

Командная оболочка Midnight Commander

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Цели и задачи работы

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

Работа с Midnight Commander

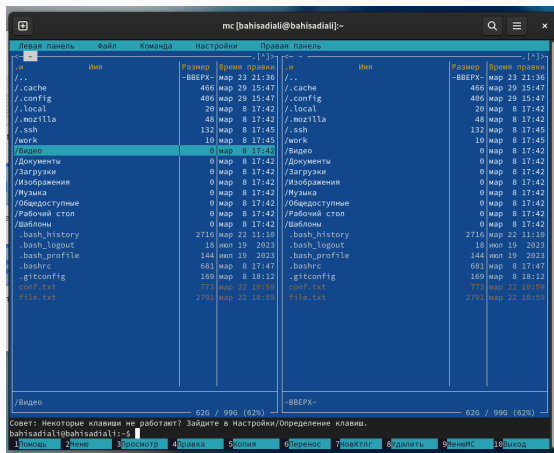


Рис. 1: Запуск mc

Работа с Midnight Commander

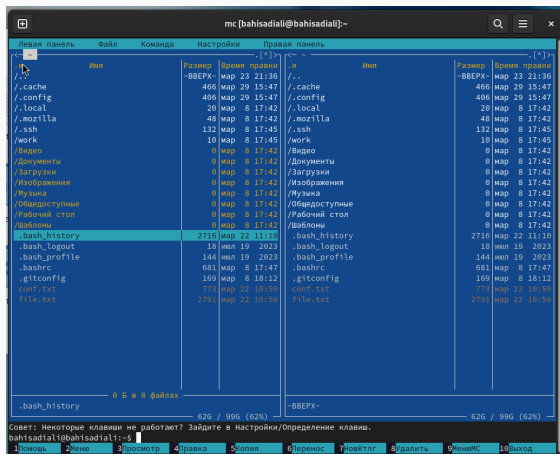


Рис. 2: Выделение

Работа с Midnight Commander

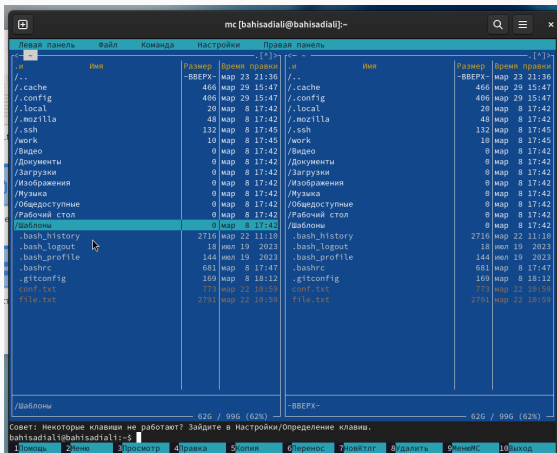


Рис. 3: Отмена

Работа с Midnight Commander

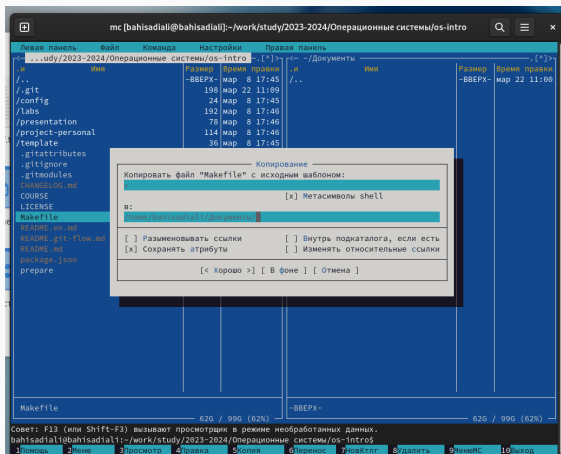


Рис. 4: Копирование

Работа с Midnight Commander

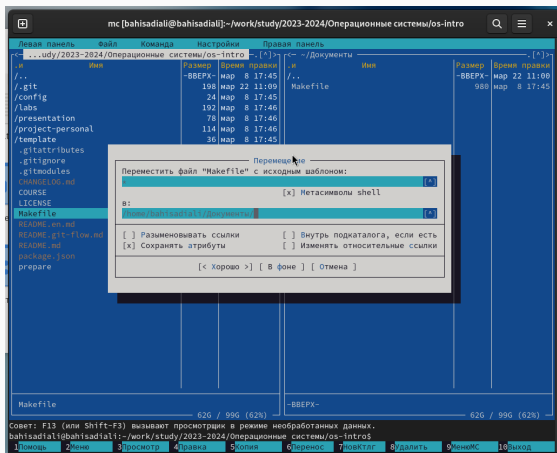


Рис. 5: Перемещение

Работа с Midnight Commander

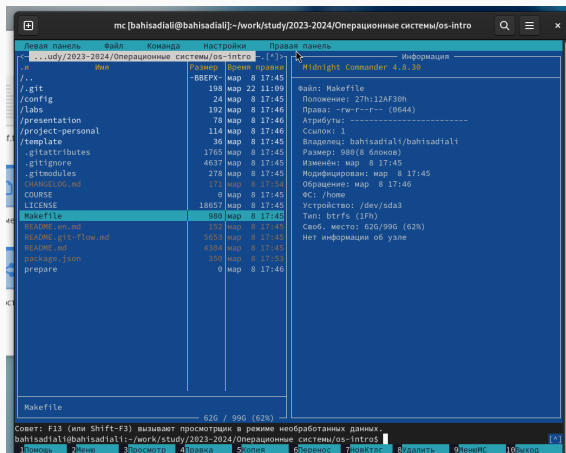


Рис. 6: Информация

Работа с Midnight Commander

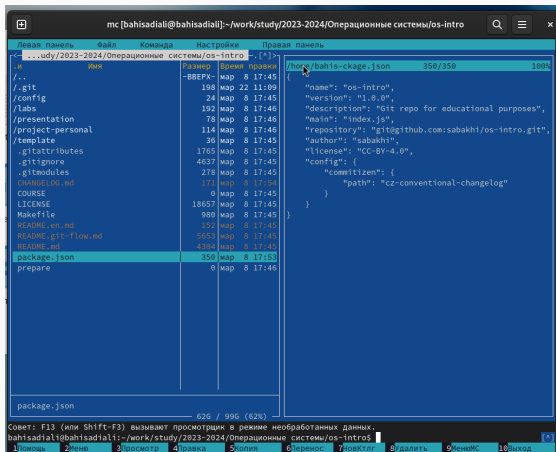


Рис. 7: Быстрый просмотр

Работа с Midnight Commander

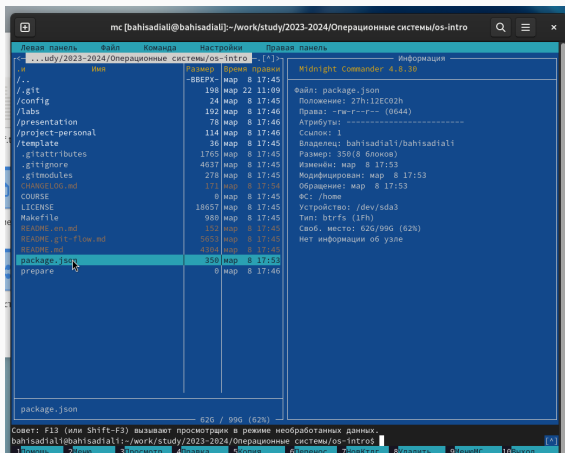


Рис. 8: Информация

Работа с Midnight Commander

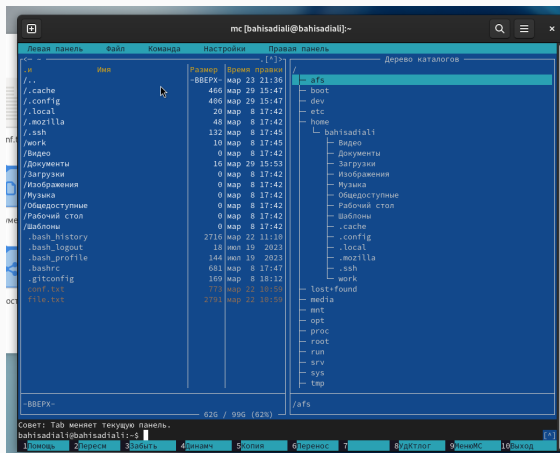
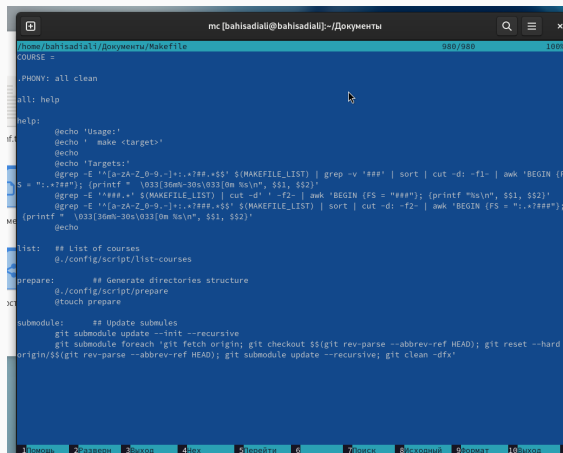


Рис. 9: Дерево каталогов

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-]+:.*?##.*$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1- | awk 'BEGIN {FS = ".*?##"}; (printf "  \033[36m%-30s\033[0m %s\n", $$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

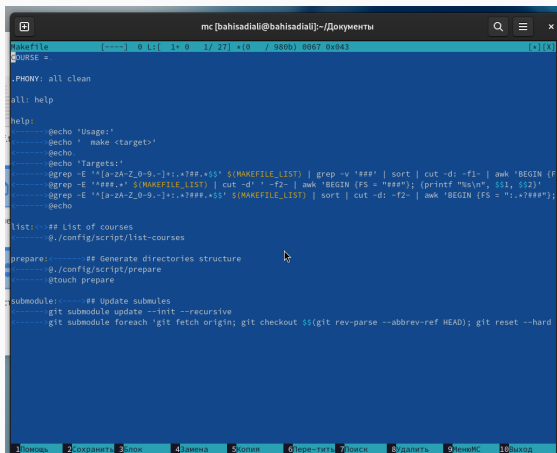
prepare: ## Generate directories structure
    @./config/script/prepare
    @touch prepare

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'
```

At the bottom of the window, there is a navigation bar with buttons: 1.Помощь, 2.Разверн, 3.Выход, 4.Нав, 5.Лейтн, 6, 7.Поиск, 8.Скопный, 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

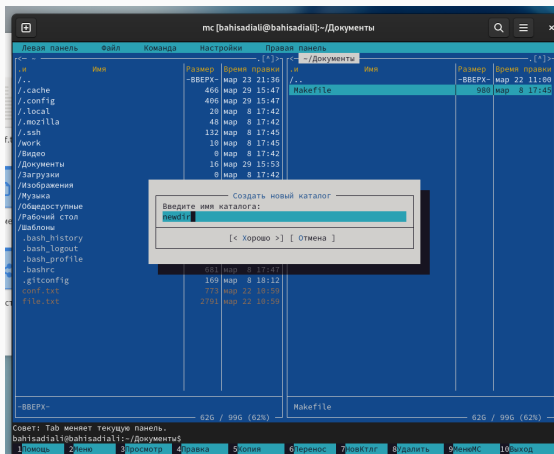


Рис. 12: Создание каталога

Работа с Midnight Commander

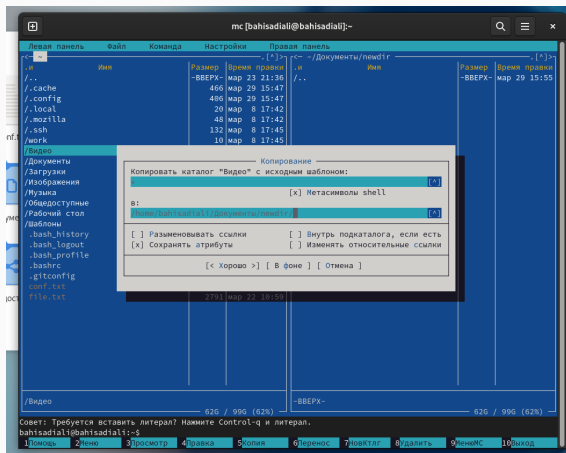


Рис. 13: Копирование в файлов в созданный каталог

Работа с Midnight Commander

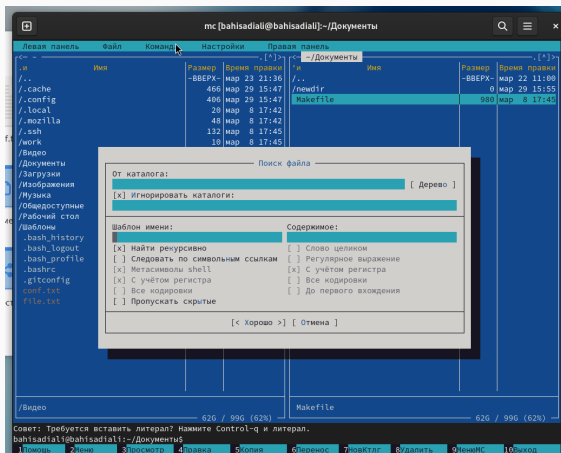


Рис. 14: Поиск файлов

Работа с Midnight Commander

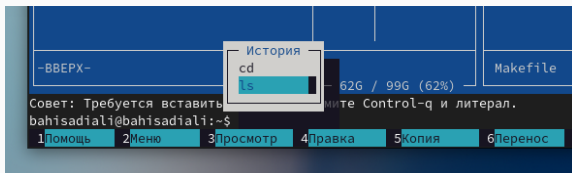


Рис. 15: История команд

Работа с Midnight Commander

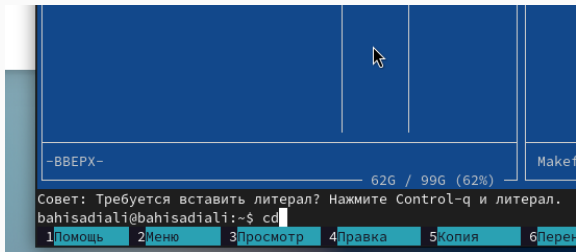


Рис. 16: Переход в домашний каталог

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

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", "#####", "F 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 vview 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", "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
# % 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 vview 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
# %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
```

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



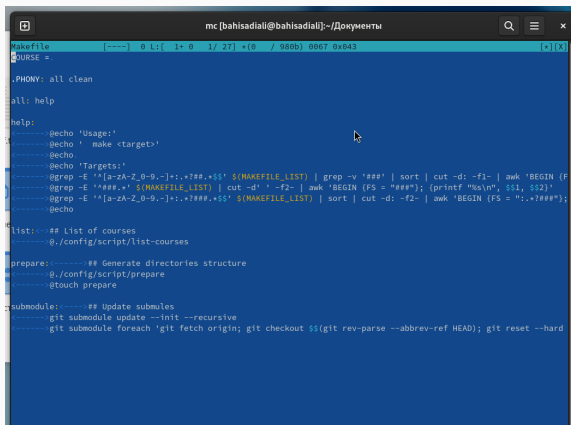
Рис. 24: Кодировка символов

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' and the current directory is '~/Документы'. The status bar at the top shows file statistics: 'Makefile' with permissions '[-rwxr-xr-x]', size '0', and other details. The main window displays the content of the 'Makefile' file, which includes a 'course' variable, a 'phony' target, a 'help' target, and several complex targets for generating directories, updating submodules, and listing courses. The file content is as follows:

```
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

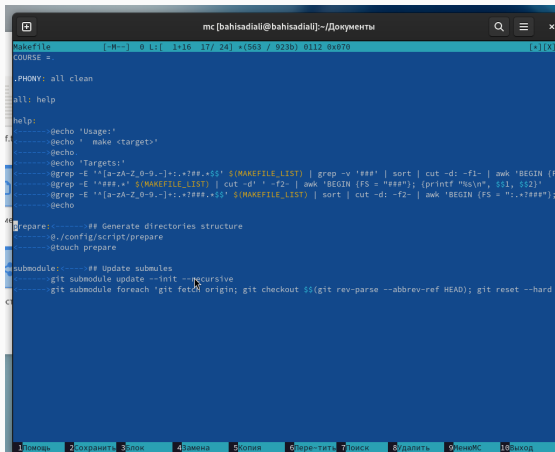
list:## List of courses
-----@./config/script/list-courses

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 [bahisadiati@bahisadiati] ~/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
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

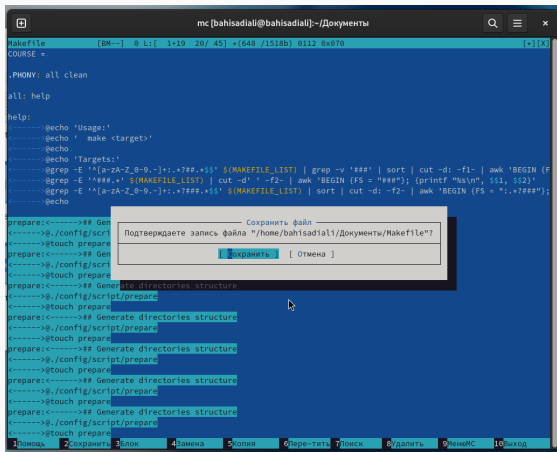
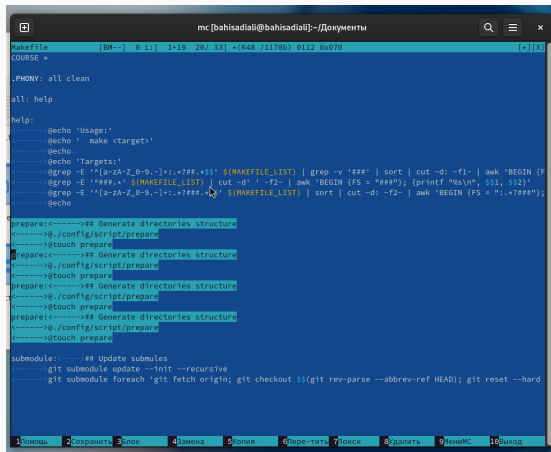


Рис. 29: Сохранение

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-]+:.*?##.*$$' $(MAKEFILE_LIST) | grep -v '##' | sort | cut -d: -f1- | awk 'BEGIN {F
+-----@grep -E '^[###.*' $(MAKEFILE_LIST) | cut -d' ' -f2- | awk 'BEGIN {FS = "###"; (printf "%s\n", $$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

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                                [+][X]
  COURSE *.                               [+][X]

.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", $1, $2};
-----@grep -E '[a-zA-Z_0-9-]+:.*?##.*$$' $(MAKEFILE_LIST) | sort | cut -d: -f2 | awk 'BEGIN {FS=" "; print "%s\n", $1, $2};
-----@echo

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

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

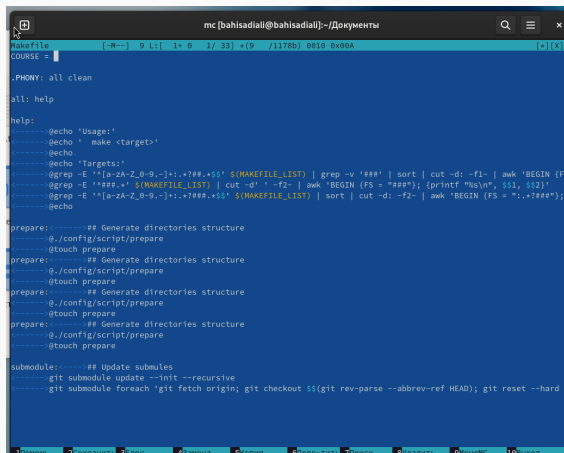
prepare:-----# Generate directories structure
-----@./config/script/prepare
-----@touch prepare

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
  
```

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

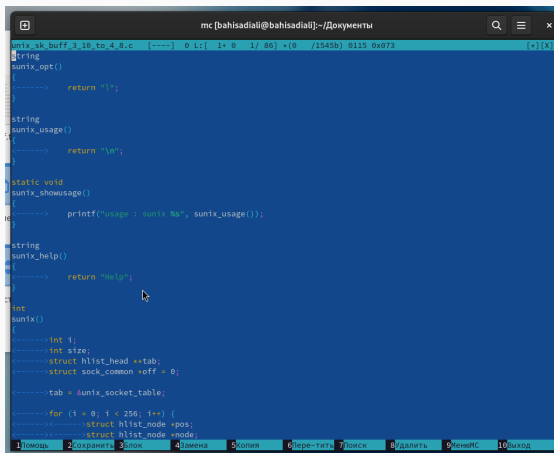
help:
-----@echo 'Usage:'
-----@echo '  make <target>'
-----@echo
-----@echo 'Targets:'
-----@grep -E '[a-zA-Z_0-9-]+\.[?#%.+$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1 | awk 'BEGIN {F
-----@grep -E '[?#%.+]' $(MAKEFILE_LIST) | cut -d: -f2- | awk 'BEGIN {FS = "###"; (printf "%s\n", $$1,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

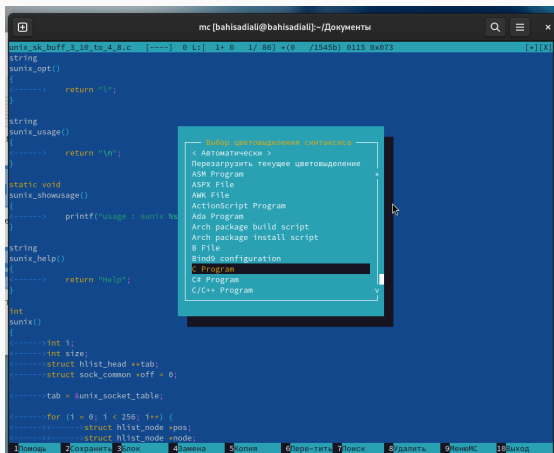


Рис. 34: Цветовыделение синтаксиса

Выводы по проделанной работе

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