

# Командная оболочка Midnight Commander

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# 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

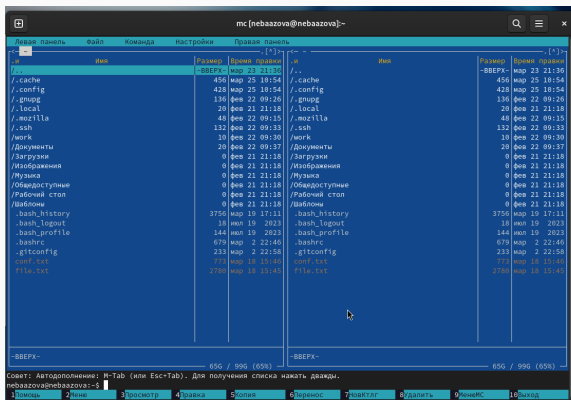


Рис. 1: Запуск ms

# Работа с Midnight Commander

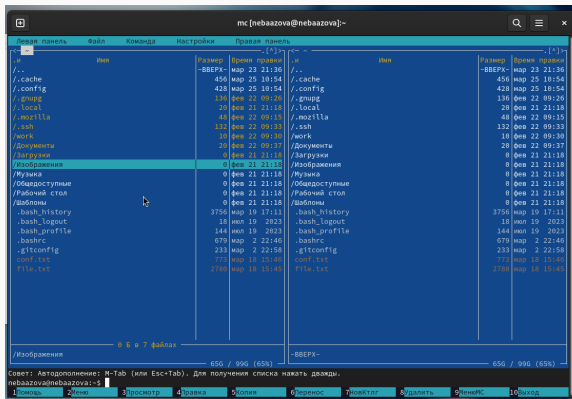


Рис. 2: Выделение

# Работа с Midnight Commander

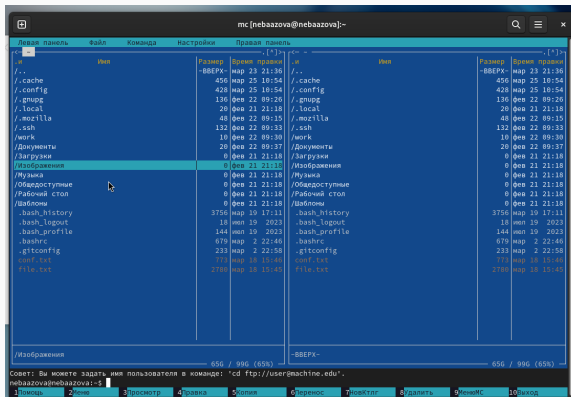


Рис. 3: Отмена



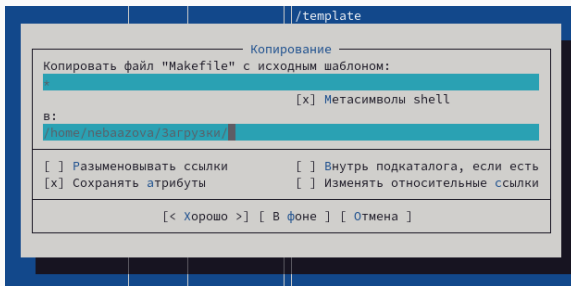


Рис. 4: Копирование

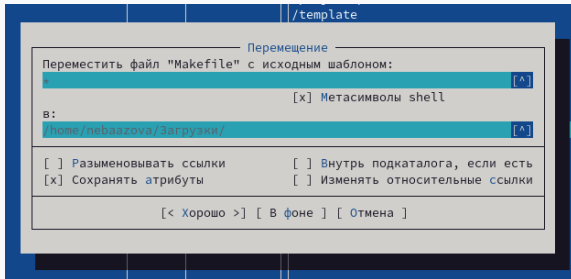


Рис. 5: Перемещение

# Работа с Midnight Commander

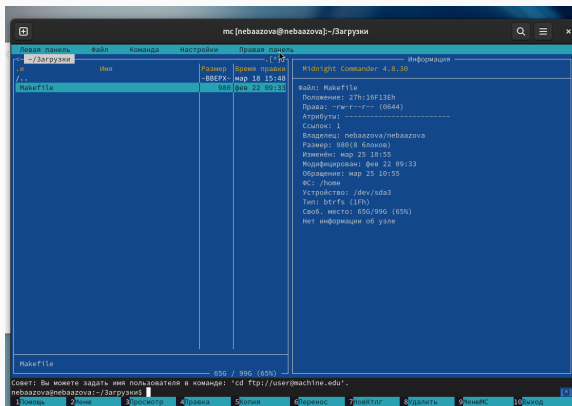


Рис. 6: Информация

# Работа с Midnight Commander

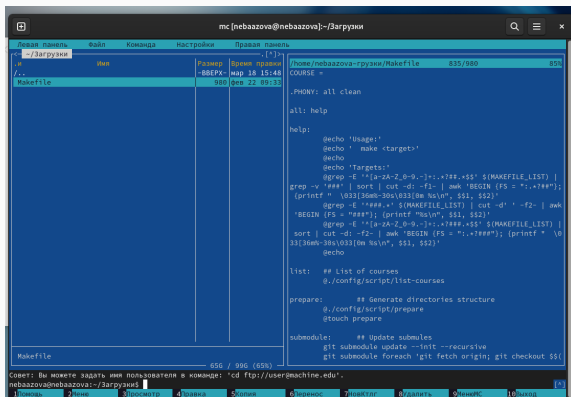


Рис. 7: Быстрый просмотр

# Работа с Midnight Commander

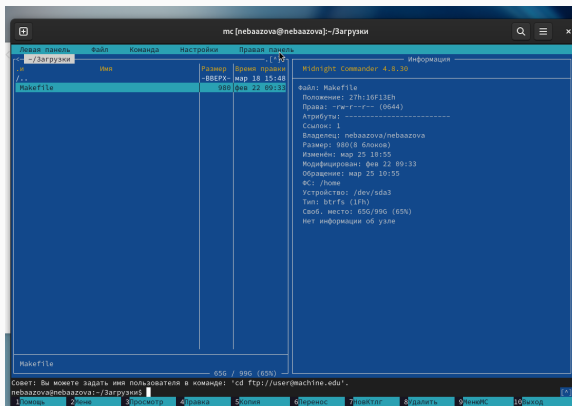


Рис. 8: Информация

# Работа с Midnight Commander

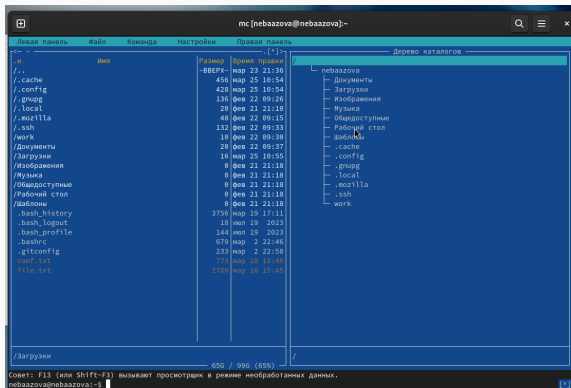
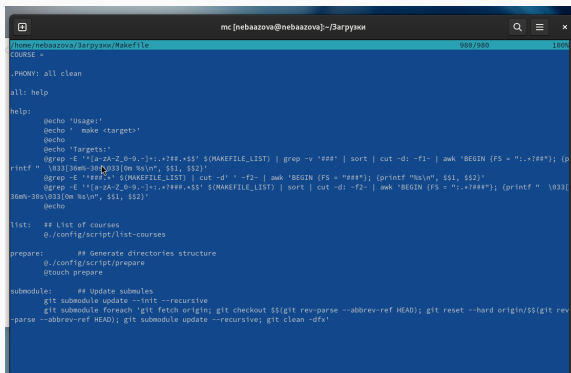


Рис. 9: Дерево каталогов

# Работа с Midnight Commander



The screenshot shows a terminal window titled 'mc [nebaazova@nebaazova:~/Зарядки]'. The window displays the contents of a file named 'Makefile' located at '/home/nebaazova/Зарядки/Makefile'. The file content is as follows:

```
COURSE =

.PHONY: all clean

all: help

help:
    @echo 'Usage:'
    @echo ' make <target>'
    @echo
    @echo 'Targets:'
    @grep -E '^[a-zA-Z_0-9-]+:.*?##.*$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1 | awk 'BEGIN {FS = ".*?##"}; {p
rintf " \033[36m-30s\033[0m %s\n", $$1, $$2}'
    @grep -E '###.*' $(MAKEFILE_LIST) | cut -d' ' -f2- | awk 'BEGIN {FS = "###"}; {printf "%s\n", $$1, $$2}'
    @grep -E '^[a-zA-Z_0-9-]+:.*?##.*$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = ".*?##"}; {printf " \033[
36m-30s\033[0m %s\n", $$1, $$2}'
    @echo

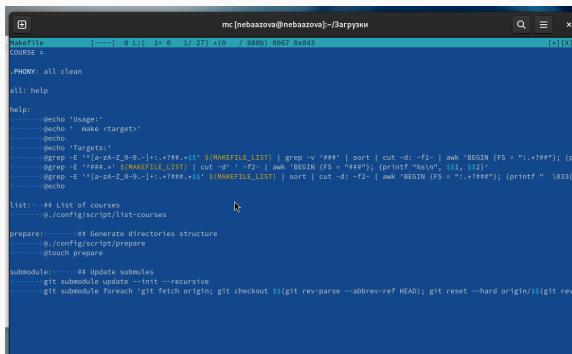
list: ## List of courses
    @./config/script/list-courses

prepare: ## Generate directories structure
    @./config/script/prepare
    @touch prepare

submodule: ## Update submodules
    git submodule update --init --recursive
    git submodule foreach 'git fetch origin; git checkout $$git rev-parse --abbrev-ref HEAD; git reset --hard origin/$(git rev
-parse --abbrev-ref HEAD); git submodule update --recursive; git clean -dfx'
```

Рис. 10: Просмотр содержимого текстового файла

# Работа с Midnight Commander



The screenshot shows the Midnight Commander (mc) interface. The title bar indicates the user is 'mc [nebaazova@nebaazova] ~/Загрузки'. The main window displays the contents of a file named 'Makefile'. The text in the file is as follows:

```
Makefile  [-----]  0 L:  1+ 0  1/ 27) +0 / 980b) 8067 0x043  [v] [x]
COURSE =

.PHONY: all clean

all: help

help:
-----@echo 'Usage:'
-----@echo '  make <target>'
-----@echo
-----@echo 'Targets:'
-----@grep -E '[a-zA-Z_0-9-]+\.[789]+$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1- | awk 'BEGIN {FS = ":[.789]*"}; {p
-----@grep -E '###.*' $(MAKEFILE_LIST) | cut -d' ' -f2- | awk 'BEGIN {FS = "###"}; {printf "%s\n", $1, $2}'
-----@grep -E '[a-zA-Z_0-9-]+\.[789]+$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = ":[.789]*"}; {printf " \033[
-----@echo

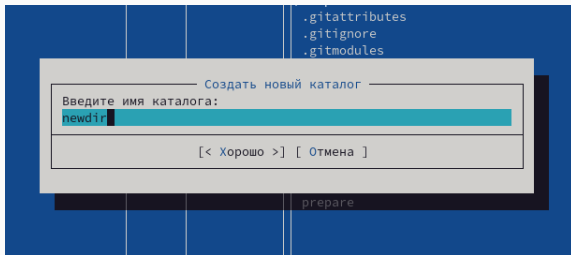
List:-----## List of courses
-----@./config/script/list-courses

prepare:-----## Generate directories structure
-----@./config/script/prepare
-----@touch prepare

submodule:-----## Update submodules
-----git submodule update --init --recursive
-----git submodule foreach 'git fetch origin; git checkout $$ (git rev-parse --abbrev-ref HEAD); git reset --hard origin/$$(git rev
```

**Рис. 11:** Отредактируем содержимое текстового файла без сохранения результатов





**Рис. 12:** Создание каталога

# Работа с Midnight Commander

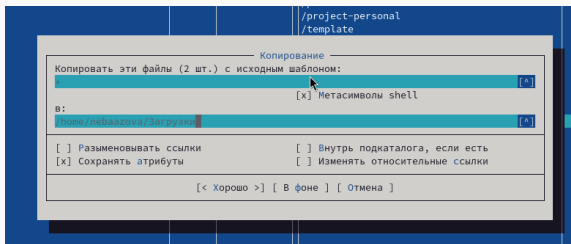


Рис. 13: Копирование в файлов в созданный каталог

# Работа с Midnight Commander

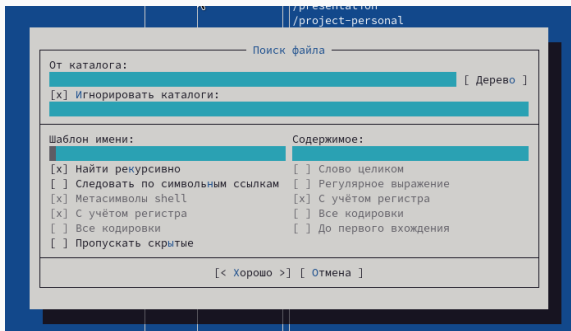


Рис. 14: Поиск файлов

# Работа с Midnight Commander

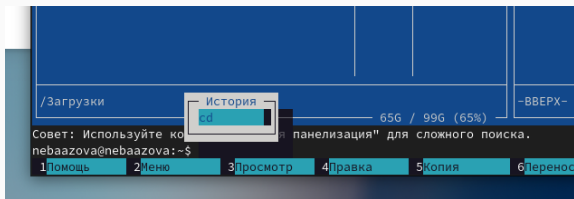
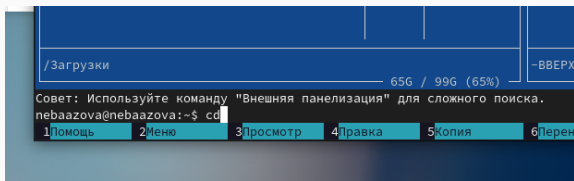


Рис. 15: История команд

# Работа с Midnight Commander



**Рис. 16:** Переход в домашний каталог

# Работа с Midnight Commander



```
mc.ext.ini      [-----]  0 L: 1+ 0  1/1136) *(0  /26909b) 0035 0x023      [.*|X]
Midnight Commander 4.8 extension file
#
# Warning: The structure of this file has been completely changed with the version 4.0!
#
# All lines starting with # or empty lines are ignored.
#
# IMPORTANT: mc scans this file only upon first use or after editing it using the
# mc "Edit extension file" command (F8-c-e). If you edit this file in any other way
# while mc is running, you will need to press F8-c-e and exit the editor for your
# changes to take effect, or exit mc and start it again.
#
# Section name can be anything with following exceptions:
#   there are two reserved section names:
#       mc.ext.ini
#       Default
#   special name pattern:
#       Include/xxxx
#   See below for more details.
#
# Section [mc.ext.ini] is mandatory. It contains file metadata.
# "Version" parameter is mandatory. It contains the file format version.
#
# Section [Default] is optional. It is applied only if no other match was found.
#
# Sections like [Include/xxxx] can be referenced as "Include=xxxx" from other sections.
# Section [Include/xxxx] can be located as before as after sections that point to it.
#
# Sections are processed from top to bottom, thus the order is important.
# If there are more than one sections with the same name in this file, the first
# section will be used.
#
# [Default] should be a catch-all action and come last.
#
```

Рис. 17: Просмотр файла расширений

# Работа с Midnight Commander

A screenshot of the Midnight Commander file menu. The window title is "menu" with a status bar at the bottom showing "1: Помощь 2: Сохранить 3: Поиск 4: Имена 5: Скопия 6: Перенести 7: Повтор 8: Удалить 9: НенавС 10: Выход". The menu content includes options like "shell\_patterns=0", "#####", "% The % character", "f The current file", "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)", "v view Runs the commands and pipes standard output to the view command", "If %view is immediately followed by 'l', 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", "f ditto", "f don't quote expanded macro", "#####", "t t Do something on the current file CMD=%(Enter command) SCMD %f", "t t Do something on the tagged files CMD=%(Enter command) for 1 in %t ; do", and a status bar at the bottom with 10 numbered buttons: 1: Помощь, 2: Сохранить, 3: Поиск, 4: Имена, 5: Скопия, 6: Перенести, 7: Повтор, 8: Удалить, 9: НенавС, 10: Выход.

```
menu [-----] 1 t: 1*16 17/378 *(732 /11821b) 0010 0x00A [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)
# v view Runs the commands and pipes standard output to the view command
# If %view is immediately followed by 'l', 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
# %f ditto
# %f don't quote expanded macro
#####

+ t t
0 Do something on the current file
CMD=%(Enter command)
SCMD %f

+ t t
0 Do something on the tagged files
CMD=%(Enter command)
for 1 in %t ; do
```

Рис. 18: Просмотр файла меню

# Работа с Midnight Commander



Рис. 19: Конфигурация



# Работа с Midnight Commander



Рис. 20: Внешний вид

# Работа с Midnight Commander



Рис. 21: Настройки панелей



Рис. 22: Подтверждение



**Рис. 23:** Оформление



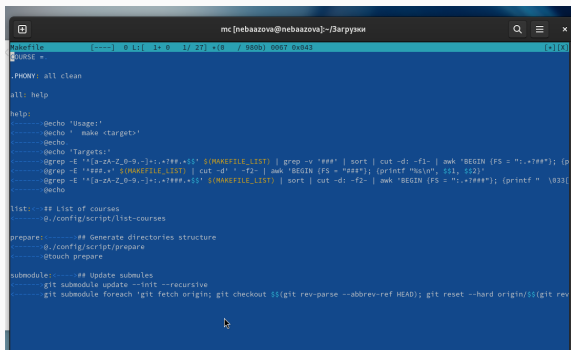
**Рис. 24:** Кодировка символов

# Работа с Midnight Commander



Рис. 25: Распознавание клавиш

# Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander (mc) interface with a file named 'Makefile' open. The window title is 'mc [nebaazova@nebaazova] ~/Загрузки'. The file content is a Makefile script with the following visible sections:

```
Makefile
#URSE *.
.PHONY: all clean
all: help

help:
-----@echo 'Usage:'
-----@echo ' make <target>'
-----@echo
-----@echo 'Targets:'
-----@grep -E '[a-zA-Z_0-9-]+:.*?##.*$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1 | awk 'BEGIN {FS = ".*?##"}; {p
-----@grep -E '##.*?$(MAKEFILE_LIST) | cut -d: -f2- | awk 'BEGIN {FS = "##"}; {printf "%s\n", $1, $2}'
-----@grep -E '[a-zA-Z_0-9-]+:.*?##.*$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = ".*?##"}; {printf " \033[
-----@echo

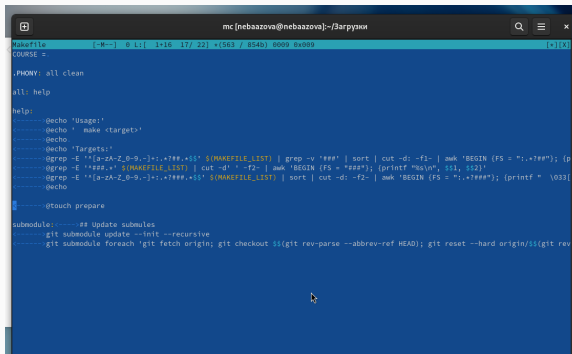
list:-----## List of courses
-----@./config/script/list-courses

prepare:-----## Generate directories structure
-----@./config/script/prepare
-----@touch prepare

submodule:-----## Update submodules
-----@git submodule update --init --recursive
-----@git submodule foreach 'git fetch origin; git checkout $$ (git rev-parse --abbrev-ref HEAD); git reset --hard origin/$$(git rev
```

Рис. 26: Файл с текстом

# Работа с редактором Midnight Commander

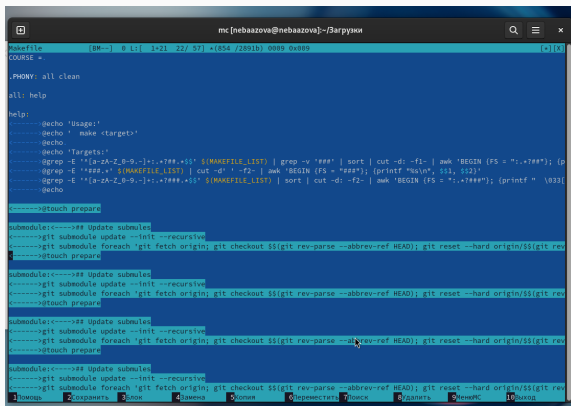
A screenshot of the Midnight Commander (mc) file manager and editor. The window title is 'mc [nebaazova@nebaazova] ~/Загрузки'. The top status bar shows 'Makefile' and file statistics. The main area displays a Makefile with the following content:

```
COURSE =  
  
.PHONY: all clean  
  
all: help  
  
help:  
-----@echo 'Usage:'  
-----@echo ' make <target>'  
-----@echo  
-----@echo 'Targets:'  
-----@grep -E '[a-zA-Z_0-9-]+:.*?##+$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1- | awk 'BEGIN {FS = ".*?##+"; } {p  
-----@grep -E '###+.' $(MAKEFILE_LIST) | cut -d' ' -f2- | awk 'BEGIN {FS = "###+"; } {printf "%s\n", $1, $2}'  
-----@grep -E '[a-zA-Z_0-9-]+:.*?##+$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = ".*?##+"; } {printf " \033[  
-----@echo  
  
@touch prepare  
  
submodule:-----## Update submules  
-----git submodule update --init --recursive  
-----git submodule foreach 'git fetch origin; git checkout $$ (git rev-parse --abbrev-ref HEAD); git reset --hard origin/$$(git rev
```

Рис. 27: Файл с текстом



# Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander (MC) interface. The title bar indicates the user is 'mc [nebaazova@nebaazova]:~/Загрузки'. The main window displays a file named 'Makefile' with the following content:

```
Makefile [BM--] 0 L[ 1*21 22/ 57] + (854 / 2891b) 0009 0x009 [+][X]
COURSE = .

.PHONY: all clean

all: help

help:
-----@echo 'Usage:'
-----@echo ' make <target>'
-----@echo
-----@echo 'Targets:'
-----@grep -E '[a-zA-Z_0-9-]+:.*?##.*?' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1- | awk 'BEGIN {FS = ".*?##"}; {p
-----@grep -E '###.*' $(MAKEFILE_LIST) | cut -d: -f2- | awk 'BEGIN {FS = "###"}; {printf "%6s\n", $1, $2}'
-----@grep -E '[a-zA-Z_0-9-]+:.*?##.*?' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = ".*?##"}; {printf " \033[
-----@echo

-----@touch prepare

submodule:-----## Update submodules
-----@git submodule update --init --recursive
-----@git submodule foreach 'git fetch origin; git checkout $(git rev-parse --abbrev-ref HEAD); git reset --hard origin/$(git rev
-----@touch prepare

submodule:-----## Update submodules
-----@git submodule update --init --recursive
-----@git submodule foreach 'git fetch origin; git checkout $(git rev-parse --abbrev-ref HEAD); git reset --hard origin/$(git rev
-----@touch prepare

submodule:-----## Update submodules
-----@git submodule update --init --recursive
-----@git submodule foreach 'git fetch origin; git checkout $(git rev-parse --abbrev-ref HEAD); git reset --hard origin/$(git rev
-----@touch prepare

submodule:-----## Update submodules
-----@git submodule update --init --recursive
-----@git submodule foreach 'git fetch origin; git checkout $(git rev-parse --abbrev-ref HEAD); git reset --hard origin/$(git rev
```

The line `-----@git submodule foreach 'git fetch origin; git checkout $(git rev-parse --abbrev-ref HEAD); git reset --hard origin/$(git rev` is highlighted in blue. At the bottom of the window, there is a status bar with icons and labels: 'помощь', 'Сохранить', 'Взгляд', 'Замена', 'Копия', 'Перенести', 'Пуск', 'Взгляд', 'Удалить', 'Удалить', 'Выход'.

Рис. 28: Копирование фрагмента

# Работа с редактором Midnight Commander

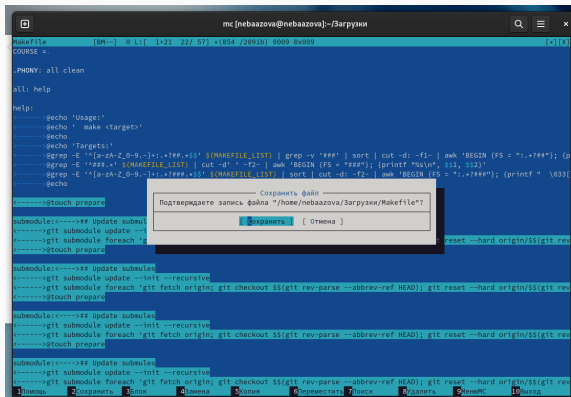
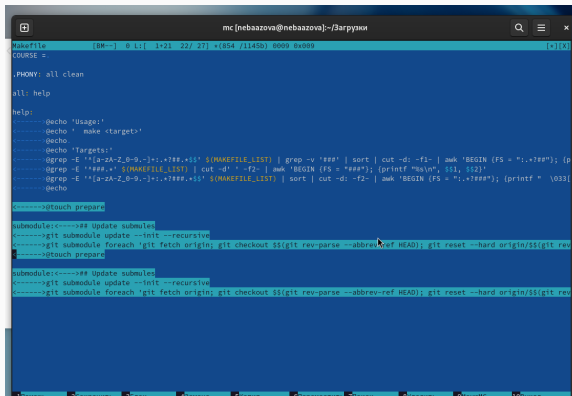


Рис. 29: Сохранение

# Работа с редактором Midnight Commander



The screenshot shows a terminal window titled "mc [nebaazova@nebaazova] ~/Загрузки". The terminal displays the contents of a Makefile and the output of the 'make' command. The Makefile includes a 'prepare' target that runs a series of git commands to update submodules. The terminal output shows the execution of these commands, with some lines highlighted in green.

```
Makefile [0M-] 0 L: 1+21 22/ 27) x(854 /1145b) 8009 8x000 [x]X
COURSE =

.PHONY: all clean

all: help

help:
-----@echo 'Usage:'
-----@echo ' make <target>'
-----@echo
-----@echo 'Targets:'
-----@grep -E '[a-zA-Z_0-9-]+:.*?$$' $(MAKEFILE_LIST) | grep -v '##' | sort | cut -d: -f2- | awk 'BEGIN {FS = ".*?$$"}; {p
-----@grep -E '##.*' $(MAKEFILE_LIST) | cut -d: -f2- | awk 'BEGIN {FS = "##"}; {printf "%s\n", $1, $2}'
-----@grep -E '[a-zA-Z_0-9-]+:.*?7##.*$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = ".*?7##"}; {printf " \033[
-----@echo

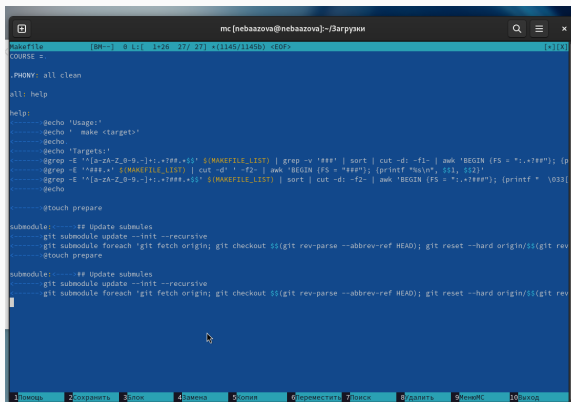
c----->@touch prepare

submodule:c----->## Update submodules
c----->git submodule update --init --recursive
c----->git submodule foreach 'git fetch origin; git checkout $$ (git rev-parse --abbrev-ref HEAD); git reset --hard origin/$(git rev
c----->@touch prepare

submodule:c----->## Update submodules
c----->git submodule update --init --recursive
c----->git submodule foreach 'git fetch origin; git checkout $$ (git rev-parse --abbrev-ref HEAD); git reset --hard origin/$(git rev
```

Рис. 30: Отмена

# Работа с редактором Midnight Commander



```
mc [nebaazova@nebaazova:~/Загрузки]
Makefile [BM--] 0 Li( 1+26 27/ 27) *(1145/1145b) <EOF> [*)(X)]
COURSE = .

.PHONY: all clean

all: help

help:
-----@echo 'Usage:'
-----@echo ' make <target>'
-----@echo
-----@echo 'Targets:'
-----@grep -E '[a-zA-Z_0-9-]+\.[?#].*$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1- | awk 'BEGIN (FS = ":[?#]"); {p
-----@grep -E '###.*' $(MAKEFILE_LIST) | cut -d' ' -f2- | awk 'BEGIN (FS = "###"); {printf "%s\n", $$1, $$2}'
-----@grep -E '[a-zA-Z_0-9-]+\.[?#].*$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN (FS = ":[?#]"); {printf " \033[
-----@echo

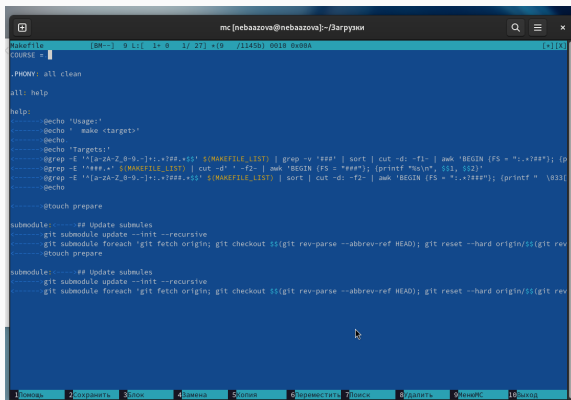
-----@touch prepare

submodule:-----## Update submodules
-----git submodule update --init --recursive
-----git submodule foreach 'git fetch origin; git checkout $$git rev-parse --abbrev-ref HEAD; git reset --hard origin/$(git rev
-----@touch prepare

submodule:-----## Update submodules
-----git submodule update --init --recursive
-----git submodule foreach 'git fetch origin; git checkout $$git rev-parse --abbrev-ref HEAD; git reset --hard origin/$(git rev
```

Рис. 31: Переход в конец файла

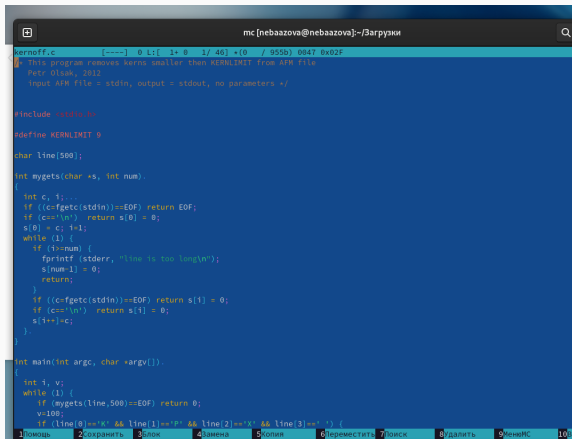
# Работа с редактором Midnight Commander



```
mc [nebaazova@nebaazova]:~/Загрузки
Makefile [BM--] 9 L[ 1+ 0 1/ 27] *9 /1145b) 0018 0x00A [*][X]
COURSE =
.PHONY: all clean
all: help
help:
=====>echo 'Usage:'
=====>echo ' make <target>'
=====>echo
=====>echo 'Targets:'
=====>@grep -E '[a-zA-Z_0-9-]+\.[x?#].+$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1- | awk 'BEGIN {FS = ":[x?#]"; {p
=====>@grep -E '###.*' $(MAKEFILE_LIST) | cut -d: -f2- | awk 'BEGIN {FS = "###"; (printf "%s\n", $$1, $$2)
=====>@grep -E '[a-zA-Z_0-9-]+\.[x?#].+$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = ":[x?#]"; (printf " \B33[
=====>echo
=====>@touch prepare
submodule:=====>## Update submodules
=====>git submodule update --init --recursive
=====>git submodule foreach 'git fetch origin; git checkout $$ (git rev-parse --abbrev-ref HEAD); git reset --hard origin/$(git rev
=====>@touch prepare
submodule:=====>## Update submodules
=====>git submodule update --init --recursive
=====>git submodule foreach 'git fetch origin; git checkout $$ (git rev-parse --abbrev-ref HEAD); git reset --hard origin/$(git rev
```

Рис. 32: Переход в начало файла

# Работа с редактором Midnight Commander



```
mc [nebaazova@nebaazova]:~/Загрузки
kernoff.c [----] 0 L: [ 1+ 0 1/ 46] *{0 / 955b} 0047 6x02F
/* This program removes kernels smaller than KERNELIMIT from AFM file.
   Petr Olzak, 2012
   Input AFM file = stdin, output = stdout, no parameters */

#include <stdio.h>

#define KERNELIMIT 9

char line[500];

int mygets(char *s, int num)
{
    int c, i;...
    if ((c=fgetc(stdin))==EOF) return EOF;
    if (c=='\n') return s[0] = 0;
    s[0] = c; i=1;
    while (1) {
        if (i>=num) {
            fprintf(stderr, "line is too long\n");
            s[num-1] = 0;
            return;
        }
        if ((c=fgetc(stdin))==EOF) return s[i] = 0;
        if (c=='\n') return s[i] = 0;
        s[i++] = c;
    }
}

int main(int argc, char *argv[])
{
    int i, v;
    while (1) {
        if (mygets(line, 500) == EOF) return 0;
        v=100;
        if (line[0]!='X' && line[1]!='P' && line[2]!='X' && line[3]!=' ') {
```

Рис. 33: Файл с программой

# Работа с редактором Midnight Commander

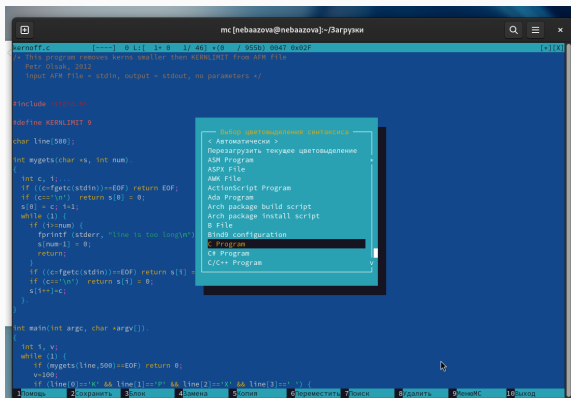


Рис. 34: Цветовыделение синтаксиса

## **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.