

Операционные системы

Командная оболочка Midnight Commander

Артём Арутюнян

25 марта 2025

Российский университет дружбы народов, Москва, Россия

Цели и задачи 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.

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

Процесс выполнения лабораторной работы

Работа с Midnight Commander

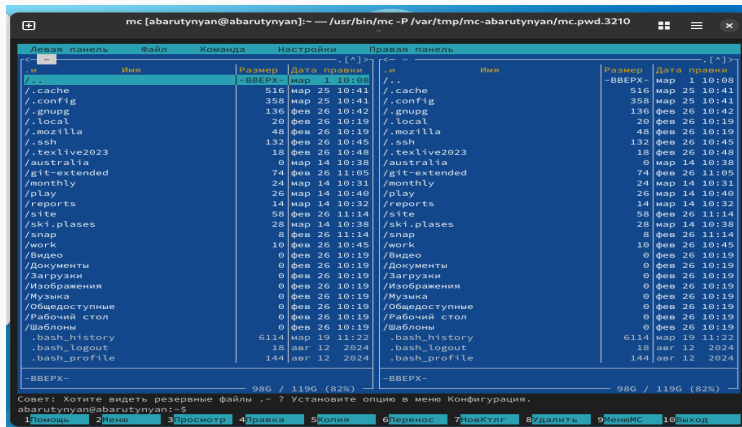


Рис. 1: Запуск mc

Работа с Midnight Commander

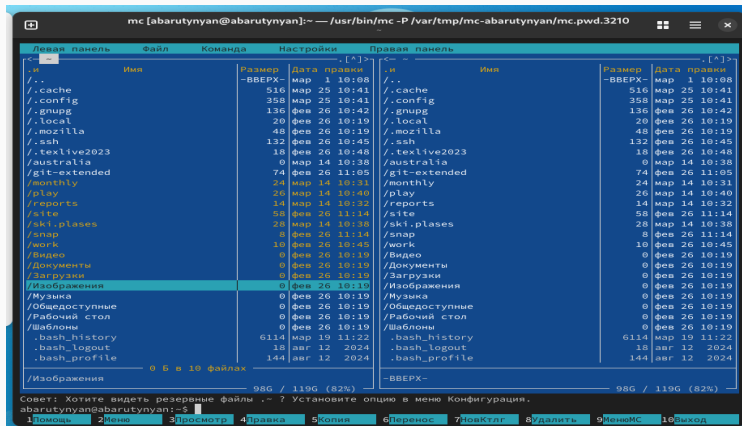


Рис. 2: Выделение

Работа с Midnight Commander

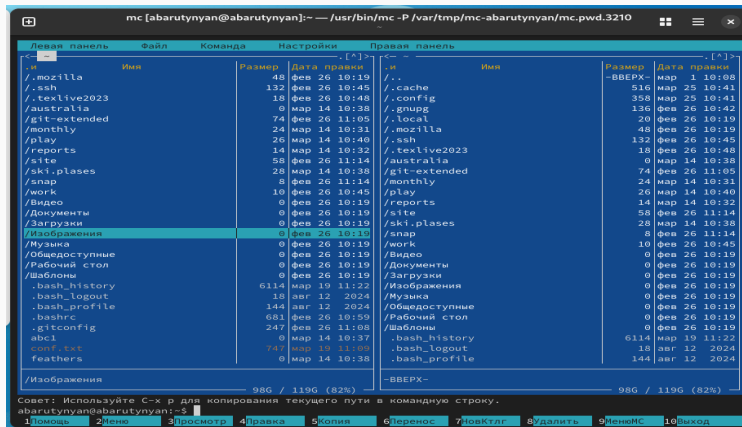


Рис. 3: Отмена

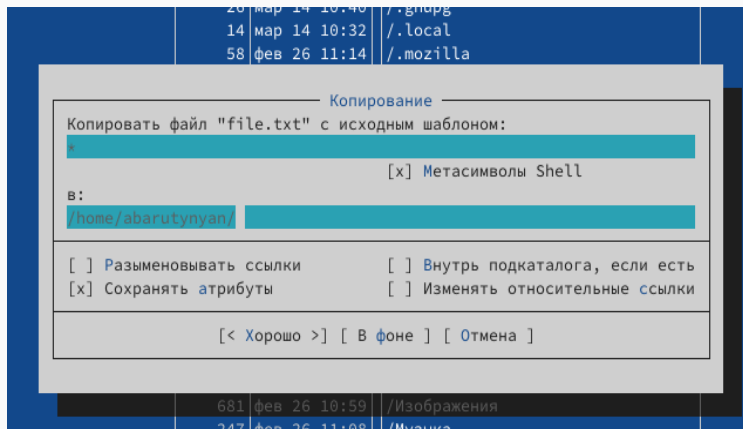


Рис. 4: Копирование

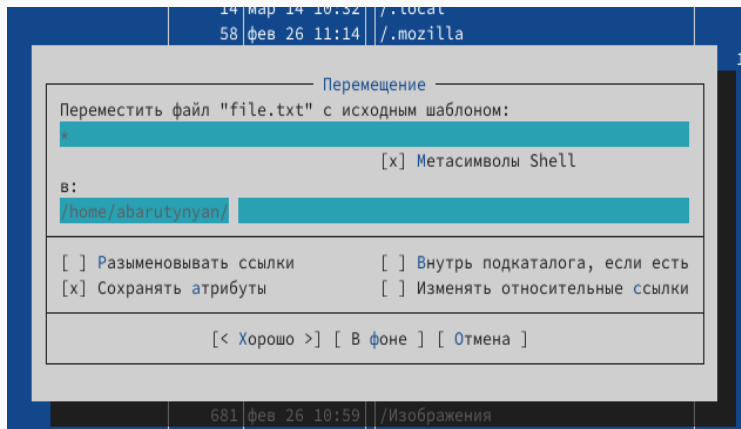


Рис. 5: Перемещение

Работа с Midnight Commander

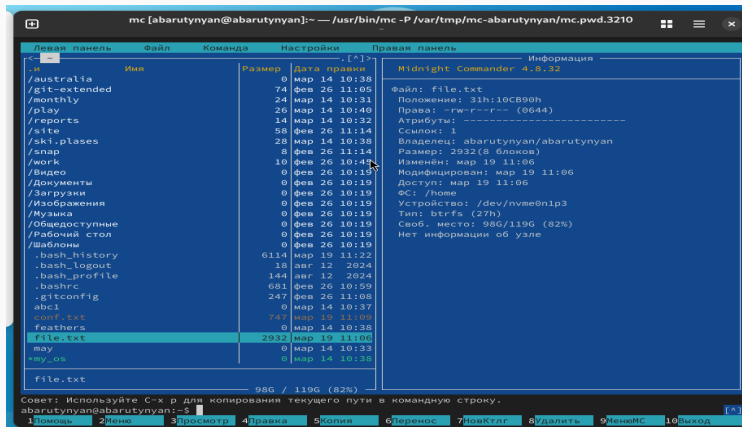


Рис. 6: Информация

Работа с Midnight Commander

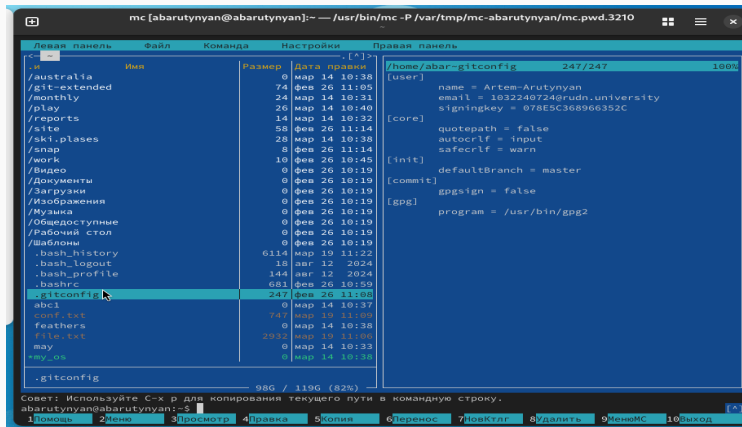


Рис. 7: Быстрый просмотр

Работа с Midnight Commander

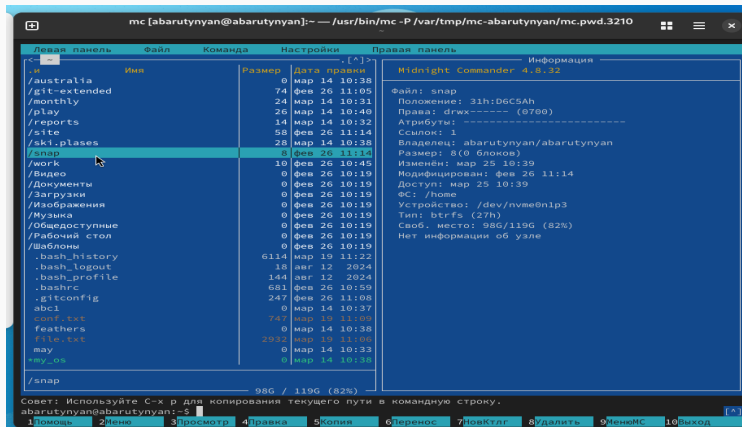


Рис. 8: Информация

Работа с Midnight Commander

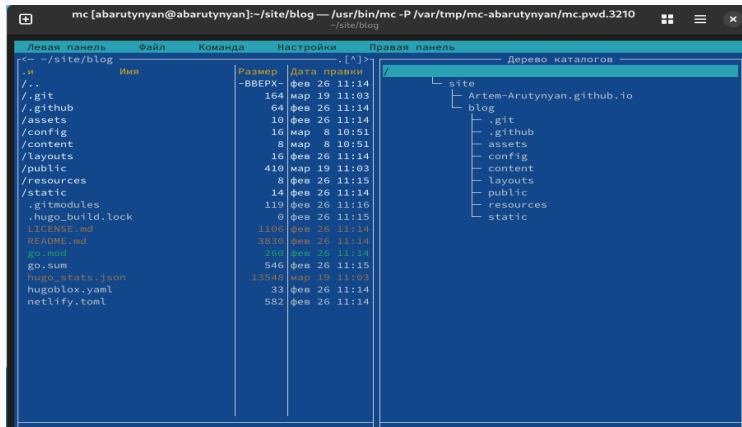
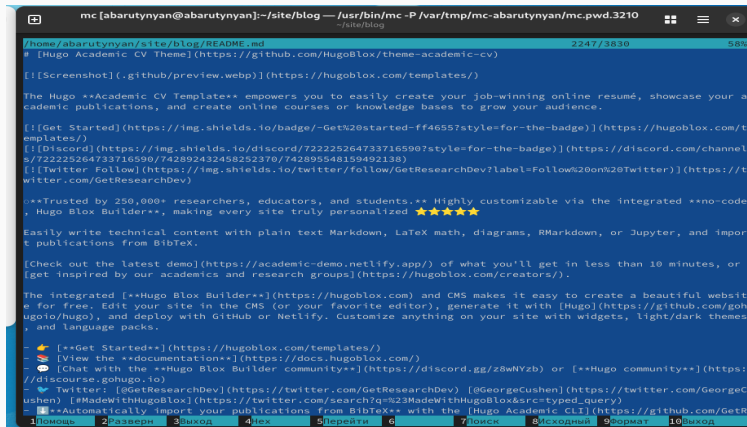


Рис. 9: Дерево каталогов

Работа с Midnight Commander



```
mc [abarutynyan@abarutynyan]:~/site/blog — /usr/bin/mc -P /var/tmp/mc-abarutynyan/mc.pwd.3210
~/site/blog

/home/abarutynyan/site/blog/README.md 2247/3830 58%
# [Hugo Academic CV Theme](https://github.com/HugoBlox/theme-academic-cv)

[[Screenshot](.github/preview.webp)](https://hugoblox.com/templates/)

The Hugo Academic CV Template empowers you to easily create your job-winning online resumé, showcase your academic publications, and create online courses or knowledge bases to grow your audience.

[[Get Started](https://img.shields.io/badge/-Get%20started-ff4655?style=for-the-badge)](https://hugoblox.com/templates/)
[[Discord](https://img.shields.io/discord/72225264733716590?style=for-the-badge)](https://discord.com/channels/72225264733716590/742892432458252370/742895548159492138)
[[Twitter Follow](https://img.shields.io/twitter/follow/GetResearchDev?label=Follow%20on%20Twitter)](https://twitter.com/GetResearchDev)

Trusted by 250,000+ researchers, educators, and students. Highly customizable via the integrated no-code Hugo Blox Builder, making every site truly personalized ★★★★★

Easily write technical content with plain text Markdown, LaTeX math, diagrams, RMarkdown, or Jupyter, and import publications from BibTeX.

[Check out the latest demo](https://academic-demo.netlify.app/) of what you'll get in less than 10 minutes, or get inspired by our academics and research groups(https://hugoblox.com/creators/).

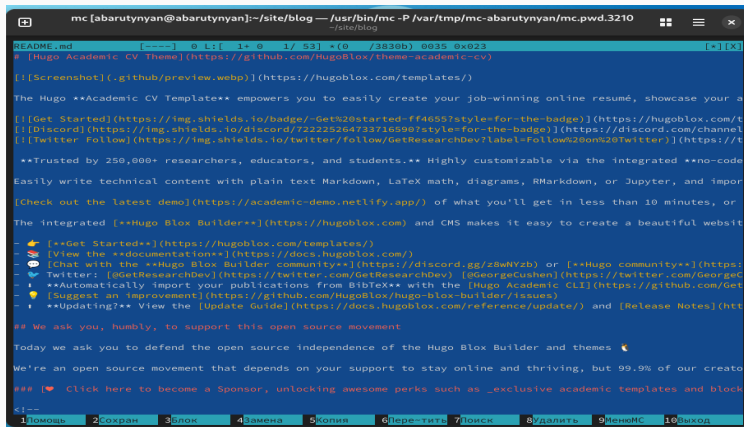
The integrated Hugo Blox Builder(https://hugoblox.com) and CMS makes it easy to create a beautiful website for free. Edit your site in the CMS (or your favorite editor), generate it with [Hugo](https://github.com/gohugoio/hugo), and deploy with GitHub or Netlify. Customize anything on your site with widgets, light/dark themes, and language packs.

- 📖 [[Get Started]](https://hugoblox.com/templates/)
- 📖 [View the documentation](https://docs.hugoblox.com/)
- 💬 [Chat with the Hugo Blox Builder community](https://discord.gg/z8wNYzb) or [[Hugo community]](https://discourse.gohugo.io)
- 🐦 Twitter: [[GetResearchDev](https://twitter.com/GetResearchDev)] [[GeorgeCushen](https://twitter.com/GeorgeCushen)] [[MadeWithHugoBlox](https://twitter.com/search?q=%23MadeWithHugoBlox&src=typed_query)]
- 📦 Automatically import your publications from BibTeX with the [Hugo Academic CLI](https://github.com/GetResearchDev/hugo-academic-cli)

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

Рис. 10: Просмотр содержимого текстового файла

Работа с Midnight Commander



```
mc[abarutynyan@abarutynyan]:~/site/blog — /usr/bin/mc -P /var/tmp/mc-abarutynyan/mc.pwd.3210
~/site/blog
README.md [---] 0 L: [ 1+ 0 1/ 53] * (0 /3830b) 0035 0x023 [*][X]
# [Hugo Academic CV Theme](https://github.com/HugoBlox/theme-academic-cv)
[! [Screenshot](.github/preview.webp)](https://hugoblox.com/templates/)

The Hugo Academic CV Template empowers you to easily create your job-winning online resumé, showcase your a

[! [Get Started](https://img.shields.io/badge/-Get%20started-ff4655?style=for-the-badge)](https://hugoblox.com/t
[! [Discord](https://img.shields.io/discord/722225264733716590?style=for-the-badge)](https://discord.com/channel
[! [Twitter Follow](https://img.shields.io/twitter/follow/GetResearchDev?label=Follow%20on%20Twitter)](https://t

Trusted by 250,000+ researchers, educators, and students. Highly customizable via the integrated no-code

Easily write technical content with plain text Markdown, LaTeX math, diagrams, RMarkdown, or Jupyter, and impor

[Check out the latest demo](https://academic-demo.netlify.app/) of what you'll get in less than 10 minutes, or

The integrated Hugo Blox Builder (https://hugoblox.com) and CMS makes it easy to create a beautiful websit

- 🚀 Get Started (https://hugoblox.com/templates/)
- 📖 View the documentation (https://docs.hugoblox.com/)
- 💬 Chat with the Hugo Blox Builder community (https://discord.gg/z8wNVzb) or Hugo community (https:
- 🐦 Twitter: [ @GetResearchDev ](https://twitter.com/GetResearchDev) [ @GeorgeCushen ](https://twitter.com/GeorgeC
- ⚡ Automatically import your publications from BibTeX with the [Hugo Academic CLI](https://github.com/Get
- 💡 Suggest an improvement (https://github.com/HugoBlox/hugo-blox-builder/issues)
- 🔄 Updating? View the [Update Guide](https://docs.hugoblox.com/reference/update/) and [Release Notes](htt

We ask you, humbly, to support this open source movement

Today we ask you to defend the open source independence of the Hugo Blox Builder and themes 🦋

We're an open source movement that depends on your support to stay online and thriving, but 99.9% of our creato

## [❤️ Click here to become a Sponsor, unlocking awesome perks such as _exclusive academic templates and block

<!--
1 Помощь 2 Сохран 3 Блок 4 Замена 5 Копия 6 Пере-тить 7 Поиск 8 Удалить 9 МенюМС 10 Выход
```

Рис. 11: Отредактируем содержимое текстового файла без сохранения результатов

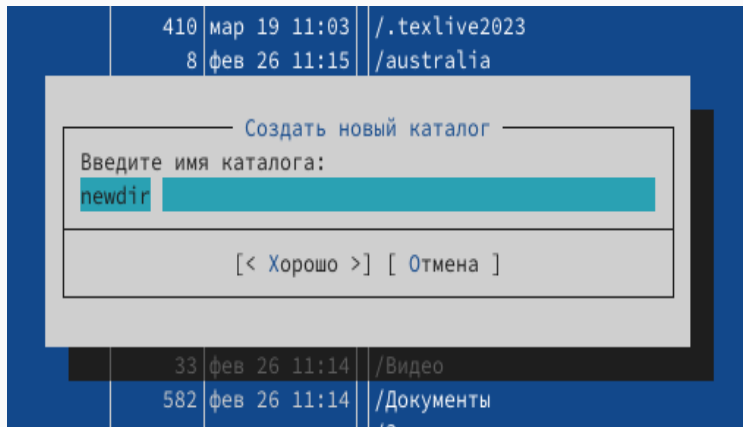


Рис. 12: Создание каталога

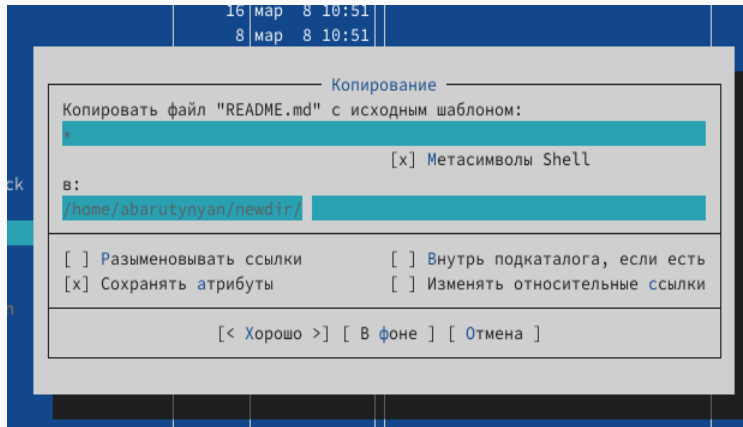


Рис. 13: Копирование в файлов в созданный каталог

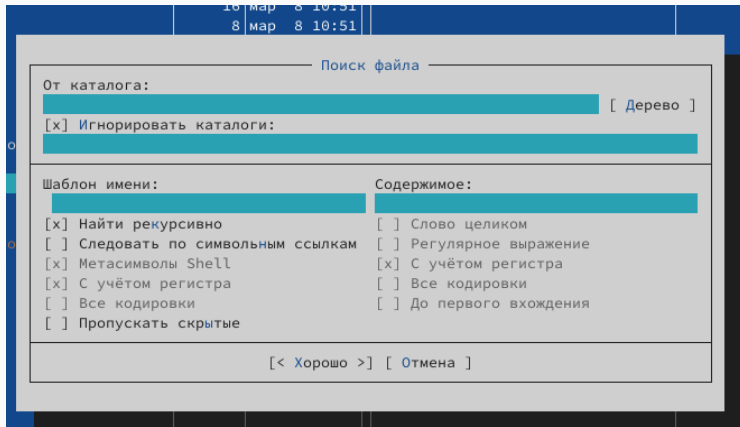


Рис. 14: Поиск файлов

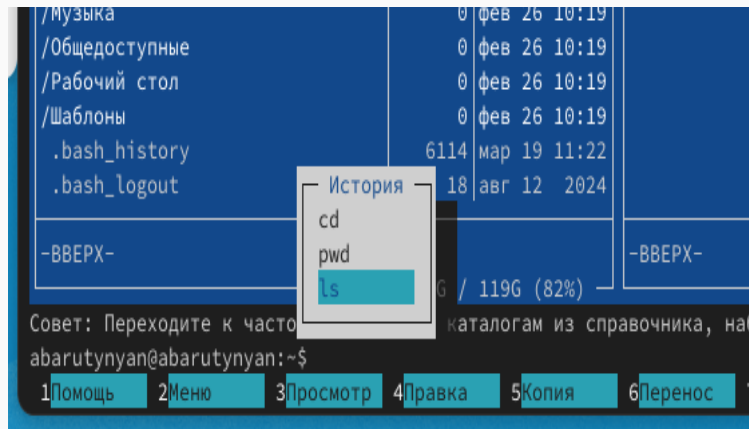


Рис. 15: История команд

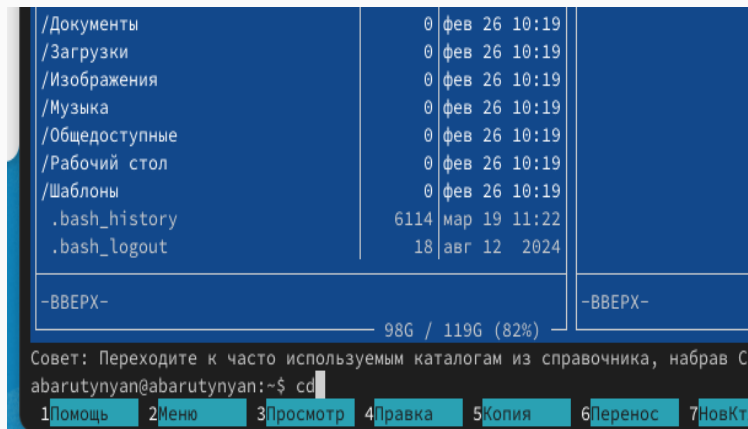


Рис. 16: Переход в домашний каталог



```
mc.ext.ini [----] 0 L: [ 1+ 0 1/1136] *(0 /26909b) 0035 0x023 [•][X]
# Midnight Commander 4.0 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 (F9-c-e). If you edit this file in any other way
# while mc is running, you will need to press F9-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/xxxxx
# 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 manager's menu system. The window title is 'menu' with standard window controls. The menu is open, showing a list of options. At the top, it says 'shell_patterns=0'. The menu items include: '%%' (The % character), '%f' (The current file), '%p' (The current file), '%d' (The current working directory), '%s' (Selected files), '%t' (Tagged files), '%u' (Tagged files), '%view' (Runs commands), and a section for format letters (ascii, hex, nroff, uniform). Below this is a section for macros, starting with '+ ! t t' (Do something on the current file) and '+ t t' (Do something on the tagged files). At the bottom, there is a status bar with numbered shortcuts: 1.Помощь, 2.Сохранить, 3.Блок, 4.Замена, 5.Копия, 6.Перем-тить, 7.Поиск, 8.Удалить, 9.МенюМС, 10.Выход.

```
menu [=====] 1 L: [ 1*16 17/370] *(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)
# %view Runs the commands and pipes standard output to the view command
# If %view is immediately followed by '{', recognize keywords
#      ascii, hex, nroff and uniform
#
# 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
# %0f don't quote expanded macro
#####

+ ! 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.Блок 4.Замена 5.Копия 6.Перем-тить 7.Поиск 8.Удалить 9.МенюМС 10.Выход
```

Рис. 18: Просмотр файла меню



Рис. 19: Конфигурация



Рис. 20: Внешний вид



Рис. 21: Настройки панелей



Рис. 22: Подтверждение



Рис. 23: Оформление



Рис. 24: Кодировка символов



Рис. 25: Распознавание клавиш

Работа с редактором Midnight Commander

```
README.md [-----] 24 L: [ 5+19 24/ 53] *(2300/3830b) 0109 0x06D [*][X]
The Hugo Academic CV Template empowers you to easily create your job-winning online resumé, showcase your a

[[Get Started](https://img.shields.io/badge/-Get%20started-ff4655?style=for-the-badge)](https://hugoblox.com/t
[[Discord](https://img.shields.io/discord/72225264733716590?style=for-the-badge)](https://discord.com/channel
[[Twitter Follow](https://img.shields.io/twitter/follow/GetResearchDev?label=Follow%20on%20Twitter)](https://t

Trusted by 250,000+ researchers, educators, and students. Highly customizable via the integrated no-code
 Easily write technical content with plain text Markdown, LaTeX math, diagrams, RMarkdown, or Jupyter, and impor
[Check out the latest demo](https://academic-demo.netlify.app/) of what you'll get in less than 10 minutes, or
The integrated Hugo Blox Builder (https://hugoblox.com) and CMS makes it easy to create a beautiful websit

- 📄 Get Started (https://hugoblox.com/templates/)
- 📖 View the documentation (https://docs.hugoblox.com/)
- 💬 Chat with the Hugo Blox Builder community (https://discord.gg/z8wNYzb) or Hugo community (https:
- 🐦 Twitter: [GetResearchDev](https://twitter.com/GetResearchDev) [GeorgeCushen](https://twitter.com/GeorgeC
- 📄 Automatically import your publications from BibTeX with the Hugo Academic CLI (https://github.com/Get
- 💡 Suggest an improvement (https://github.com/HugoBlox/hugo-blox-builder/issues)
- 📄 Updating? View Update Guide (https://docs.hugoblox.com/reference/update/) and Release Notes (htt

We ask you, humbly, to support this open source movement

Today we ask you to defend the open source independence of the Hugo Blox Builder and themes 🙏

We're an open source movement that depends on your support to stay online and thriving, but 99.9% of our creato

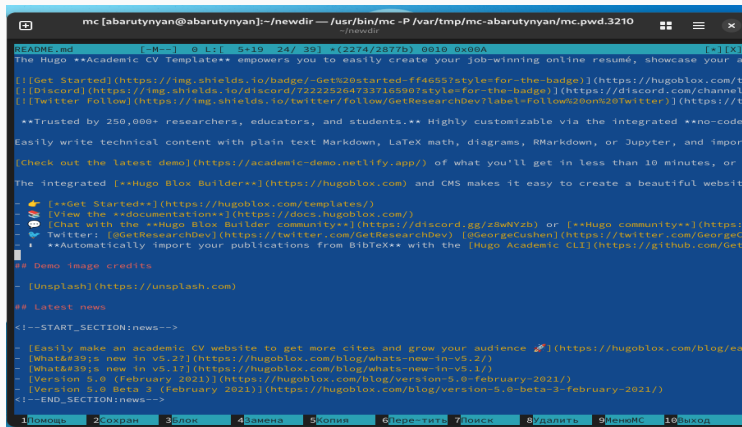
❤️ Click here to become a Sponsor, unlocking awesome perks such as _exclusive academic templates and block

<!--
<p align="center"><a href="https://hugoblox.com/templates/" target="_blank" rel="noopener"><img src="https://hu
-->

Demo image credits
```

Рис. 26: Файл с текстом

Работа с редактором Midnight Commander



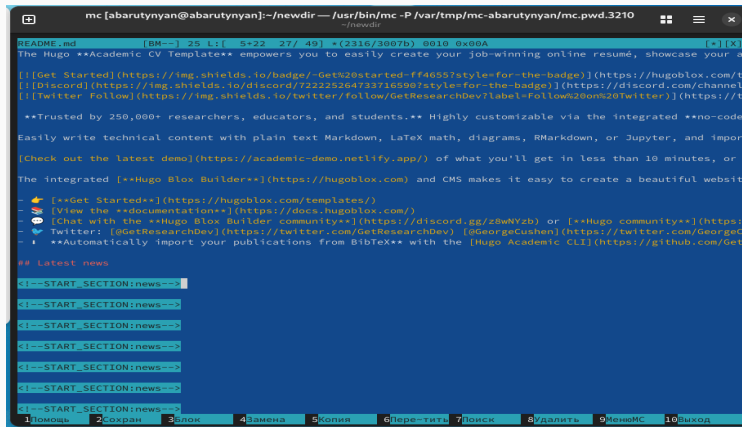
```
mc [abaratynyan@abaratynyan]:~/newdir — /usr/bin/mc -P /var/tmp/mc-abaratynyan/mc.pwd.3210
~ /newdir
README.md  [-M-]  0 L: 5+19 24/ 39  *(2274/2577b) 0010 0x00A  [~][X]
The Hugo **Academic CV Template** empowers you to easily create your job-winning online resumé, showcase your a
[[Get Started](https://img.shields.io/badge/-Get%20started-ff4655?style=for-the-badge)](https://hugoblox.com/t
[[Discord](https://img.shields.io/discord/722225264733716590?style=for-the-badge)](https://discord.com/channel
[[Twitter Follow](https://img.shields.io/twitter/follow/GetResearchDev?label=Follow%20on%20Twitter)](https://t

**Trusted by 250,000+ researchers, educators, and students.** Highly customizable via the integrated **no-code
Easily write technical content with plain text Markdown, LaTeX math, diagrams, RMarkdown, or Jupyter, and impor
[Check out the latest demo](https://academic-demo.netlify.app/) of what you'll get in less than 10 minutes, or
The integrated **[Hugo Blox Builder](https://hugoblox.com)** and CMS makes it easy to create a beautiful websit
- 🚀 [**Get Started**](https://hugoblox.com/templates/)
- 📖 [View the **documentation**](https://docs.hugoblox.com/)
- 💬 [Chat with the **Hugo Blox Builder community**](https://discord.gg/z8wNYzb) or [**Hugo community**](https:
- 🐦 Twitter: [GetResearchDev](https://twitter.com/GetResearchDev) [GeorgeCushen](https://twitter.com/GeorgeC
- 📄 **Automatically import your publications from BibTeX** with the [Hugo Academic CLI](https://github.com/Get
|
## Demo image credits
- [Unsplash](https://unsplash.com)

## Latest news
<!--START_SECTION:news-->
- [Easily make an academic CV website to get more cites and grow your audience 🚀](https://hugoblox.com/blog/ea
- [What's new in v5.2!](https://hugoblox.com/blog/whats-new-in-v5.2/)
- [What's new in v5.1!](https://hugoblox.com/blog/whats-new-in-v5.1/)
- [Version 5.0 (February 2021)](https://hugoblox.com/blog/version-5.0-february-2021/)
- [Version 5.0 Beta 3 (February 2021)](https://hugoblox.com/blog/version-5.0-beta-3-february-2021/)
<!--END_SECTION:news-->
1Помощь 2Сохран 3Блок 4Замена 5Копия 6Пере-тить 7Поиск 8Удалить 9МенюМС 10Выход
```

Рис. 27: Файл с текстом

Работа с редактором Midnight Commander



```
mc [abarutynyan@abarutynyan]:~/newdir — /usr/bin/mc -P /var/tmp/mc-abarutynyan/mc.pwd.3210
~ /newdir

README.md [BM--] 25 L: [ 5+22 27/ 49] * (2316/3607b) 0010 0x00A [*] [X]
The Hugo **Academic CV Template** empowers you to easily create your job-winning online resumé, showcase your a

[[[Get Started]](https://img.shields.io/badge/-Get%20started-ff4655?style=for-the-badge)](https://hugoblox.com/t
[[[Discord]](https://img.shields.io/discord/72225264733716590?style=for-the-badge)](https://discord.com/channel
[[[Twitter Follow]](https://img.shields.io/twitter/follow/GetResearchDev?label=Follow%20on%20Twitter)](https://t

**Trusted by 250,000+ researchers, educators, and students.** Highly customizable via the integrated **no-code
```

Рис. 28: Копирование фрагмента

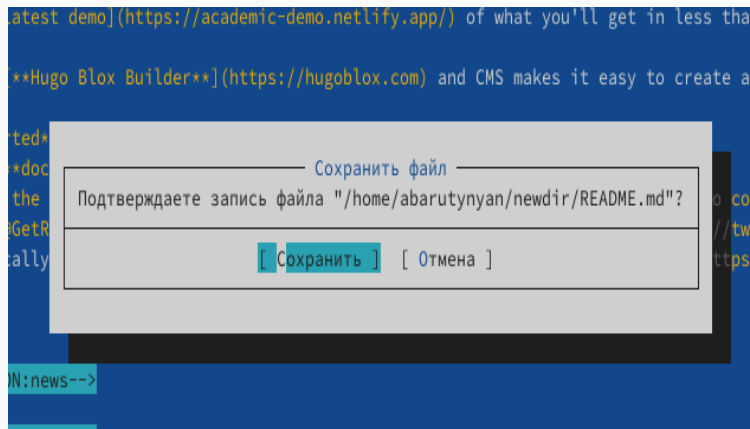
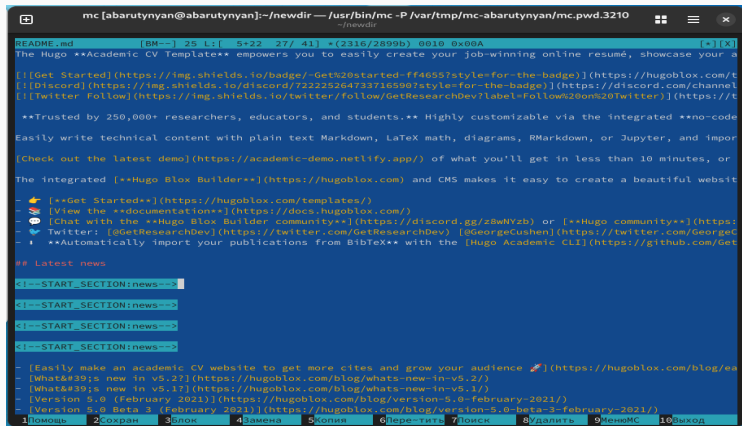


Рис. 29: Сохранение

Работа с редактором Midnight Commander



```
mc [abarutynyan@abarutynyan]:~/newdir — /usr/bin/mc -P /var/tmp/mc-abarutynyan/mc.pwd.3210
~ /newdir

README.md [BM--] 25 L: [ 5+22 27/ 41] *(2316/2899b) 0010 0x00A [*][X]
The Hugo **Academic CV Template** empowers you to easily create your job-winning online resumé, showcase your a

[[Get Started]](https://img.shields.io/badge/-Get%20started-ff4655?style=for-the-badge)](https://hugoblox.com/t
[[Discord]](https://img.shields.io/discord/72225264733716590?style=for-the-badge)](https://discord.com/channel
[[Twitter Follow]](https://img.shields.io/twitter/follow/GetResearchDev?label=Follow%20on%20Twitter)](https://t

**Trusted by 250,000+ researchers, educators, and students.** Highly customizable via the integrated **no-code
 Easily write technical content with plain text Markdown, LaTeX math, diagrams, RMarkdown, or Jupyter, and impor
[Check out the latest demo](https://academic-demo.netlify.app/) of what you'll get in less than 10 minutes, or
The integrated [[Hugo Blox Builder**]](https://hugoblox.com) and CMS makes it easy to create a beautiful websit

- 🚀 [[Get Started**]](https://hugoblox.com/templates/)
- 📖 [View the **documentation**]](https://docs.hugoblox.com/)
- 💬 [Chat with the **Hugo Blox Builder community**]](https://discord.gg/z8wHVzb) or [[Hugo community**]](https:
- 🐦 Twitter: [@GetResearchDev](https://twitter.com/GetResearchDev) [GeorgeCushen](https://twitter.com/GeorgeC
- 📄 **Automatically import your publications from BibTeX** with the [Hugo Academic CLI](https://github.com/Get

## Latest news

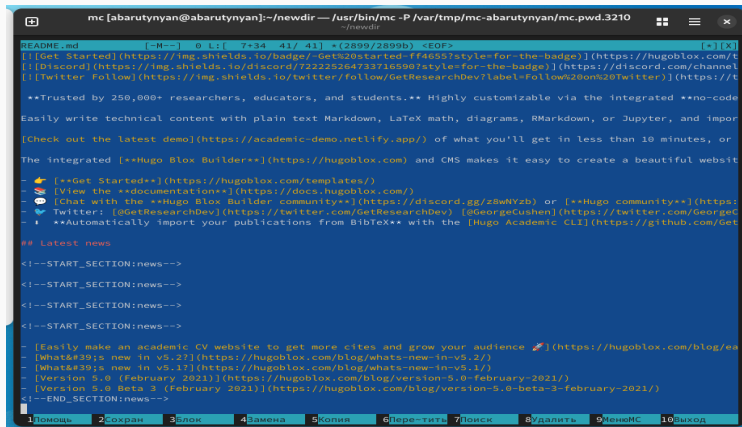
<!--START_SECTION:news-->
<!--START_SECTION:news-->
<!--START_SECTION:news-->
<!--START_SECTION:news-->

- [Easily make an academic CV website to get more cites and grow your audience 🐦](https://hugoblox.com/blog/ea
- [What's new in v5.2?](https://hugoblox.com/blog/whats-new-in-v5.2/)
- [What's new in v5.1?](https://hugoblox.com/blog/whats-new-in-v5.1/)
- [Version 5.0 (February 2021)](https://hugoblox.com/blog/version-5.0-february-2021/)
- [Version 5.0 Beta 3 (February 2021)](https://hugoblox.com/blog/version-5.0-beta-3-february-2021/)

1Помощь 2Сохран 3Блок 4Замена 5Копия 6Перетяг 7Поиск 8Удалить 9МенюMC 10Выход
```

Рис. 30: Отмена

Работа с редактором Midnight Commander



```
mc [abarutynyan@abarutynyan]:~/newdir — /usr/bin/mc -P /var/tmp/mc-abarutynyan/mc.pwd.3210
~/newdir
README.md  [-M--]  0 L: [ 7+34 41/ 41] *(2899/2899b) <EOF>  [*] [X]
[[[Get Started]](https://img.shields.io/badge/-Get%20started-ff4655?style=for-the-badge)](https://hugoblox.com/t
[[[Discord]](https://img.shields.io/discord/72225264733716590?style=for-the-badge)](https://discord.com/channel
[[[Twitter Follow]](https://img.shields.io/twitter/follow/GetResearchDev?label=Follow%20on%20Twitter)](https://t

**Trusted by 250,000+ researchers, educators, and students.** Highly customizable via the integrated **no-code
 Easily write technical content with plain text Markdown, LaTeX math, diagrams, RMarkdown, or Jupyter, and impor
[Check out the latest demo](https://academic-demo.netlify.app/) of what you'll get in less than 10 minutes, or
The integrated Hugo Blox Builder(https://hugoblox.com) and CMS makes it easy to create a beautiful website
- 🌟 Get Started(https://hugoblox.com/templates/)
- 📖 [View the documentation](https://docs.hugoblox.com/)
- 💬 [Chat with the Hugo Blox Builder community](https://discord.gg/z8wNYzb) or Hugo community(https:
- 🐦 Twitter: [ @GetResearchDev ](https://twitter.com/GetResearchDev) [ @GeorgeCushen ](https://twitter.com/GeorgeC
- 📄 Automatically import your publications from BibTeX with the [Hugo Academic CLI](https://github.com/Get

## Latest news

<!--START_SECTION:news-->

<!--START_SECTION:news-->

<!--START_SECTION:news-->

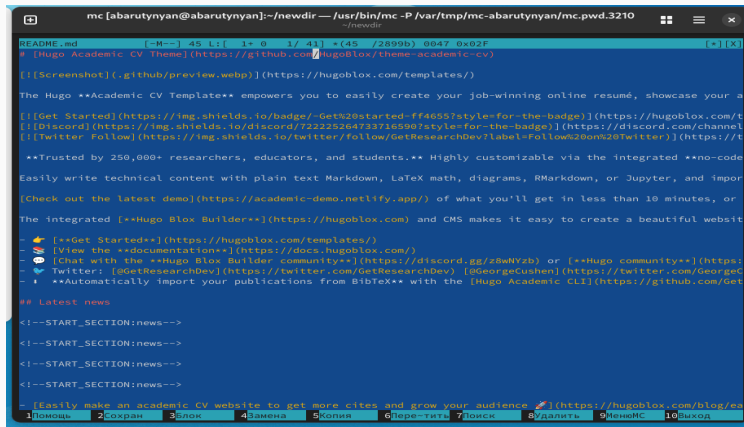
<!--START_SECTION:news-->

- [Easily make an academic CV website to get more cites and grow your audience 📄](https://hugoblox.com/blog/ea
- [What's new in v5.2?](https://hugoblox.com/blog/whats-new-in-v5.2/)
- [What's new in v5.1?](https://hugoblox.com/blog/whats-new-in-v5.1/)
- [Version 5.0 (February 2021)](https://hugoblox.com/blog/version-5.0-february-2021/)
- [Version 5.0 Beta 3 (February 2021)](https://hugoblox.com/blog/version-5.0-beta-3-february-2021/)
<!--END_SECTION:news-->

1 Помощь 2 Сохран 3 Блок 4 Замена 5 Копия 6 Пере-тить 7 Поиск 8 Удалить 9 МенюMC 10 Выход
```

Рис. 31: Переход в конец файла

Работа с редактором Midnight Commander



```
mc [abarutynyan@abarutynyan]:~/newdir — /usr/bin/mc -P /var/tmp/mc-abarutynyan/mc.pwd.3210
~/.newdir
README.md [-M--] 45 L:[ 1+ 0 1/ 41] *(45 /2899b) 0047 0x02F [*] [X]
# [Hugo Academic CV Theme](https://github.com/HugoBlox/theme-academic-cv)

[[Screenshot]](.github/preview.webp)](https://hugoblox.com/templates/)

The Hugo Academic CV Template empowers you to easily create your job-winning online resumé, showcase your a

[[Get Started]](https://img.shields.io/badge/-Get%20started-ff4655?style=for-the-badge)](https://hugoblox.com/t
[[Discord]](https://img.shields.io/discord/722252647337165907?style=for-the-badge)](https://discord.com/channel
[[Twitter Follow]](https://img.shields.io/twitter/follow/GetResearchDev?label=Follow%20on%20Twitter)](https://t

Trusted by 250,000+ researchers, educators, and students. Highly customizable via the integrated no-code
 Easily write technical content with plain text Markdown, LaTeX math, diagrams, RMarkdown, or Jupyter, and impor
[Check out the latest demo](https://academic-demo.netlify.app/) of what you'll get in less than 10 minutes, or
The integrated Hugo Blox Builder](https://hugoblox.com) and CMS makes it easy to create a beautiful websit

- 🌟 Get Started](https://hugoblox.com/templates/)
- 📖 View the documentation](https://docs.hugoblox.com/)
- 💬 Chat with the Hugo Blox Builder community](https://discord.gg/z8wNYzb) or Hugo community](https:
- 🐦 Twitter: @GetResearchDev](https://twitter.com/GetResearchDev) [ @GeorgeCushen](https://twitter.com/GeorgeC
- 📄 Automatically import your publications from BibTeX with the [Hugo Academic CLI](https://github.com/Get

## Latest news

<!--START_SECTION:news-->

<!--START_SECTION:news-->

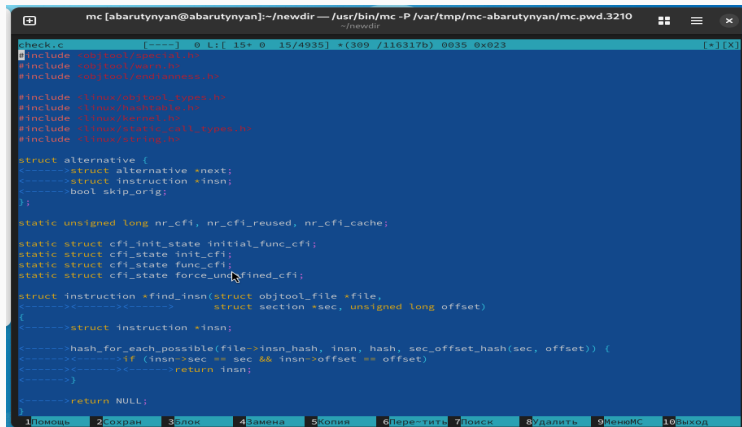
<!--START_SECTION:news-->

<!--START_SECTION:news-->

- [Easily make an academic CV website to get more cites and grow your audience 📈](https://hugoblox.com/blog/ea
1Помощь 2Сохран 3Блок 4Замена 5Копия 6Пере-титл 7Поиск 8Удалить 9МенюМС 10Выход
```

Рис. 32: Переход в начало файла

Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander (MC) interface. The title bar indicates the user is 'abarutynyan' and the current directory is '/newdir'. The file being edited is 'check.c'. The code is written in C and includes various system headers like 'objtool/special.h', 'objtool/warn.h', and 'objtool/endianmess.h'. It defines a 'struct alternative' and a 'struct instruction'. The code includes static variables for CFI (Control Flow Integrity) and a function 'find_insn' that searches for instructions in a file. The bottom status bar shows various menu options: 1.Помощь, 2.Сохран, 3.Блок, 4.Замена, 5.Копия, 6.Пере-тить, 7.Поиск, 8.Удалить, 9.МенюМС, 10.Выход.

```
mc [abarutynyan@abarutynyan]:~/newdir — /usr/bin/mc -P /var/tmp/mc-abarutynyan/mc.pwd.3210
~/newdir
check.c [-----] 0 L: [ 15+ 0 15/4935] *(309 /116317b) 0035 0x023 [*][X]
#include <objtool/special.h>
#include <objtool/warn.h>
#include <objtool/endianmess.h>

#include <linux/objtool_types.h>
#include <linux/hashtable.h>
#include <linux/kernel.h>
#include <linux/static_call_types.h>
#include <linux/string.h>

struct alternative {
    <----->struct alternative *next;
    <----->struct instruction *insn;
    <----->bool skip_orig;
};

static unsigned long nr_cfi, nr_cfi_reused, nr_cfi_cache;

static struct cfi_init_state initial_func_cfi;
static struct cfi_state init_cfi;
static struct cfi_state func_cfi;
static struct cfi_state force_undefined_cfi;

struct instruction *find_insn(struct objtool_file *file,
    <-----><-----><-----> struct section *sec, unsigned long offset)
{
    <----->struct instruction *insn;

    <----->hash_for_each_possible(file->insn_hash, insn, hash, sec_offset_hash(sec, offset)) {
    <-----><-----><-----> if (insn->sec == sec && insn->offset == offset)
    <-----><-----><-----> return insn;
    <----->
    }

    <----->return NULL;
}

1.Помощь 2.Сохран 3.Блок 4.Замена 5.Копия 6.Пере-тить 7.Поиск 8.Удалить 9.МенюМС 10.Выход
```

Рис. 33: Файл с программой

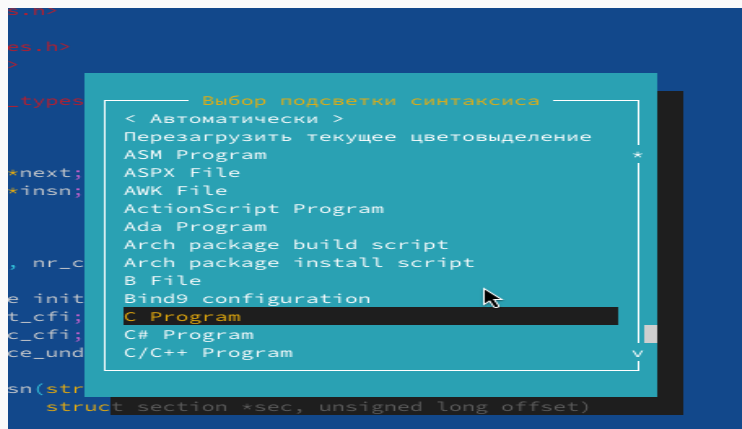


Рис. 34: Цветовыделение синтаксиса

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.