

Module 4 Linux Essentials

TASK 4.3

Anton Fofanov

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).

```
felexa@aku-ПК:/home$ pwd
/home
felexa@aku-ПК:/home$ S_
```

2. Collect output of these commands

ls -l /

```
felexa@aku-ПК:/home$ ls -l /
total 580
drwxr-xr-x  1 root root    512 Apr 19 20:21 bin
drwxr-xr-x  1 root root    512 May 21  2019 boot
drwxr-xr-x  1 root root    512 Apr 19 20:24 dev
drwxr-xr-x  1 root root    512 Apr 19 20:24 etc
drwxr-xr-x  1 root root    512 Feb 29 16:19 home
-rwxr-xr-x  1 root root 591344 Jan  1  1970 init
drwxr-xr-x  1 root root    512 May 21  2019 lib
drwxr-xr-x  1 root root    512 May 21  2019 lib64
drwxr-xr-x  1 root root    512 May 21  2019 media
drwxr-xr-x  1 root root    512 Feb 29 14:58 mnt
drwxr-xr-x  1 root root    512 May 21  2019 opt
dr-xr-xr-x  9 root root      0 Apr 19 20:24 proc
drwx----- 1 root root    512 May 21  2019 root
drwxr-xr-x  1 root root    512 Apr 19 20:24 run
drwxr-xr-x  1 root root    512 Apr 19 20:21/sbin
drwxr-xr-x  1 root root    512 Mar 21  2019 snap
drwxr-xr-x  1 root root    512 May 21  2019 srv
dr-xr-xr-x 12 root root      0 Apr 19 20:24 sys
drwxrwxrwt  1 root root    512 Apr 19 20:24 tmp
drwxr-xr-x  1 root root    512 May 21  2019 usr
drwxr-xr-x  1 root root    512 May 21  2019 var
felexa@aku-ПК:/home$
```

ls

```
felexa@aku-ПК:/home$ ls
felexa
felexa@aku-ПК:/home$
```

ls ~

```
admin1@checkout:/home$ ls ~
ca.crt  checkout  checkout-test  nginx
admin1@checkout:/home$
```

ls -l

```
felexa@aku-ПК:/home$ ls -l
total 0
-rw-r--r-- 1 root  root    0 Apr 19 20:28 Epam_task
drwxr-xr-x 1 felexa felexa 512 Mar  8 23:04 felexa
felexa@aku-ПК:/home$
```

ls -a

```
felexa@aku-ПК:/home$ ls -a
.  ..  Epam_task  felexa
felexa@aku-ПК:/home$
```

ls -la

```
felexa@aku-ПК:/home$ ls -la
total 0
drwxr-xr-x 1 root  root    512 Apr 19 20:32 .
drwxr-xr-x 1 root  root    512 Jan  1 1970 ..
-rw-r--r-- 1 root  root      0 Apr 19 20:32 .lolol
-rw-r--r-- 1 root  root      0 Apr 19 20:28 Epam_task
drwxr-xr-x 1 felexa felexa 512 Mar  8 23:04 felexa
felexa@aku-ПК:/home$
```

ls -lda ~

```
felexa@aku-ПК:/home$ ls -lda ~
drwxr-xr-x 1 felexa felexa 512 Mar  8 23:04 /home/felexa
felexa@aku-ПК:/home$
```

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

Listing of files from specified directory with different keys

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

mkdir test

```
felexa@aku-ПК:/home/Epam$ sudo mkdir test
felexa@aku-ПК:/home/Epam$ ll
total 0
drwxr-xr-x 1 root root 512 Apr 19 20:43 ./
drwxr-xr-x 1 root root 512 Apr 19 20:43 ../
drwxr-xr-x 1 root root 512 Apr 19 20:43 test/
felexa@aku-ПК:/home/Epam$
```

cd test

```
felexa@aku-ПК:/home/Epam$ cd test/
felexa@aku-ПК:/home/Epam/test$
```

pwd

```
felexa@aku-ПК:/home/Epam/test$ pwd
/home/Epam/test
felexa@aku-ПК:/home/Epam/test$
```

touch test.txt

```
felexa@aku-ПК:/home/Epam/test$ sudo touch test.txt
```

ls -l test.txt

```
felexa@aku-ПК:/home/Epam/test$ ls -l test.txt
-rw-r--r-- 1 root root 0 Apr 19 20:44 test.txt
```

mkdir test2

```
felexa@aku-ПК:/home/Epam/test$ sudo mkdir test2
felexa@aku-ПК:/home/Epam/test$ ll
total 0
drwxr-xr-x 1 root root 512 Apr 19 20:46 ./
drwxr-xr-x 1 root root 512 Apr 19 20:43 ../
-rw-r--r-- 1 root root 0 Apr 19 20:44 test.txt
drwxr-xr-x 1 root root 512 Apr 19 20:46 test2/
felexa@aku-ПК:/home/Epam/test$
```

mv test.txt test2

```
felexa@aku-ПК:/home/Epam/test$ sudo mv test.txt test2
felexa@aku-ПК:/home/Epam/test$ ll
total 0
drwxr-xr-x 1 root root 512 Apr 19 20:46 ./
drwxr-xr-x 1 root root 512 Apr 19 20:43 ../
drwxr-xr-x 1 root root 512 Apr 19 20:46 test2/
```

cd test2

```
felexa@aku-ПК:/home/Epam/test$ cd test2/
felexa@aku-ПК:/home/Epam/test/test2$ _
```

ls

```
felexa@aku-ПК:/home/Epam/test/test2$ ls
test.txt
```

mv test.txt test2.txt

```
felexa@aku-ПК:/home/Epam/test/test2$ sudo mv test.txt test2.txt
```

ls

```
felexa@aku-ПК:/home/Epam/test/test2$ ls
test2.txt
```

cp test2.txt ..

```
felexa@aku-ПК:/home/Epam/test/test2$ sudo cp test2.txt ..
felexa@aku-ПК:/home/Epam/test/test2$
```

cd ..

```
felexa@aku-ПК:/home/Epam/test/test2$ cd ..
felexa@aku-ПК:/home/Epam/test$
```

ls

```
felexa@aku-ПК:/home/Epam/test$ ls
test2 test2.txt
```

rm test2.txt

```
felexa@aku-ПК:/home/Epam/test$ sudo rm test2.txt
felexa@aku-ПК:/home/Epam/test$
```

rmdir test2

```
felexa@aku-ПК:/home/Epam/test$ sudo rmdir test2
rmdir: failed to remove 'test2': Directory not empty
felexa@aku-ПК:/home/Epam/test$
```

```
felexa@aku-ПК:/home/Epam/test$ sudo rm -rf test2
felexa@aku-ПК:/home/Epam/test$ ll
total 0
drwxr-xr-x 1 root root 512 Apr 19 20:55 ./
drwxr-xr-x 1 root root 512 Apr 19 20:43 ../
felexa@aku-ПК:/home/Epam/test$
```

4. Execute and describe the difference

cat /etc/fstab

```
felexa@aku-ПК:/home/Epam$ cat /etc/fstab
LABEL=cloudimg-rootfs / ext4 defaults 0 0
```

less /etc/fstab

```
LABEL=cloudimg-rootfs / ext4 defaults 0 0
/etc/fstab (END)
```

more /etc/fstab

```
felexa@aku-ПК:/home/Epam$ more /etc/fstab
LABEL=cloudimg-rootfs / ext4 defaults 0 0
```

cat provides output of the file contents without changes;

less provides output of the contents of the file unchanged with scrollable.

more provides output of the file contents without changes in separate pages.

5. Add to archive all 'test' directories.

a. to the pure 'tar';

```
felexa@aku-ПК:/home/Epam$ sudo tar -cf test.tar test/
felexa@aku-ПК:/home/Epam$ ll
total 12
drwxr-xr-x 1 root root 512 Apr 19 21:46 ./
drwxr-xr-x 1 root root 512 Apr 19 20:43 ../
drwxr-xr-x 1 root root 512 Apr 19 21:42 test/
-rw-r--r-- 1 root root 10240 Apr 19 21:46 test.tar
felexa@aku-ПК:/home/Epam$
```

b. to the zipped 'tar' with only tar command;

```
felexa@aku-ПК:/home/Epam$ sudo tar cvfz test.tar.gz test/
test/
test/test123
felexa@aku-ПК:/home/Epam$ ll
total 12
drwxr-xr-x 1 root root 512 Apr 19 21:53 ./
drwxr-xr-x 1 root root 512 Apr 19 20:43 ../
drwxr-xr-x 1 root root 512 Apr 19 21:42 test/
-rw-r--r-- 1 root root 10240 Apr 19 21:46 test.tar
-rw-r--r-- 1 root root 138 Apr 19 21:53 test.tar.gz
felexa@aku-ПК:/home/Epam$
```

c. to the zipped 'tar' with gzip command;

```
felexa@aku-ПК:/home/Epam$ sudo gzip test.tar
felexa@aku-ПК:/home/Epam$ ll
total 0
drwxr-xr-x 1 root root 512 Apr 19 22:36 ./
drwxr-xr-x 1 root root 512 Apr 19 20:43 ../
drwxr-xr-x 1 root root 512 Apr 19 21:42 test/
-rw-r--r-- 1 root root 147 Apr 19 21:46 test.tar.gz
felexa@aku-ПК:/home/Epam$
```

extract from archives all above.

```
felexa@aku-ПК:/home/Epam$ sudo gunzip test.tar.gz
felexa@aku-ПК:/home/Epam$ ll
total 12
drwxr-xr-x 1 root root 512 Apr 19 22:45 ./
drwxr-xr-x 1 root root 512 Apr 19 20:43 ../
drwxr-xr-x 1 root root 512 Apr 19 21:42 test/
-rw-r--r-- 1 root root 10240 Apr 19 21:46 test.tar
felexa@aku-ПК:/home/Epam$ sudo tar -xvf test.tar
test/
test/test123
```

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