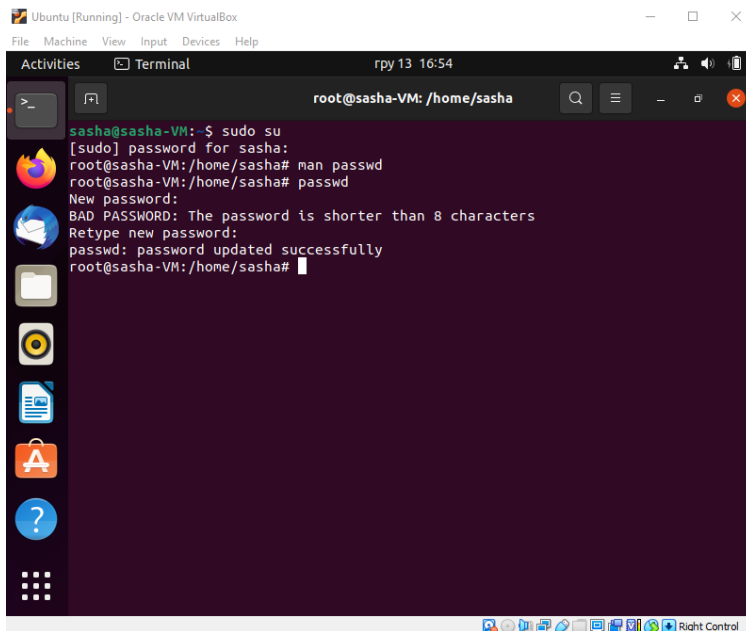


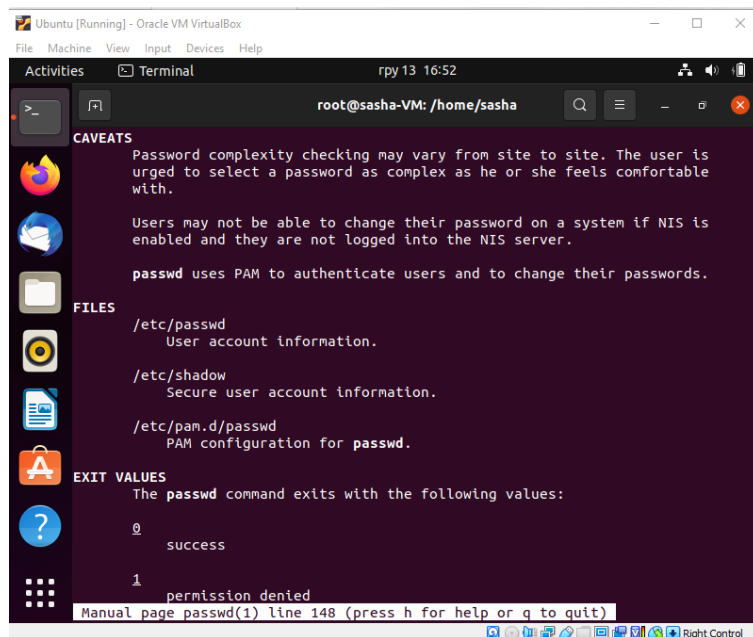
## Part 1

1. Sudo su
2. passwd



The screenshot shows a terminal window titled "Ubuntu [Running] - Oracle VM VirtualBox". The user is logged in as "sasha" at "sasha-VM". The prompt is "sasha@sasha-VM: ~\$". The user enters "sudo su", and the prompt changes to "root@sasha-VM: /home/sasha#". The user then enters "man passwd", which displays the manual page for the "passwd" command. The user then enters "passwd", which prompts for a new password. The user enters a password, but it is rejected with the message "BAD PASSWORD: The password is shorter than 8 characters". The user then enters the password again, and it is accepted with the message "passwd: password updated successfully". The prompt returns to "root@sasha-VM: /home/sasha#".

```
sasha@sasha-VM: ~$ sudo su
[sudo] password for sasha:
root@sasha-VM: /home/sasha# man passwd
root@sasha-VM: /home/sasha# passwd
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
root@sasha-VM: /home/sasha#
```



The screenshot shows the same terminal window as the previous one, but now displaying the manual page for the "passwd" command. The prompt is "root@sasha-VM: /home/sasha#". The manual page is titled "CAVEATS" and "FILES". The "CAVEATS" section contains the following text: "Password complexity checking may vary from site to site. The user is urged to select a password as complex as he or she feels comfortable with." and "Users may not be able to change their password on a system if NIS is enabled and they are not logged into the NIS server." The "FILES" section contains the following text: "passwd uses PAM to authenticate users and to change their passwords." and lists the following files: "/etc/passwd" (User account information.), "/etc/shadow" (Secure user account information.), and "/etc/pam.d/passwd" (PAM configuration for passwd.). The "EXIT VALUES" section contains the following text: "The passwd command exits with the following values:" and lists the following values: "0" (success) and "1" (permission denied). The prompt returns to "root@sasha-VM: /home/sasha#".

```
root@sasha-VM: /home/sasha#
CAVEATS
Password complexity checking may vary from site to site. The user is
urged to select a password as complex as he or she feels comfortable
with.

Users may not be able to change their password on a system if NIS is
enabled and they are not logged into the NIS server.

passwd uses PAM to authenticate users and to change their passwords.

FILES
/etc/passwd
    User account information.

/etc/shadow
    Secure user account information.

/etc/pam.d/passwd
    PAM configuration for passwd.

EXIT VALUES
The passwd command exits with the following values:

0
    success

1
    permission denied

Manual page passwd(1) line 148 (press h for help or q to quit)
```

3. w

```
Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal rpy 13 16:55
root@sasha-VM: /home/sasha

sasha@sasha-VM:~$ sudo su
[sudo] password for sasha:
root@sasha-VM: /home/sasha# man passwd
root@sasha-VM: /home/sasha# passwd
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
root@sasha-VM: /home/sasha# w
 16:55:32 up 10 min,  1 user,  load average: 2,23, 1,87, 1,17
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
sasha    tty2     tty2           16:50    9:31   0.07s  0.06s /usr/libexec/g
root@sasha-VM: /home/sasha#
```

4.

```
Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal rpy 13 16:57
root@sasha-VM: /home/sasha

root:x:0:0:sasha,118,+380501111111,+380977777777:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mail List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
systemd-timesync:x:102:104:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:103:106:/:nonexistent:/usr/sbin/nologin
syslog:x:104:111:/:home/syslog:/usr/sbin/nologin
_apt:x:105:65534:/:nonexistent:/usr/sbin/nologin
tss:x:106:112:TPM software stack,,,:/var/lib/tpm:/bin/false
```

```
Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal rpy 13 16:58
root@sasha-VM: /home/sasha

sasha@sasha-VM:~$ sudo su
[sudo] password for sasha:
root@sasha-VM: /home/sasha# man passwd
root@sasha-VM: /home/sasha# passwd
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
root@sasha-VM: /home/sasha# w
 16:55:32 up 10 min,  1 user,  load average: 2,23, 1,87, 1,17
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU   WHAT
sasha    tty2     tty2           16:50    9:31   0.07s  0.06s /usr/libexec/g
root@sasha-VM: /home/sasha# vi /etc/passwd
[2]+  Stopped                  vi /etc/passwd
root@sasha-VM: /home/sasha# sudo vi /etc/passwd
[3]+  Stopped                  sudo vi /etc/passwd
root@sasha-VM: /home/sasha# last -a
sasha    tty2     Mon Dec 13 16:50   still logged in   tty2
reboot   system boot Mon Dec 13 16:45   still running     5.13.0-22-generic
sasha    tty2     Sat Dec  4 20:04 - crash (8+20:41) tty2
reboot   system boot Sat Dec  4 20:01   still running     5.13.0-22-generic

wtmp begins Sat Dec  4 20:01:22 2021
root@sasha-VM: /home/sasha#
```

The screenshot shows a terminal window titled "Ubuntu [Running] - Oracle VM VirtualBox". The prompt is "root@sasha-VM: /home/sasha". The user "sasha" has been created with the command: `usermod -c "Oleksandr Zui,118,+380501111111,+380971234567,Ubuntu_bugor" sasha`. The password for "sasha" is "1000:1000:Oleksandr Zui,118,+380501111111,+380971234567,Ubuntu\_bugor:/home/sasha:/bin/bash". The `finger` command is executed, showing the following output:

Login	Name	Tty	Idle	Login Time	Office	Office Phone
sasha	Oleksandr Zui	tty2	24	Dec 13 16:50 (tty2)		

5.

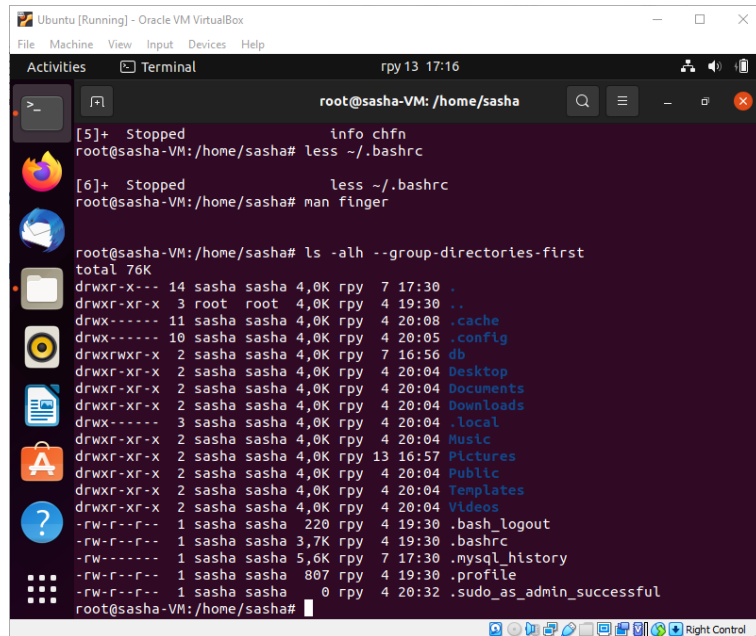
The screenshot shows a terminal window titled "Ubuntu [Running] - Oracle VM VirtualBox". The prompt is "root@sasha-VM: /home/sasha". The user has entered `FINGER(1)`, which displays the manual page for the `finger` command. The manual page includes the following sections:

- NAME**  
`finger` – user information lookup program
- SYNOPSIS**  
`finger [-lmsp] [user ...] [user@host ...]`
- DESCRIPTION**  
The `finger` displays information about the system users.  
Options are:
  - `-s` `Finger` displays the user's login name, real name, terminal name and write status (as a `'*'` after the terminal name if write permission is denied), idle time, login time, office location and office phone number.  
Login time is displayed as month, day, hours and minutes, unless more than six months ago, in which case the year is displayed rather than the hours and minutes.  
Unknown devices as well as nonexistent idle and login times are displayed as single asterisks.
  - `-l` Produces a multi-line format displaying all of the information described for the `-s` option as well as the user's home directory, home phone number, login shell, mail status, and the contents of

Manual page finger(1) line 1 (press h for help or q to quit)



8.

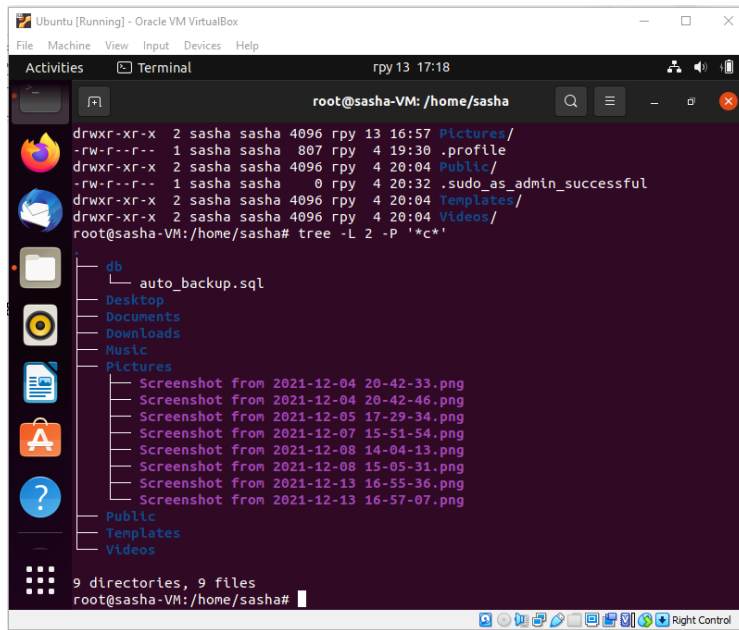


A terminal window titled 'Ubuntu [Running] - Oracle VM VirtualBox' with a menu bar (File, Machine, View, Input, Devices, Help) and a toolbar. The terminal shows the user 'root@sasha-VM' in the directory '/home/sasha'. The user has stopped a process 'chfn' and run 'less ~/.bashrc'. Then, they stopped 'finger' and run 'ls -alh --group-directories-first'. The output shows a directory listing with permissions, owner, group, size, and date for various files and directories including .cache, .config, db, Desktop, Documents, Downloads, .local, Music, Pictures, Public, Templates, Videos, .bash\_logout, .bashrc, .mysql\_history, .profile, and .sudo\_as\_admin\_successful.

```
root@sasha-VM: /home/sasha
[5]+  Stopped                  info chfn
root@sasha-VM: /home/sasha# less ~/.bashrc
[6]+  Stopped                  less ~/.bashrc
root@sasha-VM: /home/sasha# man finger

root@sasha-VM: /home/sasha# ls -alh --group-directories-first
total 76K
drwxr-x--- 14 sasha sasha 4,0K rpy  7 17:30 .
drwxr-xr-x  3 root  root  4,0K rpy  4 19:30 ..
drwx----- 11 sasha sasha 4,0K rpy  4 20:08 .cache
drwx----- 10 sasha sasha 4,0K rpy  4 20:05 .config
drwxrwxr-x  2 sasha sasha 4,0K rpy  7 16:56 db
drwxr-xr-x  2 sasha sasha 4,0K rpy  4 20:04 Desktop
drwxr-xr-x  2 sasha sasha 4,0K rpy  4 20:04 Documents
drwxr-xr-x  2 sasha sasha 4,0K rpy  4 20:04 Downloads
drwx-----  3 sasha sasha 4,0K rpy  4 20:04 .local
drwxr-xr-x  2 sasha sasha 4,0K rpy  4 20:04 Music
drwxr-xr-x  2 sasha sasha 4,0K rpy 13 16:57 Pictures
drwxr-xr-x  2 sasha sasha 4,0K rpy  4 20:04 Public
drwxr-xr-x  2 sasha sasha 4,0K rpy  4 20:04 Templates
drwxr-xr-x  2 sasha sasha 4,0K rpy  4 20:04 Videos
-rw-r--r--  1 sasha sasha 220 rpy  4 19:30 .bash_logout
-rw-r--r--  1 sasha sasha 3,7K rpy  4 19:30 .bashrc
-rw-----  1 sasha sasha 5,6K rpy  7 17:30 .mysql_history
-rw-r--r--  1 sasha sasha 807 rpy  4 19:30 .profile
-rw-r--r--  1 sasha sasha  0 rpy  4 20:32 .sudo_as_admin_successful
root@sasha-VM: /home/sasha#
```

## Part 2



A terminal window titled 'Ubuntu [Running] - Oracle VM VirtualBox' with a menu bar (File, Machine, View, Input, Devices, Help) and a toolbar. The terminal shows the user 'root@sasha-VM' in the directory '/home/sasha'. The user has run 'tree -L 2 -P '\*c\*'. The output shows a directory tree with 'db' containing 'auto\_backup.sql' and 'Pictures' containing several screenshot files. The user has also run 'ls' and 'ls -lh' to show the files in the 'Pictures' directory.

```
root@sasha-VM: /home/sasha
drwxr-xr-x  2 sasha sasha 4096 rpy 13 16:57 Pictures/
-rw-r--r--  1 sasha sasha 807 rpy  4 19:30 .profile
drwxr-xr-x  2 sasha sasha 4096 rpy  4 20:04 Public/
-rw-r--r--  1 sasha sasha  0 rpy  4 20:32 .sudo_as_admin_successful
drwxr-xr-x  2 sasha sasha 4096 rpy  4 20:04 Templates/
drwxr-xr-x  2 sasha sasha 4096 rpy  4 20:04 Videos/
root@sasha-VM: /home/sasha# tree -L 2 -P '*c*'
.
├── db
│   └── auto_backup.sql
├── Desktop
├── Documents
├── Downloads
├── Music
├── Pictures
│   ├── Screenshot from 2021-12-04 20-42-33.png
│   ├── Screenshot from 2021-12-04 20-42-46.png
│   ├── Screenshot from 2021-12-05 17-29-34.png
│   ├── Screenshot from 2021-12-07 15-51-54.png
│   ├── Screenshot from 2021-12-08 14-04-13.png
│   ├── Screenshot from 2021-12-08 15-05-31.png
│   ├── Screenshot from 2021-12-13 16-55-36.png
│   └── Screenshot from 2021-12-13 16-57-07.png
├── Public
├── Templates
└── Videos

9 directories, 9 files
root@sasha-VM: /home/sasha#
```

1.

```

root@sasha-VM: /home/sasha
-rw-r--r-- 1 sasha sasha 3771 rpy 4 19:30 .bashrc
drwx----- 11 sasha sasha 4096 rpy 4 20:08 .cache/
drwx----- 10 sasha sasha 4096 rpy 4 20:05 .config/
drwxrwxr-x 2 sasha sasha 4096 rpy 7 16:56 db/
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Desktop/
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Documents/
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Downloads/
drwx----- 3 sasha sasha 4096 rpy 4 20:04 .local/
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Music/
-rw----- 1 sasha sasha 5663 rpy 7 17:30 .mysql_history
drwxr-xr-x 2 sasha sasha 4096 rpy 13 16:57 Pictures/
-rw-r--r-- 1 sasha sasha 807 rpy 4 19:30 .profile
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Public/
-rw-r--r-- 1 sasha sasha 0 rpy 4 20:32 .sudo_as_admin_successful
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Templates/
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Videos/
root@sasha-VM:/home/sasha# file *
db: directory
Desktop: directory
Documents: directory
Downloads: directory
Music: directory
Pictures: directory
Public: directory
Templates: directory
Videos: directory
root@sasha-VM:/home/sasha# file .bash_logout
.bash_logout: ASCII text
root@sasha-VM:/home/sasha#

```

2.

3. Cd – Change to the home directory  
Cd / - Change to the root directory
4. Ls -a -all  
Ls -l – use a long listing format
5. Mkdir Task5\_part\_2  
Tree > Task5\_part\_2/directories.txt  
Vi Task5\_part\_2/directories.txt

```

sasha@sasha-VM: ~
db
├── auto_backup.sql
├── Desktop
├── Documents
├── Downloads
├── Music
├── Pictures
│   ├── Screenshot from 2021-12-04 20-42-33.png
│   ├── Screenshot from 2021-12-04 20-42-46.png
│   ├── Screenshot from 2021-12-05 17-29-34.png
│   ├── Screenshot from 2021-12-07 15-51-54.png
│   ├── Screenshot from 2021-12-08 14-04-13.png
│   ├── Screenshot from 2021-12-08 15-05-31.png
│   ├── Screenshot from 2021-12-13 16-55-36.png
│   └── Screenshot from 2021-12-13 16-57-07.png
├── Public
├── Task5_part_2
│   └── directories.txt
├── Templates
└── Videos

10 directories, 10 files

"Task5_part_2/directories.txt" 23 lines, 743 bytes

```

- Cp Task5\_part\_2/directories.txt ~/directories.txt
- Cp Task5\_part\_2/directories.txt /home/sasha/directories.txt
- Rm -ir Task5\_part\_2
- Rm -l directories.txt
6. Mkdir test  
Cp .bash\_history test/labwork2  
Cd test  
Ln -P labwork2 labwork2\_hard  
Ln -s labwork2 labwork2\_soft

```
Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal rpy 14 18:53
sasha@sasha-VM: ~/test
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Mustc/
-rw-r--r-- 1 sasha sasha 5663 rpy 7 17:30 .mysql_history
drwxr-xr-x 2 sasha sasha 4096 rpy 13 16:57 Pictures/
-rw-r--r-- 1 sasha sasha 807 rpy 4 19:30 .profile
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Public/
-rw-r--r-- 1 sasha sasha 0 rpy 4 20:32 .sudo_as_admin_successful
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Templates/
drwxrwxr-x 2 sasha sasha 4096 rpy 13 18:24 test/
drwxr-xr-x 2 sasha sasha 4096 rpy 4 20:04 Videos/
sasha@sasha-VM:~$ cp .bash_history test/labwork2
sasha@sasha-VM:~$ cd test
sasha@sasha-VM:~/test$ ll
total 12
drwxrwxr-x 2 sasha sasha 4096 rpy 14 18:44 ./
drwxr-x--- 15 sasha sasha 4096 rpy 13 18:24 ../
-rw-r--r-- 1 sasha sasha 8 rpy 14 18:44 labwork2
sasha@sasha-VM:~/test$ man ln
sasha@sasha-VM:~/test$ ln -P labwork2 labwork2_hard
sasha@sasha-VM:~/test$ ln -s labwork2 labwork2_soft
sasha@sasha-VM:~/test$ ll
total 16
drwxrwxr-x 2 sasha sasha 4096 rpy 14 18:50 ./
drwxr-x--- 15 sasha sasha 4096 rpy 13 18:24 ../
-rw-r--r-- 2 sasha sasha 8 rpy 14 18:44 labwork2
-rw-r--r-- 2 sasha sasha 8 rpy 14 18:44 labwork2_hard
lrwxrwxrwx 1 sasha sasha 8 rpy 14 18:50 labwork2_soft -> labwork2
sasha@sasha-VM:~/test$
```

Nano labwork2\_soft  
Cat labwork2\_soft  
Cat labwork2  
Mv labwork2\_hard hard\_lnk\_labwork2  
Mv labwork2\_soft soft\_lnk\_labwork2  
Rm labwork2

```
Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal rpy 14 19:11
sasha@sasha-VM: ~/test
lrwxrwxrwx 1 sasha sasha 8 rpy 14 18:50 labwork2_soft -> labwork2
-rw-rw-r-- 1 sasha sasha 8 rpy 14 18:56 Task_5_Part2
sasha@sasha-VM:~/test$ rename labwork2_hard hard_lnk_labwork2
Command 'rename' not found, but can be installed with:
sudo apt install rename
sasha@sasha-VM:~/test$ mv labwork2_hard hard_lnk_labwork2
sasha@sasha-VM:~/test$ mv labwork2_soft symb_lnk_labwork2
sasha@sasha-VM:~/test$ ll
total 20
drwxrwxr-x 2 sasha sasha 4096 rpy 14 19:08 ./
drwxr-x--- 15 sasha sasha 4096 rpy 13 18:24 ../
-rw-r--r-- 2 sasha sasha 22 rpy 14 18:58 hard_lnk_labwork2
-rw-r--r-- 2 sasha sasha 22 rpy 14 18:58 labwork2
lrwxrwxrwx 1 sasha sasha 8 rpy 14 18:50 symb_lnk_labwork2 -> labwork2
-rw-rw-r-- 1 sasha sasha 8 rpy 14 18:56 Task_5_Part2
sasha@sasha-VM:~/test$ rm labwork2
sasha@sasha-VM:~/test$ ll
total 16
drwxrwxr-x 2 sasha sasha 4096 rpy 14 19:10 ./
drwxr-x--- 15 sasha sasha 4096 rpy 13 18:24 ../
-rw-r--r-- 1 sasha sasha 22 rpy 14 18:58 hard_lnk_labwork2
lrwxrwxrwx 1 sasha sasha 8 rpy 14 18:50 symb_lnk_labwork2 -> labwork2
-rw-rw-r-- 1 sasha sasha 8 rpy 14 18:56 Task_5_Part2
sasha@sasha-VM:~/test$ cat symb_lnk_labwork2
cat: symb_lnk_labwork2: No such file or directory
sasha@sasha-VM:~/test$ cat hard_lnk_labwork2
Task_5_Part_2
sudo su
sasha@sasha-VM:~/test$
```

7. Sudo apt install locate

Sudo updatedb

Man locate

Locate -A squid

Locate -A traceroute

8. Df -h

```

sasha@sasha-VM: ~
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop9: 65,21 MiB, 68378624 bytes, 133552 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop10: 54,22 MiB, 56856576 bytes, 111048 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/loop11: 54,24 MiB, 56872960 bytes, 111080 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

sasha@sasha-VM:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
tmpfs            393M  1,4M  392M   1% /run
/dev/sda3        25G   9,6G   14G  42% /
tmpfs            2,0G   0  2,0G   0% /dev/shm
tmpfs            5,0M   4,0K   5,0M   1% /run/lock
/dev/sda2        512M   5,3M  507M   2% /boot/efi
tmpfs            393M  108K  393M   1% /run/user/1000
sasha@sasha-VM:~$

```

9. `Less -N hard_lnk_labwork2 | wc -l`

10. `Cd /`

`Cd etc`

`Sudo find -type f -name "*host*"`

```

sasha@sasha-VM: /etc
lrwxrwxrwx 1 root root      10 rpy  4 19:15 libx32 -> usr/libx32/
drwx----- 2 root root    16384 rpy  4 19:15 lost+found/
drwxr-xr-x 2 root root    4096 xov 12 23:38 media/
drwxr-xr-x 2 root root    4096 xov 12 23:38 mnt/
drwxr-xr-x 2 root root    4096 xov 12 23:38 opt/
dr-xr-xr-x 244 root root      0 rpy 13 16:45 proc/
drwx----- 4 root root    4096 rpy 13 17:26 root/
drwxr-xr-x 32 root root     920 rpy 14 19:13 run/
lrwxrwxrwx 1 root root      8 rpy  4 19:15/sbin -> usr/sbin/
drwxr-xr-x 10 root root    4096 xov 12 23:57 snap/
drwxr-xr-x 2 root root    4096 xov 12 23:38 srv/
-rw----- 1 root root 1247815680 rpy  4 19:15 swapfile
dr-xr-xr-x 13 root root      0 rpy 13 16:45 sys/
drwxrwxrwt 19 root root    4096 rpy 14 19:54 tmp/
drwxr-xr-x 14 root root    4096 xov 12 23:38 usr/
drwxr-xr-x 14 root root    4096 xov 12 23:54 var/

sasha@sasha-VM:~$ cd etc
sasha@sasha-VM:/etc$ sudo find -type f -name "host"
sasha@sasha-VM:/etc$ sudo find -type f -name "*host*"
./hosts
./avahi/hosts
./hostid
./hosts.allow
./hosts.deny
./X11/Xsession.d/35x11-common_xhost-local
./host.conf
./hostname
./apparmor.d/abstractions/hosts_access
sasha@sasha-VM:/etc$

```

11. `Ls -al | grep "ss"`



```
Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal rpy 15 10:17
sasha@sasha-VM: /etc
drwxr-xr-x 2 root root 4096 Nov 12 23:38 srv/
-rw-r--r-- 1 root root 1247815680 rpy 4 19:15 swapfile
dr-xr-xr-x 13 root root 0 rpy 13 16:45 sys/
drwxrwxrwt 19 root root 4096 rpy 14 19:54 tmp/
drwxr-xr-x 14 root root 4096 Nov 12 23:38 usr/
drwxr-xr-x 14 root root 4096 Nov 12 23:54 var/
sasha@sasha-VM:/$ cd etc
sasha@sasha-VM:/etc$ sudo find -type f -name "host"
sasha@sasha-VM:/etc$ sudo find -type f -name "*host*"
./hosts
./avahi/hosts
./hostid
./hosts.allow
./hosts.deny
./X11/Xsession.d/35x11-common_xhost-local
./host.conf
./hostname
./apparmor.d/abstractions/hosts_access
sasha@sasha-VM:/etc$ ls -al | grep "ss"
drwxr-xr-x 3 root root 4096 Nov 21 21:07 gss
drwxr-xr-x 2 root root 4096 Nov 12 23:49 insserv.conf.d
-rw-r--r-- 1 root root 20 Nov 11 11:39 issue
-rw-r--r-- 1 root root 13 Nov 11 11:39 issue.net
-rw-r--r-- 1 root root 542 rpy 4 19:49 nsswitch.conf
-rw-r--r-- 1 root root 2935 rpy 13 17:10 passwd
-rw-r--r-- 1 root root 2882 rpy 13 17:07 passwd-
drwxr-xr-x 3 root root 4096 Nov 12 23:48 ssh
drwxr-xr-x 4 root root 4096 rpy 13 16:54 ssl
sasha@sasha-VM:/etc$
```

## 12. Ls -alh | less

```
Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal rpy 15 10:23
sasha@sasha-VM: /etc
drwxr-xr-x 2 root root 4,0K Nov 12 23:39 terminfo
drwxr-xr-x 2 root root 4,0K Nov 12 23:48 thermalid
drwxr-xr-x 2 root root 4,0K rpy 4 20:18 thunderbird
-rw-r--r-- 1 root root 12 rpy 4 20:17 timezone
drwxr-xr-x 2 root root 4,0K Nov 4 12:23 tmpfiles.d
drwxr-xr-x 2 root root 4,0K rpy 13 16:54 ubuntu-advantage
-rw-r--r-- 1 root root 1,3K Sep 16 2020 ucf.conf
drwxr-xr-x 4 root root 4,0K Nov 12 23:39 udev
drwxr-xr-x 2 root root 4,0K Nov 12 23:49 udisks2
drwxr-xr-x 3 root root 4,0K rpy 4 20:17 ufw
-rw-r--r-- 1 root root 513 Sep 19 18:35 updatedb.conf
drwxr-xr-x 3 root root 4,0K Nov 12 23:49 update-manager
drwxr-xr-x 2 root root 4,0K rpy 13 16:54 update-motd.d
drwxr-xr-x 2 root root 4,0K Sep 25 12:06 update-notifier
drwxr-xr-x 2 root root 4,0K Nov 12 23:48 UPower
-rw-r--r-- 1 root root 1,5K Nov 7 13:25 usb_modeswitch.conf
drwxr-xr-x 2 root root 4,0K Nov 24 2020 usb_modeswitch.d
drwxr-xr-x 2 root root 4,0K rpy 4 20:18 vim
drwxr-xr-x 4 root root 4,0K rpy 4 19:52 vmware-tools
-rwxrwxrwx 1 root root 23 rpy 4 19:15 vtrgb -> /etc/alternatives/vtrgb
drwxr-xr-x 5 root root 4,0K Nov 12 23:44 vulkan
-rw-r--r-- 1 root root 4,9K Nov 24 2021 wgetrc
drwxr-xr-x 2 root root 4,0K Nov 12 23:49 wpa_supplicant
drwxr-xr-x 12 root root 4,0K Nov 12 23:49 X11
-rw-r--r-- 1 root root 642 Nov 7 13:09 xattr.conf
drwxr-xr-x 6 root root 4,0K Nov 12 23:45 xdg
drwxr-xr-x 2 root root 4,0K Nov 12 23:49 xml
-rw-r--r-- 1 root root 460 Sep 1 2020 zsh_command_not_found
(END)
```

## 13. Ls -l /dev

On screen we see the type of file with the first bit on each line. Device files are denoted as the following:

- c-character
- b-block
- p-pipe
- s-socket

```

Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal rpy 15 11:04
sasha@sasha-VM: /etc

[2]+ Stopped
sasha@sasha-VM:/etc$ ls --color=auto -alh | less
total 0
crw-r--r-- 1 root root 10, 235 rpy 13 16:46 autofs
drwxr-xr-x 2 root root 400 rpy 13 16:46 block
drwxr-xr-x 2 root root 80 rpy 13 16:45 bsg
crw----- 1 root root 10, 234 rpy 13 16:45 btrfs-control
drwxr-xr-x 3 root root 60 rpy 13 16:45 bus
lrwxrwxrwx 1 root root 3 rpy 13 16:46 cdrom -> sr0
drwxr-xr-x 2 root root 3700 rpy 13 16:46 char
crw--w---- 1 root tty 5, 1 rpy 13 16:46 console
lrwxrwxrwx 1 root root 11 rpy 13 16:45 core -> /proc/kcore
drwxr-xr-x 3 root root 60 rpy 13 16:45 cpu
crw----- 1 root root 10, 123 rpy 13 16:46 cpu_dma_latency
crw----- 1 root root 10, 203 rpy 13 16:45 cuse
drwxr-xr-x 7 root root 140 rpy 13 16:45 disk
drwxr-xr-x 2 root root 60 rpy 13 16:45 dma_heap
drwxr-xr-x 3 root root 100 rpy 13 16:46 dri
lrwxrwxrwx 1 root root 3 rpy 13 16:46 dvd -> sr0
crw----- 1 root root 10, 126 rpy 13 16:46 ecryptfs
crw-rw---- 1 root video 29, 0 rpy 13 16:46 fb0
lrwxrwxrwx 1 root root 13 rpy 13 16:45 fd -> /proc/self/fd
crw-rw-rw- 1 root root 1, 7 rpy 13 16:46 full
crw-rw-rw- 1 root root 10, 229 rpy 13 16:46 fuse
crw----- 1 root root 240, 0 rpy 13 16:46 hidraw0
crw----- 1 root root 10, 228 rpy 13 16:46 hpet
drwxr-xr-x 2 root root 0 rpy 13 16:45 hugepages
crw----- 1 root root 10, 183 rpy 13 16:46 hwrng
crw----- 1 root root 89, 0 rpy 13 16:46 i2c-0

```

#### 14. Df -Th

```

Ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal rpy 15 11:42
sasha@sasha-VM: /etc

sasha@sasha-VM:/etc$ df -Th
Filesystem      Type      Size      Used Avail Use% Mounted on
tmpfs            tmpfs     393M      1,4M  392M   1% /run
/dev/sda3        ext4      25G       9,6G   14G  42% /
tmpfs            tmpfs     2,0G      0      2,0G   0% /dev/shm
tmpfs            tmpfs     5,0M      4,0K   5,0M   1% /run/lock
/dev/sda2        vfat      512M      5,3M   507M   2% /boot/efi
tmpfs            tmpfs     393M     108K   393M   1% /run/user/1000
sasha@sasha-VM:/etc$

```

#### 15. Ls -ltr | tail -n 5

Ubuntu [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal rpy 15 11:45

sasha@sasha-VM: /etc

```
sasha@sasha-VM:/etc$ df -Th
```

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
tmpfs	tmpfs	393M	1,4M	392M	1%	/run
/dev/sda3	ext4	25G	9,6G	14G	42%	/
tmpfs	tmpfs	2,0G	0	2,0G	0%	/dev/shm
tmpfs	tmpfs	5,0M	4,0K	5,0M	1%	/run/lock
/dev/sda2	vfat	512M	5,3M	507M	2%	/boot/efi
tmpfs	tmpfs	393M	108K	393M	1%	/run/user/1000

```
sasha@sasha-VM:/etc$ ls -ltr | tail -n 5
```

-rw-r-----	1	root	shadow	920	rpy	14	19:15	gshadow
drwxr-xr-x	2	root	root	4096	rpy	14	19:20	cron.daily
drwxr-xr-x	2	root	root	4096	rpy	14	19:22	alternatives
drwxr-xr-x	5	root	lp	4096	rpy	15	10:08	cups
-rw-r--r--	1	root	root	51845	rpy	15	10:09	ld.so.cache

sasha@sasha-VM:/etc\$

Right Control