure 11:** Отредактируем содержимое текстового файла без сохранения результатов



# Работа с Midnight Commander

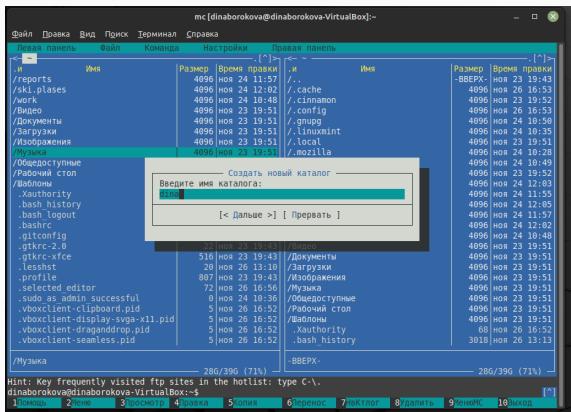


Figure 12: Создание каталога

# Работа с Midnight Commander

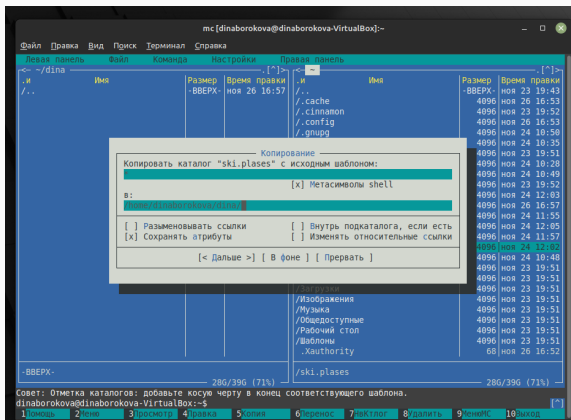


Figure 13: Копирование в файлов в созданный каталог

# Работа с Midnight Commander

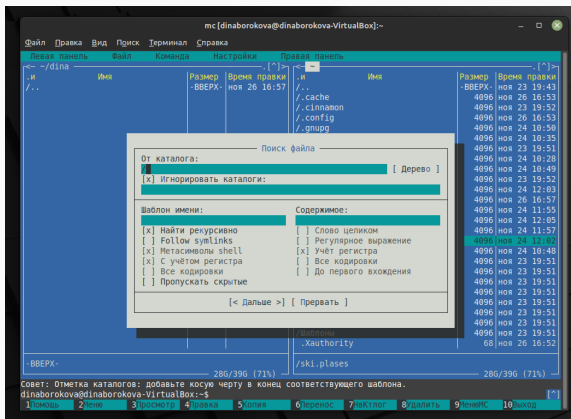


Figure 14: Поиск файлов

# Работа с Midnight Commander

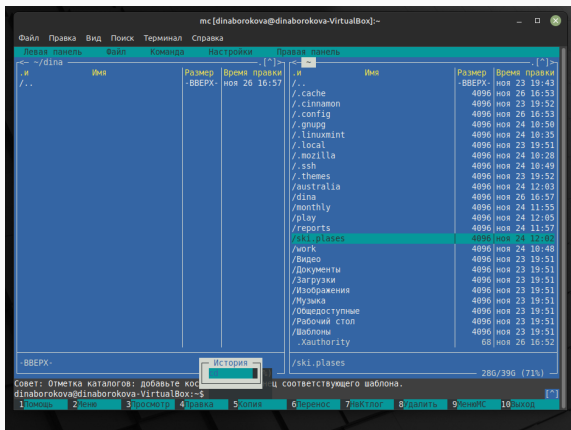


Figure 15: История команд

# Работа с Midnight Commander

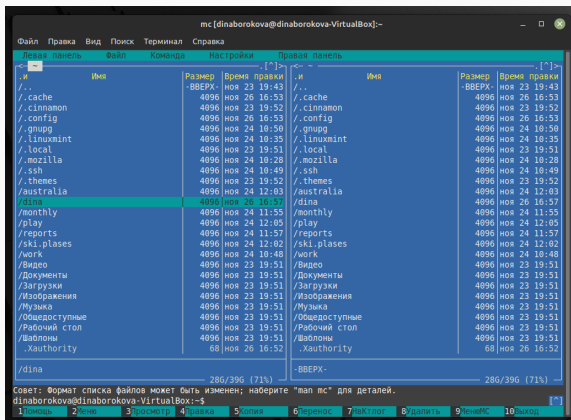
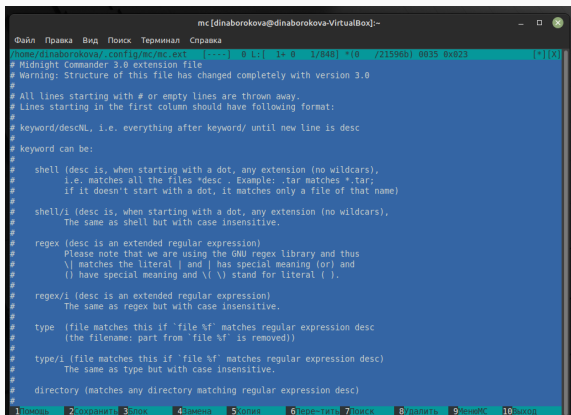


Figure 16: Переход в домашний каталог

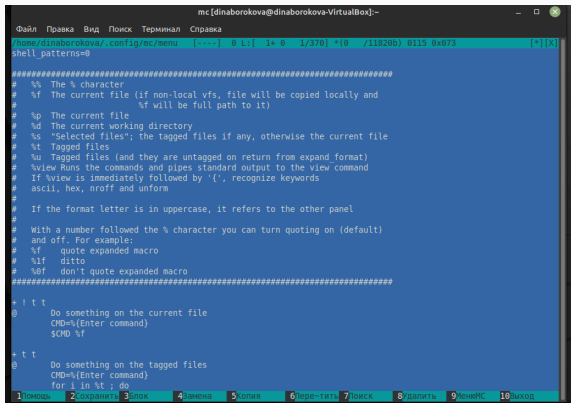
# Работа с Midnight Commander



```
mc [dinaborokova@dinaborokova-VirtualBox]~
Файл  Правка  Вид  Поиск  Терминал  Справка
/home/dinaborokova/.config/mc/mc.ext  [----]  0 L:  1+ 0  1/848  + (0  /21596b) 0035 0x023  [*](X)
# Midnight Commander 3.0 extension file
# Warning: Structure of this file has changed completely with version 3.0
#
# All lines starting with # or empty lines are thrown away.
# Lines starting in the first column should have following format:
#
# keyword/descNL, i.e. everything after keyword/ until new line is desc
# keyword can be:
#
#   shell (desc is, when starting with a dot, any extension (no wildcars),
#         i.e. matches all the files *desc . Example: .tar matches *.tar;
#         if it doesn't start with a dot, it matches only a file of that name)
#
#   shell/i (desc is, when starting with a dot, any extension (no wildcars),
#         The same as shell but with case insensitive.
#
#   regex (desc is an extended regular expression)
#         Please note that we are using the GNU regex library and thus
#         \ | matches the literal | and | has special meaning (or) and
#         ( ) have special meaning and \ ( \ ) stand for literal ( ).
#
#   regex/i (desc is an extended regular expression)
#         The same as regex but with case insensitive.
#
#   type (file matches this if 'file %f' matches regular expression desc
#         (the filename: part from 'file %f' is removed))
#
#   type/i (file matches this if 'file %f' matches regular expression desc)
#         The same as type but with case insensitive.
#
#   directory (matches any directory matching regular expression desc)
#
1Помощь  2Сохранить  3Залок  4Имена  5Копия  6Пере-тить  7Поиск  8Удалить  9Меню  10Выход
```

Figure 17: Просмотр файла расширений

# Работа с Midnight Commander



The screenshot shows the Midnight Commander (mc) interface running in a terminal window. The title bar indicates the user is 'mc[dinaborokova@dinaborokova-VirtualBox]'. The menu bar at the top includes 'Файл', 'Правка', 'Вид', 'Поиск', 'Терминал', and 'Справка'. The main window displays the file menu, which lists various commands and their functions. The menu items are as follows:

```
Файл  Правка  Вид  Поиск  Терминал  Справка
/home/dinaborokova/.config/mc/menu  [---]  0  L:  1+  0  1/370  *(0  /11820b)  0115  0x073  [*][X]
shell_patterns=0

#####
#  %% The % character
#  %f The current file (if non-local vfs, file will be copied locally and
#      %f will be full path to it)
#
#  %p The current file
#  %d The current working directory
#  %s "Selected files"; the tagged files if any, otherwise the current file
#  %t Tagged files
#  %u Tagged files (and they are untagged on return from expand_format)
#  %view Runs the commands and pipes standard output to the view command
#  If %view is immediately followed by '{', recognize keywords
#  ascii, hex, nroff and unform
#
#  If the format letter is in uppercase, it refers to the other panel
#
#  With a number followed the % character you can turn quoting on (default)
#  and off. For example:
#  %f quote expanded macro
#  %lf ditto
#  %0f don't quote expanded macro
#####
+ l t t
@ Do something on the current file
  CMD=%(Enter command)
  $CMD %f

+ t t
@ Do something on the tagged files
  CMD=%(Enter command)
  for i in %t ; do

#####
1 Помощь  2 Сохранить  3 Злоб  4 Меню  5 Копия  6 Пере-тита  7 Поиск  8 Удалить  9 Ренесс  10 Выход
```

Figure 18: Просмотр файла меню

# Работа с Midnight Commander

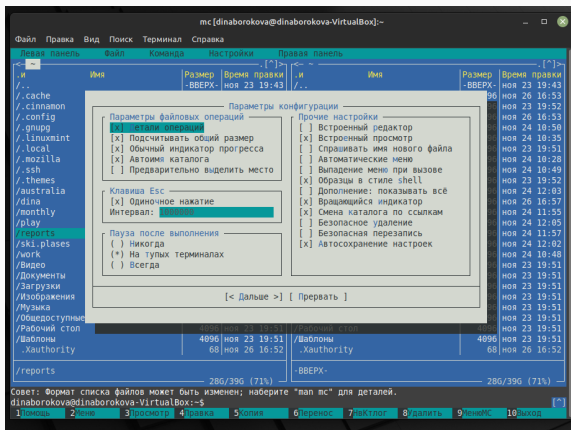


Figure 19: Конфигурация



# Работа с Midnight Commander

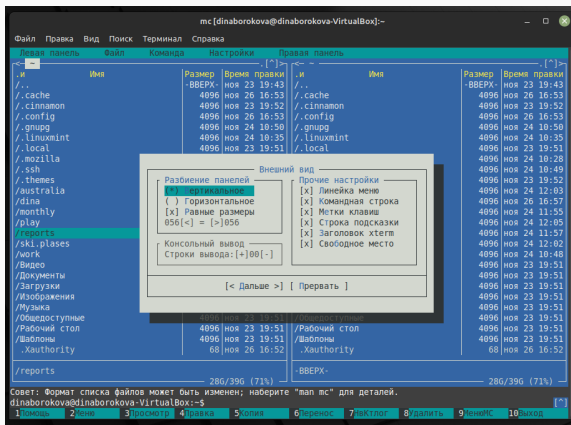
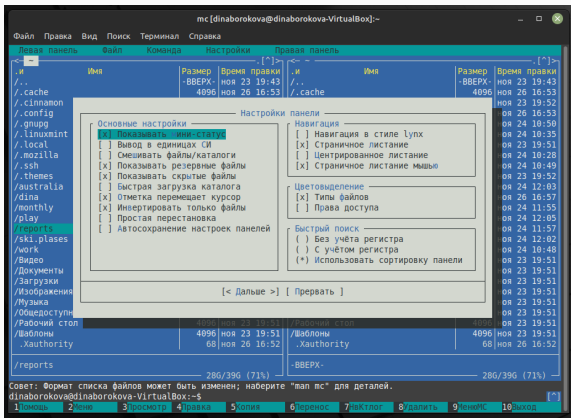


Figure 20: Внешний вид

## Работа с Midnight Commander



### Figure 21: Настройки панелей

# Работа с Midnight Commander

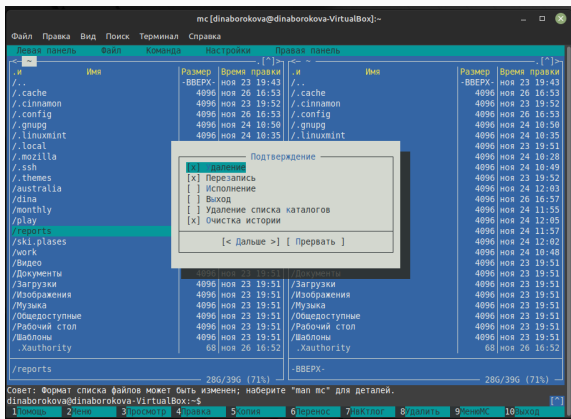


Figure 22: Подтверждение

# Работа с Midnight Commander

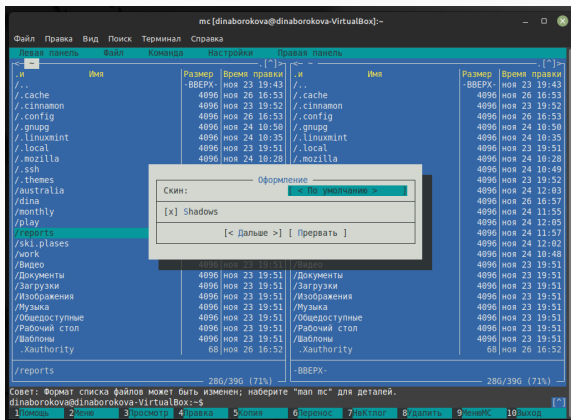


Figure 23: Оформление

# Работа с Midnight Commander

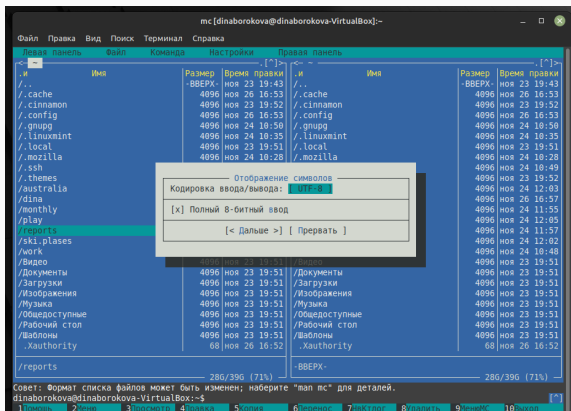


Figure 24: Кодировка символов

# Работа с Midnight Commander

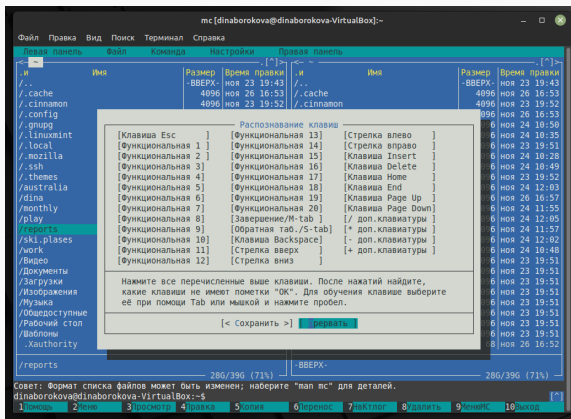


Figure 25: Распознавание клавиш

# Работа с редактором Midnight Commander

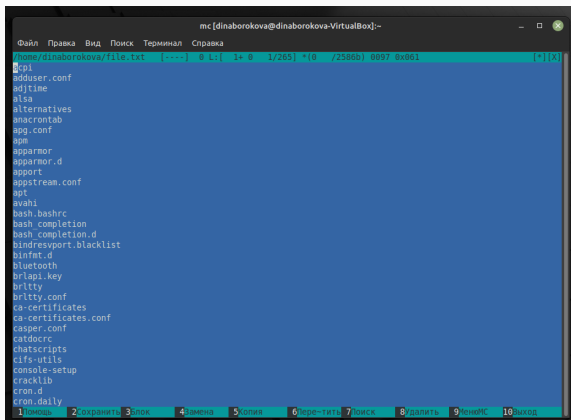


Figure 26: Файл с текстом

# Работа с редактором Midnight Commander

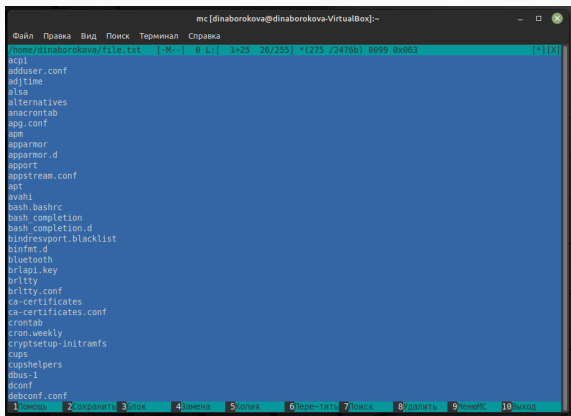


Figure 27: Файл с текстом



# Работа с редактором Midnight Commander

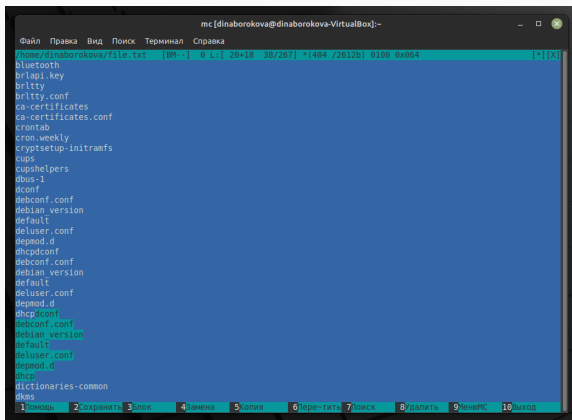


Figure 28: Копирование фрагмента

# Работа с редактором Midnight Commander

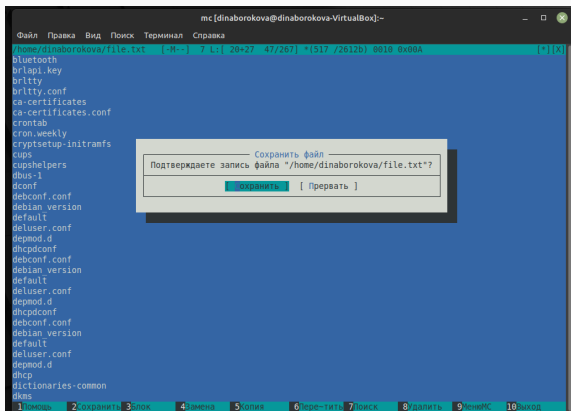


Figure 29: Сохранение

# Работа с редактором Midnight Commander

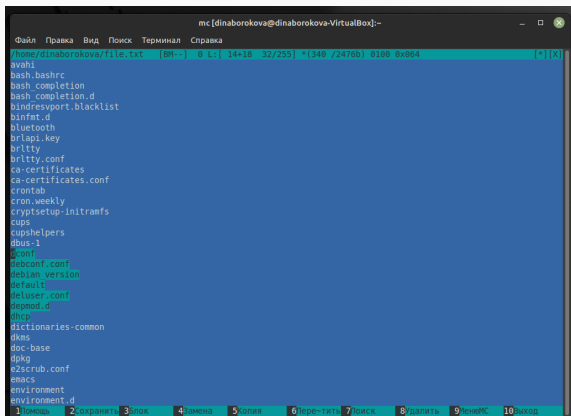


Figure 30: Отмена

# Работа с редактором Midnight Commander

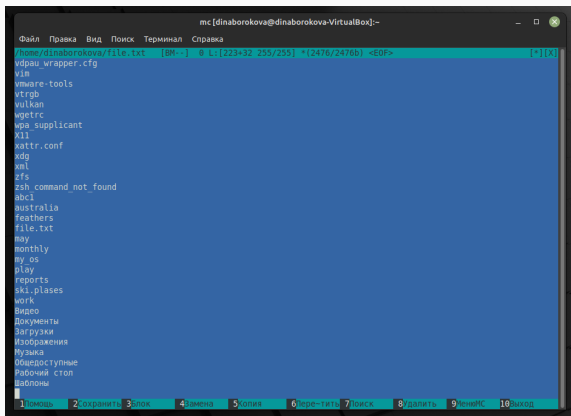


Figure 31: Переход в конец файла

# Работа с редактором Midnight Commander

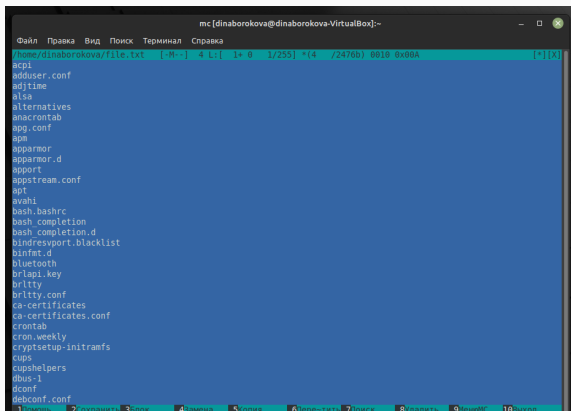
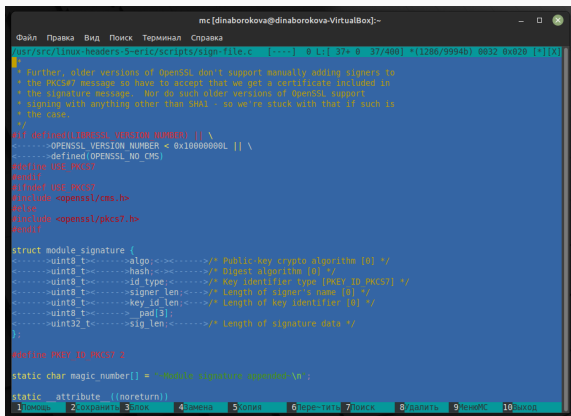


Figure 32: Переход в начало файла

# Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander (mc) interface within a VirtualBox window titled 'mc[dinaborkova@dinaborkova-VirtualBox]-'. The menu bar includes 'Файл', 'Правка', 'Вид', 'Поиск', 'Терминал', and 'Справка'. The current file is '/usr/src/linux-headers-5-eric/scripts/sign-file.c'. The code is a C source file for signing, featuring comments about OpenSSL version compatibility and PKCS#7 signing. It includes macros for OpenSSL version and CMS, and defines a 'module\_signature' struct with fields for algorithm, hash, id type, key identifier, key identifier length, key identifier, padding, and signature length. The code also defines a magic number and a static attribute for the module signature.

```
mc[dinaborkova@dinaborkova-VirtualBox]-
Файл  Правка  Вид  Поиск  Терминал  Справка
/usr/src/linux-headers-5-eric/scripts/sign-file.c  [----]  0 L: [ 37* 0 37/400]  *{1286/9994b} 0032 0x020 [*][X]
+ Further, older versions of OpenSSL don't support manually adding signers to
+ the PKCS#7 message so have to accept that we get a certificate included in
+ the signature message. Nor do such older versions of OpenSSL support
+ signing with anything other than SHA1 - so we're stuck with that if such is
+ the case.
+
+
/*#ifndef(LIBSSL_VERSION_NUMBER) || \
+----->OPENSSL_VERSION_NUMBER < 0x10000000L || \
+----->defined(OPENSSL_NO_CMS)
#define USE_PKCS7
#endif
#define USE_PKCS7
#include <openssl/cms.h>
#define
#include <openssl/pkcs7.h>
#endif

struct module_signature {
+----->uint8_t+----->algo;+-----> /* Public key crypto algorithm [0] */
+----->uint8_t+----->hash;+-----> /* Digest algorithm [0] */
+----->uint8_t+----->id_type;+-----> /* Key identifier type [PKCS7 ID_PKCS7] */
+----->uint8_t+----->signer_len;+-----> /* Length of signer's name [0] */
+----->uint8_t+----->key_id_len;+-----> /* Length of key identifier [0] */
+----->uint8_t+----->_pad[3];
+----->uint32_t+----->sig_len;+-----> /* Length of signature data */
};

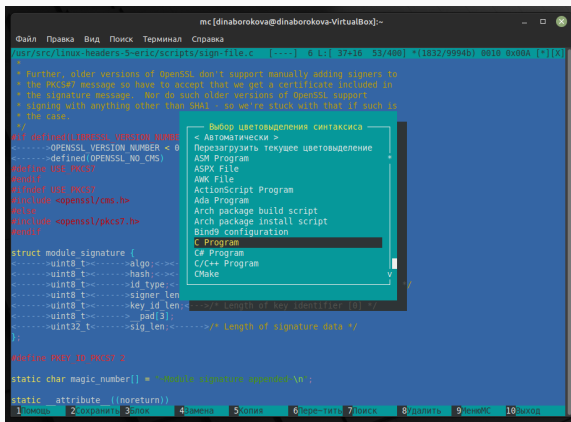
#define PKCS7_ID_PKCS7 1

static char magic_number[] = "--Module signature appended\n";

static __attribute__((noreturn))
1.Помочь 2.Сохранить 3.Помощь 4.Имена 5.Копия 6.Пере-титл 7.Поиск 8.Удалить 9.МенюМС 10.Выход
```

Figure 33: Файл с программой

# Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander (MC) interface. The top bar displays the user 'mc[dinaborokova@dinaborokova-VirtualBox]~'. The menu bar includes 'Файл', 'Правка', 'Вид', 'Поиск', 'Терминал', and 'Справка'. The status bar at the bottom shows navigation shortcuts: 1.Помощь, 2.Охранить, 3.Блок, 4.Имена, 5.Опции, 6.Пере-Тить, 7.Поиск, 8.Голить, 9.СенМС, 10.Выход.

The main window displays a C file named 'sign-file.c' with syntax highlighting. The code includes comments about OpenSSL version compatibility and defines a module signature structure. A context menu is open over the code, titled 'Выбор цветовыделения синтаксиса' (Syntax highlighting selection). The menu options are: '< Автоматически >', 'Перезагрузить текущее цветовыделение', 'ASM Program', 'ASPX File', 'AWK File', 'ActionScript Program', 'Ada Program', 'Arch package build script', 'Arch package install script', 'Bind9 configuration', 'C Program' (highlighted), 'C# Program', 'C/C++ Program', and 'CMake'.

Figure 34: Цветовыделение синтаксиса

## **Выводы по проделанной работе**

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В данной работе мы ознакомились с инструментами поиска файлов и фильтрации текстовых данных. А также приобрели практические навыки по управлению процессами.