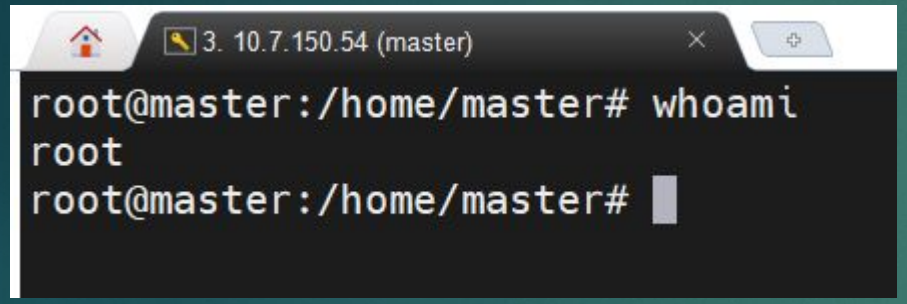
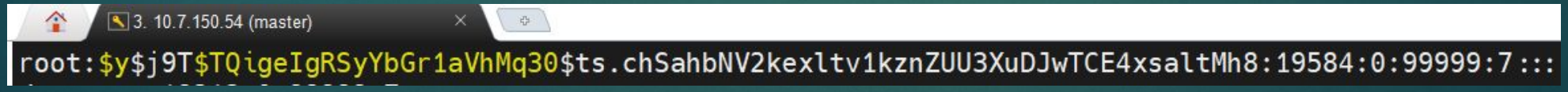
Task1 Part1

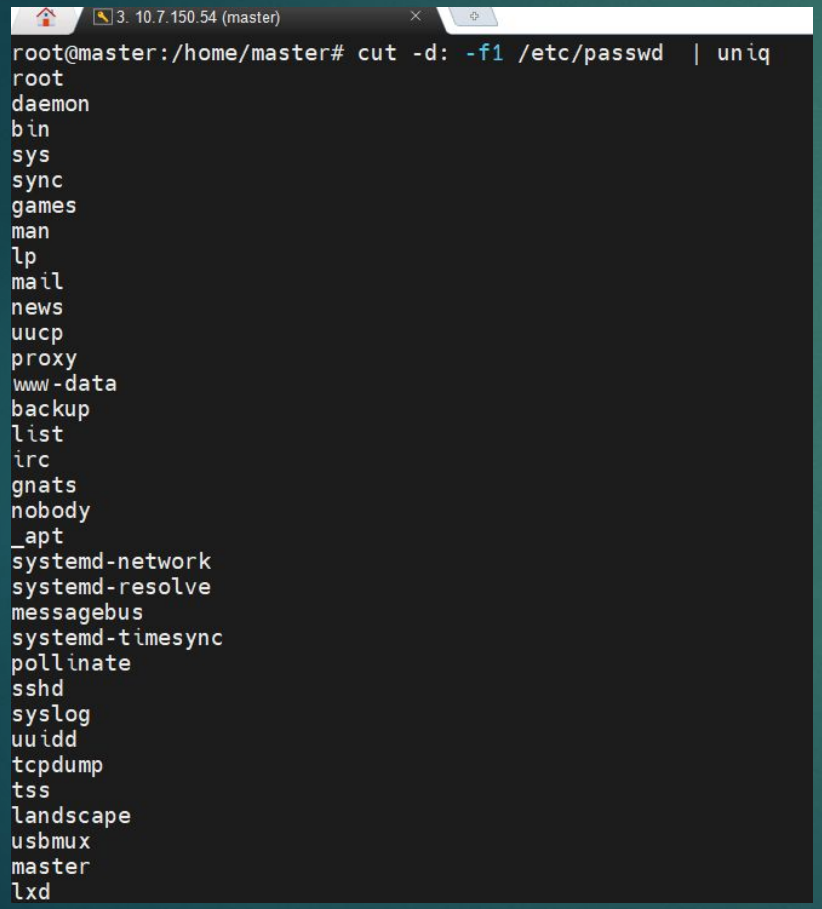
1) Log in to the system as root.
Logged in as user master:
sudo su



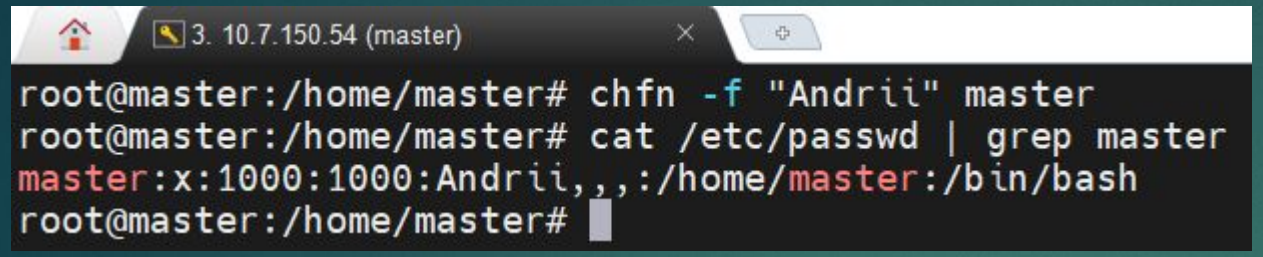
2) Use the passwd command to change the password. Examine the basic parameters of the command. What system file does it change *?
/etc/shadow



3) Determine the users registered in the system, as well as what commands they
execute. What additional information can be gleaned from the command execution?



4) Change personal information about yourself.

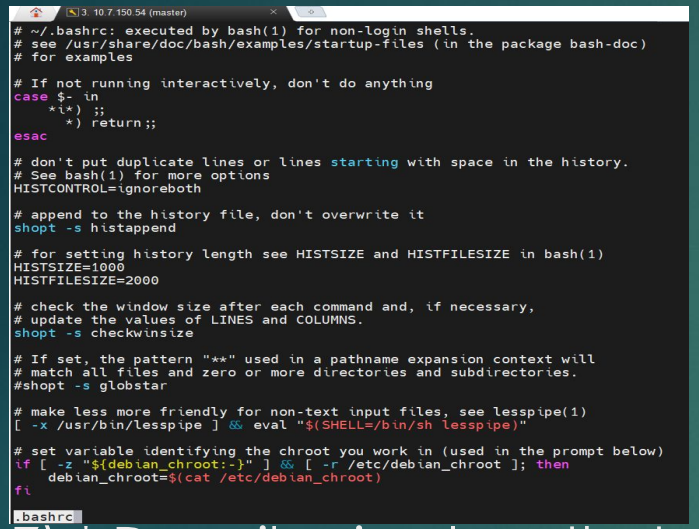


5) Become familiar with the Linux help system and the man and info commands. Get help on the previously discussed commands, define and describe any two keys for these commands. Give examples.

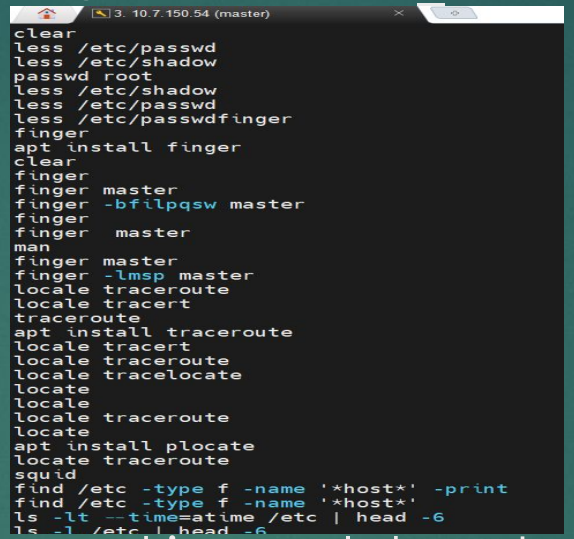
For example: in passwd command key -n, --mindays MIN_DAYS
Set the minimum number of days between password changes to MIN_DAYS. A value of zero for this field indicates that the user may change their password at any time.

6) Explore the more and less commands using the help system. View the contents of files .bash* using commands.

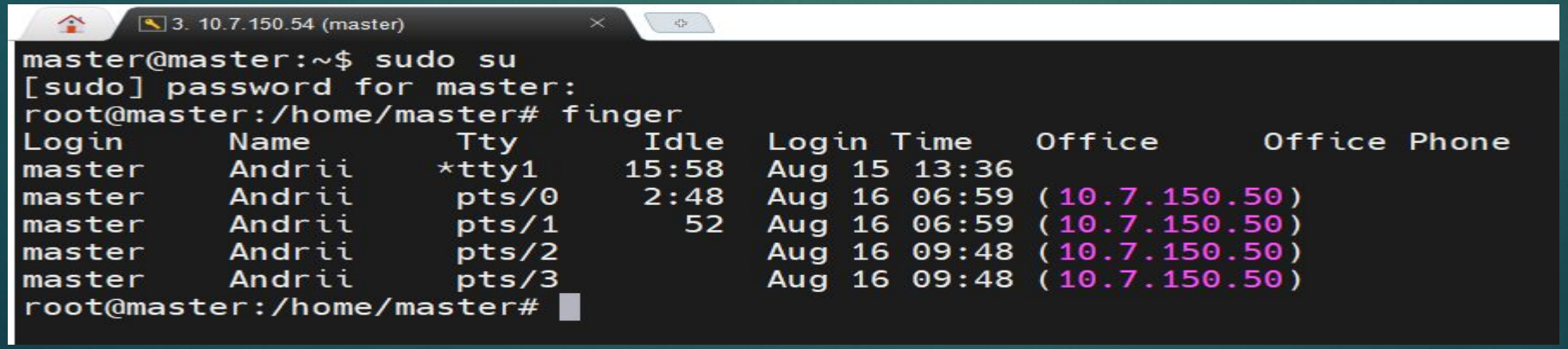
less .bashrc



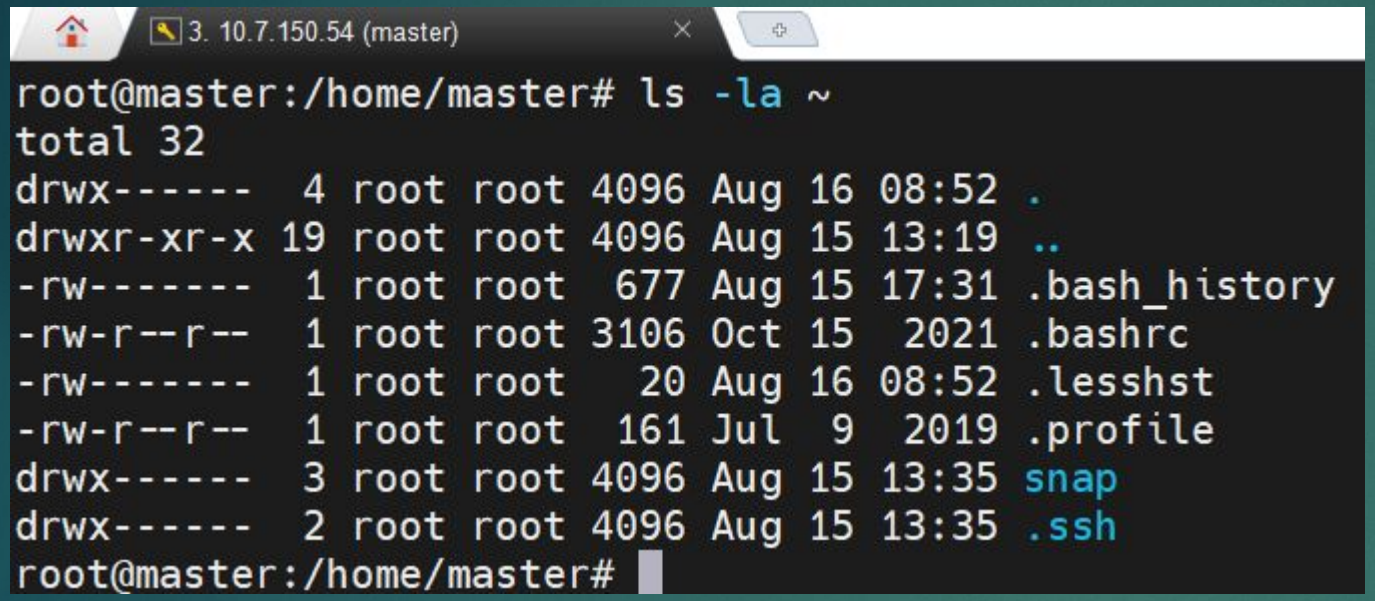
cd ~ & more .bash_history



7) * Describe in plans that you are working on laboratory work 1. Tip: You should read the documentation for the finger command.

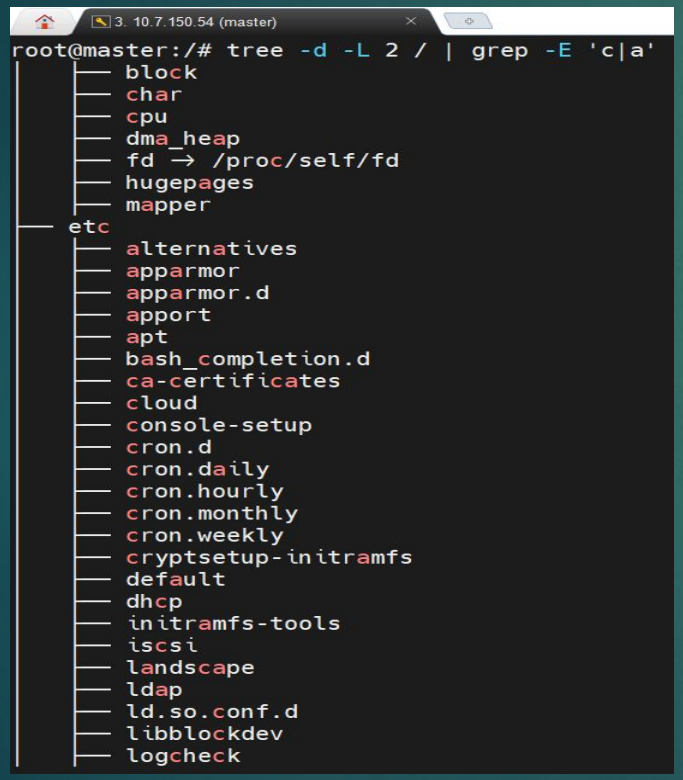


7) * List the contents of the home directory using the ls command, define its files
and directories. Hint: Use the help system to familiarize yourself with the ls command.

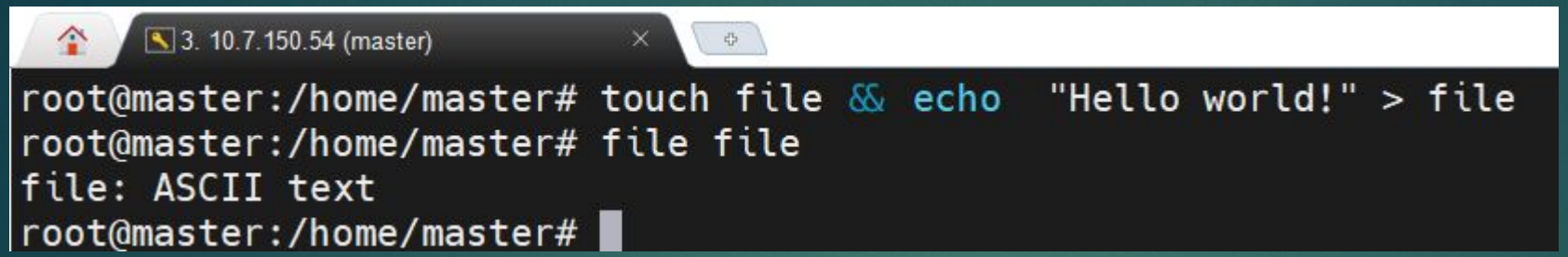


Task1 Part 2

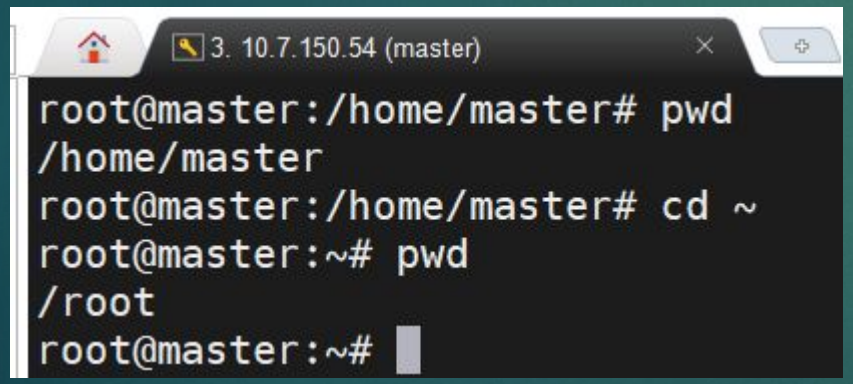
1) Examine the tree command. Master the technique of applying a template, for example, display all files that contain a character c, or files that contain a specific sequence of characters. List subdirectories of the root directory up to and including the second nesting level.



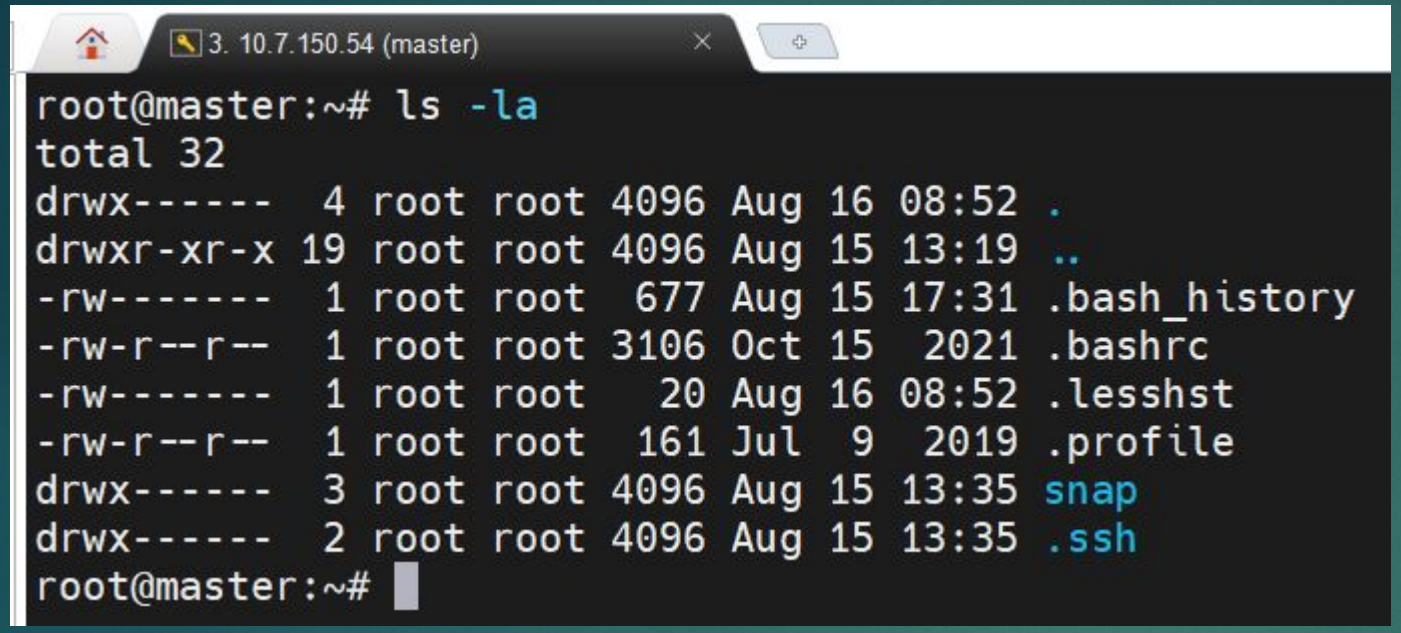
2) What command can be used to determine the type of file (for example, text or binary)? Give an example.



3) Master the skills of navigating the file system using relative and absolute paths. How can you go back to your home directory from anywhere in the filesystem?



4) Become familiar with the various options for the ls command. Give examples of listing directories using different keys. Explain the information displayed on the terminal using the -l and -a switches.



Show all files and directories in list style includes hidden.

5) Perform the following sequence of operations:
- create a subdirectory in the home directory;
- in this subdirectory create a file containing information about directories located in the root directory (using I/O redirection operations);
- view the created file;
- copy the created file to your home directory using relative and absolute addressing.
- delete the previously created subdirectory with the file requesting removal;
- delete the file copied to the home directory.

mkdir /home/master/demo && touch /home/master/demo/info && ls -l / > /home/master/demo/info && cat /home/master/demo/info

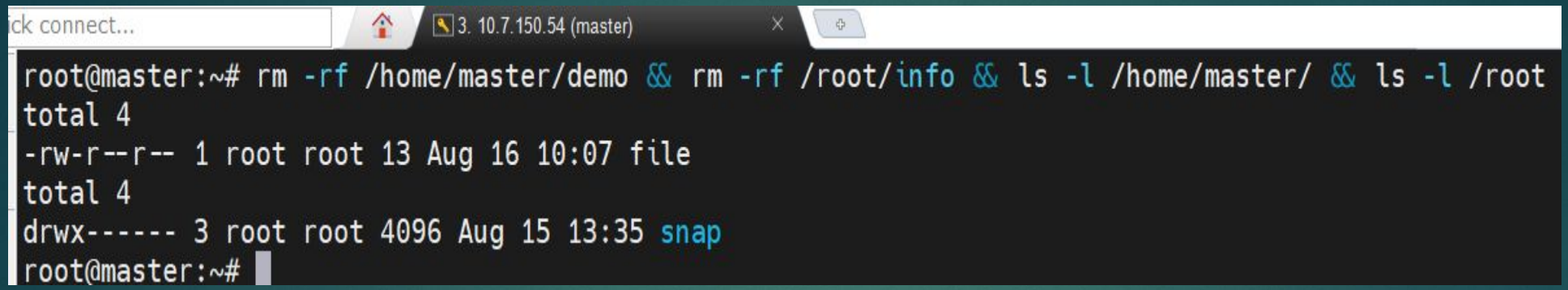
Screenshot in a next page.

```
root@master:~# mkdir /home/master/demo && touch /home/master/demo/info && ls -l / > /home/master/demo/info && cat /home/master/demo/info
total 4019268
lrwxrwxrwx   1 root root          7 Aug  9  2022 bin → usr/bin
drwxr-xr-x   3 root root       4096 Aug 15 13:13 boot
drwxr-xr-x  19 root root       4020 Aug 15 17:50 dev
drwxr-xr-x  97 root root       4096 Aug 16 08:36 etc
drwxr-xr-x   3 root root       4096 Aug 15 13:35 home
lrwxrwxrwx   1 root root          7 Aug  9  2022 lib → usr/lib
lrwxrwxrwx   1 root root          9 Aug  9  2022 lib32 → usr/lib32
lrwxrwxrwx   1 root root          9 Aug  9  2022 lib64 → usr/lib64
lrwxrwxrwx   1 root root         10 Aug  9  2022 libx32 → usr/libx32
drwx------   2 root root      16384 Aug 15 12:59 lost+found
drwxr-xr-x   2 root root       4096 Aug  9  2022 media
drwxr-xr-x   2 root root       4096 Aug  9  2022 mnt
drwxr-xr-x   2 root root       4096 Aug  9  2022 opt
dr-xr-xr-x 180 root root          0 Aug 15 13:35 proc
drwx------   4 root root       4096 Aug 16 08:52 root
drwxr-xr-x  29 root root        860 Aug 16 09:48 run
lrwxrwxrwx   1 root root          8 Aug  9  2022 sbin → usr/sbin
drwxr-xr-x   6 root root       4096 Aug  9  2022 snap
drwxr-xr-x   2 root root       4096 Aug  9  2022 srv
-rw-------   1 root root 4115660800 Aug 15 13:01 swap.img
dr-xr-xr-x  13 root root          0 Aug 15 13:35 sys
drwxrwxrwt  12 root root       4096 Aug 16 08:21 tmp
drwxr-xr-x  14 root root       4096 Aug  9  2022 usr
drwxr-xr-x  13 root root       4096 Aug  9  2022 var
root@master:~#
```

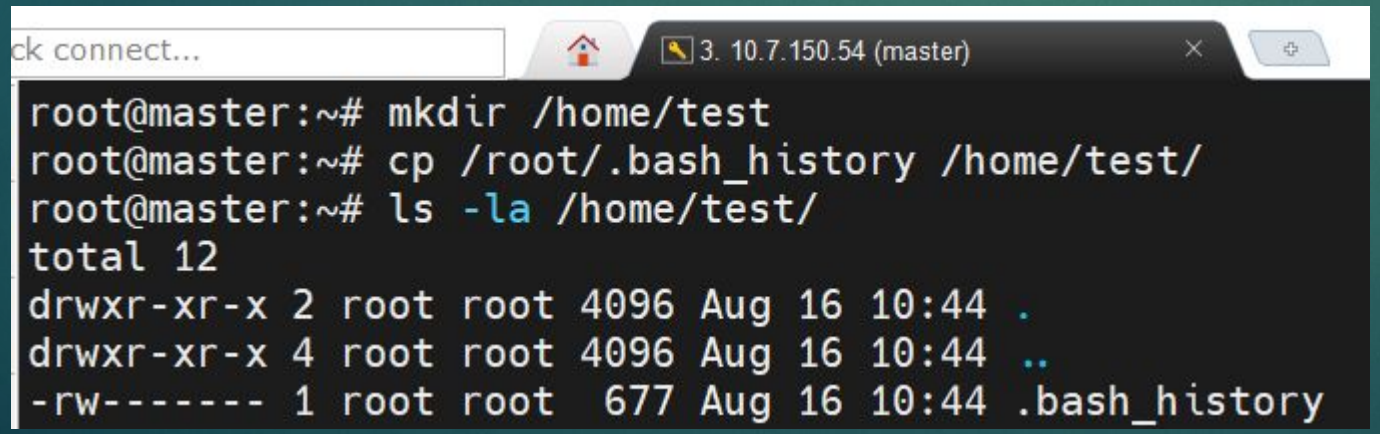
Copy:

```
root@master:~# cp /home/master/demo/info ~ && ls -l ~
total 8
-rw-r--r-- 1 root root 1387 Aug 16 10:25 info
drwx------ 3 root root 4096 Aug 15 13:35 snap
root@master:~#
```

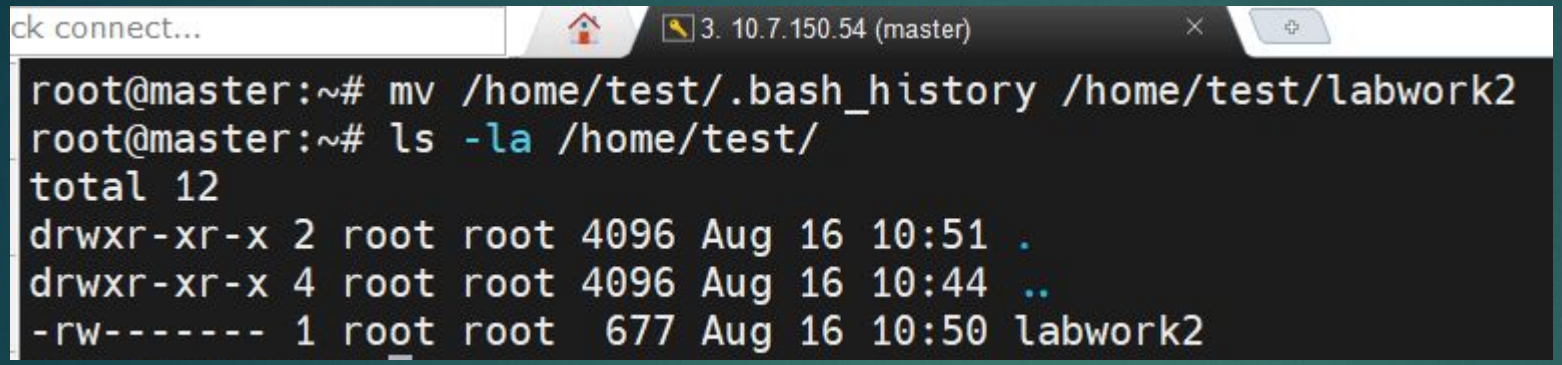
Delete:


ick connect...
3. 10.7.150.54 (master)
root@master:~# rm -rf /home/master/demo && rm -rf /root/info && ls -l /home/master/ && ls -l /root
total 4
-rw-r--r-- 1 root root 13 Aug 16 10:07 file
total 4
drwx------ 3 root root 4096 Aug 15 13:35 snap
root@master:~#

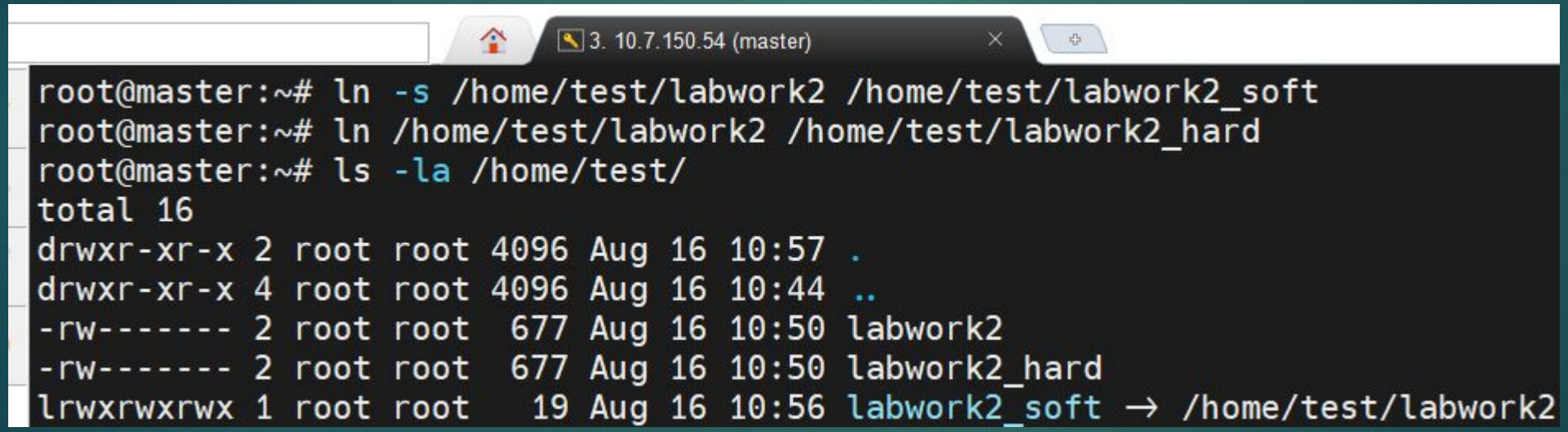
6) Perform the following sequence of operations:
- create a subdirectory test in the home directory;
- copy the .bash_history file to this directory while changing its name to labwork2;
- create a hard and soft link to the labwork2 file in the test subdirectory;
- how to define soft and hard link, what do these concepts;
- change the data by opening a symbolic link. What changes will happen and why
- rename the hard link file to hard_lnk_labwork2;
- rename the soft link file to symb_lnk_labwork2 file;
- then delete the labwork2. What changes have occurred and why?



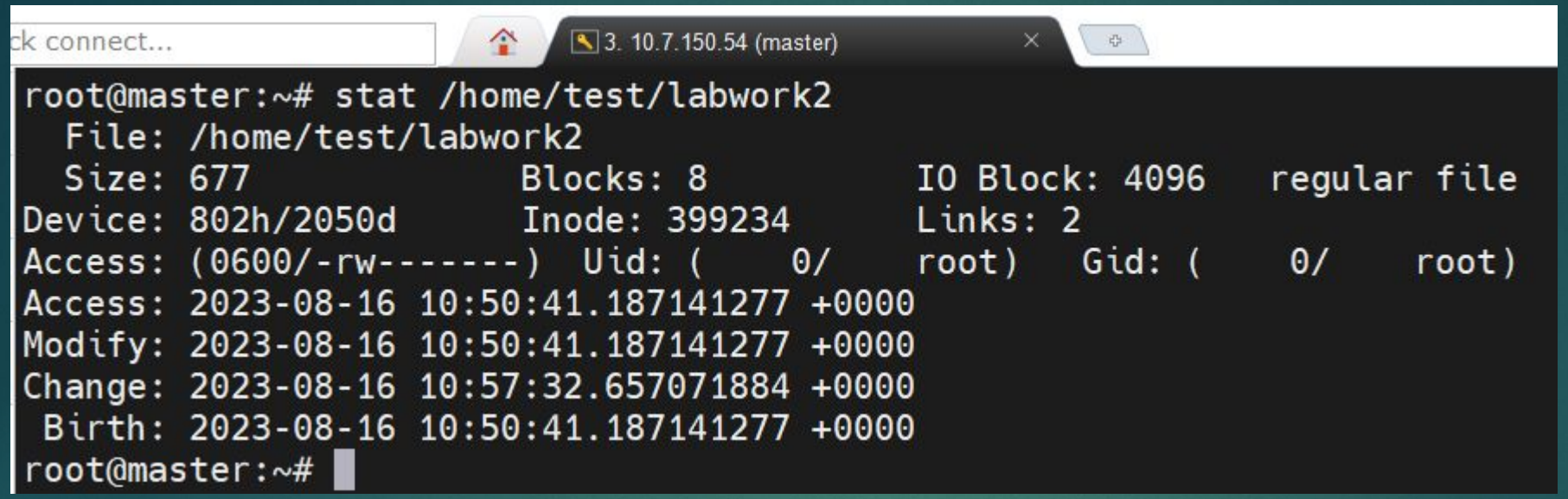
Rename:



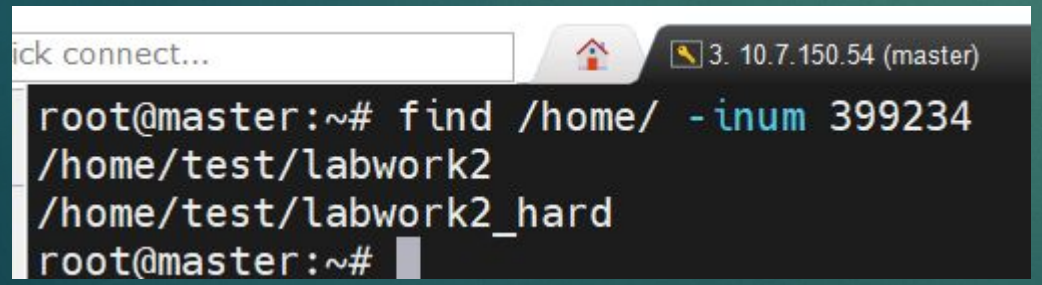
Links:



Inode info:



Hard link:



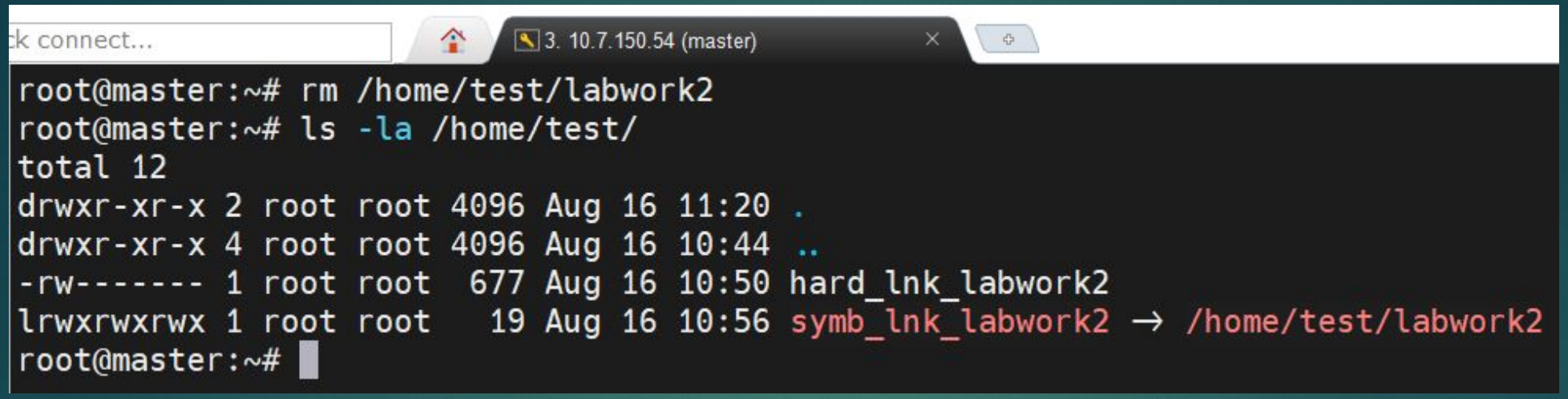
Raname hard link:

```
root@master:~# mv /home/test/labwork2_hard /home/test/hard_lnk_labwork2
root@master:~# ls -la /home/test/
total 16
drwxr-xr-x 2 root root 4096 Aug 16 11:15 .
drwxr-xr-x 4 root root 4096 Aug 16 10:44 ..
-rw------- 2 root root  677 Aug 16 10:50 hard_lnk_labwork2
-rw------- 2 root root  677 Aug 16 10:50 labwork2
lrwxrwxrwx 1 root root   19 Aug 16 10:56 labwork2_soft → /home/test/labwork2
root@master:~# _
```

Rename soft link:

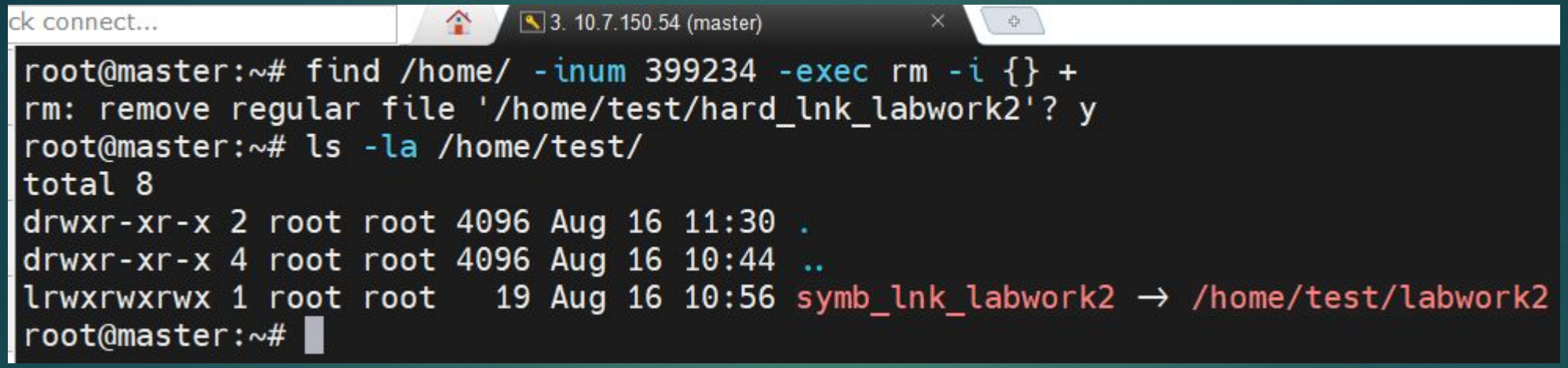
```
root@master:~# mv /home/test/labwork2_soft /home/test/symb_lnk_labwork2
root@master:~# ls -la /home/test/
total 16
drwxr-xr-x 2 root root 4096 Aug 16 11:19 .
drwxr-xr-x 4 root root 4096 Aug 16 10:44 ..
-rw------- 2 root root  677 Aug 16 10:50 hard_lnk_labwork2
-rw------- 2 root root  677 Aug 16 10:50 labwork2
lrwxrwxrwx 1 root root   19 Aug 16 10:56 symb_lnk_labwork2 → /home/test/labwork2
root@master:~#
```

Delete main file:

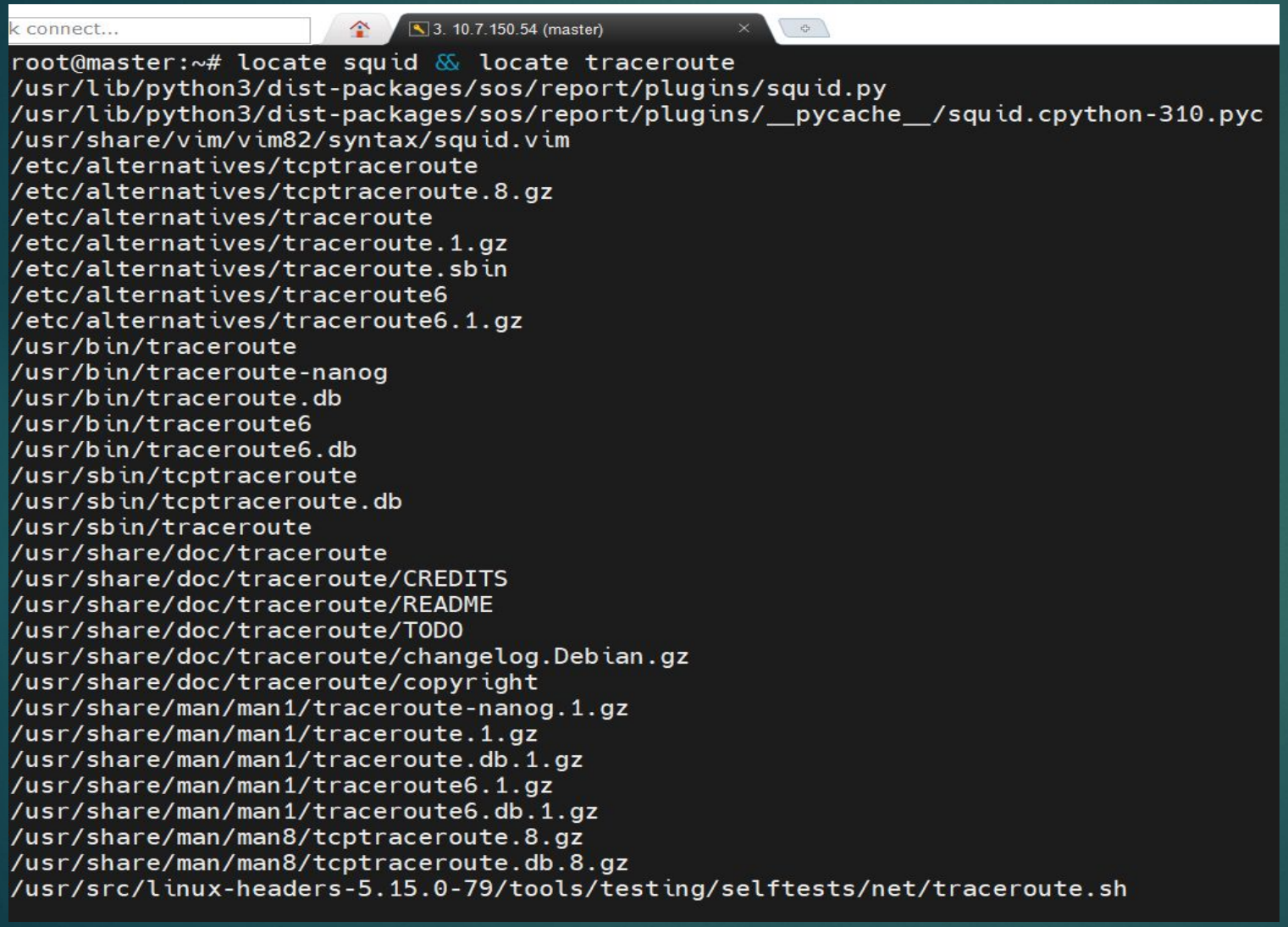


Hard Link :
A hard link acts as a copy (mirrored) of the selected file. It accesses the data available in the original file.
If the earlier selected file is deleted, the hard link to the file will still contain the data of that file.
Soft Link :
A soft link (also known as Symbolic link) acts as a pointer or a reference to the file name. It does not access the data available in the original file. If the earlier file is deleted, the soft link will be pointing to a file that does not exist anymore.

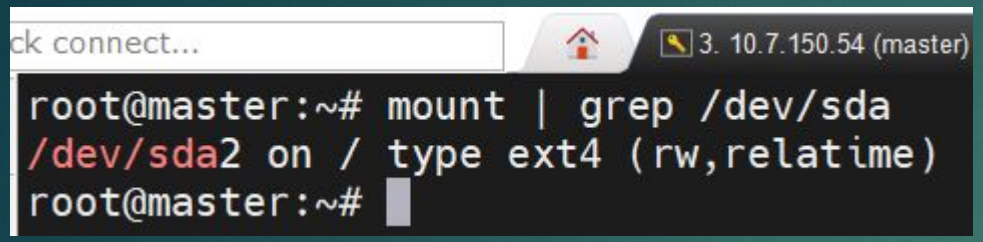
Remove all hard links:



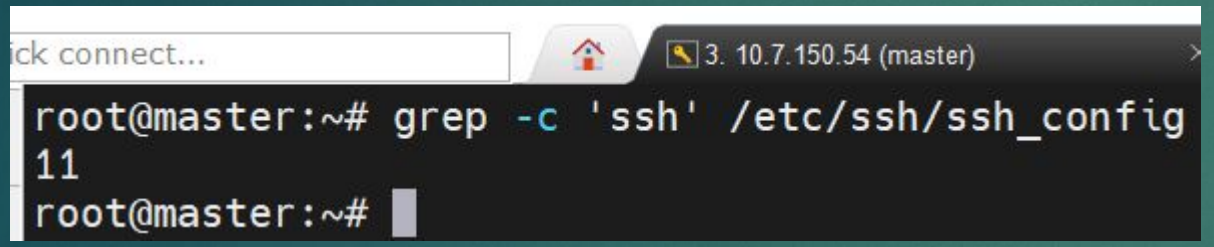
7) Using the locate utility, find all files that contain the squid and traceroute sequence.



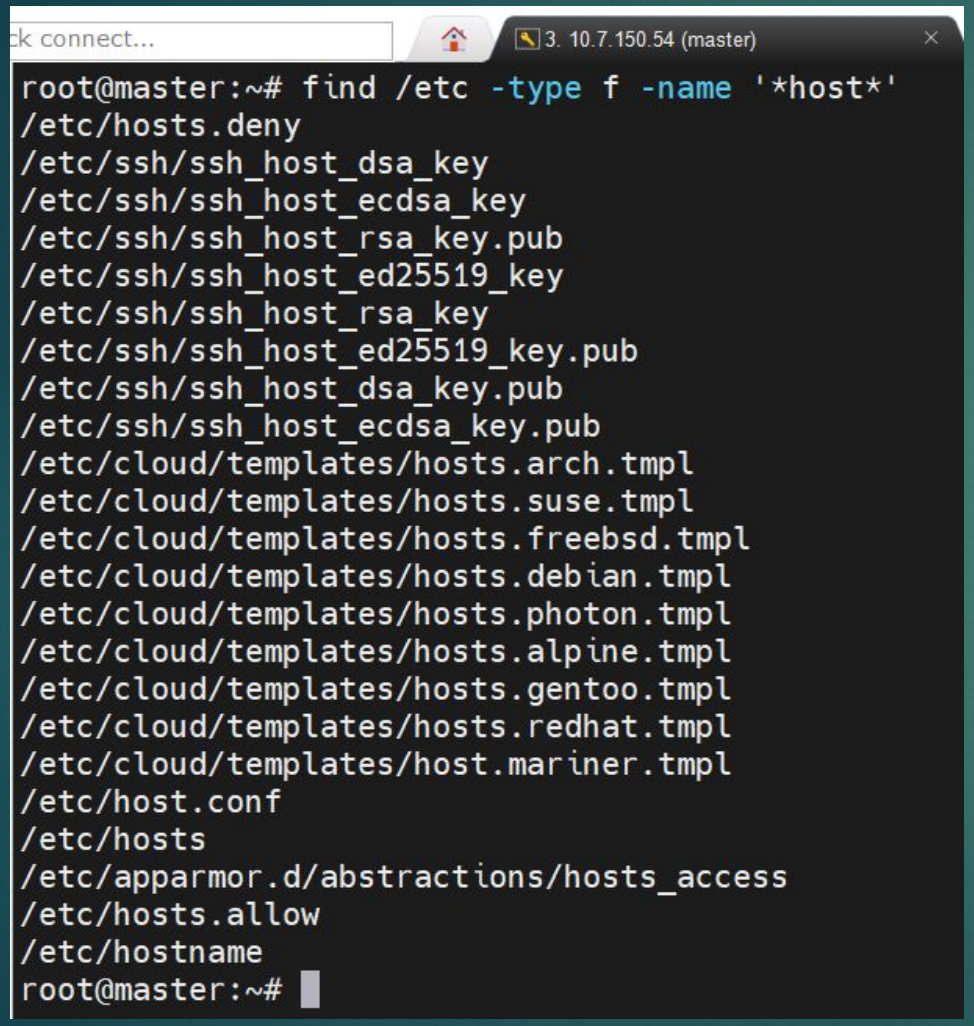
8) Determine which partitions are mounted in the system, as well as the types of these partitions.



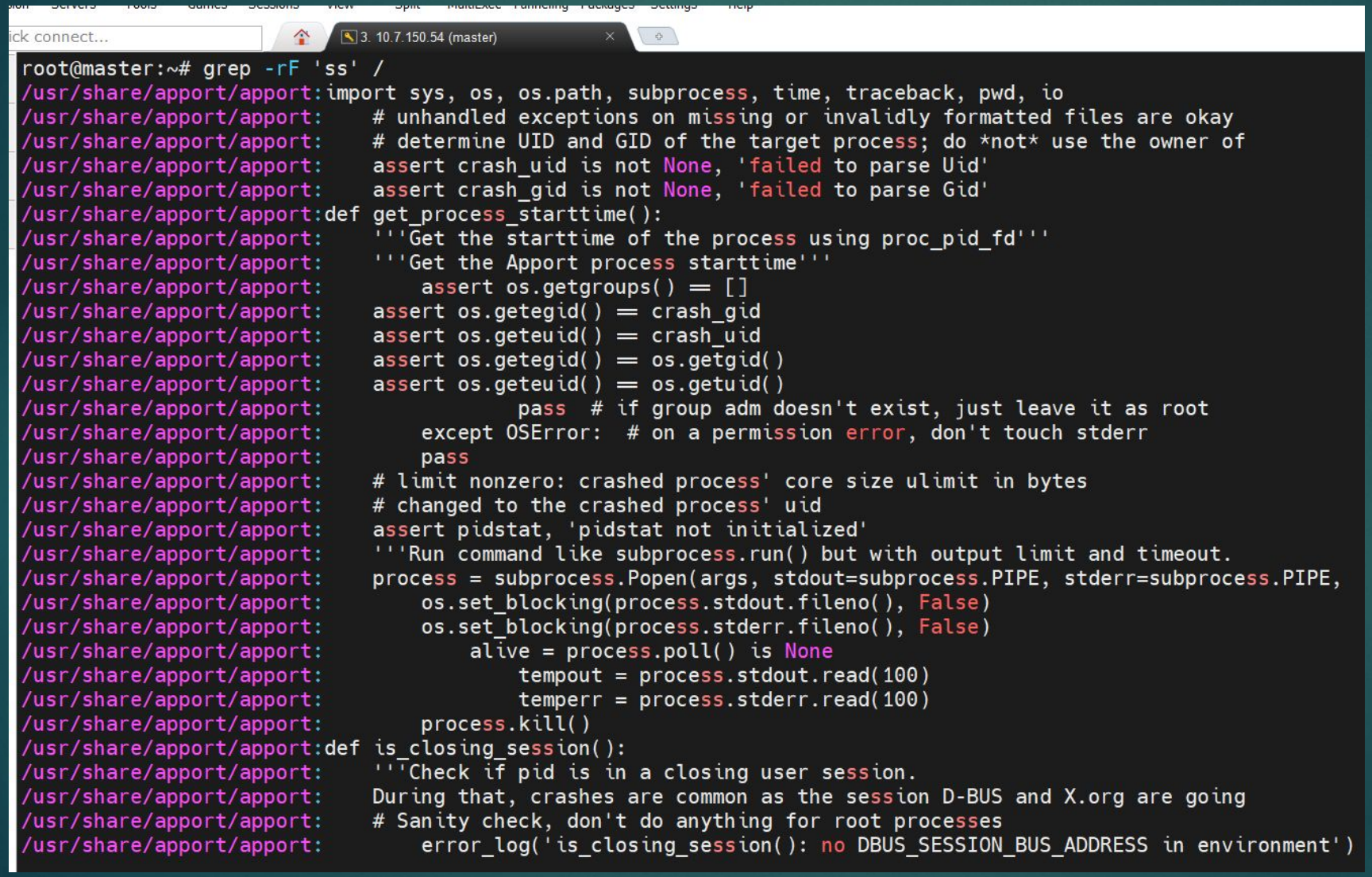
9) Count the number of lines containing a given sequence of characters in a given file.



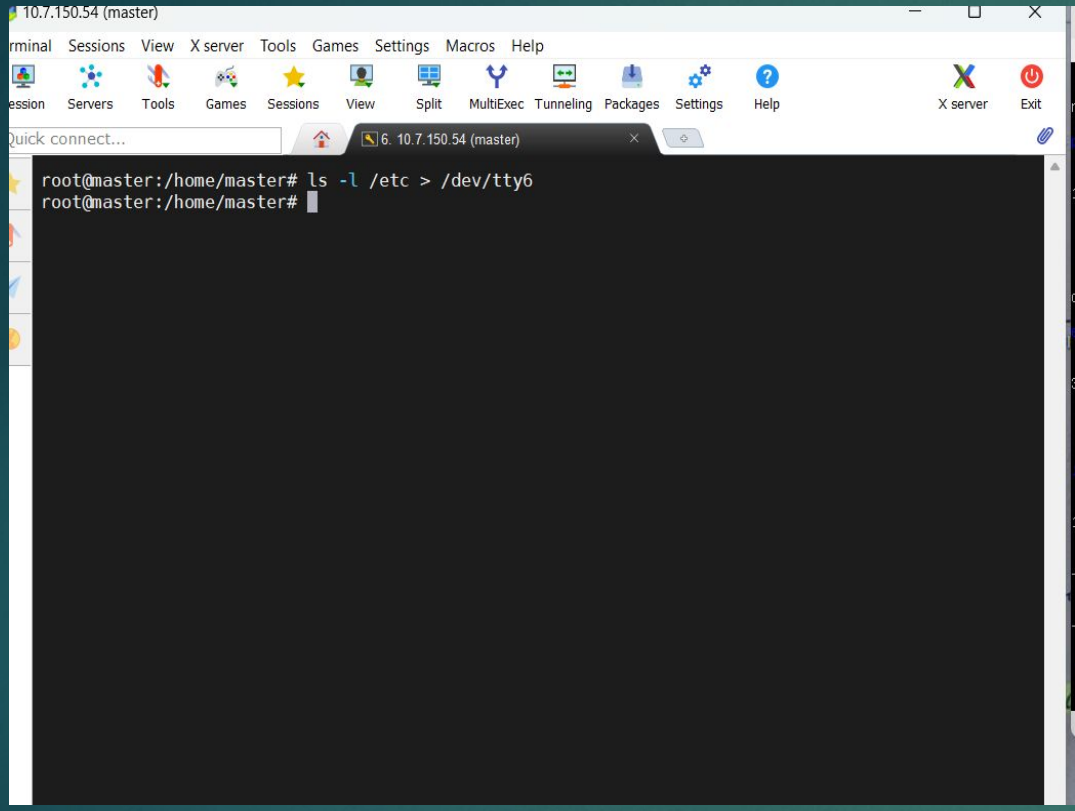
10) Using the find command, find all files in the /etc directory containing the host character sequence.

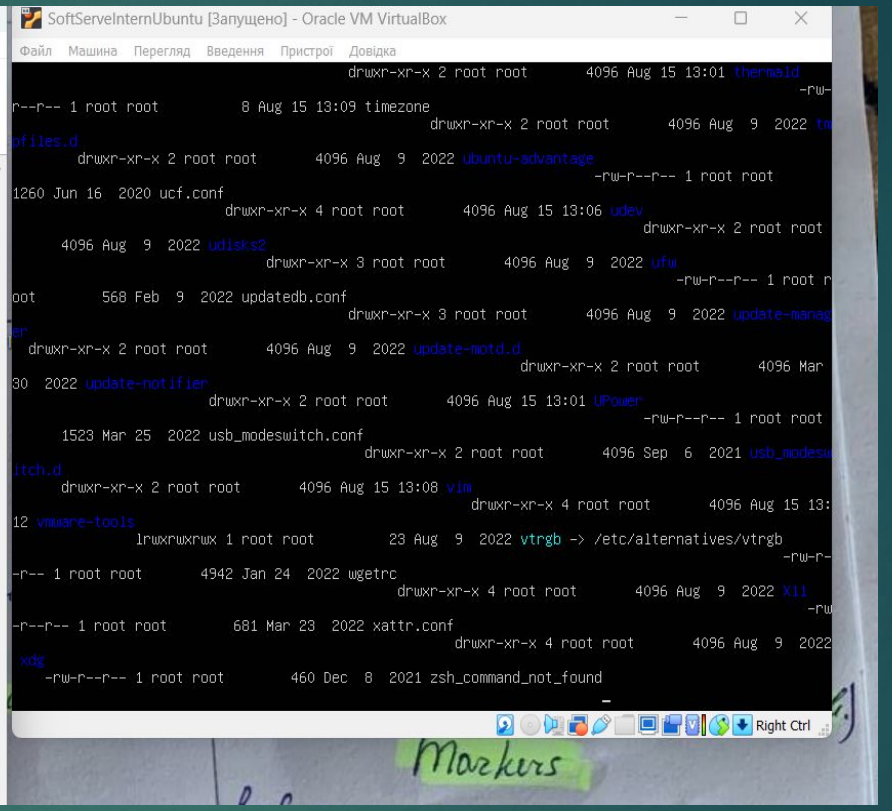


11) List all objects in /etc that contain the ss character sequence. How can I duplicate a similar command using a bunch of grep?

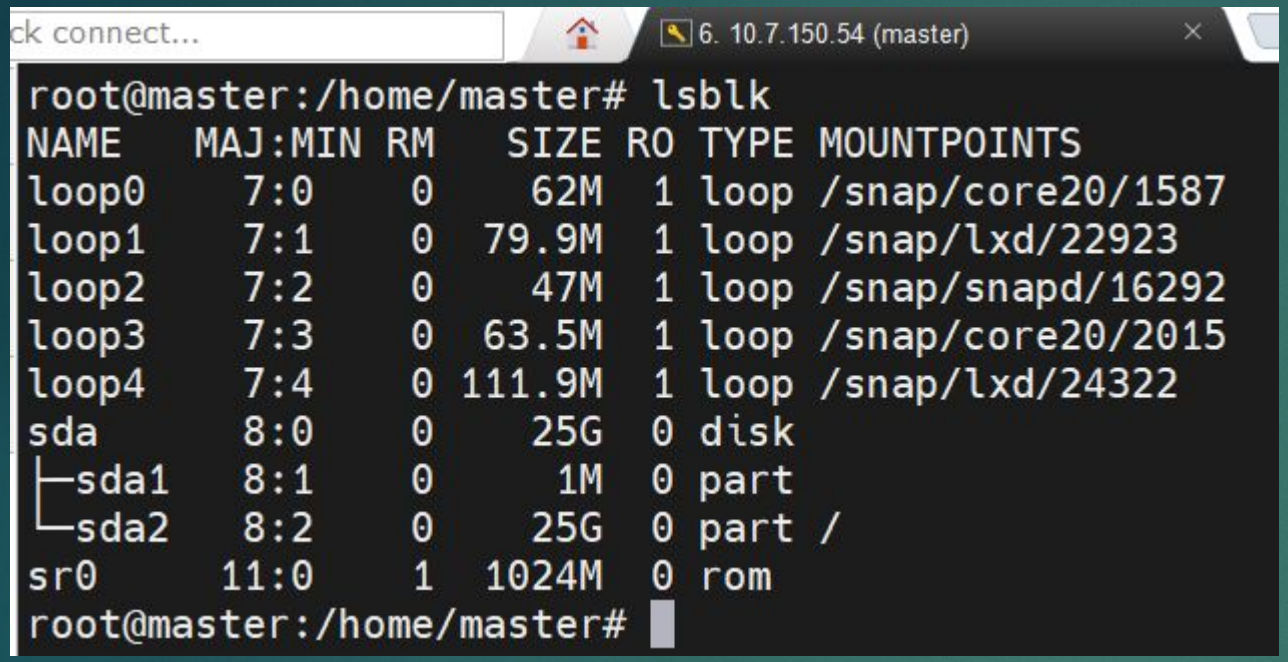


12) Organize a screen-by-screen print of the contents of the /etc directory. Hint: You must use stream redirection operations.

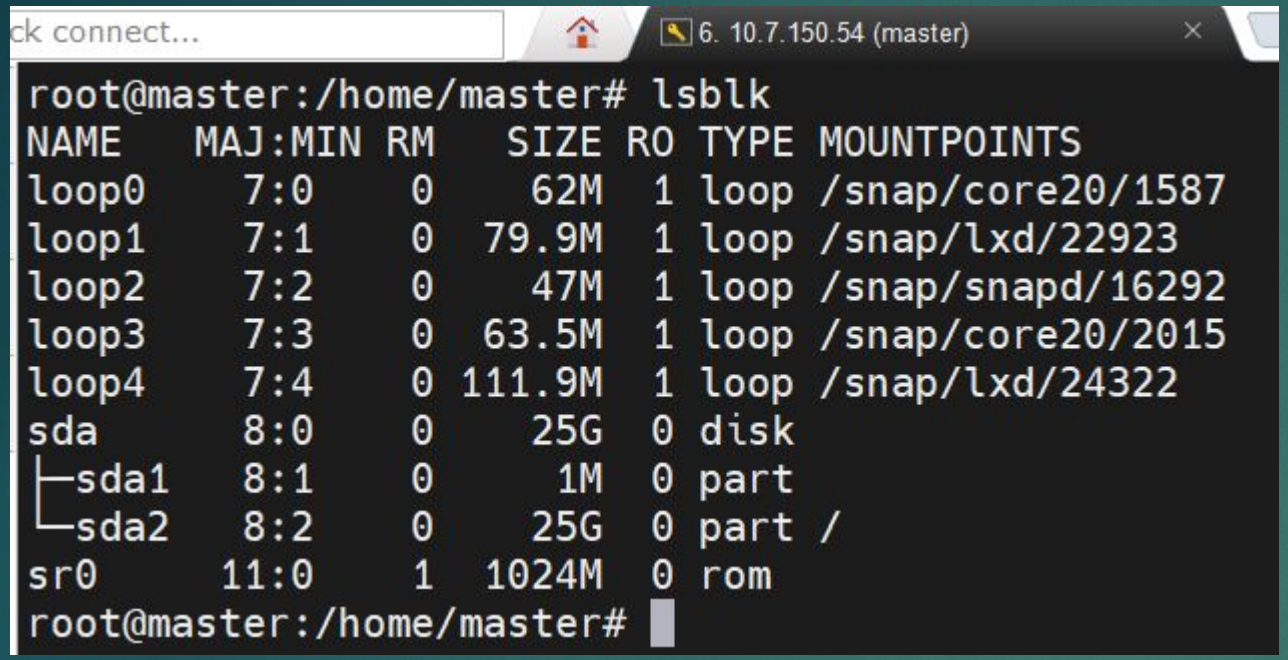




13) What are the types of devices and how to determine the type of device? Give examples.



14) How to determine the type of file in the system, what types of files are there?



15) * List the first 5 directory files that were recently accessed in the /etc directory.