Лабораторая работа 6

Акопян Изабелла Арменовна

2021, 15 Мая

RUDN University, Moscow, Russian Federation

Анализ файловой системы Linux. Команды для работы с файлами и каталогами.

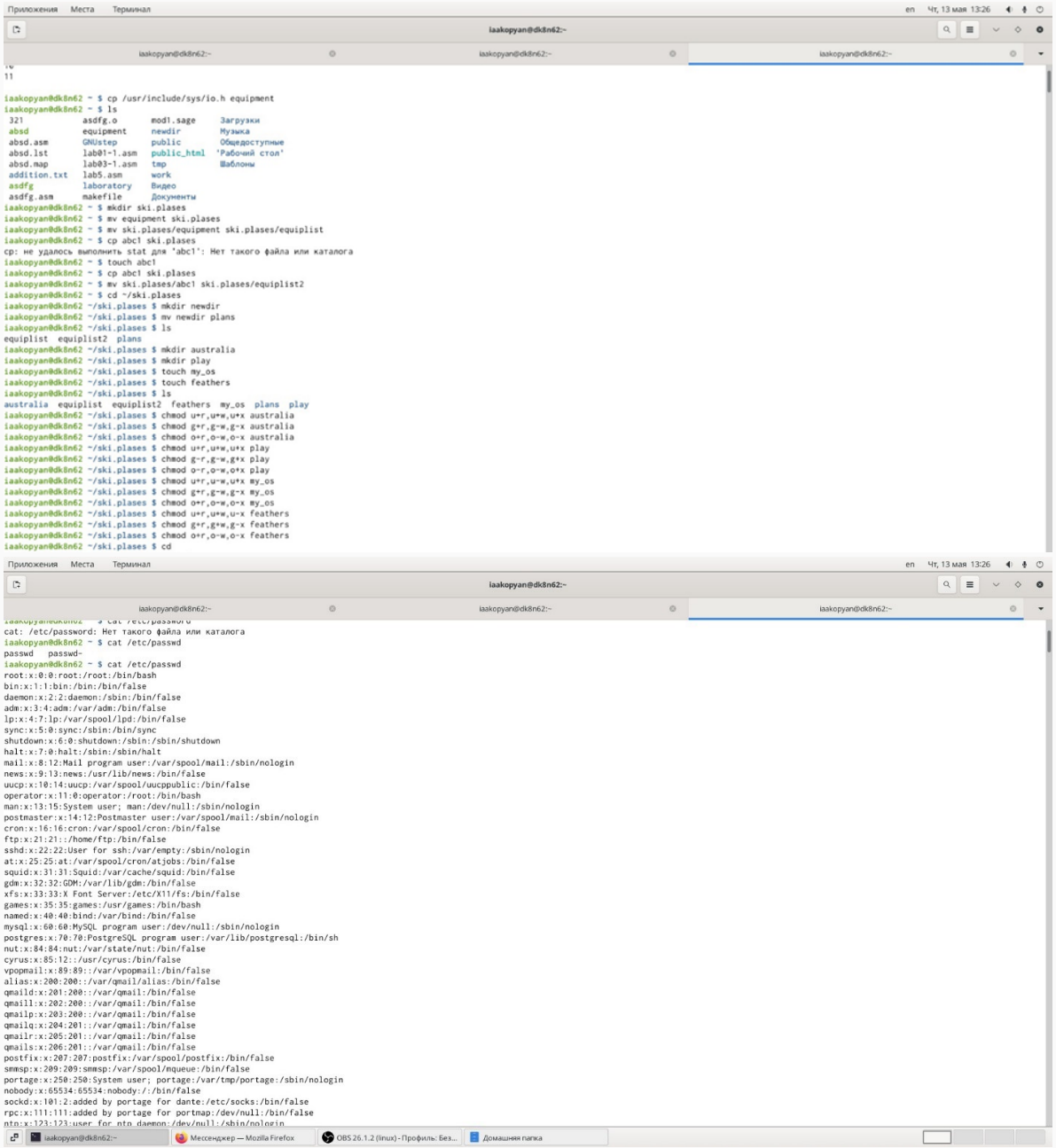
Цель лабораторной работы

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 (и работами), по проверке использования диска и обслуживанию файловой системы.

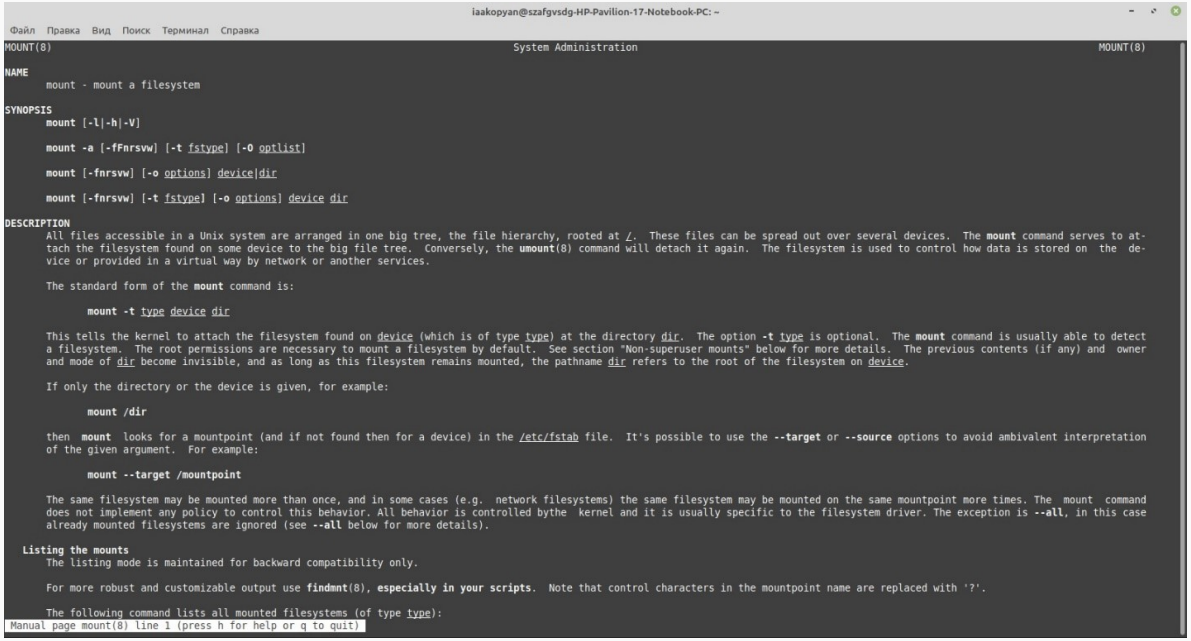
Задачи

- Выполнить все примеры из первой части
- Копирование заданных файлов в каталоги
- Создание директорий и каталогов
- Перемещение файлов
- Переименование файлов
- Изменение прав доступа к файлам
- Просмотр содержимого файлов
- Работа со справкой man

Основная работа



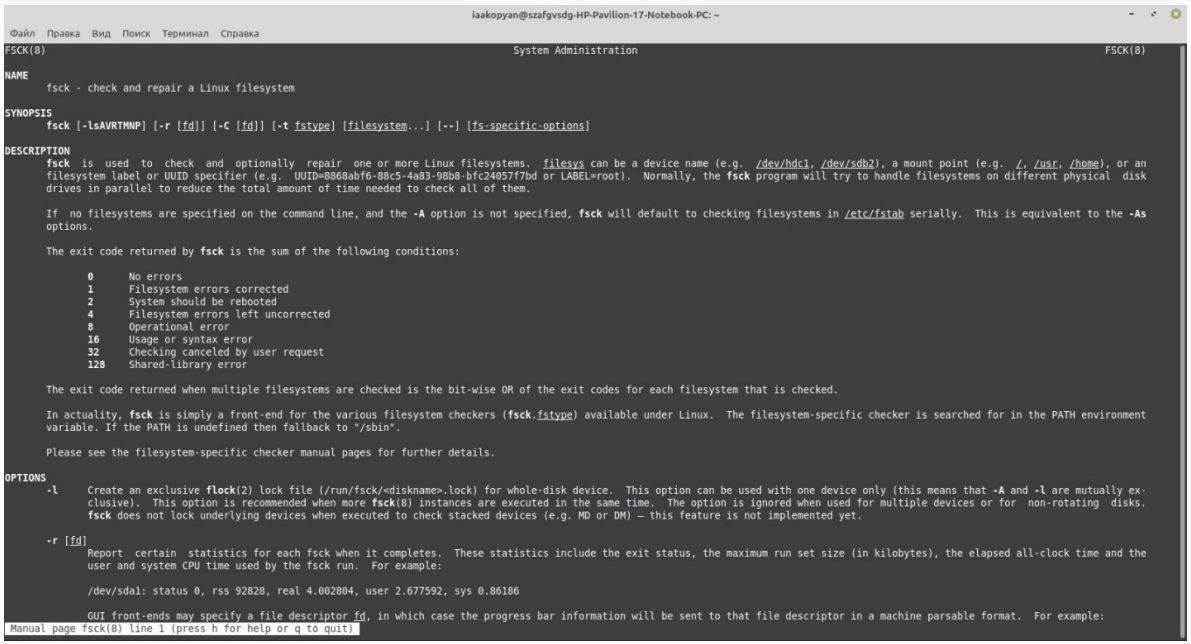
Полученные справки (1/2)



iaakopyan@szafgvsdg-HP-Pavilion-17-Notebook-PC: ~

Файл Правка Вид Поиск Терминал Справка

```
MOUNT(8)                                    System Administration                                    MOUNT(8)

NAME
       mount - mount a filesystem

SYNOPSIS
       mount [-l|-h|-V]

       mount -a [-fFnrsvw] [-t fstype] [-O optlist]

       mount [-fnrsvw] [-o options] device|dir

       mount [-fnrsvw] [-t fstype] [-o options] device dir

DESCRIPTION
       All files accessible in a Unix system are arranged in one big tree, the file hierarchy, rooted at /.  These files can be spread out over several devices.  The mount command serves to at-
       tach the filesystem found on some device to the big file tree.  Conversely, the umount(8) command will detach it again.  The filesystem is used to control how data is stored on  the  de-
       vice or provided in a virtual way by network or another services.

       The standard form of the mount command is:

              mount -t type device dir

       This tells the kernel to attach the filesystem found on device (which is of type type) at the directory dir.  The option -t type is optional.  The mount command is usually able to detect
       a filesystem.  The root permissions are necessary to mount a filesystem by default.  See section "Non-superuser mounts" below for more details.  The previous contents (if any) and  owner
       and mode of dir become invisible, and as long as this filesystem remains mounted, the pathname dir refers to the root of the filesystem on device.

       If only the directory or the device is given, for example:

              mount /dir

       then  mount  looks for a mountpoint (and if not found then for a device) in the /etc/fstab file.  It's possible to use the --target or --source options to avoid ambivalent interpretation
       of the given argument.  For example:

              mount --target /mountpoint

       The same filesystem may be mounted more than once, and in some cases (e.g.  network filesystems) the same filesystem may be mounted on the same mountpoint more times. The  mount  command
       does not implement any policy to control this behavior. All behavior is controlled bythe  kernel and it is usually specific to the filesystem driver. The exception is --all, in this case
       already mounted filesystems are ignored (see --all below for more details).

   Listing the mounts
       The listing mode is maintained for backward compatibility only.

       For more robust and customizable output use findmnt(8), especially in your scripts.  Note that control characters in the mountpoint name are replaced with '?'.

       The following command lists all mounted filesystems (of type type):
Manual page mount(8) line 1 (press h for help or q to quit)
```



iaakopyan@szafgvsdg-HP-Pavilion-17-Notebook-PC: ~

Файл Правка Вид Поиск Терминал Справка

```
FSCK(8)                                     System Administration                                     FSCK(8)

NAME
       fsck - check and repair a Linux filesystem

SYNOPSIS
       fsck [-lsAVRTMNP] [-r [fd]] [-C [fd]] [-t fstype] [filesystem...] [--] [fs-specific-options]

DESCRIPTION
       fsck  is  used  to  check  and  optionally  repair  one or more Linux filesystems.  filesys can be a device name (e.g.  /dev/hdc1, /dev/sdb2), a mount point (e.g.  /, /usr, /home), or an
       filesystem label or UUID specifier (e.g.  UUID=8868abf6-88c5-4a83-98b8-bfc24057f7bd or LABEL=root).  Normally, the fsck program will try to handle filesystems on different physical  disk
       drives in parallel to reduce the total amount of time needed to check all of them.

       If  no filesystems are specified on the command line, and the -A option is not specified, fsck will default to checking filesystems in /etc/fstab serially.  This is equivalent to the -As
       options.

       The exit code returned by fsck is the sum of the following conditions:

              0      No errors
              1      Filesystem errors corrected
              2      System should be rebooted
              4      Filesystem errors left uncorrected
              8      Operational error
              16     Usage or syntax error
              32     Checking canceled by user request
              128    Shared-library error

       The exit code returned when multiple filesystems are checked is the bit-wise OR of the exit codes for each filesystem that is checked.

       In actuality, fsck is simply a front-end for the various filesystem checkers (fsck.fstype) available under Linux.  The filesystem-specific checker is searched for in the PATH environment
       variable. If the PATH is undefined then fallback to "/sbin".

       Please see the filesystem-specific checker manual pages for further details.

OPTIONS
       -l     Create an exclusive flock(2) lock file (/run/fsck/<diskname>.lock) for whole-disk device.  This option can be used with one device only (this means that -A and -l are mutually ex-
              clusive).  This option is recommended when more fsck(8) instances are executed in the same time.  The option is ignored when used for multiple devices or for  non-rotating  disks.
              fsck does not lock underlying devices when executed to check stacked devices (e.g. MD or DM) – this feature is not implemented yet.

       -r [fd]
              Report  certain  statistics for each fsck when it completes.  These statistics include the exit status, the maximum run set size (in kilobytes), the elapsed all-clock time and the
              user and system CPU time used by the fsck run.  For example:

              /dev/sda1: status 0, rss 92828, real 4.002804, user 2.677592, sys 0.86186

              GUI front-ends may specify a file descriptor fd, in which case the progress bar information will be sent to that file descriptor in a machine parsable format.  For example:
Manual page fsck(8) line 1 (press h for help or q to quit)
```

Полученные справки (2/2)

Вывод

Я удачно ознакомилась с файловой системой Linux, её структурой, именами и содержанием каталогов. Приобрела практические навыки по применению команд для работы с файлами и каталогами, по управлению процессами (и работами), по проверке использования диска и обслуживанию файловой системы.