

# Операционные системы

Командная оболочка Midnight Commander

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1. Цели и задачи работы
2. Процесс выполнения лабораторной работы
3. Выводы по проделанной работе

# **1. Цели и задачи работы**

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## 1.1 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.

## 1.2 Задачи лабораторной работы

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

## **2. Процесс выполнения лабораторной работы**

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## 2.1 Работа с Midnight Commander

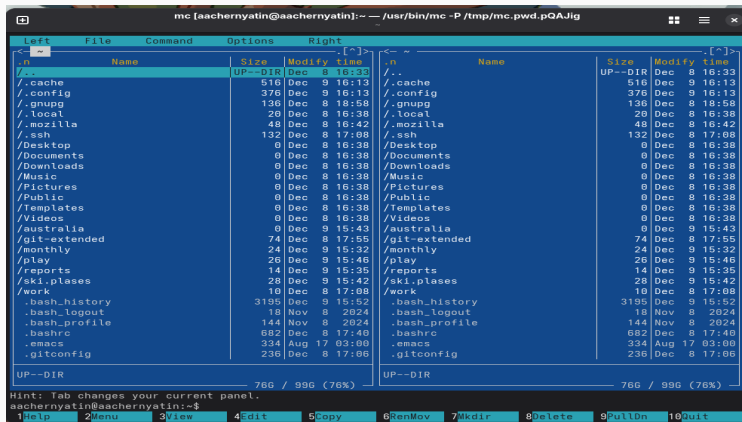


Рисунок 1: Запуск mc

## 2.2 Работа с Midnight Commander

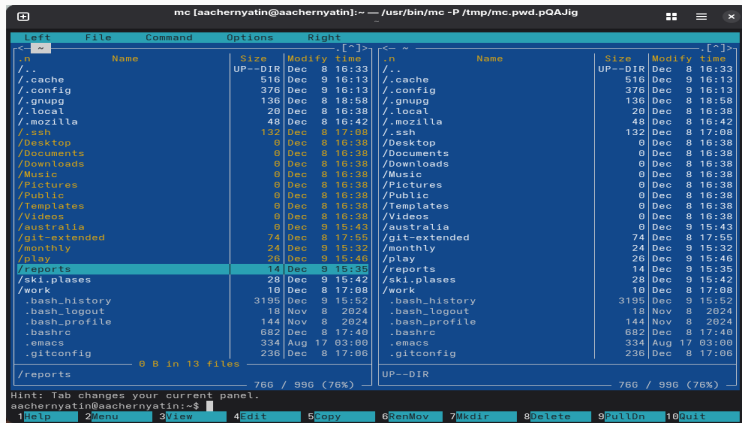


Рисунок 2: Выделение



## 2.3 Работа с Midnight Commander

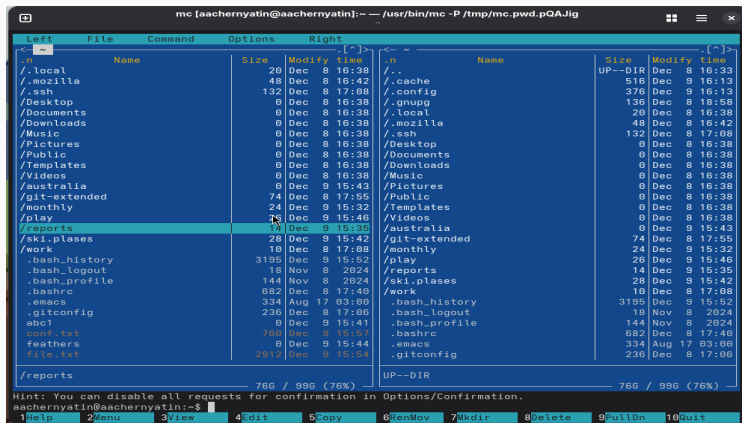


Рисунок 3: Отмена

## 2.4 Работа с Midnight Commander

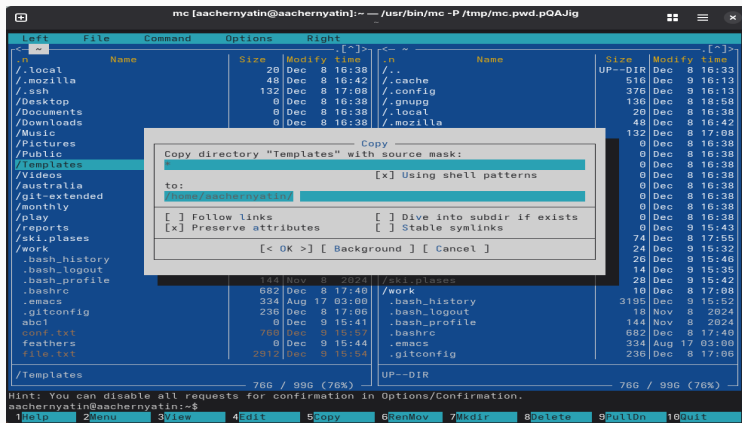


Рисунок 4: Копирование

## 2.5 Работа с Midnight Commander

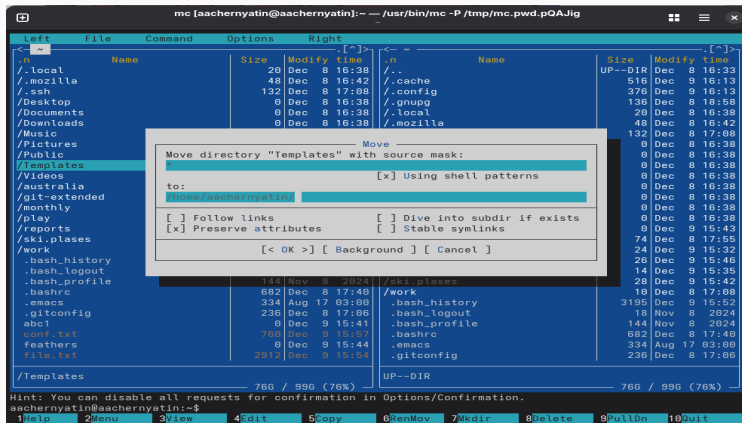


Рисунок 5: Перемещение

## 2.6 Работа с Midnight Commander

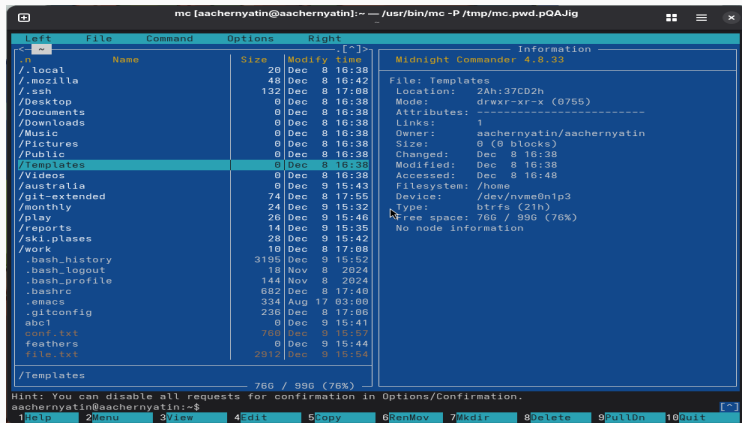


Рисунок 6: Информация

## 2.7 Работа с Midnight Commander

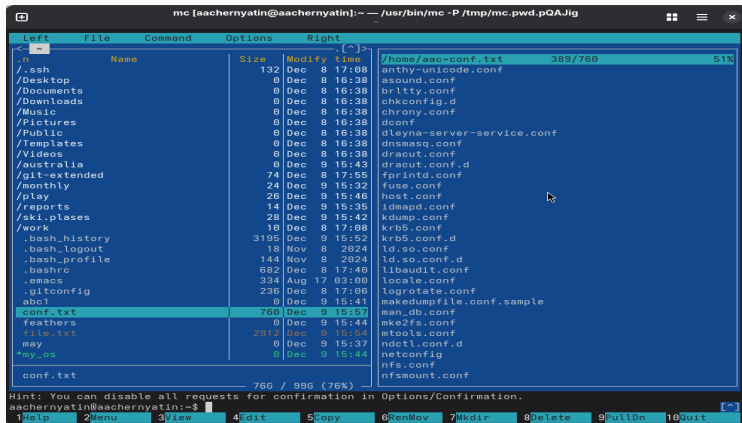


Рисунок 7: Быстрый просмотр

## 2.8 Работа с Midnight Commander

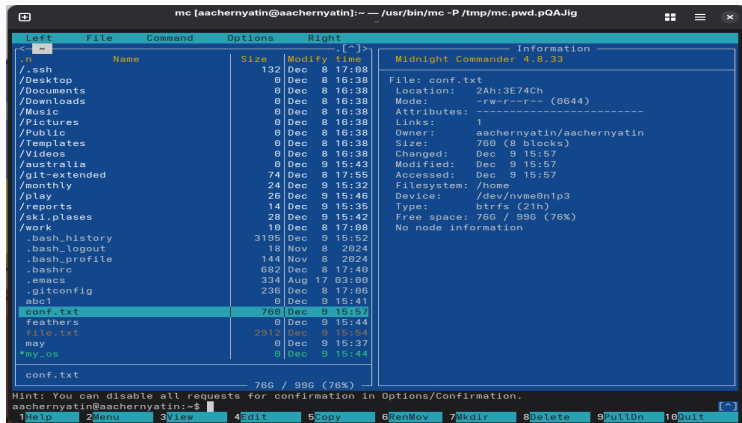


Рисунок 8: Информация

## 2.9 Работа с Midnight Commander

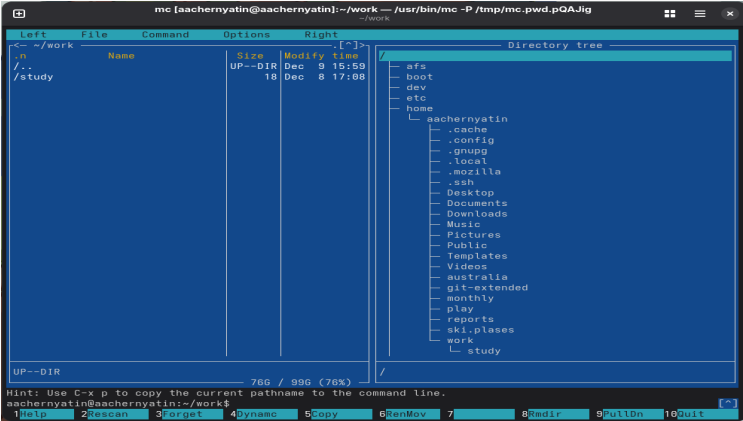
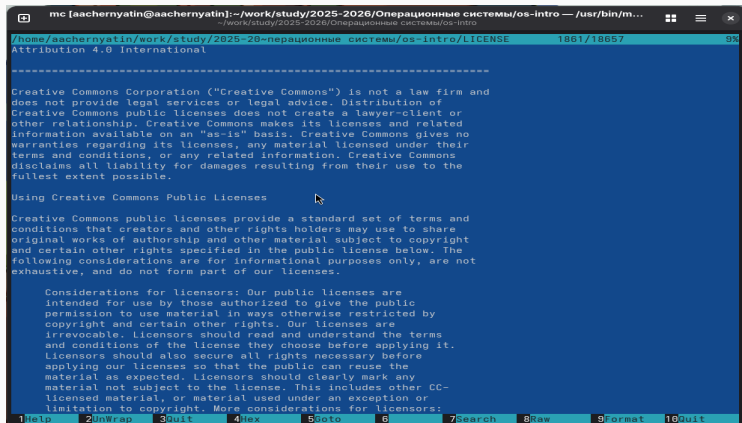


Рисунок 9: Дерево каталогов

## 2.10 Работа с Midnight Commander



The screenshot shows the Midnight Commander (mc) interface. The title bar indicates the user is 'aachernyatin' and the current directory is '/work/study/2025-2026/Операционные системы/os-intro'. The file being edited is '/home/aachernyatin/work/study/2025-2026-перационные системы/os-intro/LICENSE', which is 1861/18657 bytes in size and 9% full. The file content is the Creative Commons Attribution 4.0 International license text. The interface includes a status bar at the bottom with numbered shortcuts: 1Help, 2UnWrap, 3Quit, 4Hex, 5Goto, 6, 7Search, 8Raw, 9Format, and 10Quit.

```
mc [aachernyatin@aachernyatin]:~/work/study/2025-2026/Операционные системы/os-intro — /usr/bin/m...
~/work/study/2025-2026/Операционные системы/os-intro

/home/aachernyatin/work/study/2025-2026-перационные системы/os-intro/LICENSE 1861/18657 9%
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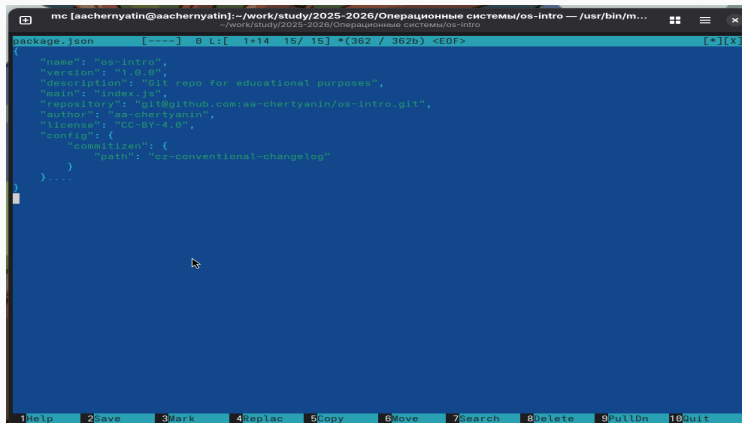
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1Help 2UnWrap 3Quit 4Hex 5Goto 6 7Search 8Raw 9Format 10Quit
```

Рисунок 10: Просмотр содержимого текстового файла

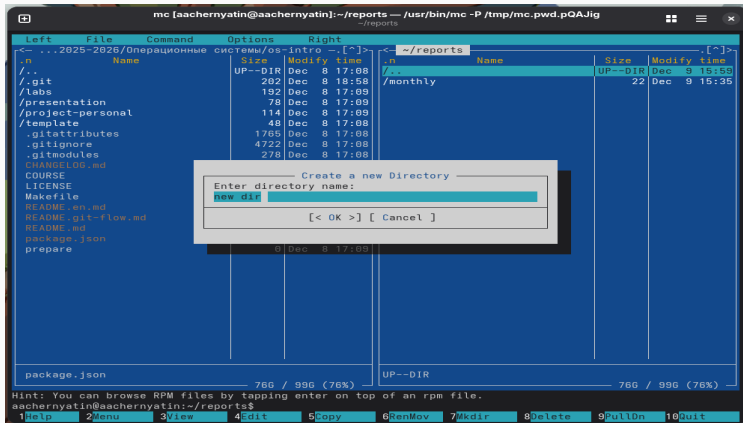


## 2.11 Работа с Midnight Commander



**Рисунок 11:** Отредактируем содержимое текстового файла без сохранения результатов

## 2.12 Работа с Midnight Commander



## Рисунок 12: Создание каталога

## 2.13 Работа с Midnight Commander

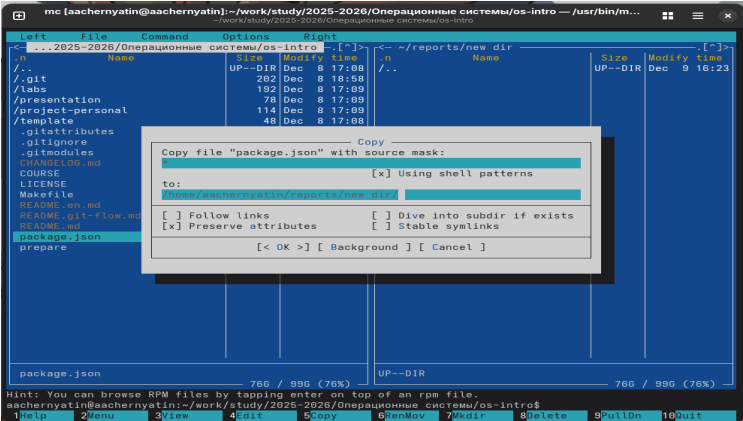


Рисунок 13: Копирование в файлы в созданный каталог

## 2.14 Работа с Midnight Commander

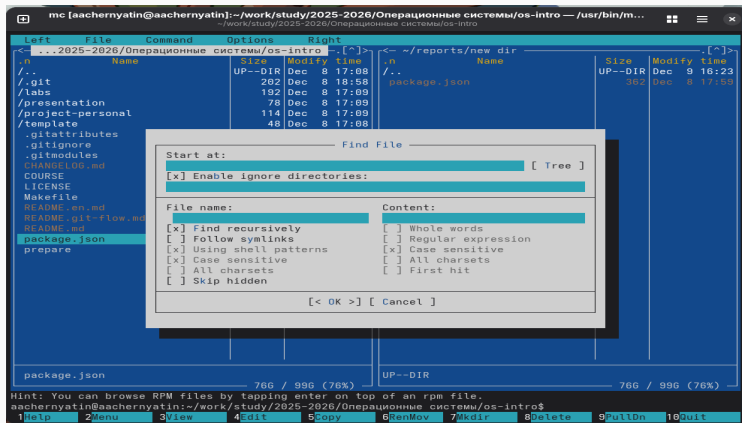
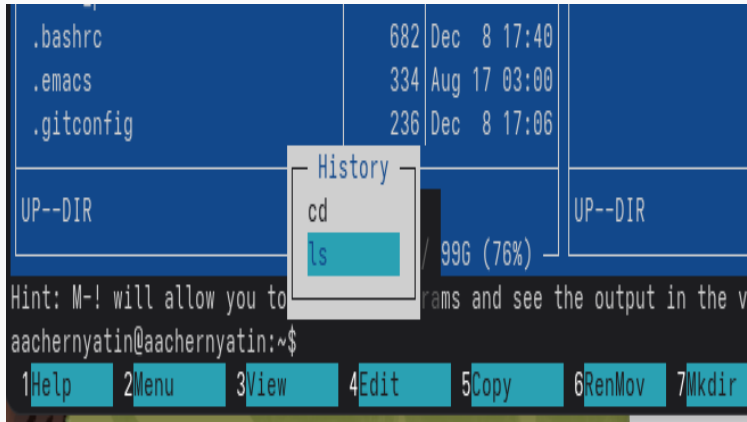


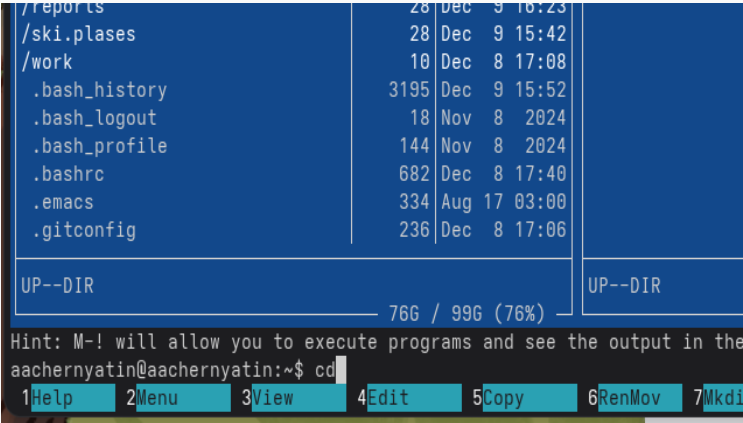
Рисунок 14: Поиск файлов

## 2.15 Работа с Midnight Commander



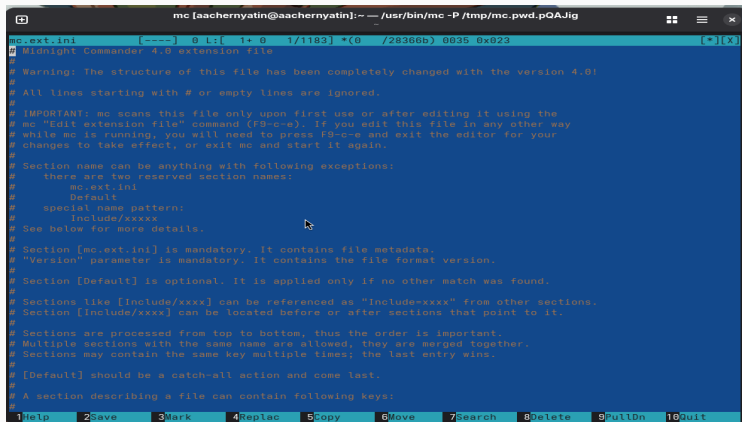
**Рисунок 15:** История команд

## 2.16 Работа с Midnight Commander



**Рисунок 16:** Переход в домашний каталог

## 2.17 Работа с Midnight Commander



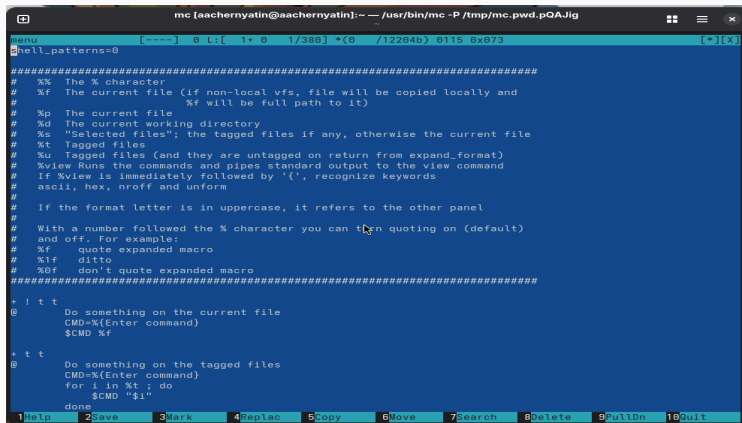
The screenshot shows a terminal window titled "mc [aachernyatin@aachernyatin]:~ — /usr/bin/mc -P /tmp/mc.pwd.pQAJig". The window displays the contents of the "mc.ext.ini" file. The text is as follows:

```
mc.ext.ini  [----]  0 L:[ 1+ 0 1/1183] *(0 /28366b) 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 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 before or after sections that point to it.
#
# Sections are processed from top to bottom, thus the order is important.
# Multiple sections with the same name are allowed, they are merged together.
# Sections may contain the same key multiple times; the last entry wins.
#
# [Default] should be a catch-all action and come last.
#
# A section describing a file can contain following keys:
```

At the bottom of the window, there is a status bar with the following keys: 1Help, 2Save, 3Mark, 4Replac, 5Copy, 6Move, 7Search, 8Delete, 9PullDn, 10Quit.

**Рисунок 17:** Просмотр файла расширений

## 2.18 Работа с Midnight Commander

A screenshot of the Midnight Commander (mc) application window. The title bar shows the user 'aachernyatin@achernyatin' and the path '/usr/bin/mc -P /tmp/mc.pwd.pQAJig'. The main window has a dark blue background with white text. At the top, a status bar shows '[---] 0 L: 1+ 0 1/388] \*(0 /12284b) 0115 0x073 [\*)[X]'. Below this, the 'menu' is displayed, starting with 'hell\_patterns=0'. The menu contains several sections of help text, including explanations of macros like %%, %f, %p, %d, %s, %t, %u, %view, and %if. It also shows two command templates: '+ ! t t' for 'Do something on the current file' and '+ t t' for 'Do something on the tagged files'. At the bottom, a light blue bar contains 10 numbered menu items: 1Help, 2Save, 3Mark, 4Replac, 5Copy, 6Move, 7Search, 8Delete, 9PullDn, and 10Quit. A mouse cursor is visible over the text 'then quoting on (default)' in the menu.

```
mc [aachernyatin@achernyatin]:~ — /usr/bin/mc -P /tmp/mc.pwd.pQAJig
[---] 0 L: 1+ 0 1/388] *(0 /12284b) 0115 0x073 [*)[X]
hell_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 unform
#
# If the format letter is in uppercase, it refers to the other panel
#
# With a number followed the % character you can then quoting on (default)
# and off. For example:
# %f quote expanded macro
# %if ditto
# %of 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
    $CMD "$i"
  done
1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit
```

Рисунок 18: Просмотр файла меню



## 2.19 Работа с Midnight Commander

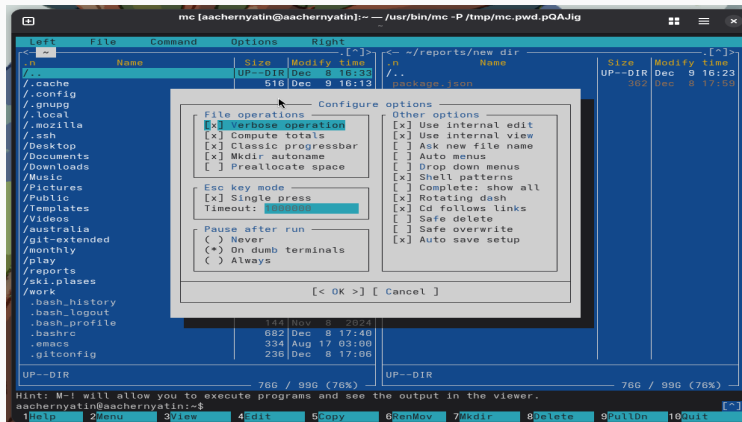


Рисунок 19: Конфигурация

## 2.20 Работа с Midnight Commander

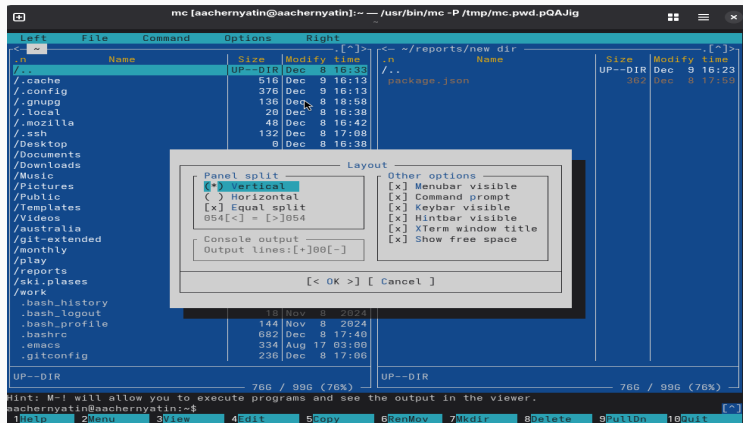


Рисунок 20: Внешний вид

## 2.21 Работа с Midnight Commander

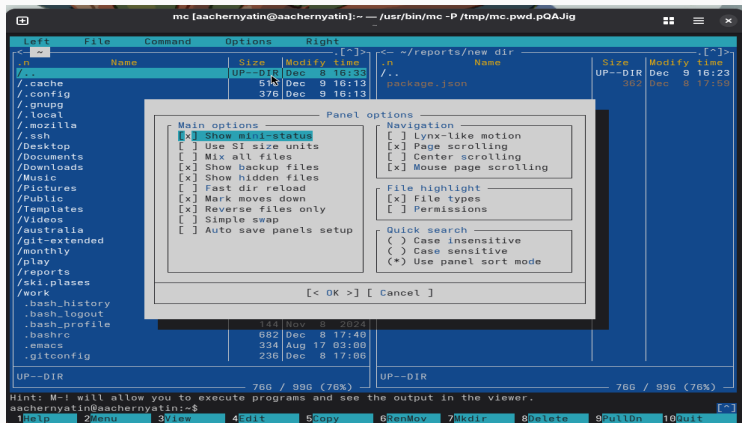


Рисунок 21: Настройки панелей

## 2.22 Работа с Midnight Commander

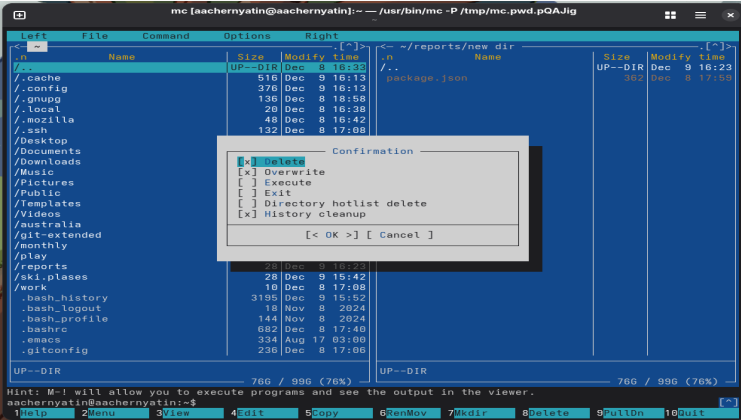


Рисунок 22: Подтверждение

## 2.23 Работа с Midnight Commander

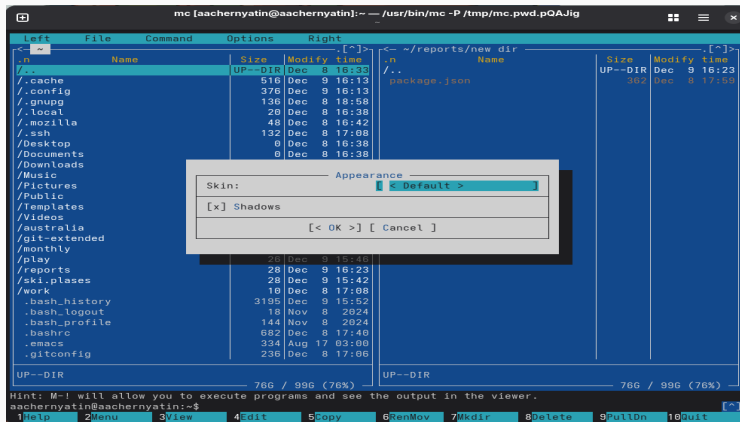


Рисунок 23: Оформление

## 2.24 Работа с Midnight Commander

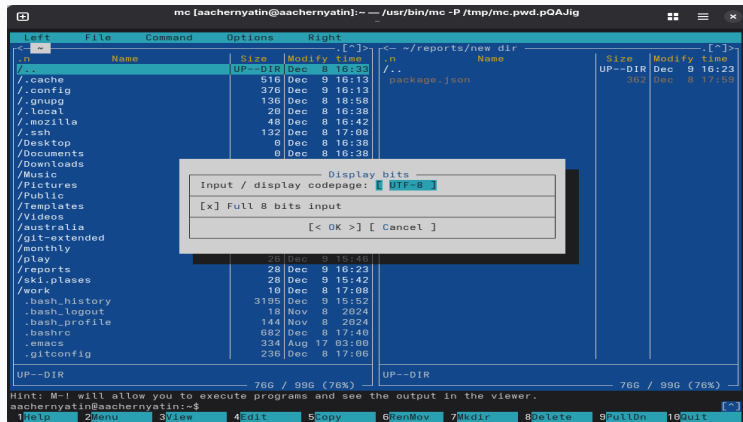


Рисунок 24: Кодировка символов

## 2.25 Работа с Midnight Commander

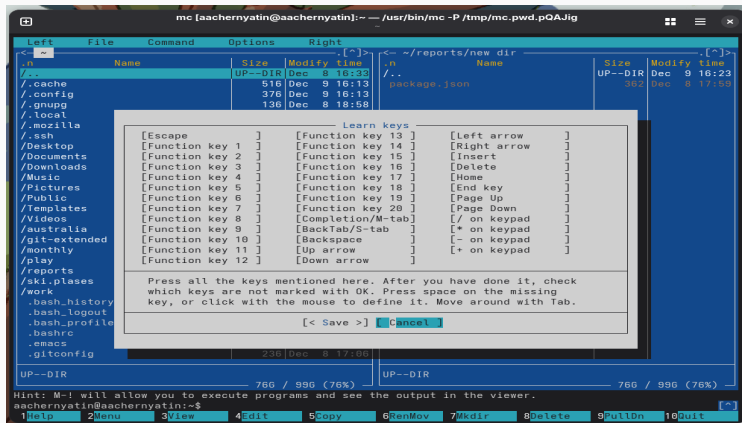
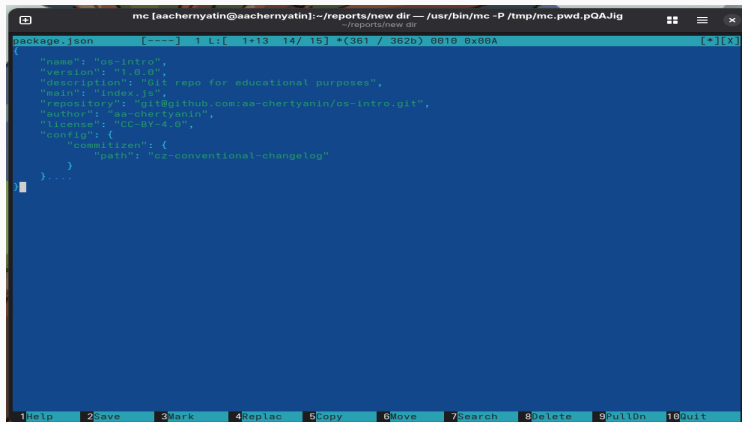


Рисунок 25: Распознавание клавиш

## 2.26 Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander (MC) interface. The title bar indicates the user is 'aachernyatin@aachernyatin' and the current directory is '~/reports/new\_dir'. The file being edited is 'package.json'. The status bar at the top shows the file size as 361 bytes. The main editing area displays the following JSON content:

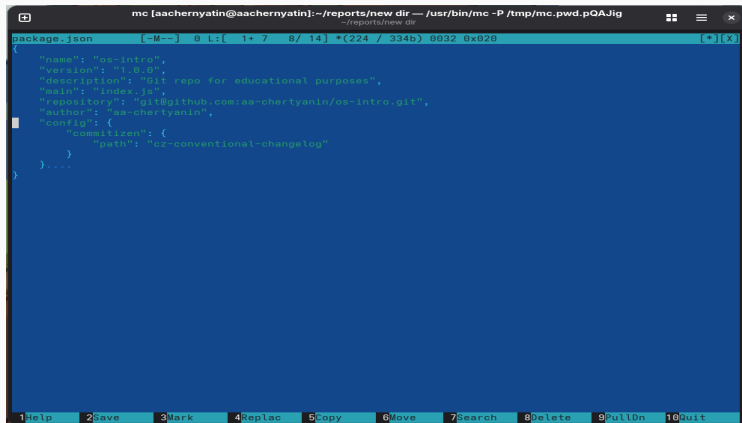
```
{
  "name": "os-intro",
  "version": "1.0.0",
  "description": "Git repo for educational purposes",
  "main": "index.js",
  "repository": "git@github.com:aachernyatin/os-intro.git",
  "author": "aachernyatin",
  "license": "CC-BY-4.0",
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  }
}
```

The bottom status bar contains a menu with the following items: 1Help, 2Save, 3Mark, 4Replac, 5Copy, 6Move, 7Search, 8Delete, 9PullDn, 10Quit.

Рисунок 26: Файл с текстом



## 2.27 Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander (mc) interface. The title bar indicates the current directory is `~/reports/new dir` and the file being edited is `package.json`. The file content is a JSON object for a package named "os-intro". The interface includes a status bar at the bottom with menu options: 1Help, 2Save, 3Mark, 4Replac, 5Copy, 6Move, 7Search, 8Delete, 9PullDn, 10Quit.

```
package.json  [-M--]  0 L:[ 1+ 7  8/ 14] *(224 / 334b) 0032 0x020  [*][X]
{
  "name": "os-intro",
  "version": "1.0.0",
  "description": "Git repo for educational purposes",
  "main": "index.js",
  "repository": "git@github.com:aa-chertyanin/os-intro.git",
  "author": "aa-chertyanin",
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  }
}....
```

1Help 2Save 3Mark 4Replac 5Copy 6Move 7Search 8Delete 9PullDn 10Quit

Рисунок 27: Файл с текстом

## 2.28 Работа с редактором Midnight Commander

```
mccachernyatin@accheryatinin:~/reports/new_dir — /usr/bin/mc -P /tmp/mc.pwd.pQAjlg
```

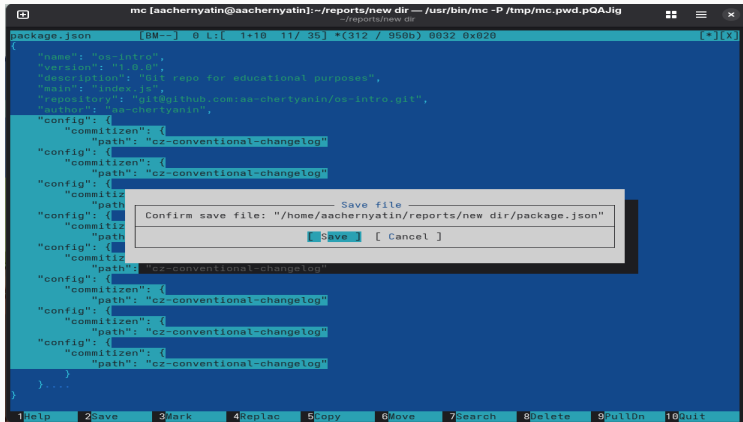
```
package.json [BM--] 0 L:[ 1+18 11/ 35] *(312 / 950b) 8032 0x020 [+][X]
```

```
{  
  "name": "os-intro",  
  "version": "1.0.0",  
  "description": "Git repo for educational purposes",  
  "main": "index.js",  
  "repository": "git@github.com:sachertyanin/os-intro.git",  
  "author": "sa-chertyanin",  
  "config": {  
    "commitizen": {  
      "path": "cz-conventional-changelog"  
    }  
  },  
  "config": {  
    "commitizen": {  
      "path": "cz-conventional-changelog"  
    }  
  },  
  "config": {  
    "commitizen": {  
      "path": "cz-conventional-changelog"  
    }  
  },  
  "config": {  
    "commitizen": {  
      "path": "cz-conventional-changelog"  
    }  
  },  
  "config": {  
    "commitizen": {  
      "path": "cz-conventional-changelog"  
    }  
  },  
  "config": {  
    "commitizen": {  
      "path": "cz-conventional-changelog"  
    }  
  },  
  "config": {  
    "commitizen": {  
      "path": "cz-conventional-changelog"  
    }  
  },  
  "config": {  
    "commitizen": {  
      "path": "cz-conventional-changelog"  
    }  
  },  
  "config": {  
    "commitizen": {  
      "path": "cz-conventional-changelog"  
    }  
  },  
  "config": {  
    "commitizen": {  
      "path": "cz-conventional-changelog"  
    }  
  },  
}
```

```
1 Help     2 Save     3 Mark     4 Replac   5 Copy     6 Move     7 Search   8 Delete   9 PullDn  10 Quit
```

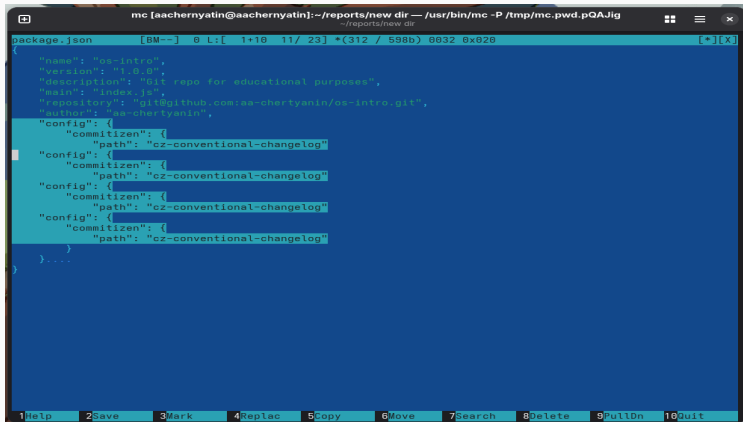
### Рисунок 28: Копирование фрагмента

## 2.29 Работа с редактором Midnight Commander



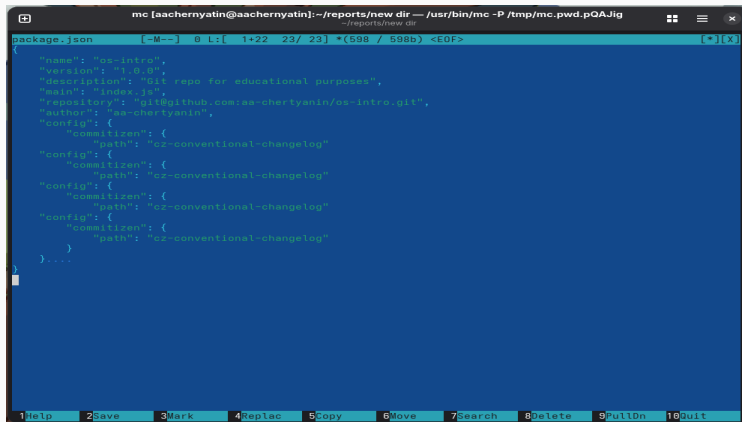
### Рисунок 29: Сохранение

## 2.30 Работа с редактором Midnight Commander



### Рисунок 30: Отмена

## 2.31 Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander (MC) interface. The title bar indicates the current directory is `~/reports/new_dir` and the file being edited is `package.json`. The status bar at the top shows file statistics: `[-M--] 0 L: 1+22 23/ 23 *(598 / 598b) <EOF>`. The main editing area displays the JSON content of `package.json`, which includes fields for name, version, description, main script, repository, author, and a series of nested `commitizen` and `config` objects. The cursor is positioned at the end of the file, after the closing brace of the last `config` object. The bottom status bar contains a menu with 10 items: 1Help, 2Save, 3Mark, 4Replac, 5Copy, 6Move, 7Search, 8Delete, 9PullDn, and 10Quit.

```
package.json [-M--] 0 L: 1+22 23/ 23 *(598 / 598b) <EOF> [*][X]
{
  "name": "os-intro",
  "version": "1.0.0",
  "description": "Git repo for educational purposes",
  "main": "index.js",
  "repository": "git@github.com:aa-chertyanin/os-intro.git",
  "author": "aa-chertyanin",
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  },
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  },
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  },
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  }
}
}
```

Рисунок 31: Переход в конец файла

## 2.32 Работа с редактором Midnight Commander

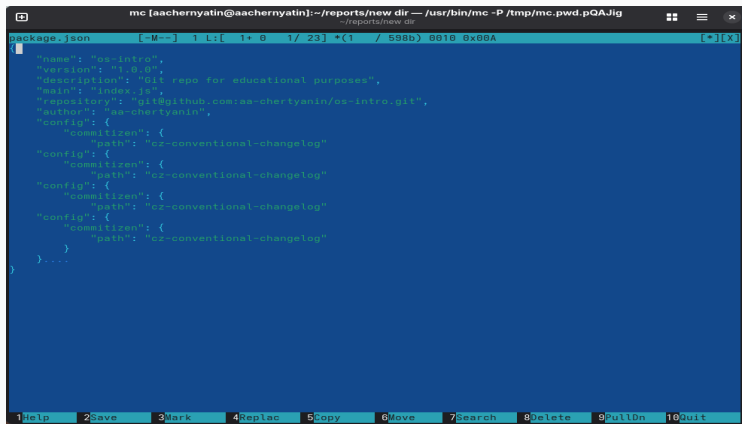
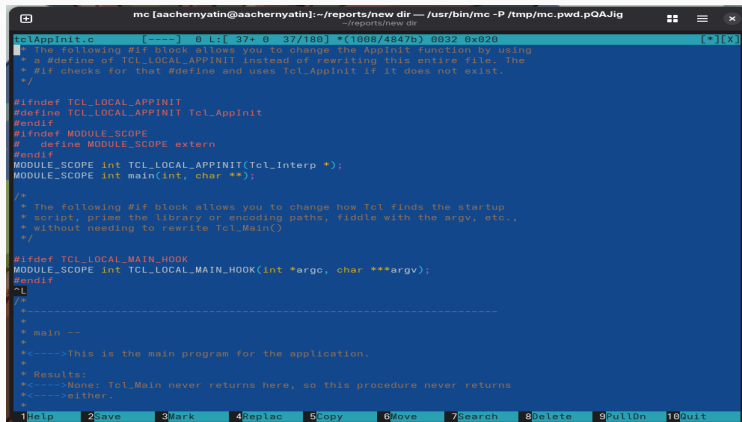


Рисунок 32: Переход в начало файла

## 2.33 Работа с редактором Midnight Commander



```
mc [aachernyatin@aachernyatin]:~/reports/new_dir — /usr/bin/mc -P /tmp/mc.pwd.pQAJig
~/reports/new_dir
tclAppinit.c  [----]  0 L: [ 37+ 0 37/180] *(1008/4847b) 0032 0x020 [*)(x]
/*
 * The following #if block allows you to change the Appinit function by using
 * a #define of TCL_LOCAL_APPINIT instead of rewriting this entire file. The
 * #if checks for that #define and uses Tcl_Appinit if it does not exist.
 */

#ifdef TCL_LOCAL_APPINIT
#define TCL_LOCAL_APPINIT Tcl_Appinit
#endif
#ifdef MODULE_SCOPE
# define MODULE_SCOPE extern
#endif
MODULE_SCOPE int TCL_LOCAL_APPINIT(Tcl_Interp *);
MODULE_SCOPE int main(int, char **);

/*
 * The following #if block allows you to change how Tcl finds the startup
 * script, prime the library or encoding paths, fiddle with the argv, etc.,
 * without needing to rewrite Tcl_Main()
 */

#ifdef TCL_LOCAL_MAIN_HOOK
MODULE_SCOPE int TCL_LOCAL_MAIN_HOOK(int *argc, char ***argv);
#endif
^L
/*
 * -----
 *
 * main --
 *
 * <----->This is the main program for the application.
 *
 * Results:
 * <----->None: Tcl_Main never returns here, so this procedure never returns
 * <----->either.
 *
1Help  2Save  3Mark  4Replac  5Copy  6Move  7Search  8Delete  9PullDn  10Quit
```

Рисунок 33: Файл с программой

## 2.34 Работа с редактором Midnight Commander

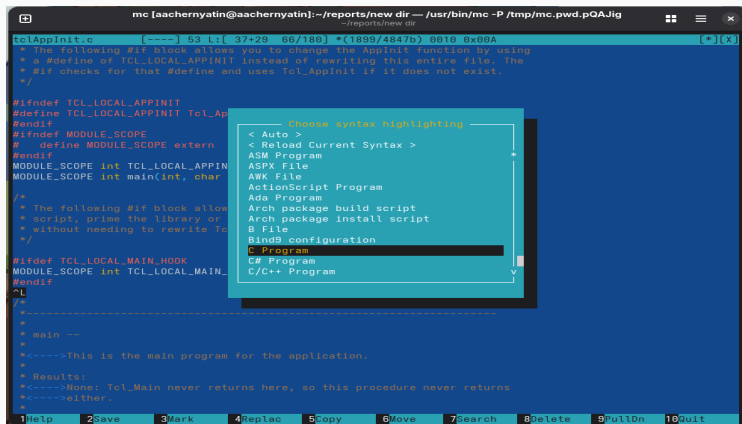


Рисунок 34: Цветовыделение синтаксиса



### **3. Выводы по проделанной работе**

---

## 3.1 Вывод

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