

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

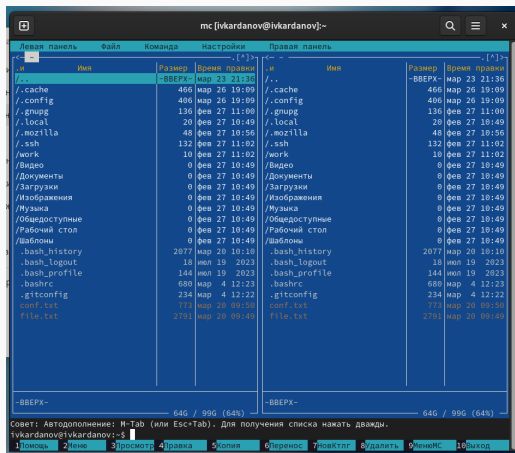


Рис. 1: Запуск mc

Работа с Midnight Commander

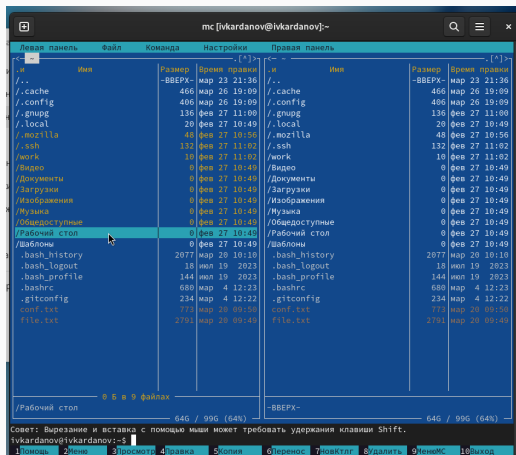


Рис. 2: Выделение

Работа с Midnight Commander

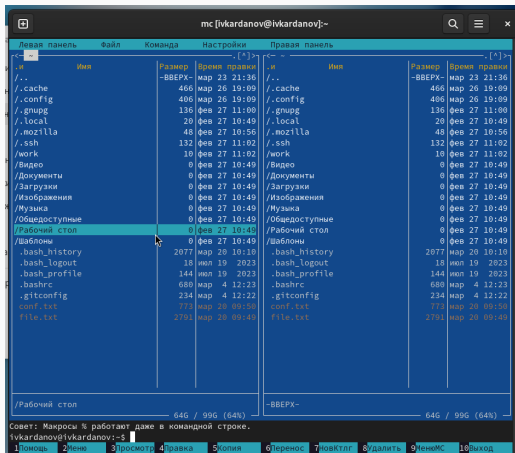


Рис. 3: Отмена

Работа с Midnight Commander

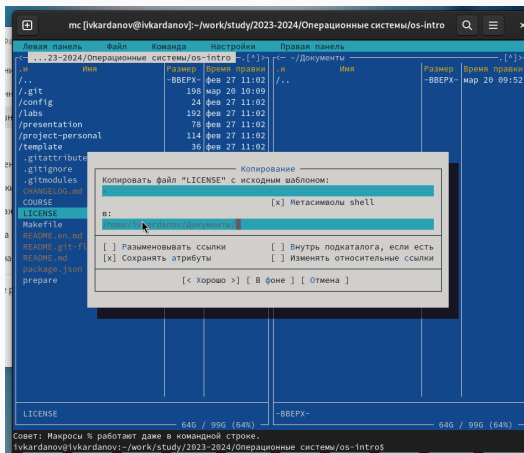


Рис. 4: Копирование

Работа с Midnight Commander

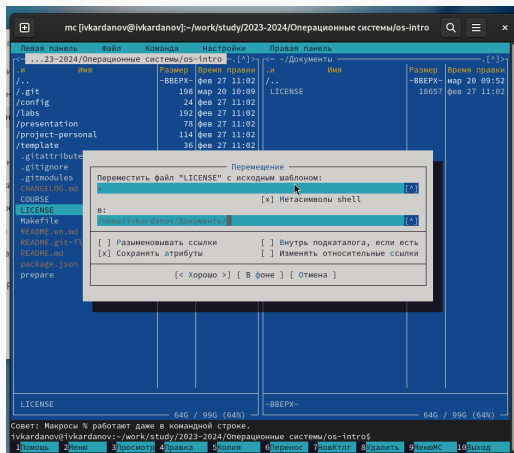


Рис. 5: Перемещение

Работа с Midnight Commander

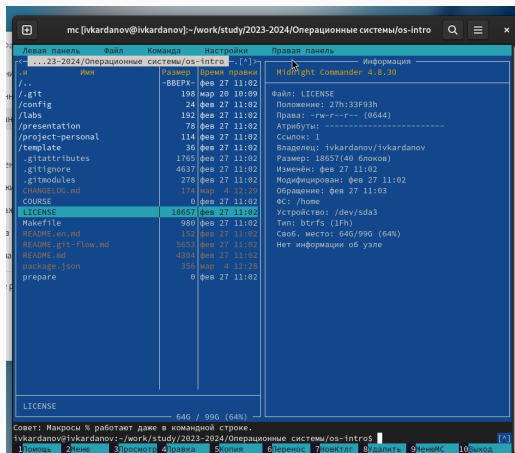


Рис. 6: Информация

Работа с Midnight Commander

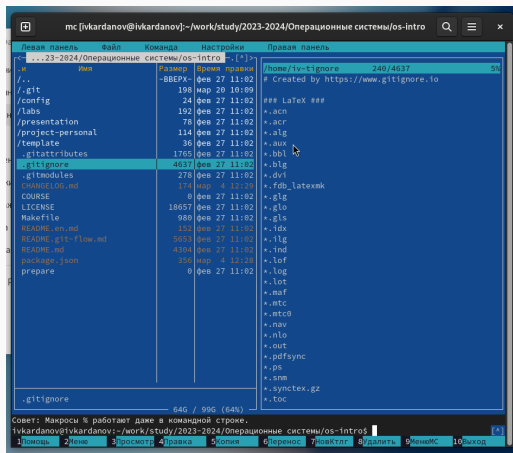


Рис. 7: Быстрый просмотр

Работа с Midnight Commander

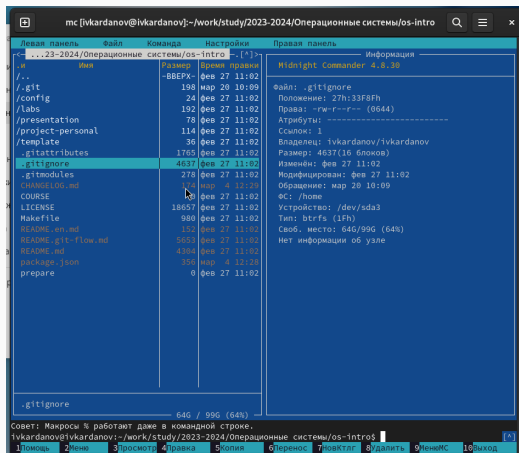


Рис. 8: Информация

Работа с Midnight Commander

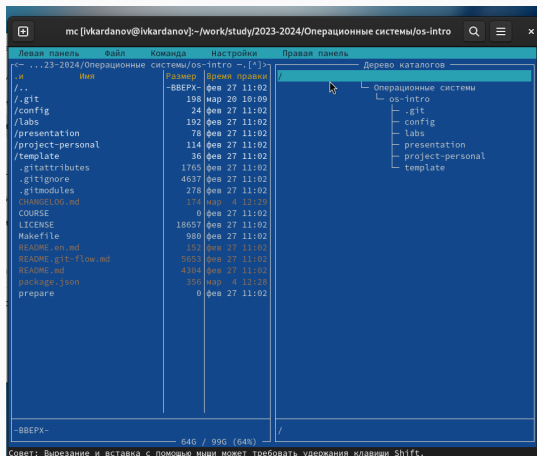


Рис. 9: Дерево каталогов

Работа с Midnight Commander

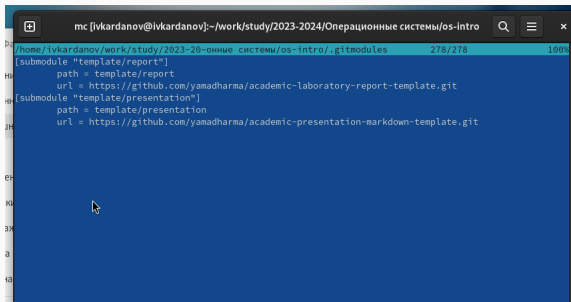
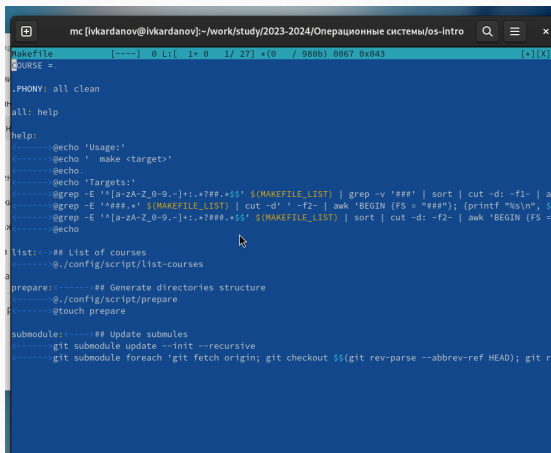


Рис. 10: Просмотр содержимого текстового файла

Работа с Midnight Commander



The image shows a terminal window of the Midnight Commander file manager. The title bar indicates the user is 'lvkardanov' at 'lvkardanov' in the directory '~/work/study/2023-2024/Операционные системы/os-Intro'. The main window displays the contents of a 'Makefile' file. The file includes a 'COURSE =' line, a '.PHONY: all clean' declaration, and a target 'all: help'. The 'help' target contains several echo commands and a complex shell command using 'grep', 'cut', 'awk', and 'sort' to process the 'MAKEFILE_LIST' variable. Below the 'help' target, there are three more targets: 'list' (which runs '@./config/script/list-courses'), 'prepare' (which generates directory structure and touches 'prepare'), and 'submodule' (which updates submodules using 'git submodule update --init --recursive' and 'git submodule foreach').

```
mc [lvkardanov@lvkardanov]:~/work/study/2023-2024/Операционные системы/os-Intro  🔍  ☰  ✕  
Makefile  [-----]  0 L: [ 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-]+.*?##.*$$' $(MAKEFILE_LIST) | grep -v '###' | sort | cut -d: -f1- | a  
-----@grep -E '###.*' $(MAKEFILE_LIST) | cut -d' ' -f2- | awk 'BEGIN {FS = "###"}; {printf "%s\n", $  
-----@grep -E '^[a-zA-Z_0-9-]+.*?###.*$$' $(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 submodules  
-----git submodule update --init --recursive  
-----git submodule foreach 'git fetch origin; git checkout $$ (git rev-parse --abbrev-ref HEAD); git r
```

Рис. 11: Отредактируем содержимое текстового файла без сохранения результатов

Работа с Midnight Commander

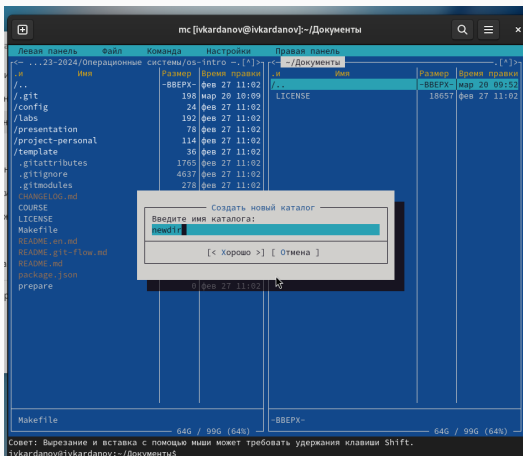


Рис. 12: Создание каталога

Работа с Midnight Commander

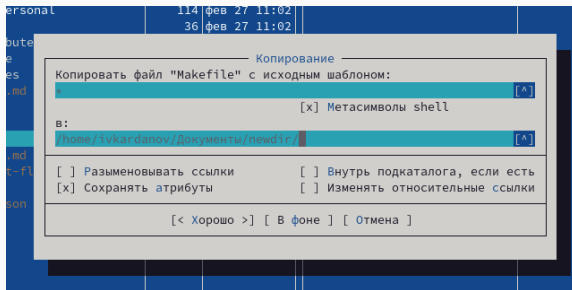


Рис. 13: Копирование в файлов в созданный каталог

Работа с Midnight Commander

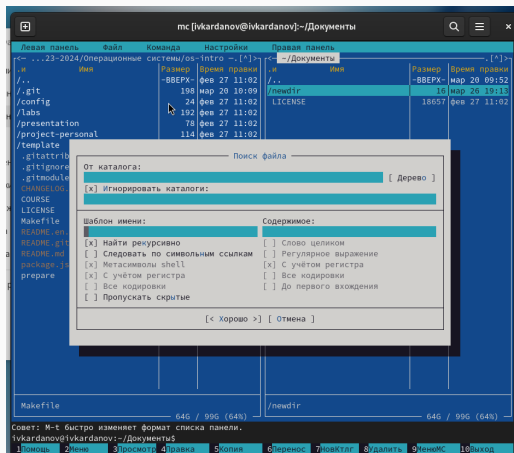


Рис. 14: Поиск файлов

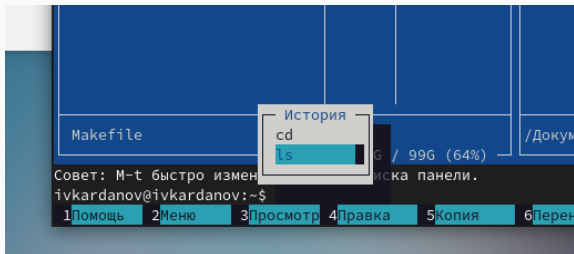


Рис. 15: История команд

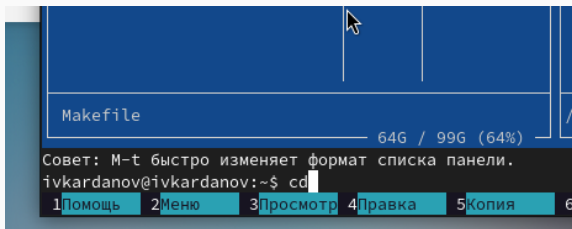


Рис. 16: Переход в домашний каталог

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: Скопировать 6: Перенести 7: Повторить 8: Удалить 9: Найти 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

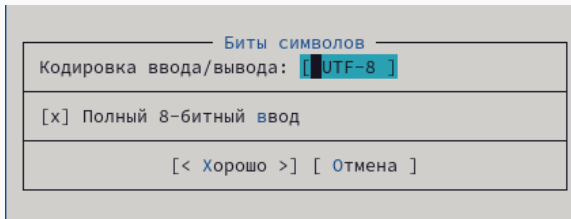


Рис. 24: Кодировка символов

Работа с Midnight Commander



Рис. 25: Распознавание клавиш

Работа с редактором Midnight Commander

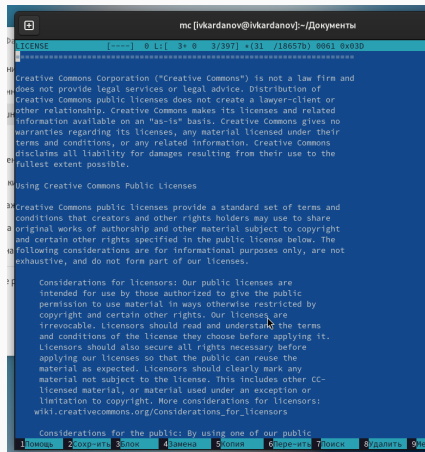


Рис. 26: Файл с текстом

Работа с редактором Midnight Commander

```
mc [ivkardanov@ivkardanov]:~/Документы
LICENSE  [-M--]  0 L:[ 3+12 15/362] +(676 /16636b) 0032 0x020
=====
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and in which the Licensed Material is translated, altered,
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Рис. 27: Файл с текстом

Работа с редактором Midnight Commander

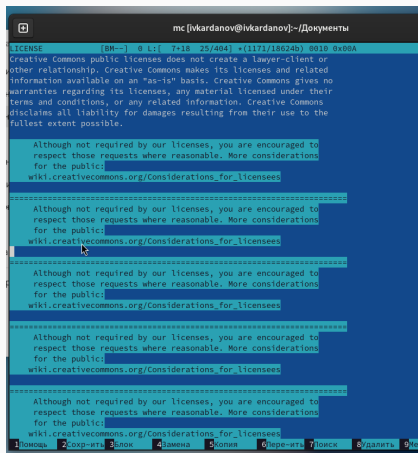


Рис. 28: Копирование фрагмента

Работа с редактором Midnight Commander

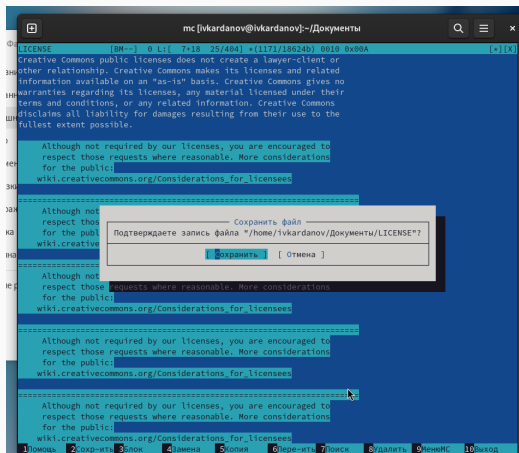


Рис. 29: Сохранение

Работа с редактором Midnight Commander

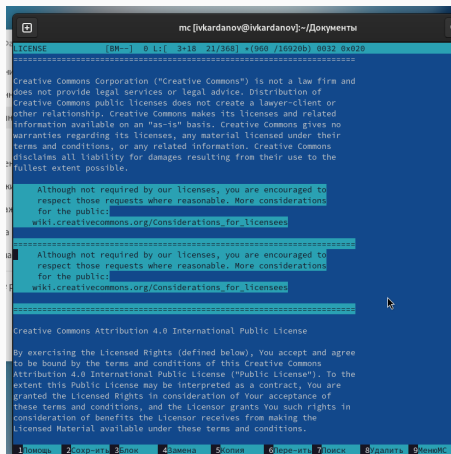


Рис. 30: Отмена

Работа с редактором Midnight Commander

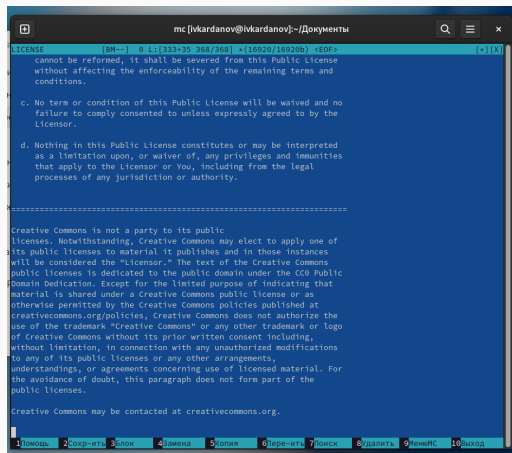


Рис. 31: Переход в конец файла

Работа с редактором Midnight Commander

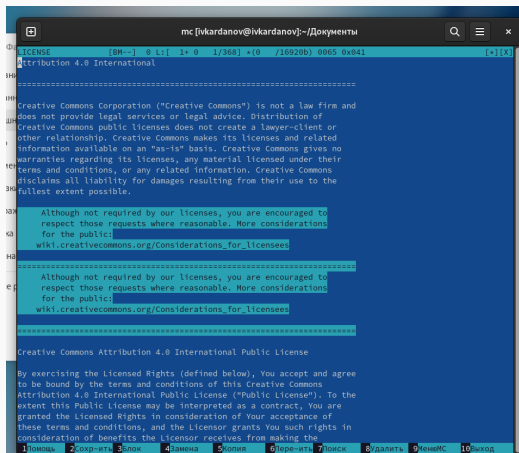
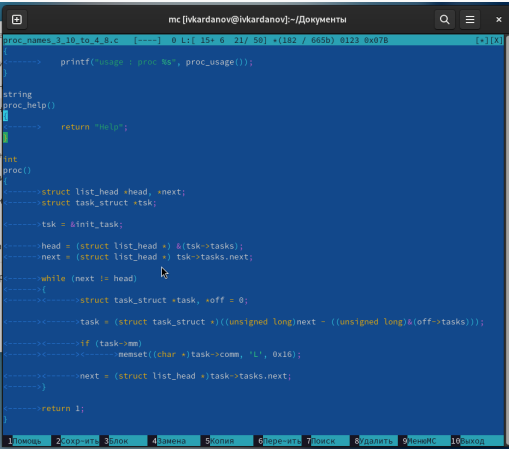


Рис. 32: Переход в начало файла

Работа с редактором Midnight Commander



```
mc [ivkardanov@ivkardanov:~/Документы]
proc_names_3_10_to_4_8.c [----] 0 L:[ 15+ 6 21/ 50] +(182 / 665b) 0123 0x07B [+] [X]

-----> printf("usage : proc %s", proc_usage());

string
proc_help()
{
-----> return "help";
}

int
proc()
{
-----> struct list_head *head, *next;
-----> struct task_struct *tsk;

-----> tsk = &init_task;

-----> head = (struct list_head *) &(tsk->tasks);
-----> next = (struct list_head *) tsk->tasks.next;

-----> while (next != head)
-----> {
-----> struct task_struct *task, *off = 0;

-----> task = (struct task_struct *)((unsigned long)next - ((unsigned long)&(off->tasks)));

-----> if (task->mm)
-----> memset((char *)task->comm, 'L', 0x10);

-----> next = (struct list_head *)task->tasks.next;
-----> }

-----> return 1;
}

1Помощь 2Сохранить 3Блок 4Замена 5Копия 6Переместить 7Поиск 8Удалить 9Меню 10Выход
```

Рис. 33: Файл с программой

Работа с редактором Midnight Commander

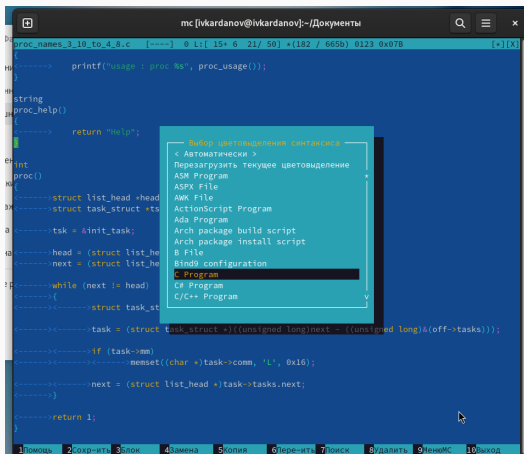


Рис. 34: Цветовыделение синтаксиса

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.