

# 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

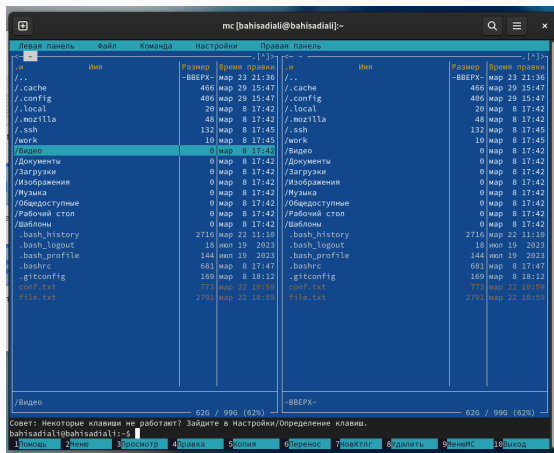


Рис. 1: Запуск mc

# Работа с Midnight Commander

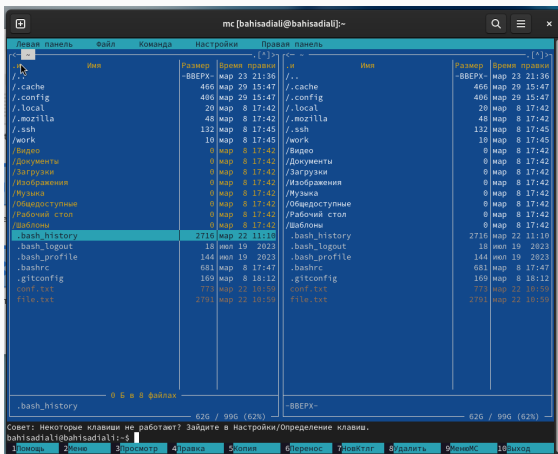


Рис. 2: Выделение

# Работа с Midnight Commander

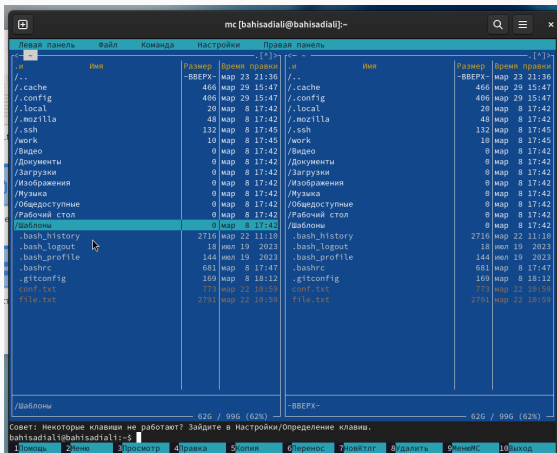


Рис. 3: Отмена



# Работа с Midnight Commander

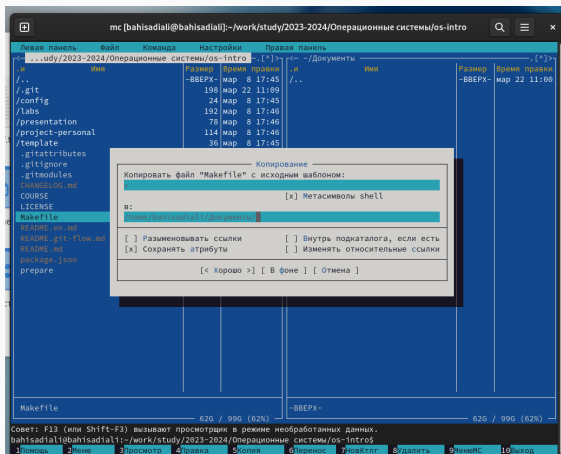


Рис. 4: Копирование

# Работа с Midnight Commander

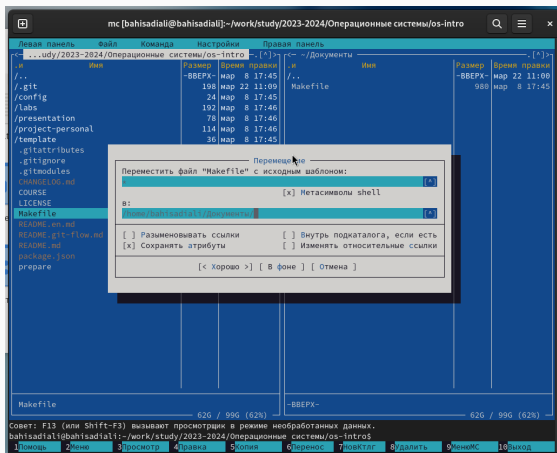


Рис. 5: Перемещение

# Работа с Midnight Commander

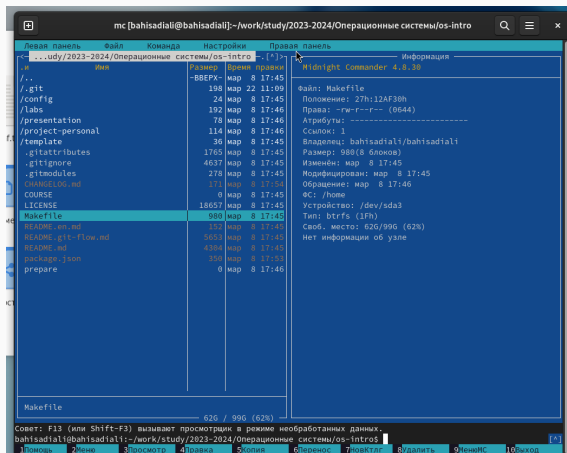


Рис. 6: Информация

# Работа с Midnight Commander

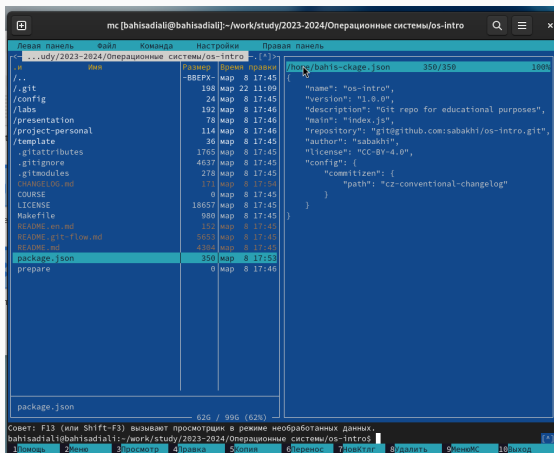


Рис. 7: Быстрый просмотр

# Работа с Midnight Commander

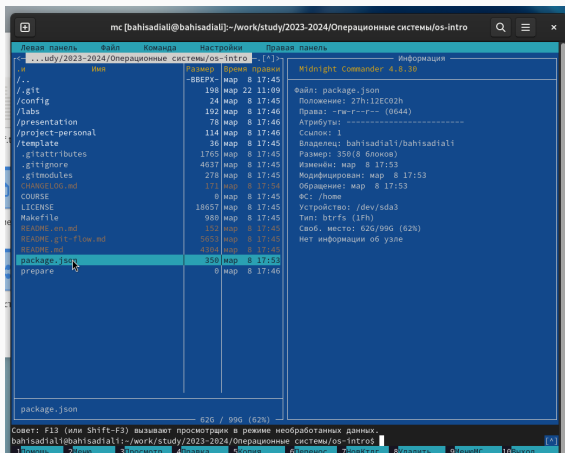


Рис. 8: Информация

# Работа с Midnight Commander

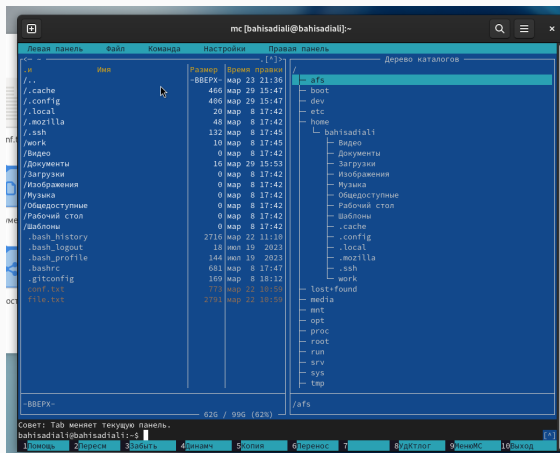
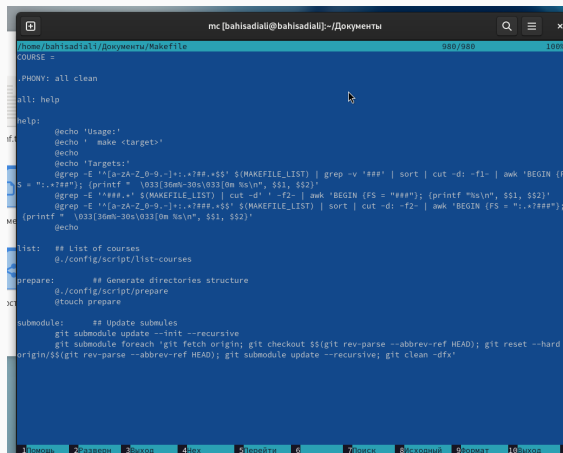


Рис. 9: Дерево каталогов

# Работа с Midnight Commander



The screenshot shows the Midnight Commander (mc) interface. The title bar indicates the user is 'bahisadiali@bahisadiali' in the directory '~/Документы'. The main window displays the contents of a file named 'Makefile' located at '/home/bahisadiali/Документы/Makefile'. The file size is 980/980 bytes and it is 100% readable. The content of the Makefile 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-]+\.[a-z#]+$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1- | awk 'BEGIN {F
S = ":[a-z#]+"; (printf " \033[36m%-30s\033[0m %s\n", $$1, $$2)'
    @grep -E '^[a-z#]+.' $(MAKEFILE_LIST) | cut -d: -f2- | awk 'BEGIN {FS = "###"; (printf "%s\n", $$1, $$2)'
    @grep -E '^[a-zA-Z_0-9-]+\.[a-z#]+$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = ":[a-z#]+";
    (printf " \033[36m%-30s\033[0m %s\n", $$1, $$2)'
    @echo

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

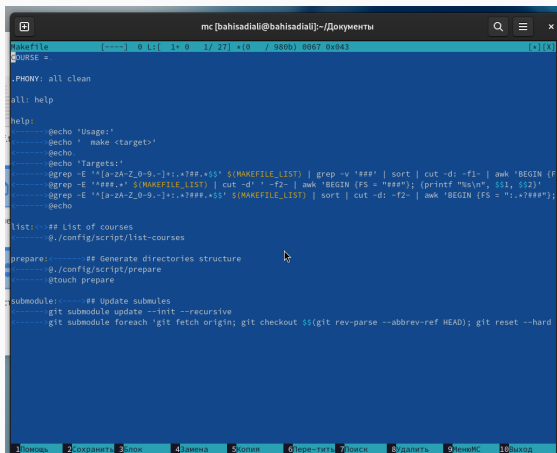
prepare: ## Generate directories structure
    @./config/script/prepare
    @touch prepare

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'
```

At the bottom of the window, there is a menu bar with the following items: 1. Помощь, 2. Разверн, 3. Выход, 4. Нех, 5. Лейтн, 6, 7. Поиск, 8. Сходный, 9. Формат, 10. Выход.

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 'bahisadiali' in the directory '~/Документы'. The main window displays a Makefile with the following content:

```
Makefile
[----] 0 Li[ 1* 0 1/ 27] * (0 / 980b) 0067 0x043 [*)(X]
COURSE = .

.PHONY: all clean

all: help

help:
----->@echo 'Usage:'
----->@echo ' make <target>'
----->@echo
----->@echo 'Targets:'
----->@grep -E '[a-zA-Z_0-9,-]+.*7###*$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1 | awk 'BEGIN {F
----->@grep -E '^###.*' $(MAKEFILE_LIST) | cut -d' ' -f2- | awk 'BEGIN {FS = "###"; (printf "%s\n", $$1, $$2)}'
----->@grep -E '[a-zA-Z_0-9,-]+.*7###*$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = ";.*7###"};
----->@echo

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

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

At the bottom of the window, there is a menu bar with the following items: 1.Помощь, 2.Сохранить, 3.Блок, 4.Замена, 5.Копия, 6.Пере-текст, 7.Поиск, 8.Удалить, 9.ИменаИС, 10.Выход.

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



# Работа с Midnight Commander

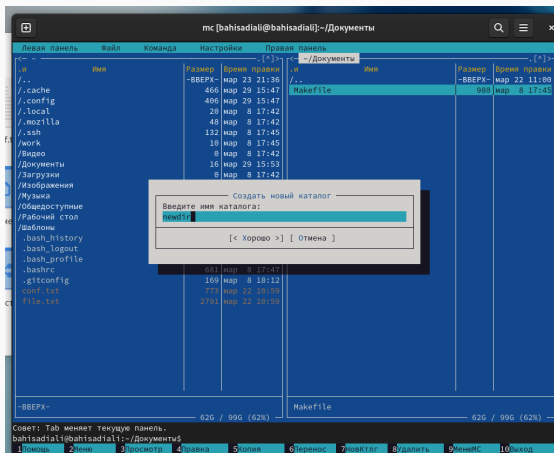


Рис. 12: Создание каталога

# Работа с Midnight Commander

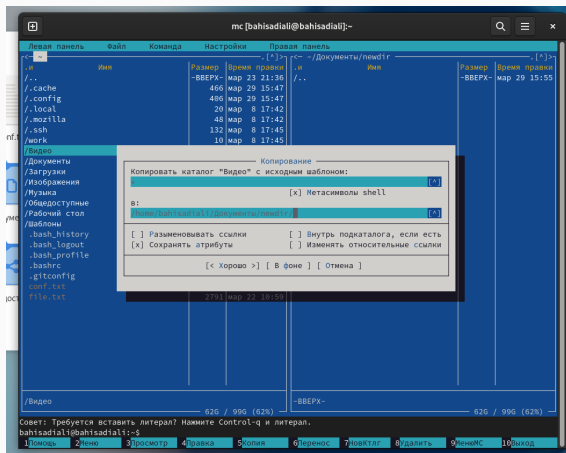


Рис. 13: Копирование в файлов в созданный каталог

# Работа с Midnight Commander

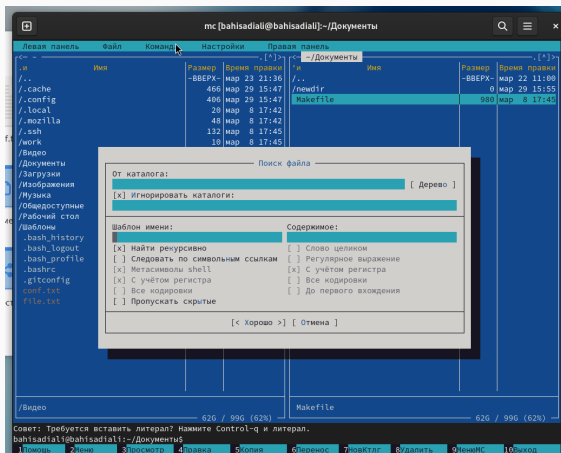


Рис. 14: Поиск файлов

# Работа с Midnight Commander

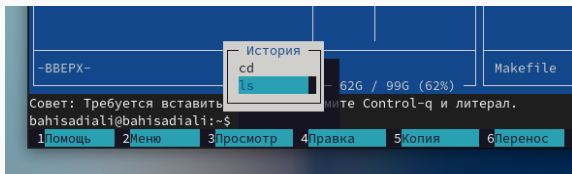


Рис. 15: История команд

# Работа с Midnight Commander

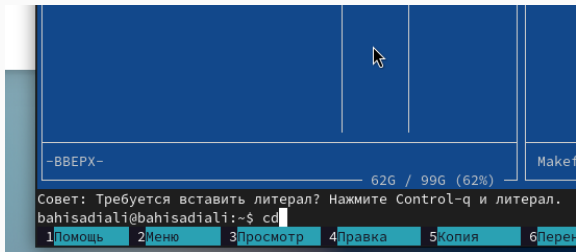


Рис. 16: Переход в домашний каталог

# 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

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 i in %t ; do".

```
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 i in %t ; do
```

Рис. 18: Просмотр файла меню

# Работа с Midnight Commander



Рис. 19: Конфигурация



# Работа с Midnight Commander



Рис. 20: Внешний вид

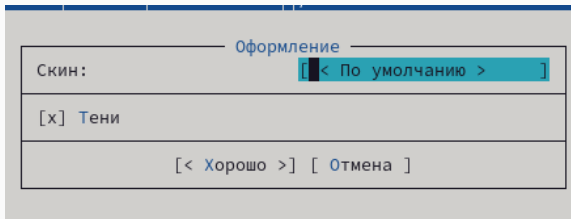
# Работа с Midnight Commander



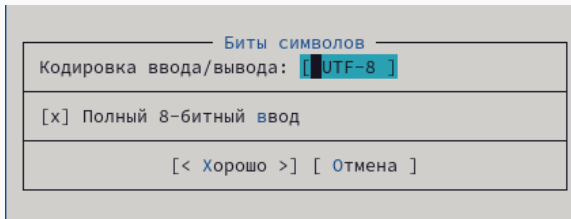
Рис. 21: Настройки панелей



Рис. 22: Подтверждение



**Рис. 23:** Оформление



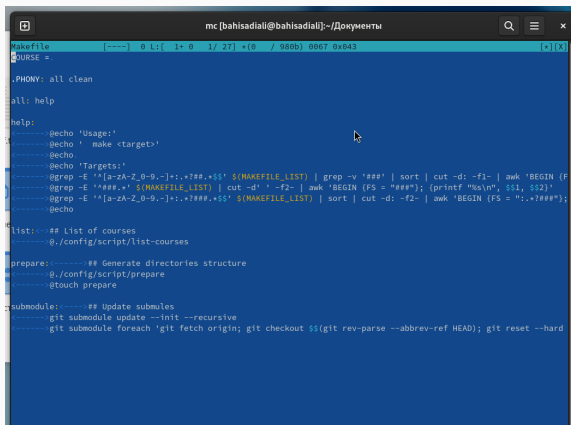
**Рис. 24:** Кодировка символов

# Работа с Midnight Commander



Рис. 25: Распознавание клавиш

# Работа с редактором Midnight Commander



The image shows a screenshot of the Midnight Commander (MC) file manager and editor. The title bar at the top indicates the user is 'bahisadiali@bahisadiali' in the directory '~/Документы'. The status bar at the top shows file statistics: 'Makefile' with permissions '[-]---', size '0', links '1+', mode '0', date '1/ 27', and other details. The main editing area contains a Makefile with the following content:

```
Makefile
COURSE =

.PHONY: all clean

all: help

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

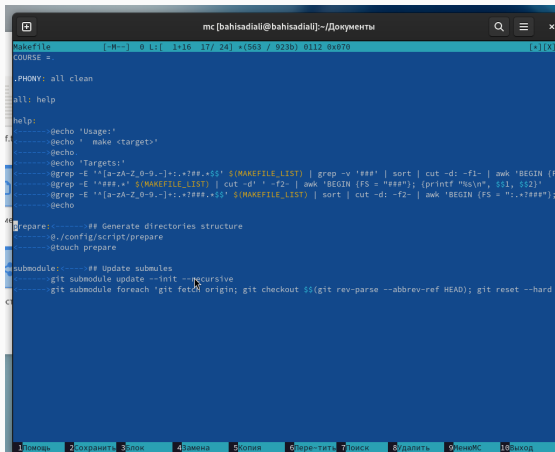
list:## List of courses
-----@./config/script/list-courses

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

Рис. 26: Файл с текстом

# Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander (mc) interface. The title bar indicates the user is bahisadiali and the current directory is ~/Документы. The main window displays a Makefile with the following content:

```
Makefile [-M--] 0 L: [ 1+16 17/ 24] *(563 / 923b) 0112 0x070 [*][X]
COURSE =

.PHONY: all clean

all: help

help:
#####@echo 'Usage:'
#####@echo ' make <target>'
#####@echo
#####@echo 'Targets:'
#####@grep -E '[a-zA-Z_0-9-]*[!@#.%$]' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1- | awk 'BEGIN {F
#####@grep -E '[!@#.%$]' $(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 = "###"; }'
#####@echo

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
```

At the bottom of the window, there is a toolbar with icons and labels for various actions: 1 Помощь (Help), 2 Сохранить (Save), 3 Блок (Block), 4 Замена (Replace), 5 Копия (Copy), 6 Пере-твить (Paste), 7 Поиск (Search), 8 Удалить (Delete), 9 Меню (Menu), and 10 Выход (Exit).

Рис. 27: Файл с текстом



## Работа с редактором Midnight Commander

```

mc [bahisadiali@bahisadiali:~/Документы
Makefile [BM--] 0 L[1 1419 20/ 45] * (648 /1518b) 0112 0x070 [x]
COURSE *.
.PHONY: all clean

all: help

help:
#####@echo 'Usage:'
#####@echo ' make <target>'
#####@echo
#####@echo 'Targets:'
#####@grep -E '[a-zA-Z_0-9-]+\.[?##.##$] $(MAKEFILE_LIST)' | grep -v '###' | sort | cut -d: -f1 | awk 'BEGIN {F
#####@grep -E '###.##$' $(MAKEFILE_LIST) | cut -d: -f2- | 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 = ":[?##]";
#####@echo

prepare:##### Generate directories structure
#####>@./config/script/prepare
#####>@touch prepare
prepare:##### Generate directories structure
#####>@./config/script/prepare
#####>@touch prepare
prepare:##### Generate directories structure
#####>@./config/script/prepare
#####>@touch prepare
prepare:##### Generate directories structure
#####>@./config/script/prepare
#####>@touch prepare
prepare:##### Generate directories structure
#####>@./config/script/prepare
#####>@touch prepare
prepare:##### Generate directories structure
#####>@./config/script/prepare
#####>@touch prepare
prepare:##### Generate directories structure
#####>@./config/script/prepare
#####>@touch prepare
#####>@touch prepare
1 Помощь 2 Сохранить 3 Оток 4 Замена 5 Копия 6 Пере-титл 7 Поиск 8 Удалить 9 Меню MS 10 Мышь

```

**Рис. 28: Копирование фрагмента**

# Работа с редактором Midnight Commander

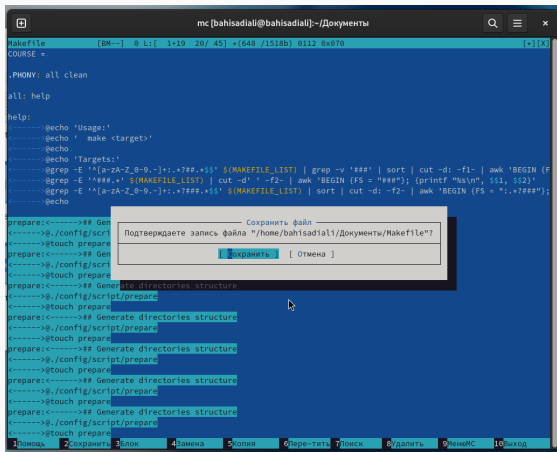
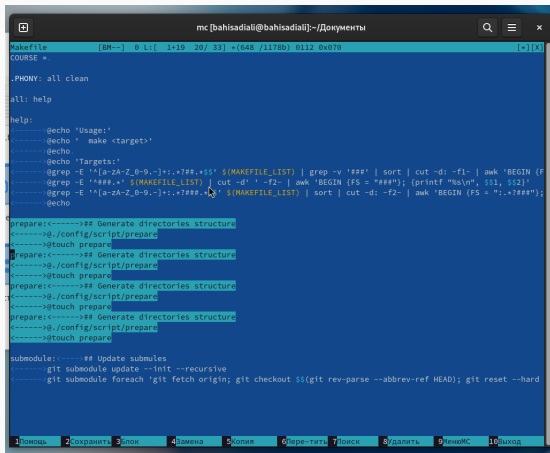


Рис. 29: Сохранение

# Работа с редактором Midnight Commander



```
mc [bahisadiali@bahisadiali]~/Документы
Makefile [BH--] 0 Li[ 1+19 20/ 33] +(648 /1178b) 0112 0x070 [~][X]
COURSE =

.PHONY: all clean

all: help

help:
-----@echo 'Usage:'
-----@echo ' make <target>'
-----@echo
-----@echo 'Targets:'
-----@grep -E '^[a-zA-Z_0-9-]+:.*?##.*$$' $(MAKEFILE_LIST) | grep -v '##' | sort | cut -d: -f1- | awk 'BEGIN {F
-----@grep -E '^[a-zA-Z_0-9-]+:.*?##.*$$' $(MAKEFILE_LIST) | cut -d: -f2- | awk 'BEGIN {FS = "##"; (printf "%s\n", $S1, $S2)'}
-----@grep -E '^[a-zA-Z_0-9-]+:.*?##.*$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = "##"; (printf "%s\n", $S1, $S2)'}
-----@echo

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

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

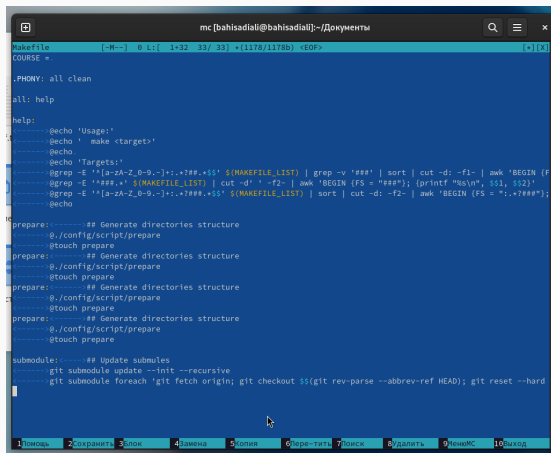
prepare:-----## Generate directories structure
----->@./config/script/prepare
----->@touch prepare

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
```

1Помощь 2Сохранить 3Блок 4Замена 5Копия 6Вставить 7Поиск 8Удалить 9Переименовать 10Выход

Рис. 30: Отмена

# Работа с редактором Midnight Commander

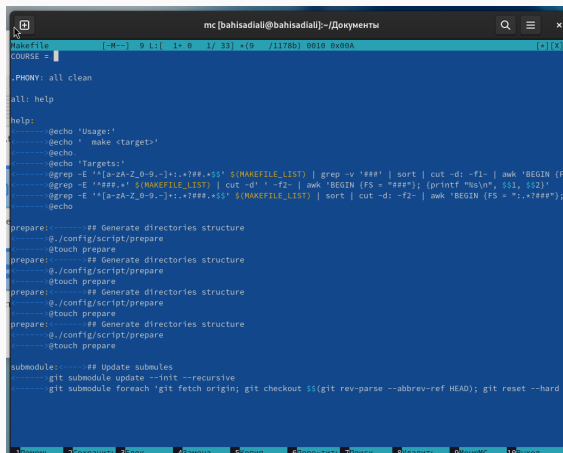


```
mc [bahisadiali@bahisadiali]:~/Документы
Makefile [-N--] 0 L: [ 1+32 33/ 33] +(1178/1178b) <EOF> [*)(X]
COURSE =
.PHONY: all clean
all: help
help:
-----@echo 'Usage:'
-----@echo ' make <target>'
-----@echo
-----@echo 'Targets:'
-----@grep -E '[a-zA-Z_0-9-]+\.[7##]+$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1- | awk 'BEGIN {F
-----@grep -E '###.+' $(MAKEFILE_LIST) | cut -d: -f2- | awk 'BEGIN {FS = "###"; (printf "%s\n", $$1, $$2)}'
-----@grep -E '[a-zA-Z_0-9-]+\.[7##]+$$' $(MAKEFILE_LIST) | sort | cut -d: -f2- | awk 'BEGIN {FS = "###";
-----@echo
prepare:-----## Generate directories structure
-----@./config/script/prepare
-----@touch prepare
prepare:-----## Generate directories structure
-----@./config/script/prepare
-----@touch prepare
prepare:-----## Generate directories structure
-----@./config/script/prepare
-----@touch prepare
prepare:-----## Generate directories structure
-----@./config/script/prepare
-----@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
```

1 Помощь 2 Сохранить 3 Блок 4 Замена 5 Копия 6 Пере-титы 7 Поиск 8 Удалить 9 Меню 10 Выход

Рис. 31: Переход в конец файла

# Работа с редактором Midnight Commander



```
mc [bahisadiali@bahisadiali]~/Документы
Makefile  [-M--]  9 L:  1+ 0  1/ 33  +9  /1178b  0010 0x00A  [+][X]
COURSE =

.PHONY: all clean

all: help

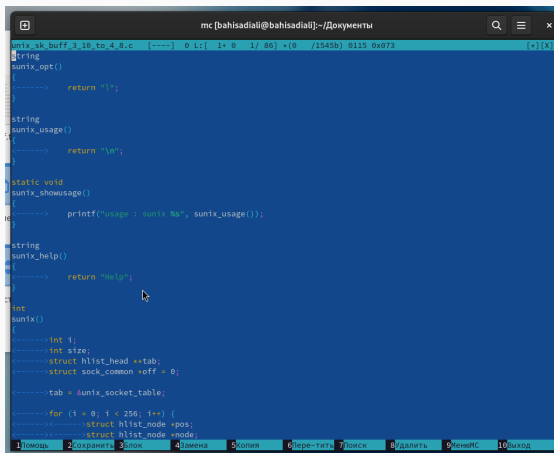
help:
-----@echo 'Usage:'
-----@echo '  make <target>'
-----@echo
-----@echo 'Targets:'
-----@grep -E '[a-zA-Z_0-9-]+\.[?#%.+$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1 | awk 'BEGIN {F
-----@grep -E '[?#%.+]' $(MAKEFILE_LIST) | cut -d: -f2- | awk 'BEGIN {FS = "###"; (printf "%s\n", $$1,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

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

Рис. 32: Переход в начало файла

# Работа с редактором Midnight Commander



```
mc [bahisadiati@bahisadiati] ~/Документы
unix_sk_buff.3.10.to.4.8.c [----] 0 L: 1* 0 1/ 86) *(0 /1545b) 0115 0x073 [*)|X]
string
sunix_opt()
{
    [----> return "";
}

string
sunix_usage()
{
    [----> return "\n";
}

static void
sunix_showusage()
{
    [----> printf("usage : sunix %s", sunix_usage());
}

string
sunix_help()
{
    [----> return "help";
}

int
sunix()
{
    [----> int i;
    [----> int size;
    [----> struct hlist_head *tab;
    [----> struct sock_common *off = 0;

    [----> tab = &unix_socket_table;

    [----> for (i = 0; i < 256; i++) {
    [----> struct hlist_node *pos;
    [----> struct hlist_node *node;
1Помощь 2Сохранить 3Блок 4Замена 5Копия 6Пере-тить 7Поиск 8Удалить 9МенюМС 10Выход
```

Рис. 33: Файл с программой

# Работа с редактором Midnight Commander

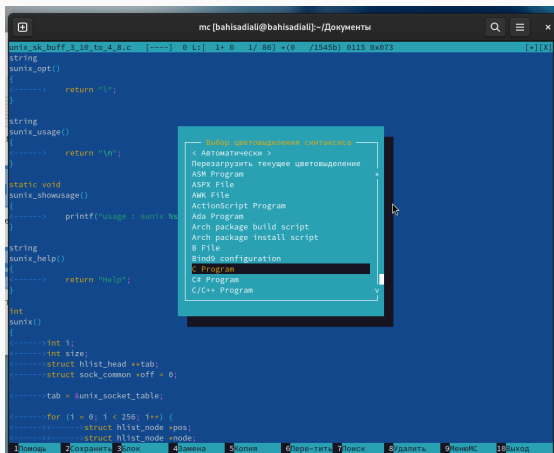


Рис. 34: Цветовыделение синтаксиса

## **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.