Отчет по лабораторной работе №4

Алмазова Елизавета Андреевна

ОТЧЕТ ПО ЛАБОРАТОРНОЙ РАБОТЕ №4

Цель работы и задание

Цель данной лабораторной работы - приобретение практических навыков взаимодействия пользователя с системой посредством командной строки. Задание: 1. Определите полное имя вашего домашнего каталога. Далее относительно этого каталога будут выполняться последующие упражнения. 2. Выполните следующие действия: 1. Перейдите в каталог /tmp. 2. Выведите на экран содержимое каталога /tmp. Для этого используйте команду ls с

Ход работы

Определение имени домашнего каталога и переход в /tmp

```
[eaalmazova@fedora ~]$ pwd
/home/eaalmazova
[eaalmazova@fedora ~]$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos  work
[eaalmazova@fedora ~]$ cd /
[eaalmazova@fedora /]$ ls
bin  boot  dev  etc  home  lib  lib64  lost+found  media  mnt  opt  proc  root  run  sbin  srv  sys  tmp  usr  var
[eaalmazova@fedora /]$ /tmp
bash: /tmp: Is a directory
[eaalmazova@fedora /]$ cd /tmp
```

Рисунок 1 - Полное имя домашнего каталога и переход в /tmp

Вывод содержимого каталога /tmp

Команда ls вывела список имен видимых файлов и подкаталогов, ls -a вывела имена видимых и скрытых файлов и подкаталогов, ls -aL вывела список имен видимых и скрытых файлов и каталогов, а для символических ссылок отобразило информацию о файле, на который они ссылаются, ls -al вывела список видимых и скрытых файлов и каталогов, а также подробную информацию о них (подробнее см. в теоретическом введении), ls

```
[eaalmazova@fedora tmp]$ ls
systemd-private-1168dd2e6dbc45bb845acdac3c746286-chronyd.service-2bfdBN
systemd-private-1168dd2e6dbc45bb845acdac3c746286-colord.service-u0roKK
systemd-private-1168dd2e6dbc45bb845acdac3c746286-dbus-broker.service-eWqjiF
systemd-private-1168dd2e6dbc45bb845acdac3c746286-fwupd.service-Wo598P
systemd-private-1168dd2e6dbc45bb845acdac3c746286-geoclue.service-Rsh3cP
systemd-private-1168dd2e6dbc45bb845acdac3c746286-low-memory-monitor.service-Rd5e2O
systemd-private-1168dd2e6dbc45bb845acdac3c746286-ModemManager.service-Ar3Gvk
systemd-private-1168dd2e6dbc45bb845acdac3c746286-power-profiles-daemon.service-a1E7Z6
systemd-private-1168dd2e6dbc45bb845acdac3c746286-rtkit-daemon.service-RnrmOx
systemd-private-1168dd2e6dbc45bb845acdac3c746286-switcheroo-control.service-yj0bir
systemd-private-1168dd2e6dbc45bb845acdac3c746286-systemd-logind.service-WEvU3g
systemd-private-1168dd2e6dbc45bb845acdac3c746286-systemd-oomd.service-xNQo5i
systemd-private-1168dd2e6dbc45bb845acdac3c746286-systemd-resolved.service-EJzoe2
systemd-private-1168dd2e6dbc45bb845acdac3c746286-upower.service-YEp96V
[eaalmazova@fedora tmp]$ ls -a
.
..
.font-unix
.ICE-unix
systemd-private-1168dd2e6dbc45bb845acdac3c746286-chronyd.service-2bfdBN
systemd-private-1168dd2e6dbc45bb845acdac3c746286-colord.service-u0roKK
systemd-private-1168dd2e6dbc45bb845acdac3c746286-dbus-broker.service-eWqjiF
systemd-private-1168dd2e6dbc45bb845acdac3c746286-fwupd.service-Wo598P
systemd-private-1168dd2e6dbc45bb845acdac3c746286-geoclue.service-Rsh3cP
systemd-private-1168dd2e6dbc45bb845acdac3c746286-low-memory-monitor.service-Rd5e2O
systemd-private-1168dd2e6dbc45bb845acdac3c746286-ModemManager.service-Ar3Gvk
systemd-private-1168dd2e6dbc45bb845acdac3c746286-power-profiles-daemon.service-a1E7Z6
systemd-private-1168dd2e6dbc45bb845acdac3c746286-rtkit-daemon.service-RnrmOx
systemd-private-1168dd2e6dbc45bb845acdac3c746286-switcheroo-control.service-yj0bir
systemd-private-1168dd2e6dbc45bb845acdac3c746286-systemd-logind.service-WEvU3g
systemd-private-1168dd2e6dbc45bb845acdac3c746286-systemd-oomd.service-xNQo5i
systemd-private-1168dd2e6dbc45bb845acdac3c746286-systemd-resolved.service-EJzoe2
systemd-private-1168dd2e6dbc45bb845acdac3c746286-upower.service-YEp96V
.Test-unix
.X0-lock
.X1024-lock
.X1025-lock
.X11-unix
.X1-lock
.XIM-unix
[eaalmazova@fedora tmp]$ ls -aL
.
..
.font-unix
.ICE-unix
systemd-private-1168dd2e6dbc45bb845acdac3c746286-chronyd.service-2bfdBN
systemd-private-1168dd2e6dbc45bb845acdac3c746286-colord.service-u0roKK
systemd-private-1168dd2e6dbc45bb845acdac3c746286-dbus-broker.service-eWqjiF
systemd-private-1168dd2e6dbc45bb845acdac3c746286-fwupd.service-Wo598P
systemd-private-1168dd2e6dbc45bb845acdac3c746286-geoclue.service-Rsh3cP
systemd-private-1168dd2e6dbc45bb845acdac3c746286-low-memory-monitor.service-Rd5e2O
systemd-private-1168dd2e6dbc45bb845acdac3c746286-ModemManager.service-Ar3Gvk
systemd-private-1168dd2e6dbc45bb845acdac3c746286-power-profiles-daemon.service-a1E7Z6
systemd-private-1168dd2e6dbc45bb845acdac3c746286-rtkit-daemon.service-RnrmOx
systemd-private-1168dd2e6dbc45bb845acdac3c746286-switcheroo-control.service-yj0bir
systemd-private-1168dd2e6dbc45bb845acdac3c746286-systemd-logind.service-WEvU3g
systemd-private-1168dd2e6dbc45bb845acdac3c746286-systemd-oomd.service-xNQo5i
systemd-private-1168dd2e6dbc45bb845acdac3c746286-systemd-resolved.service-EJzoe2
systemd-private-1168dd2e6dbc45bb845acdac3c746286-upower.service-YEp96V
.Test-unix
.X0-lock
```

Рисунок 2 - Вывод команд ls, ls-a, ls -aL

Рисунок 3 - Вывод команд ls -aL (продолжение), ls -al, ls -alF

Поиск подкаталога cron и определение владельца файлов домашнего каталога

Рисунок 4 - Содержимое /var/spool и ~

Создание и удаление каталогов

Я создала с помощью команды mkdir каталог newdir и его подкаталог morefun, а также создала (mkdir) и удалила 3 каталога: (rmdir) letters, memos, misk.

```
[eaalmazova@fedora ~]$ mkdir newdir
[eaalmazova@fedora ~]$ ls
Desktop  Documents  Downloads  Music  newdir  Pictures  Public  Templates  Videos  work
[eaalmazova@fedora ~]$ cd newdir
[eaalmazova@fedora newdir]$ mkdir morefun
[eaalmazova@fedora newdir]$ ls
morefun
[eaalmazova@fedora newdir]$ cd ~
[eaalmazova@fedora ~]$ mkdir letters memos misk
[eaalmazova@fedora ~]$ ls
Desktop  Documents  Downloads  letters  memos  misk  Music  newdir  Pictures  Public  Templates  Videos  work
[eaalmazova@fedora ~]$ rmdir letters memos misk
[eaalmazova@fedora ~]$ ls
Desktop  Documents  Downloads  Music  newdir  Pictures  Public  Templates  Videos  work
[eaalmazova@fedora ~]$ rm newdir
rm: cannot remove 'newdir': Is a directory
[eaalmazova@fedora ~]$ rmdir newdir/morefun
[eaalmazova@fedora ~]$ ls newdir
[eaalmazova@fedora ~]$ cd newdir
[eaalmazova@fedora newdir]$ ls
[eaalmazova@fedora newdir]$ cd ~
[eaalmazova@fedora ~]$ rm -r newdir
[eaalmazova@fedora ~]$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos  work
```

Рисунок 5 - Создание и удаление каталогов

Получение справки по команде ls

Man ls показало: опция R покажет содержимое подкаталогов, набор опция -clt отсортирует файлы по времени последнего изменения и выведет подробное описание.

```
-l      use a long listing format

-L, --dereference
        when showing file information for a symbolic link, show information for the file the link references rather than for the link itself

-m      fill width with a comma separated list of entries

-n, --numeric-uid-gid
        like -l, but list numeric user and group IDs

-N, --literal
        print entry names without quoting

-o      like -l, but do not list group information

-p, --indicator-style=slash
        append / indicator to directories

-q, --hide-control-chars
        print ? instead of nongraphic characters

--show-control-chars
        show nongraphic characters as-is (the default, unless program is 'ls' and output is a terminal)

-Q, --quote-name
        enclose entry names in double quotes

--quoting-style=WORD
        use quoting style WORD for entry names: literal, locale, shell, shell-always, shell-escape, shell-escape-always, c, escape (overrides QUOT-
        ING_STYLE environment variable)

-r, --reverse
        reverse order while sorting

-R, --recursive
        list subdirectories recursively

-s, --size
        print the allocated size of each file, in blocks

-S      sort by file size, largest first
```

Рисунок 6 - Справка о команде ls (включает опцию R)

```
-c      with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise:
        sort by ctime, newest first

-C      list entries by columns

--color[=WHEN]
        colorize the output; WHEN can be 'always' (default if omitted), 'auto', or 'never'; more info below

-d, --directory
        list directories themselves, not their contents

-D, --dired
        generate output designed for Emacs' dired mode

-f      do not sort, enable -aU, disable -ls --color

-F, --classify
        append indicator (one of */=>@|) to entries

--file-type
        likewise, except do not append '*'

--format=WORD
        across -x, commas -m, horizontal -x, long -l, single-column -1, verbose -l, vertical -C

--full-time
        like -l --time-style=full-iso

-g      like -l, but do not list owner

--group-directories-first
        group directories before files;

        can be augmented with a --sort option, but any use of --sort=none (-U) disables grouping

-G, --no-group
        in a long listing, don't print group names

-h, --human-readable
        with -l and -s, print sizes like 1K 234M 2G etc.

--si    likewise, but use powers of 1000 not 1024

-H, --dereference-command-line
        follow symbolic links listed on the command line

--dereference-command-line-symlink-to-dir
        follow each command line symbolic link

        that points to a directory

--hide=PATTERN
        do not list implied entries matching shell PATTERN (overridden by -a or -A)
```

Рисунок 7 - Справка о команде ls (с опцией c, а точнее clt и cl, а также –hide)

```
-l      use a long listing format
```

Рисунок 8 - Справка о команде ls (с опцией l)

```
-a, --all
        do not ignore entries starting with .
```

Рисунок 9 - Справка о команде ls (с опцией а)

Получение справки по основным командам

С помощью команды man я просмотрела описание следующих команд: cd (рис.10), pwd (рис.11), mkdir (рис.12), rmdir (рис.13), rm (рис.14) (рис.15).

```
cd [-L|[-P [-e]] [-@]] [dir]
      Change the current directory to dir.  if dir is not supplied, the value of the HOME shell variable is the default.   Any  additional  argu-
      ments  following dir are ignored.  The variable CDPATH defines the search path for the directory containing dir: each directory name in CD-
      PATH is searched for dir.  Alternative directory names in CDPATH are separated by a colon (:).  A null directory name in CDPATH is the same
      as the current directory, i.e., ``.''.  If dir begins with a slash (/), then CDPATH is not used.  The -P option causes cd to use the physi-
      cal directory structure by resolving symbolic links while traversing dir and before processing instances of .. in dir (see also the -P  op-
      tion to the set builtin command); the -L option forces symbolic links to be followed by resolving the link after processing instances of ..
      in dir.  If .. appears in dir, it is processed by removing the immediately previous pathname component from dir, back to a slash or the be-
      ginning of dir.  If the -e option is supplied with -P, and the current working directory cannot be successfully determined after a success-
      ful directory change, cd will return an unsuccessful status.  On systems that support it, the -@ option presents  the  extended  attributes
      associated  with a file as a directory.  An argument of - is converted to $OLDPWD before the directory change is attempted.  If a non-empty
      directory name from CDPATH is used, or if - is the first argument, and the directory change is successful, the absolute pathname of the new
      working directory is written to the standard output.  The return value is true if the directory was successfully changed; false otherwise.
```

Рисунок 10 - Справка по команде cd

```
PWD(1)                                    User Commands                                    PWD(1)

NAME
       pwd - print name of current/working directory

SYNOPSIS
       pwd [OPTION]...

DESCRIPTION
       Print the full filename of the current working directory.

       -L, --logical
              use PWD from environment, even if it contains symlinks

       -P, --physical
              avoid all symlinks

       --help display this help and exit

       --version
              output version information and exit

       If no option is specified, -P is assumed.

       NOTE: your shell may have its own version of pwd, which usually supersedes the version described here.  Please refer to your shell's documentation
       for details about the options it supports.

AUTHOR
       Written by Jim Meyering.

REPORTING BUGS
       GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
       Report any translation bugs to <https://translationproject.org/team/>

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SEE ALSO
       getcwd(3)

       Full documentation <https://www.gnu.org/software/coreutils/pwd>
       or available locally via: info '(coreutils) pwd invocation'

GNU coreutils 8.32                        July 2021                                        PWD(1)
 Manual page pwd(1) line 1/45 (END) (press h for help or q to quit)
```

Рисунок 11 - Справка по команде pwd

```
MKDIR(1)                                        User Commands                                        MKDIR(1)

NAME
       mkdir - make directories

SYNOPSIS
       mkdir [OPTION]... DIRECTORY...

DESCRIPTION
       Create the DIRECTORY(ies), if they do not already exist.

       Mandatory arguments to long options are mandatory for short options too.

       -m, --mode=MODE
              set file mode (as in chmod), not a=rwx - umask

       -p, --parents
              no error if existing, make parent directories as needed

       -v, --verbose
              print a message for each created directory

       -Z     set SELinux security context of each created directory to the default type

       --context[=CTX]
              like -Z, or if CTX is specified then set the SELinux or SMACK security context to CTX

       --help display this help and exit

       --version
              output version information and exit

AUTHOR
       Written by David MacKenzie.

REPORTING BUGS
       GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
       Report any translation bugs to <https://translationproject.org/team/>

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SEE ALSO
       mkdir(2)

       Full documentation <https://www.gnu.org/software/coreutils/mkdir>
       or available locally via: info '(coreutils) mkdir invocation'

GNU coreutils 8.32                                 July 2021                                        MKDIR(1)
Manual page mkdir(1) line 1/50 (END) (press h for help or q to quit)
```

Рисунок 12 - Справка по команде mkdir

Рисунок 13 - Справка по команде rmdir

Рисунок 14 - Справка по команде rm

```
[eaalmazova@fedora ~]$ man ls
[eaalmazova@fedora ~]$ man cd
[eaalmazova@fedora ~]$ man cd
[eaalmazova@fedora ~]$ man pwd
[eaalmazova@fedora ~]$ man mkdir
[eaalmazova@fedora ~]$ man rmdir
[eaalmazova@fedora ~]$ man rm
[eaalmazova@fedora ~]$ man cd
[eaalmazova@fedora ~]$ man pwd
[eaalmazova@fedora ~]$
[eaalmazova@fedora ~]$ man mkdir
[eaalmazova@fedora ~]$ man rmdir
```

Рисунок 15 - Выполнение команд man ls, man cd и др.

Модификация команд

Используя команду history 5, я узнала последние 5 выполненных команд. С помощью команд !180:s/a/l и !181:s/F/a я соответственно модифицировала команды ls -a и ls -F к виду ls -l и ls -a (рис.16).

```
[eaalmazova@fedora ~]$ ls -a
.                .bash_logout    .cache    Documents    .gnupg    .mozilla  Public     .texlive2021                      .vboxclient-draganddrop.pid   .wget-hsts
..               .bash_profile   .config   Downloads    .lesshst  Music     .ssh       .vboxclient-clipboard.pid         .vboxclient-seamless.pid      work
.bash_history    .bashrc         Desktop   .gitconfig   .local    Pictures  Templates  .vboxclient-display-svga-x11.pid  Videos
[eaalmazova@fedora ~]$ ls -F
Desktop/  Documents/  Downloads/  Music/  Pictures/  Public/  Templates/  Videos/  work/
[eaalmazova@fedora ~]$ history 5
  178  man mkdir
  179  man rmdir
  180  ls -a
  181  ls -F
  182  history 5
[eaalmazova@fedora ~]$ !180:s/a/l
ls -l
total 0
drwxr-xr-x. 1 eaalmazova eaalmazova   0 Apr 22 15:45 Desktop
drwxr-xr-x. 1 eaalmazova eaalmazova   0 Apr 22 15:45 Documents
drwxr-xr-x. 1 eaalmazova eaalmazova   0 Apr 29 19:07 Downloads
drwxr-xr-x. 1 eaalmazova eaalmazova   0 Apr 22 15:45 Music
drwxr-xr-x. 1 eaalmazova eaalmazova 234 Apr 22 23:35 Pictures
drwxr-xr-x. 1 eaalmazova eaalmazova   0 Apr 22 15:45 Public
drwxr-xr-x. 1 eaalmazova eaalmazova   0 Apr 22 15:45 Templates
drwxr-xr-x. 1 eaalmazova eaalmazova   0 Apr 22 15:45 Videos
drwxrwxr-x. 1 eaalmazova eaalmazova  10 Apr 22 16:32 work
[eaalmazova@fedora ~]$ !181:s/F/a
ls -a
.                .bash_logout    .cache    Documents    .gnupg    .mozilla  Public     .texlive2021                      .vboxclient-draganddrop.pid   .wget-hsts
..               .bash_profile   .config   Downloads    .lesshst  Music     .ssh       .vboxclient-clipboard.pid         .vboxclient-seamless.pid      work
.bash_history    .bashrc         Desktop   .gitconfig   .local    Pictures  Templates  .vboxclient-display-svga-x11.pid  Videos
```

Рисунок 16 - Использование команды history и модификация команд

Выводы

В ходе выполнения данной лабораторной работы я приобрела практические навыки взаимодействия пользователя с системой посредством командной строки.

Спасибо за внимание!