Module 4 Linux Essentials

TASK 4.3

After you have logged into the system, do the following.

1.Invoke **pwd** to see your current working directory (there should be your home directory).

```
mykhailo_litvinov@mruletkin:~$ pwd
/home/mykhailo_litvinov
mykhailo_litvinov@mruletkin:~$
```

2. Collect output of these commands

ls -l / - output information in long format

ls - output information in simple format

ls ~ - output the relative path

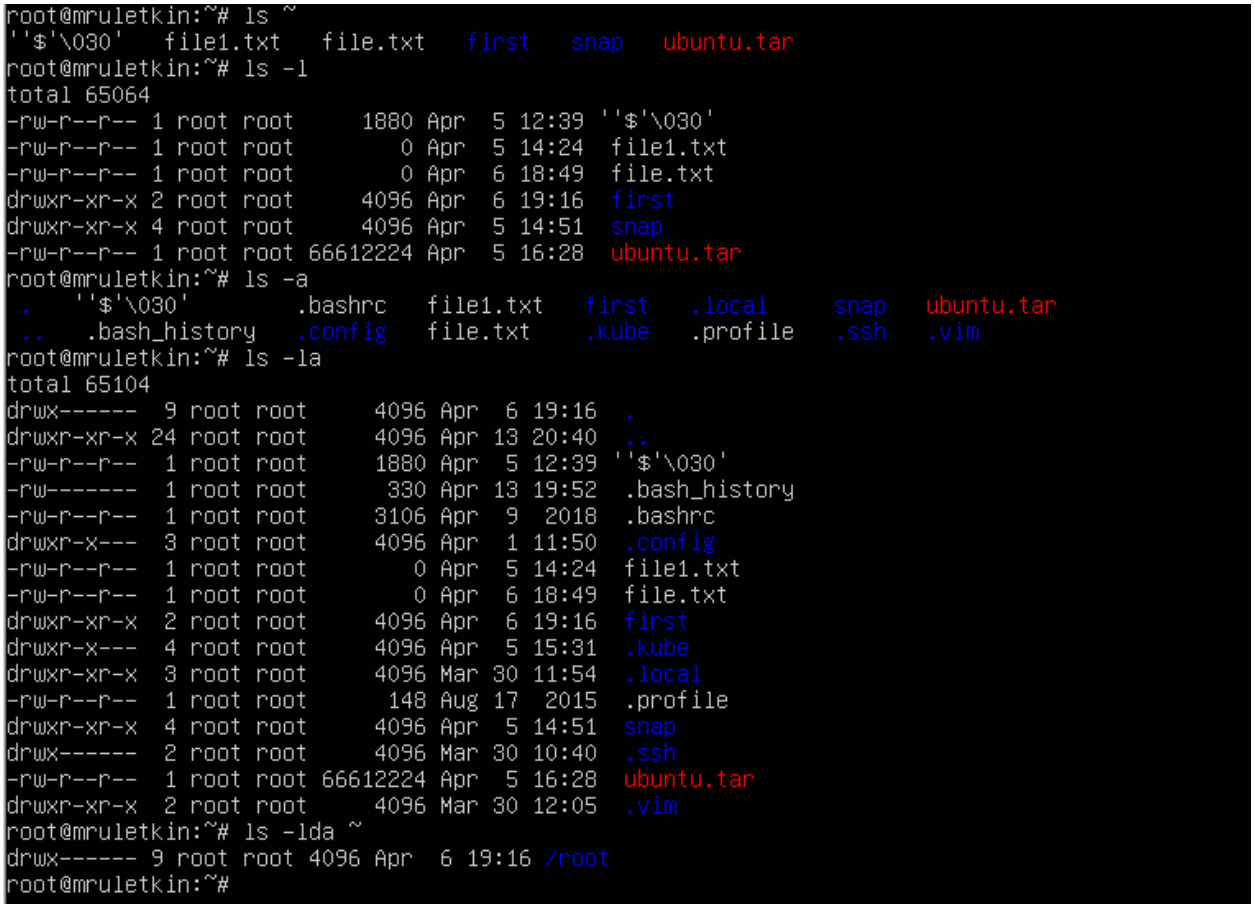
ls -l - output information about content in long format

ls -a – output list of each file (including opened)

ls -la - output list of each file (including opened) in long format

ls -lda ~ output information about directory in long format

```
root@mruletkin:~# ls -l /
total 2097248
drwxr-xr-x   2 root root       4096 Mar 30 10:37 bin
drwxr-xr-x   3 root root       4096 Apr 13 18:51 boot
drwxr-xr-x   2 root root       4096 Mar 30 10:30 cdrom
drwxr-xr-x  18 root root       3880 Apr 15 16:46 dev
drwxr-xr-x  95 root root       4096 Apr  5 15:28 etc
drwxr-xr-x   4 root root       4096 Apr  5 14:31 home
lrwxrwxrwx   1 root root         33 Apr 13 18:50 initrd.img -> boot/initrd.img-4.15.0-96-generic
lrwxrwxrwx   1 root root         33 Mar 30 10:32 initrd.img.old -> boot/initrd.img-4.15.0-91-generic
drwxr-xr-x  22 root root       4096 Mar 30 11:07 lib
drwxr-xr-x   2 root root       4096 Feb  3 18:22 lib64
drwx------   2 root root      16384 Mar 30 10:29 lost+found
drwxr-xr-x   3 root root       4096 Mar 30 11:05 media
drwxr-xr-x   2 root root       4096 Feb  3 18:22 mnt
drwxr-xr-x   4 root root       4096 Apr  5 12:35 opt
dr-xr-xr-x 122 root root          0 Apr 15 16:46 proc
drwx------   9 root root       4096 Apr  6 19:16 root
drwxr-xr-x  29 root root       1040 Apr 15 16:51 run
drwxr-xr-x   2 root root      12288 Apr 15 16:47 sbin
drwxr-xr-x   7 root root       4096 Apr 15 16:47 snap
drwxr-xr-x   2 root root       4096 Feb  3 18:22 srv
-rw-------   1 root root 2147483648 Mar 30 10:32 swap.img
dr-xr-xr-x  13 root root          0 Apr 15 16:56 sys
drwxrwxrwt   9 root root       4096 Apr 15 16:51 tmp
drwxr-xr-x  11 root root       4096 Apr  5 12:35 usr
drwxr-xr-x  13 root root       4096 Feb  3 18:24 var
-rw-------   1 root root          0 Apr 15 16:47 VBox.log
lrwxrwxrwx   1 root root         30 Apr 13 18:50 vmlinuz -> boot/vmlinuz-4.15.0-96-generic
lrwxrwxrwx   1 root root         30 Mar 30 10:32 vmlinuz.old -> boot/vmlinuz-4.15.0-91-generic
root@mruletkin:~# ls
''$'\030'   file1.txt   file.txt   first   snap   ubuntu.tar
root@mruletkin:~#
```



Note differences between produced outputs. Describe (in few words) purposes of these commands.

- Command **ls** lets see content of directory and find out the attributes files and directories

3. Execute and describe the following commands (store the output, if any):

mkdir test - create directory “test”

cd test - enter to the directory “test”

pwd – output the current path

touch test.txt create file “test.txt”

ls -l test.txt output long information about file “test.txt”

mkdir test2 - create directory “test2”

mv test.txt test2 – move file “test.txt” to the directory “test2”

cd test2 - enter to the directory “test2”

ls – output information about content of “test2”

mv test.txt test2.txt - rename file “test.txt” in “test2.txt”
ls – output new name of file
cp test2.txt .. – copying file “test2.txt”
cd ..
ls
rm test2.txt – remove file “test2.txt”
rmdir test2 - remove directory “test2”

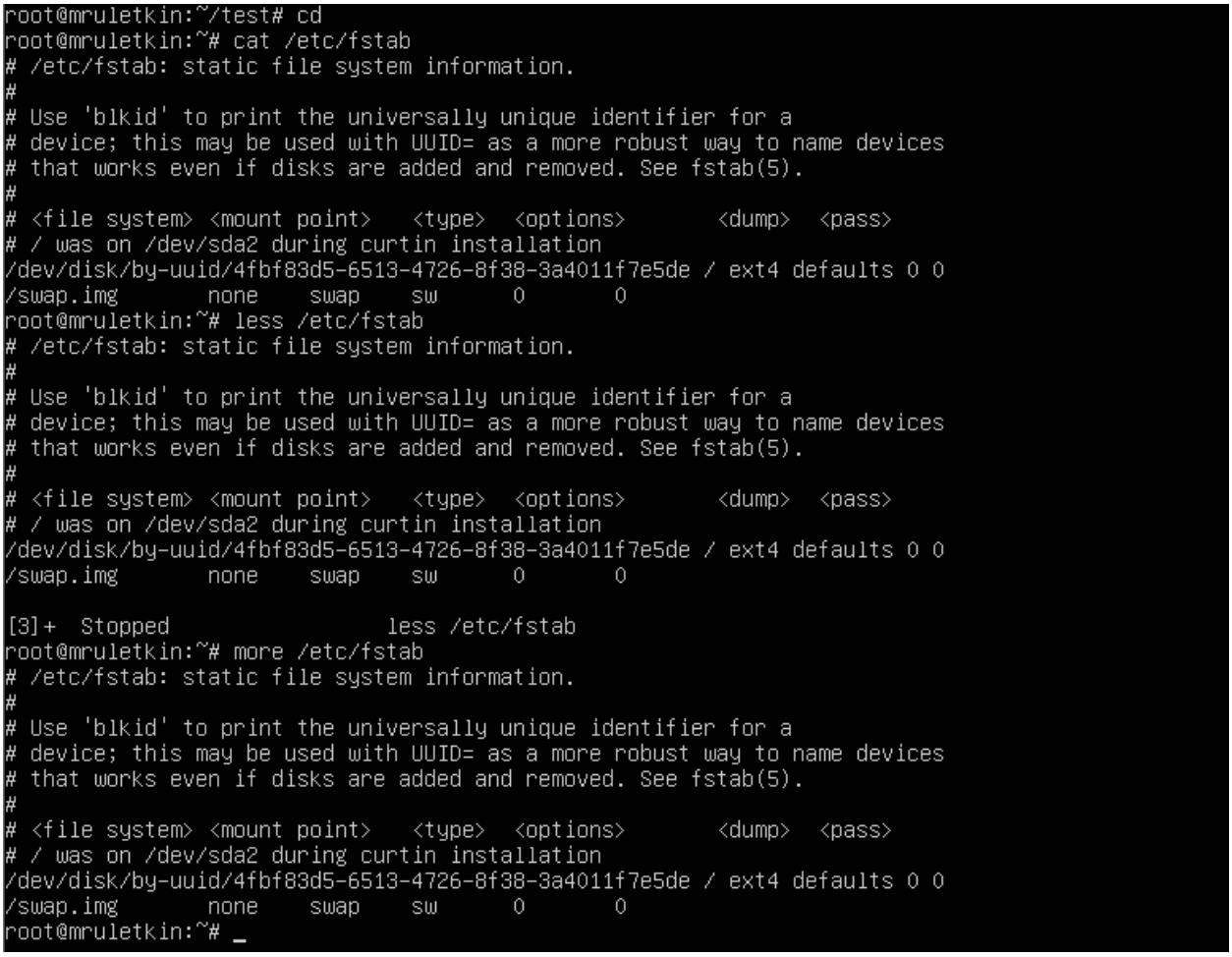
```
root@mruletkin:~# mkdir test
root@mruletkin:~# cd test
root@mruletkin:~/test# pwd
/root/test
root@mruletkin:~/test#
root@mruletkin:~/test# touch test.txt
root@mruletkin:~/test# ls -l test.txt
-rw-r--r-- 1 root root 0 Apr 15 20:22 test.txt
root@mruletkin:~/test# mkdir test2
root@mruletkin:~/test# mv test.txt test2
root@mruletkin:~/test# cd test2
root@mruletkin:~/test/test2# ls
test.txt
root@mruletkin:~/test/test2# mv test.txt test2.txt
root@mruletkin:~/test/test2# ls
test2.txt
root@mruletkin:~/test/test2# cp test2.txt ~/test
root@mruletkin:~/test/test2# cd
root@mruletkin:~# cd test
root@mruletkin:~/test# ls
test2  test2.txt
root@mruletkin:~/test# rm test2.txt
root@mruletkin:~/test# cd test2
root@mruletkin:~/test/test2# ls
test2.txt
root@mruletkin:~/test/test2# rm test2.txt
root@mruletkin:~/test/test2# cd
root@mruletkin:~# cd test
root@mruletkin:~/test# rmdir test2
root@mruletkin:~/test# ls
```

4. Execute and describe the difference

cat /etc/fstab

less /etc/fstab

more /etc/fstab



- **cat** used to combine files and full-screen displaying text files
- **less** and **more** are responsible for outputting of information in full-screen pages

5. Add to archive all ‘test’ directories.

a. to the pure ‘tar’;

b. to the zipped ‘tar’ with only tar command;

c. to the zipped ‘tar’ with gzip command;

```
root@mruletkin:~# tar -cvf test.tar test
test/
root@mruletkin:~# ls
''$'\030'   file1.txt   file.txt   first   snap   test   test.tar   ubuntu.tar
root@mruletkin:~# tar -czf testz.tgz test
root@mruletkin:~# ls
''$'\030'   file1.txt   file.txt   first   snap   test   test.tar   testz.tgz   ubuntu.tar
root@mruletkin:~# gzip test.tar
root@mruletkin:~# ls
''$'\030'   file1.txt   file.txt   first   snap   test   test.tar.gz   testz.tgz   ubuntu.tar
root@mruletkin:~# _
```

extract from archives all above.

```
root@mruletkin:~# tar -xvf testz.tgz
test/
root@mruletkin:~# ls
''$'\030'                                                          first
 4e5021d210f65ebe915670c7089120120bc0a303b90208592851708c1b8c04bd.json   manifest.json
 85a81177d4281af6c8dc7e4cfcc8aa33f9c031991eaf2e349628e3b462c9fb82        repositories
 c04ff1820d1857aed15ab3884e18b63bcffcee7e1d3f20575dc05c251b8fe9e3        snap
 e21c93ee46e050c5be8f77e1048d1f9b66799415709720c6ffdd0f71aa38ddb25       test
 e260ca1c1f8cd0093994a9bba5b467f158a6913972169faff2d7fc3443e8df54        test.tar.gz
 file1.txt                                                         testz.tgz
 file.txt                                                          ubuntu.tar
root@mruletkin:~# gunzip test.tar.gz
root@mruletkin:~# ls
''$'\030'                                                          file1.txt       test
 4e5021d210f65ebe915670c7089120120bc0a303b90208592851708c1b8c04bd.json   file.txt        test.tar
 85a81177d4281af6c8dc7e4cfcc8aa33f9c031991eaf2e349628e3b462c9fb82        first           testz.tgz
 c04ff1820d1857aed15ab3884e18b63bcffcee7e1d3f20575dc05c251b8fe9e3        manifest.json   ubuntu.tar
 e21c93ee46e050c5be8f77e1048d1f9b66799415709720c6ffdd0f71aa38ddb25       repositories
 e260ca1c1f8cd0093994a9bba5b467f158a6913972169faff2d7fc3443e8df54        snap
root@mruletkin:~# _
```

5. Look through man pages of the listed above commands.