Task2

Task assignment.

1) Analyze the structure of the /etc/passwd and /etc/group file, what fields are present in it, what users exist on the system? Specify several pseudo-users, how to define them?

/etc/passwd contains lines with fields:

username : password (encrypted) : identifier of the user : identifier of the group : extended user description : user's home directory : user's command interpreter

/etc/group contains lines with fields:

group name : password (encrypted) : identifier of the group : list of users belonging to this group

users by uid: 0 (root), 1-999 (daemons, pseudo_users, system users), 1000+ (regular users)

pseudo-users: daemon – used by system processes, bin – gives ownership of executable commands; defining by an uid

2) What are the uid ranges? What is UID? How to define it?

uid range commonly is 0 – 65535
uid – unique identidier of the user within the system
it's a third column in /etc/passwd

3) What is GID? How to define it?

gid - unique identidier of the group within the system to which the user belongs
its a forth column in /etc/passwd

4) How to determine belonging of user to the specific group?

last field in line in /etc/group shows list of users belonging to this grop

5) What are the commands for adding a user to the system? What are the basic parameters required to create a user?

```
yaroslav@nitro-5:~$ sudo useradd test
```

username is only required parameter

6) How do I change the name (account name) of an existing user?

```
yaroslav@nitro-5:~$ sudo usermod -l new_username test
```

7) What is skell_dir? What is its structure?

/etc/skel contains files and directories that are automatically copied over to a new user's when it is created from useradd command

```
yaroslav@nitro-5:~$ ls -al /etc/skel/
total 28
drwxr-xr-x   2 root root  4096 авг 19 13:30 .
drwxr-xr-x 132 root root 12288 фев 16 14:17 ..
-rw-r--r--   1 root root   220 фев 25  2020 .bash_logout
-rw-r--r--   1 root root  3771 фев 25  2020 .bashrc
-rw-r--r--   1 root root   807 фев 25  2020 .profile
```

8) How to remove a user from the system (including his mailbox)?

```
yaroslav@nitro-5:~$ sudo userdel -r new_username
```

9) What commands and keys should be used to lock and unlock a user account?

```
yaroslav@nitro-5:~$ sudo usermod -L test2
yaroslav@nitro-5:~$ sudo usermod -U test2
```

10) How to remove a user's password and provide him with a password-free login for subsequent password change?

```
yaroslav@nitro-5:~$ sudo passwd -d test
```

11) Display the extended format of information about the directory, tell about the information columns displayed on the terminal.

Columns: file type, file permissions, number of links, owner name, owner group, file size, time of last modification, the name of a file or directory

```
yaroslav@nitro-5:~/Desktop$ ls -al
total 75140
drwxr-xr-x  4 yaroslav yaroslav     4096 фев 16 13:12  .
drwxr-xr-x 27 yaroslav yaroslav     4096 фев 16 12:12  ..
-rw-rw-r--  1 yaroslav yaroslav       92 фев  7 17:17  abbreviation.txt
```

12) What access rights exist and for whom (i. e., describe the main roles)? Briefly describe the acronym for access rights.

r – read, w – write, x – execute; main roles: as owner, as member of the group that owns the file, as an others, and no ownership relations; acromym: ‘u’ – user, ‘g’ – group, ‘o’ – others.

13) What is the sequence of defining the relationship between the file and the user?

first char filetype, next 3 chars – ‘u’, next 3 chars – ‘g’, next 3 chars – ‘o’.

14) What commands are used to change the owner of a file (directory), as well as the mode of access to the file? Give examples, demonstrate on the terminal.

```
yaroslav@nitro-5:~/Desktop$ chown yaroslav basic.py
yaroslav@nitro-5:~/Desktop$ chmod a+x basic.py
```

15) What is an example of octal representation of access rights? Describe the umask command.

4 – read, 2 – write, 1 – execute.

```
yaroslav@nitro-5:~/Desktop$ umask
0022
yaroslav@nitro-5:~/Desktop$ umask -p
umask 0022
yaroslav@nitro-5:~/Desktop$ umask -S
u=rwx,g=rx,o=rx
```

16) Give definitions of sticky bits and mechanism of identifier substitution. Give an example of files and directories with these attributes.

sticky bits (‘t’ or ‘T’) guarantee that directory and files inside it won’t delete by other users, who have full permissions.

```
drwxrwxrwt  2 root root   40 фев 16 15:41 .
drwxr-xr-x 22 root root 5120 фев 16 12:48 ..
```

17) What file attributes should be present in the command script?

a - append only, c – compressed, d - no dump, e - extent format, i – immutable, j - data journaling, s - secure deletion, t - no tail-merging, u – undeletable, A - no atime updates, D - synchronous directory updates, S - synchronous updates, T - top of directory hierarchy

```
yaroslav@nitro-5:~/Desktop$ lsattr
----------------e----- ./interview.txt
----------------e----- ./task 1.odt
```