

## Linux exercise 6-Users and groups

1. Create regular users sulo and riku using useradd command (use options for creating home directory and sets bash as a default shell). Set passwords for both users. Then create users joonas and jani using adduser command.

tualBox

!lp

```
jean@jean:~$ sudo useradd -m sulo -s /bin/bash
jean@jean:~$ sudo useradd -m riku -s /bin/bash
jean@jean:~$ ls /home
jean  riku  sulo
jean@jean:~$ sudo passwd sulo
New password:
Retype new password:
passwd: password updated successfully
jean@jean:~$ sudo passwd riku
New password:
Retype new password:
passwd: password updated successfully
jean@jean:~$ sudo adduser joonas
Adding user `joonas' ...
Adding new group `joonas' (1003) ...
Adding new user `joonas' (1003) with group `joonas' ...
Creating home directory `/home/joonas' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for joonas
Enter the new value, or press ENTER for the default
    Full Name []: Joonas
    Room Number []: 1
    Work Phone []: +358447823873
    Home Phone []: +358768868836
    Other []:
Is the information correct? [Y/n] y
jean@jean:~$ sudo adduser jani
Adding user `jani' ...
Adding new group `jani' (1004) ...
Adding new user `jani' (1004) with group `jani' ...
Creating home directory `/home/jani' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for jani
Enter the new value, or press ENTER for the default
    Full Name []: Jani
    Room Number []: 2
    Work Phone []: +35877665544
    Home Phone []: +35866775543
    Other []:
Is the information correct? [Y/n] y
jean@jean:~$
```

2. Create group called testers and add this group as a primary group for all users created in previous task. Verify this by creating a file with user jani and check the owner group. In addition, test commands id and groups for any of previously

created users and for your own user. In what groups does your user belong to?

Find out what is the purpose of these groups.

rtualBox

elp

```
jean@jean:~$ sudo groupadd testers
[sudo] password for jean:
jean@jean:~$ usermod -g testers sulo
usermod: Permission denied.
usermod: cannot lock /etc/passwd; try again later.
jean@jean:~$ sudo usermod -g testers sulo
jean@jean:~$ sudo usermod -g testers riku
jean@jean:~$ sudo usermod -g testers joonas
jean@jean:~$ sudo usermod -g testers jani
jean@jean:~$
```

```
jean@jean:~$ sudo -u jani touch jani_file.txt
jean@jean:~$ ls -l jani_file.txt
-rw-r--r-- 1 jani testers 0 Jun 21 09:48 jani_file.txt
jean@jean:~$ _
```

```
jean@jean:~$ groups sulo
sulo : testers
jean@jean:~$ groups riku
riku : testers
jean@jean:~$ groups joonas
joonas : testers
jean@jean:~$ groups jani
jani : testers
jean@jean:~$ groups jean
jean : jean adm cdrom sudo dip plugdev lxd
jean@jean:~$ _
```

3. Create group called coders and set it as the primary group for user joonas, but let joonas still be a member of testers group.

```
jean@jean:~$ sudo groupadd coders
jean@jean:~$ sudo usermod -g coders -G testers joonas
jean@jean:~$ groups joonas
joonas : coders testers
jean@jean:~$ _
```

4. Remove the user riku (remove also user's home directory) and remove also user jani without removing user's home directory. In addition, remove the group called coders.

```

jean@jean:~$ ls /home
jani jean joonas riku sulo
jean@jean:~$ sudo userdel -r riku
userdel: riku mail spool (/var/mail/riku) not found
jean@jean:~$ ls /home
jani jean joonas sulo
jean@jean:~$ sudo userdel jani
userdel: group jani not removed because it is not the primary group of user jani.
jean@jean:~$ ls /home
jani jean joonas sulo
jean@jean:~$ sudo userdel jani
userdel: user 'jani' does not exist
jean@jean:~$ sudo groupdel coders
groupdel: cannot remove the primary group of user 'joonas'
jean@jean:~$ sudo usermod -g testers joonas
jean@jean:~$ sudo groupdel coders
jean@jean:~$

```

5. Lock the password for user sulo. Verify the changes. After this, set the password as expired and login with user sulo (remember to remove the password lock before login).

What happens? ( I am asked to change for user sulo)

```

jean@jean:~$ sudo passwd -l sulo
passwd: password expiry information changed.
jean@jean:~$ su sulo
Password:
su: Authentication failure
jean@jean:~$ sudo passwd -e sulo
passwd: password expiry information changed.
jean@jean:~$ passwd -u sulo
passwd: Permission denied.
jean@jean:~$ sudo passwd -u sulo
passwd: password expiry information changed.
jean@jean:~$ su sulo
Password:
You are required to change your password immediately (administrator enforced)
Changing password for sulo.
Current password:
New password:
Retype new password:
Password unchanged
New password:
Retype new password:
You must choose a longer password
New password:
Retype new password:
sulo@jean:/home/jean$

```

6. Below is the presentation of a directory structure from fictional company including users from different groups. Create the presented directory structure, users and groups for the filesystem of your Ubuntu. Set file permissions for files and directories as described in the figure (Tip: use material from the next course title: *File permissions*). Verify that

permissions work as intended and take screenshot from several different situations with

different users. **Important:** Owner and group permissions can be set to be equal and other

users should have permissions if needed (check the image for other permissions)!

```
jean@jean:/var/shares$ sudo mkdir projects management marketing
jean@jean:/var/shares$ ls
management marketing projects
jean@jean:/var/shares$ cd projects
jean@jean:/var/shares/projects$ sudo touch period_1_report.txt period_2_report.txt project_schedule.txt
jean@jean:/var/shares/projects$ ls
period_1_report.txt period_2_report.txt project_schedule.txt
jean@jean:/var/shares/projects$ cd /shares/management
bash: cd: /shares/management: No such file or directory
jean@jean:/var/shares/projects$ cd ..
jean@jean:/var/shares$ cd management
jean@jean:/var/shares/management$ sudo touch list_of_employees.txt
jean@jean:/var/shares/management$ ls
list_of_employees.txt
jean@jean:/var/shares/management$ cd ..
jean@jean:/var/shares$ cd marketing
jean@jean:/var/shares/marketing$ sudo touch seminars.txt marketing_policy.txt
jean@jean:/var/shares/marketing$ ls
marketing_policy.txt seminars.txt
jean@jean:/var/shares/marketing$
```

```
jean@jean:/var/shares$ ls -l
total 12
drwxrwx--- 2 Mike      managers 4096 Jun 21 11:38 management
drwxrwxr-x 2 Nicky     marketing 4096 Jun 21 11:39 marketing
drwxrwxr-x 2 Jonathan  projects 4096 Jun 21 11:36 projects
jean@jean:/var/shares$ _
```

```
jean@jean:/var/shares$ cd projects/
jean@jean:/var/shares/projects$ ls -l
total 0
-rw-rw-r-- 1 Jonathan projects 0 Jun 21 11:36 period_1_report.txt
-rw-rw-r-- 1 Jonathan projects 0 Jun 21 11:36 period_2_report.txt
-rw-rw-r-- 1 Jonathan projects 0 Jun 21 11:36 project_schedule.txt
jean@jean:/var/shares/projects$
```

```
jean@jean:/var/shares/projects$ cd ..
jean@jean:/var/shares$ cd management/
bash: cd: management/: Permission denied
jean@jean:/var/shares$ su Mike
Password:
Mike@jean:/var/shares$ cd management/
Mike@jean:/var/shares/management$ ls -l
total 0
-rw-rw---- 1 Mike managers 0 Jun 21 11:38 list_of_employees.txt
Mike@jean:/var/shares/management$
```

```
jean@jean:/var/shares$ cd marketing/
jean@jean:/var/shares/marketing$ ls -l
total 0
-rw-rw-r-- 1 Mike managers 0 Jun 21 11:39 marketing_policy.txt
-rw-rw-r-- 1 Nicky marketing 0 Jun 21 11:39 seminars.txt
jean@jean:/var/shares/marketing$ _
```

