

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

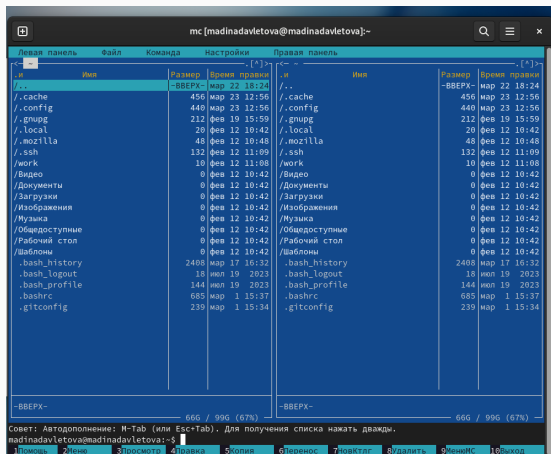


Рис. 1: Запуск mc

Работа с Midnight Commander

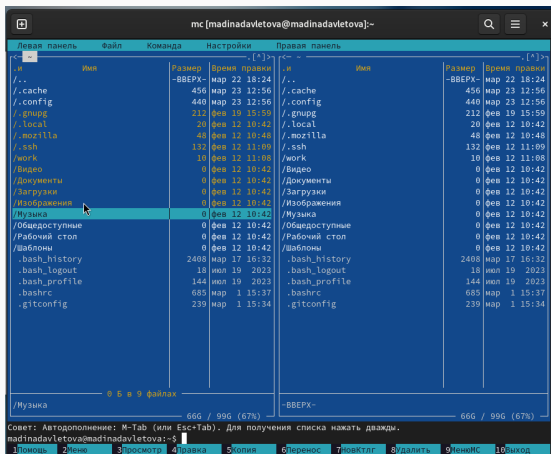


Рис. 2: Выделение

Работа с Midnight Commander

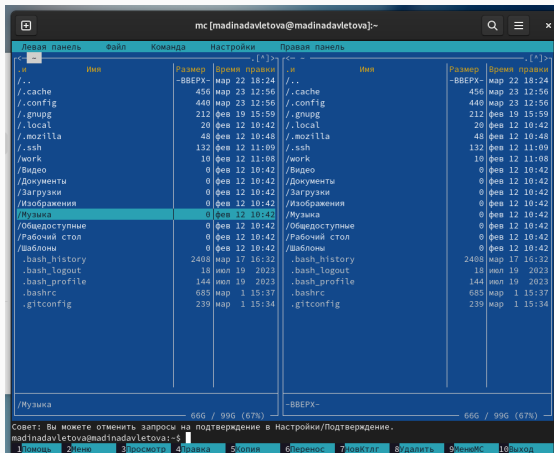


Рис. 3: Отмена

Работа с Midnight Commander

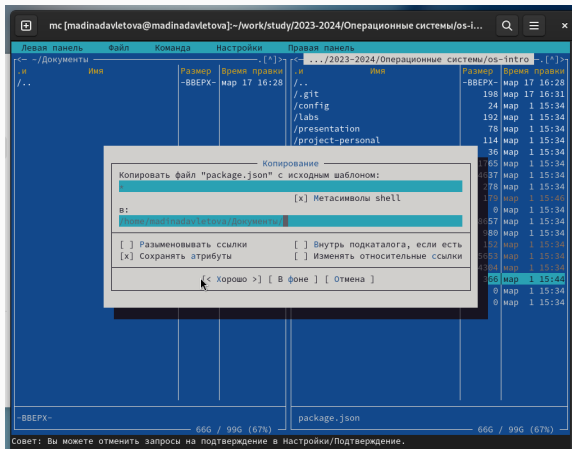


Рис. 4: Копирование

Работа с Midnight Commander

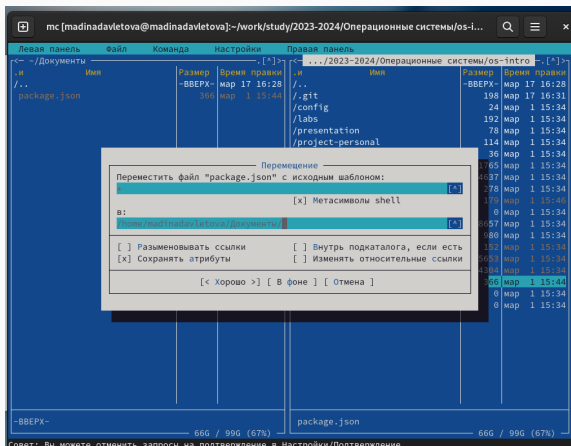


Рис. 5: Перемещение

Работа с Midnight Commander

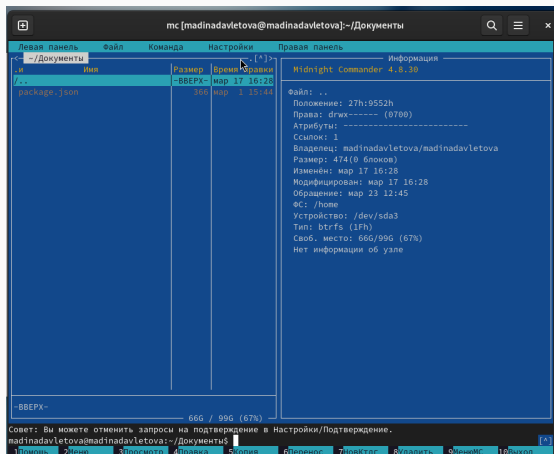


Рис. 6: Информация

Работа с Midnight Commander

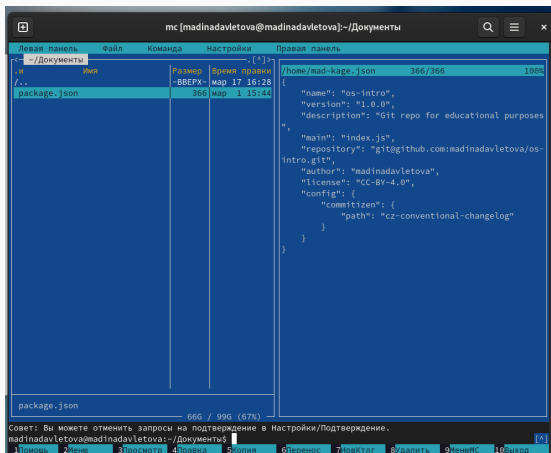


Рис. 7: Быстрый просмотр

Работа с Midnight Commander

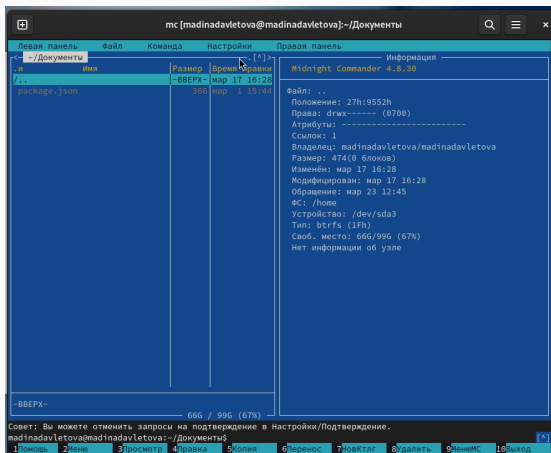


Рис. 8: Информация

Работа с Midnight Commander

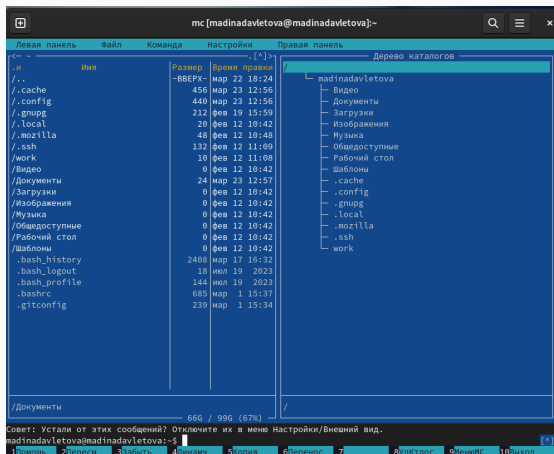
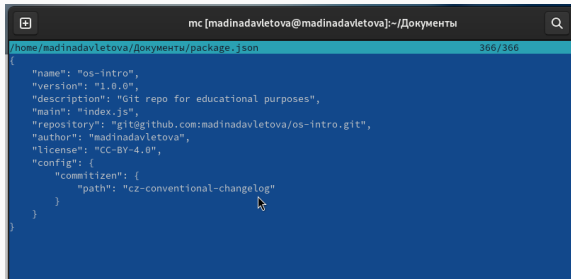


Рис. 9: Дерево каталогов

Работа с Midnight Commander

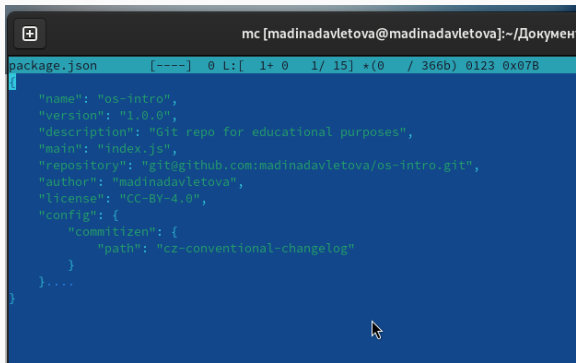


The screenshot shows the Midnight Commander interface. The title bar indicates the user is 'mc [madinadavletova@madinadavletova]: ~/Документы'. The current directory is '/home/madinadavletova/Документы/package.json', and the file size is '366/366'. The main window displays the JSON content of the file, which is a package configuration for 'os-intro'. A mouse cursor is pointing at the 'path' property within the 'commitizen' configuration.

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

Рис. 10: Просмотр содержимого текстового файла

Работа с Midnight Commander



The screenshot shows the Midnight Commander (mc) interface. The title bar at the top reads "mc [madinadavletova@madinadavletova]:~/Документ". Below the title bar, the file "package.json" is open, and its metadata is displayed: "[----] 0 L: [1+ 0 1/ 15] *(0 / 366b) 0123 0x07B". The main area shows the JSON content of the file, which is a package configuration for "os-intro". A mouse cursor is visible at the bottom right of the text area.

```
package.json [----] 0 L: [ 1+ 0 1/ 15] *(0 / 366b) 0123 0x07B
{
  "name": "os-intro",
  "version": "1.0.0",
  "description": "Git repo for educational purposes",
  "main": "index.js",
  "repository": "git@github.com:madinadavletova/os-intro.git",
  "author": "madinadavletova",
  "license": "CC-BY-4.0",
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  }...
}
```

Рис. 11: Отредактируем содержимое текстового файла без сохранения результатов

Работа с Midnight Commander

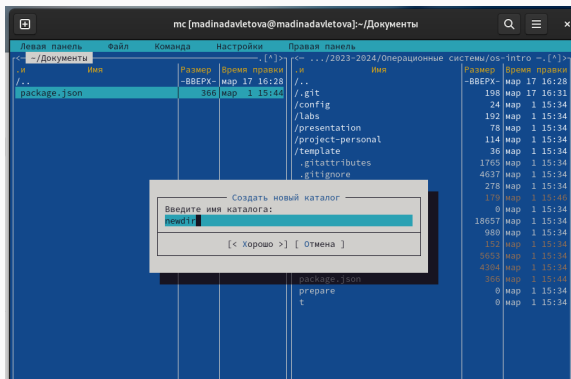


Рис. 12: Создание каталога

Работа с Midnight Commander

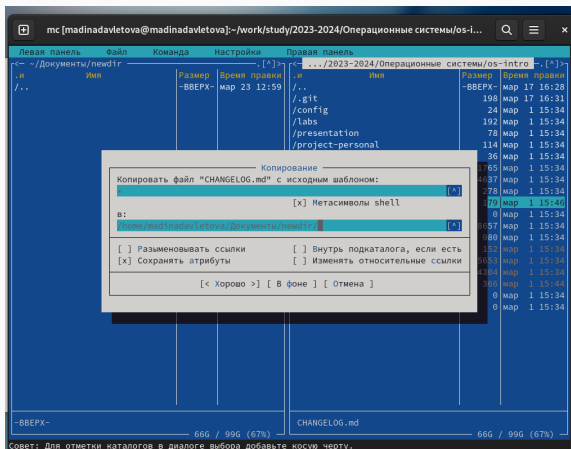


Рис. 13: Копирование в файлов в созданный каталог

The screenshot shows a Windows terminal window with a blue background. At the top, the title bar reads "mc [madinadavletova@madinadavletova:~/work/survey/2023-2024/Операционные системы/os-...". The terminal content is divided into two main sections. The left section shows a directory listing for the path "~/Документы/powdir". It lists files and folders with their sizes and modification dates. The right section shows a similar listing for the path ".../2023-2024/Операционные системы/os-intro". A search bar is positioned at the top of the terminal window, displaying the text "Поиск файла". Below the search bar, there are two tabs: "От каталога:" and "Содержимое:". The "От каталога:" tab is active, showing a list of files and folders. The "Содержимое:" tab is also visible, showing a list of files and folders. The status bar at the bottom of the terminal window displays the file size and percentage of the directory listing: "666 / 996 (67%)".

17/38

Работа с Midnight Commander

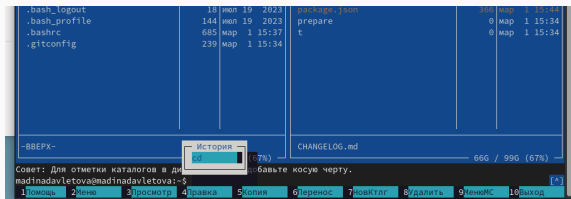


Рис. 15: История команд

Работа с Midnight Commander

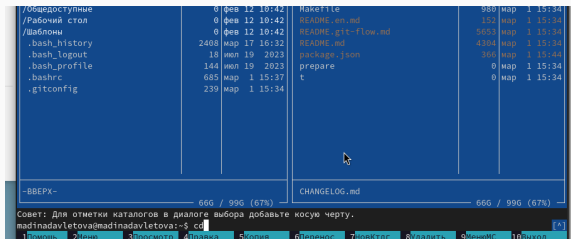


Рис. 16: Переход в домашний каталог

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 top showing "1 t: 1*16 17/378 *(732 /11821b) 0010 0x00A" and a close button. The menu text is as follows:

```
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 Run 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 turn 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
```

At the bottom of the window is a toolbar with 10 icons and their labels: 1. Помощь (Help), 2. Сохранить (Save), 3. Поиск (Find), 4. Имена (Names), 5. Скопия (Copy), 6. Перенести (Move), 7. Повтор (Repeat), 8. Удалить (Delete), 9. Ненавс (Not), 10. Выход (Exit).

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



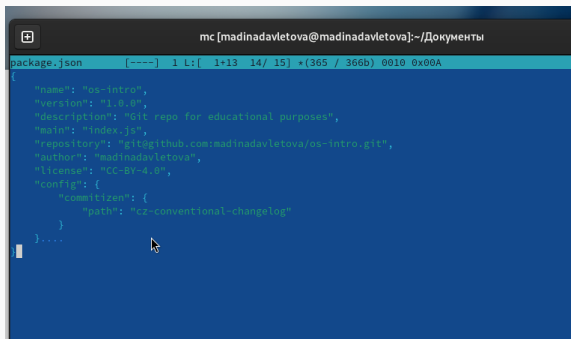
Рис. 24: Кодировка символов

Работа с Midnight Commander



Рис. 25: Распознавание клавиш

Работа с редактором Midnight Commander

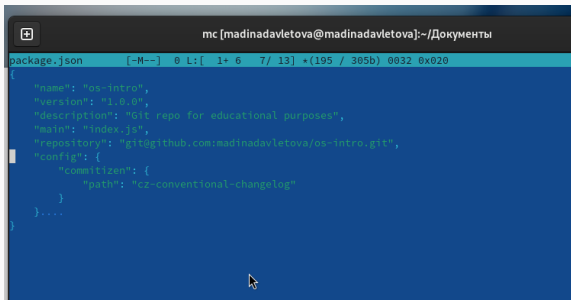


The screenshot shows the Midnight Commander (mc) interface. The title bar at the top reads "mc [madinadavletova@madinadavletova]: ~/Документы". Below the title bar, the file "package.json" is open, and its content is displayed in a monospaced font on a dark blue background. The file content is a JSON object with the following fields: "name", "version", "description", "main", "repository", "author", "license", and "config". The "config" field contains a "commitizen" object with a "path" field. The cursor is positioned at the end of the first line of the JSON object.

```
package.json  [----]  1 L:[ 1+13  14/ 15] *(365 / 366b) 0010 0x00A
{
  "name": "os-intro",
  "version": "1.0.0",
  "description": "Git repo for educational purposes",
  "main": "index.js",
  "repository": "git@github.com:madinadavletova/os-intro.git",
  "author": "madinadavletova",
  "license": "CC-BY-4.0",
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  }
}
```

Рис. 26: Файл с текстом

Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander (mc) interface. The title bar at the top reads "mc [madinadavletova@madinadavletova]:~/Документы". Below the title bar, the filename "package.json" is displayed in a light blue bar, followed by file statistics: "[-M--] 0 L:[1+ 6 7/ 13] *(195 / 305b) 0032 0x020". The main editing area has a dark blue background and 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:madinadavletova/os-intro.git",
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  }
}
```

A mouse cursor is visible at the bottom center of the editing area.

Рис. 27: Файл с текстом


```
mc [madinadavletova@madinadavletova]:~/Документы
package.json [BM--] 0 L:[ 1+10 11/ 25] *(293 / 599b) 0032 0x020
{
  "name": "os-intro",
  "version": "1.0.0",
  "description": "Git repo for educational purposes",
  "main": "index.js",
  "repository": "git@github.com:madinadavletova/os-intro.git",
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  },
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  },
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  },
  "config": {
    "commitizen": {
      "path": "cz-conventional-changelog"
    }
  },
  }....
}
```

Рис. 28: Копирование фрагмента

Работа с редактором Midnight Commander

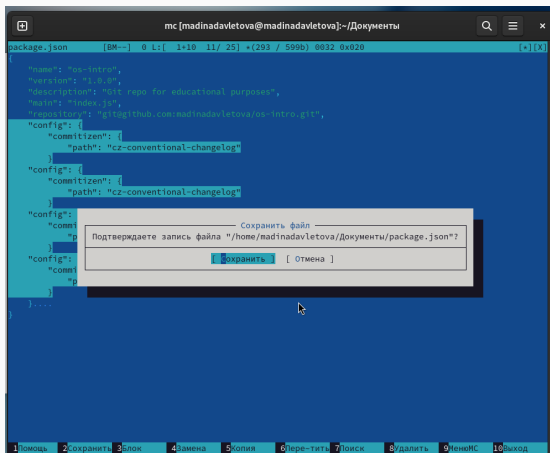


Рис. 29: Сохранение

Работа с редактором Midnight Commander

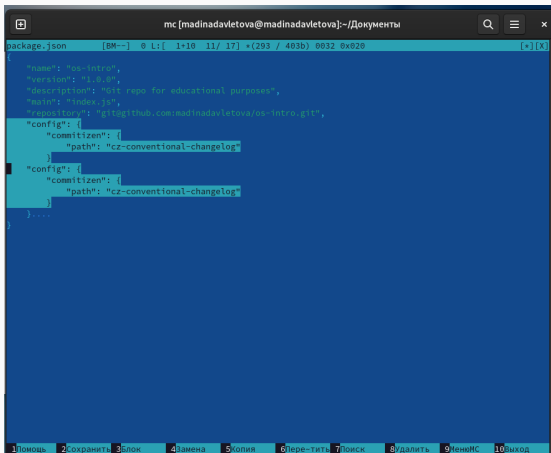


Рис. 30: Отмена

Работа с редактором Midnight Commander

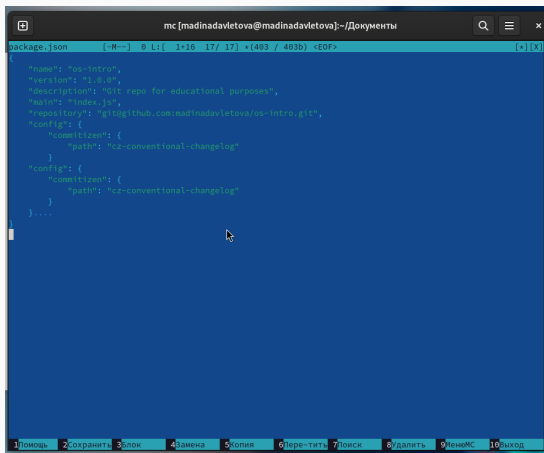


Рис. 31: Переход в конец файла

Работа с редактором Midnight Commander

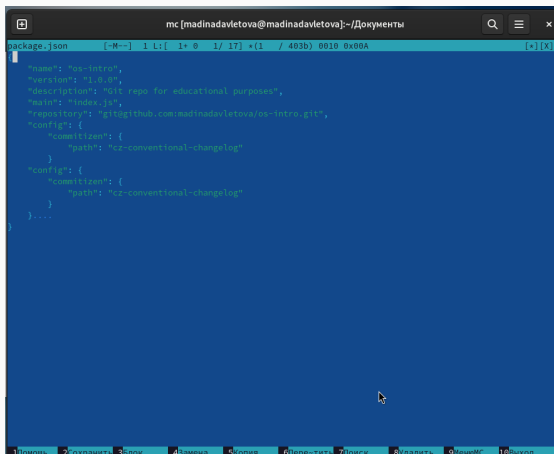
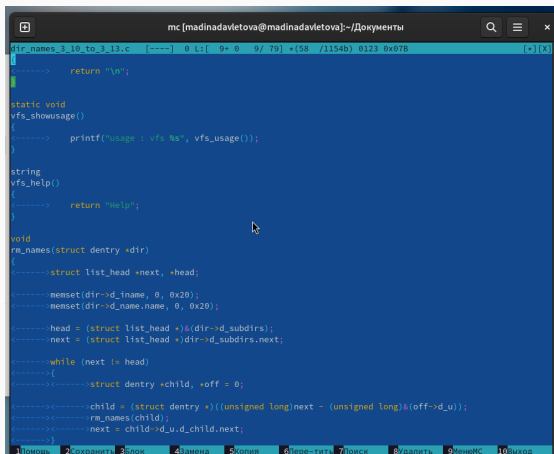


Рис. 32: Переход в начало файла

Работа с редактором Midnight Commander



```
mc [madinadavletova@madinadavletova]:~/Документы
dir_names_3_10_to_3_13.c  [----]  0 L: [  9+ 0  9/ 79] *(58 /1154b) 0123 0x07b  [.*][X]

[-----> return "\n";
]

static void
vfs_showusage()
{
[-----> printf("usage : vfs %s", vfs_usage());
}

string
vfs_help()
{
[-----> return "Help";
}

void
rm_names(struct dentry *dir)
{
[-----> struct list_head *next, *head;

[-----> memset(dir->d_name, 0, 0x20);
[-----> memset(dir->d_name.name, 0, 0x20);

[-----> head = (struct list_head *) &(dir->d_subdirs);
[-----> next = (struct list_head *) dir->d_subdirs.next;

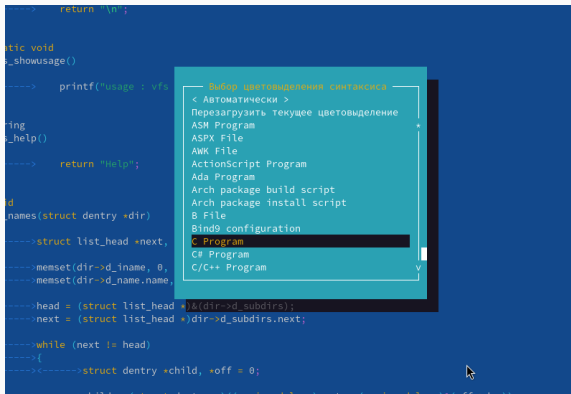
[-----> while (next != head)
[-----> {
[-----> [-----> struct dentry *child, *off = 0;

[-----> [-----> child = (struct dentry *) ((unsigned long) next - (unsigned long) &(off->d_u));
[-----> [-----> rm_names(child);
[-----> [-----> next = child->d_u.d_child.next;
[-----> }

1Помощь 2Сохранить 3Блок 4Замена 5Копия 6Пере-титъ 7Панск 8Удалить 9МенюМС 10Выход
```

Рис. 33: Файл с программой

Работа с редактором Midnight Commander



The screenshot shows the Midnight Commander text editor with a dark blue background. The code being edited is in C and includes comments in Russian. A context menu is open over the code, titled "Выбор цветовыделения синтаксиса" (Syntax highlighting selection). The menu options are: "< Автоматически >" (Automatically), "Перезагрузить текущее цветовыделение" (Reload current syntax highlighting), "ASM Program", "ASPX File", "AWK File", "ActionScript Program", "Ada Program", "Arch package build script", "Arch package install script", "B File", "Bind9 configuration", "C Program" (which is highlighted with a black bar), "C# Program", and "C/C++ Program". The code in the background includes functions like `static void showusage()`, `printf("usage : vfs")`, `return "Help";`, and a loop structure with `while (next != head)`.

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.