

## Sheet 3

### Problem 1 :

A Medical company is hiring a financial manger his name is Hossam and another person which is a store manager and his name is Maged

The administrator of the company system is called Mohamed And now.

1- Mohamed will **Create** two users (Hossam - Maged ) Hossam will be **with files** in home directory and Maged **without files**

Hossam will **have password**

2-Mohamed will **delete** the old Financial manager ahmed.

3- Mohamed Will **Create two groups** which called  
Financial & Store

4- Mohamed Will **Add** Hossam to Finanical and Maged to Store

5- Hossam will login with his account to the system and now he wants to know the **groups he belongs to** And he found that he belongs to Finanical group And he want to **show the salary files** of the employees and he want to **edit the salary** of first 2 employees

6- now Hossam will **Create a New file** called Modified\_Employees

Maged will login too

7-He have a Directory which called Medicines contains a lot of files of medicines he want to **find the capsules file** and **Search** for Panadol in the file.

Answer :

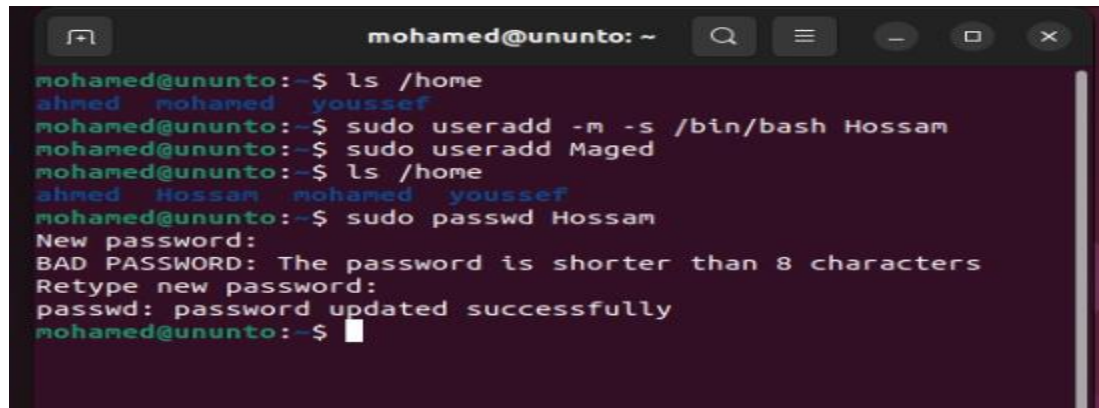
1- Create Hossam and Maged

`ls /home`

`sudo useradd -m -s /bin/bash Hossam` (with files )

`sudo useradd Maged` (without files)

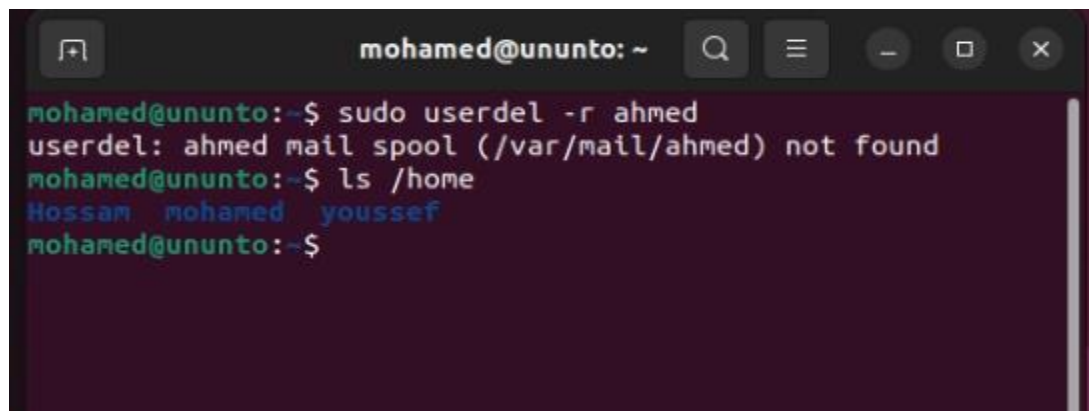
`sudo passwd Hossam`

A terminal window titled 'mohamed@ununto: ~' showing a series of commands and their outputs. The commands are: 'ls /home' (output: ahmed mohamed youssef), 'sudo useradd -m -s /bin/bash Hossam', 'sudo useradd Maged', 'ls /home' (output: ahmed Hossam mohamed youssef), and 'sudo passwd Hossam'. The password prompt shows 'New password:', 'BAD PASSWORD: The password is shorter than 8 characters', 'Retype new password:', and 'passwd: password updated successfully'.

```
mohamed@ununto:~$ ls /home
ahmed mohamed youssef
mohamed@ununto:~$ sudo useradd -m -s /bin/bash Hossam
mohamed@ununto:~$ sudo useradd Maged
mohamed@ununto:~$ ls /home
ahmed Hossam mohamed youssef
mohamed@ununto:~$ sudo passwd Hossam
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
mohamed@ununto:~$
```

2- Delete ahmed

`sudo userdel -r ahmed` (delete with files )

A terminal window titled 'mohamed@ununto: ~' showing the command 'sudo userdel -r ahmed' and its output: 'userdel: ahmed mail spool (/var/mail/ahmed) not found'. This is followed by 'ls /home' (output: Hossam mohamed youssef).

```
mohamed@ununto:~$ sudo userdel -r ahmed
userdel: ahmed mail spool (/var/mail/ahmed) not found
mohamed@ununto:~$ ls /home
Hossam mohamed youssef
mohamed@ununto:~$
```

### 3- Add Financial and Store groups

```
sudo groupadd Financial
```

```
sudo groupadd Store
```



```
mohamed@ununto: ~  
mohamed@ununto:~$ sudo groupadd Financial  
mohamed@ununto:~$ sudo groupadd Store  
mohamed@ununto:~$
```

use : `getent group` (to show all groups)

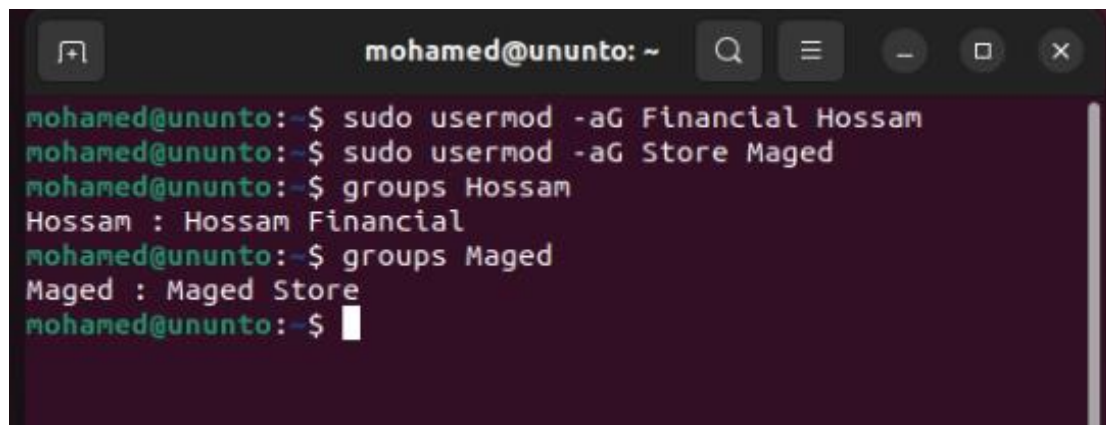


```
Hossam:x:1007:  
Maged:x:1009:  
Financial:x:1010:  
Store:x:1011:  
mohamed@ununto:~$
```

### 4- Add users to groups

```
sudo usermod -aG Financial Hossam
```

```
sudo usermod -aG Store Maged
```



```
mohamed@ununto: ~  
mohamed@ununto:~$ sudo usermod -aG Financial Hossam  
mohamed@ununto:~$ sudo usermod -aG Store Maged  
mohamed@ununto:~$ groups Hossam  
Hossam : Hossam Financial  
mohamed@ununto:~$ groups Maged  
Maged : Maged Store  
mohamed@ununto:~$
```

## 5- Hossam Groups

whoami

groups Hossam

```
Hossam@ununto: ~  
Hossam@ununto:~$ whoami  
Hossam  
Hossam@ununto:~$ groups Hossam  
Hossam : Hossam Financial  
Hossam@ununto:~$
```

Show Salary : cat Salary

```
Hossam@ununto: ~/Accountant  
Hossam@ununto:~/Accountant$ cat Salary  
Sara      2700 $  
Ali       3000 $  
mahmoud   5000 $  
samir     3400 $  
ibrahim   5200 $  
khaled    5500 $  
Hossam@ununto:~/Accountant$
```

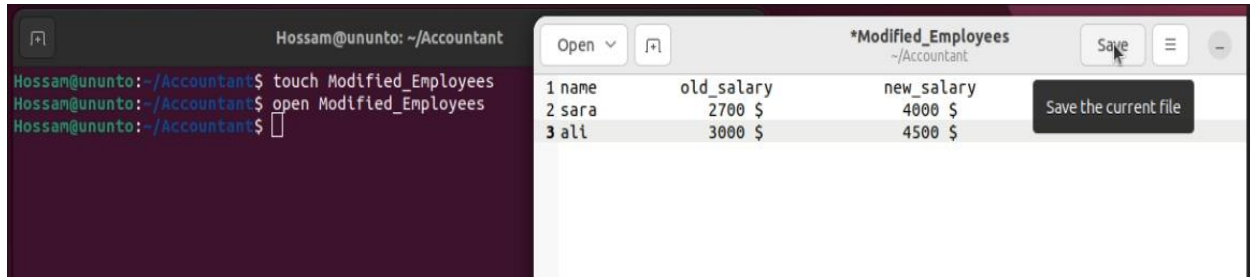
Edit Salary : nano Salary

```
GNU nano 6.2          Salary *  
Sara      2700 $  
Ali       3000 $  
mahmoud   5000 $  
samir     3400 $  
ibrahim   5200 $  
khaled    5500 $  
  
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute  ^C Location  
^X Exit      ^R Read File ^\ Replace  ^U Paste    ^J Justify  ^_ Go To Line
```

## 6- Create Modified\_Employees

touch Modified\_Employees

open Modified\_Employees



The screenshot shows a terminal window on the left and a text editor window on the right. The terminal window has a title bar 'Hossam@ununto: ~/Accountant' and shows the following commands and output:

```
Hossam@ununto:~/Accountant$ touch Modified_Employees
Hossam@ununto:~/Accountant$ open Modified_Employees
Hossam@ununto:~/Accountant$
```

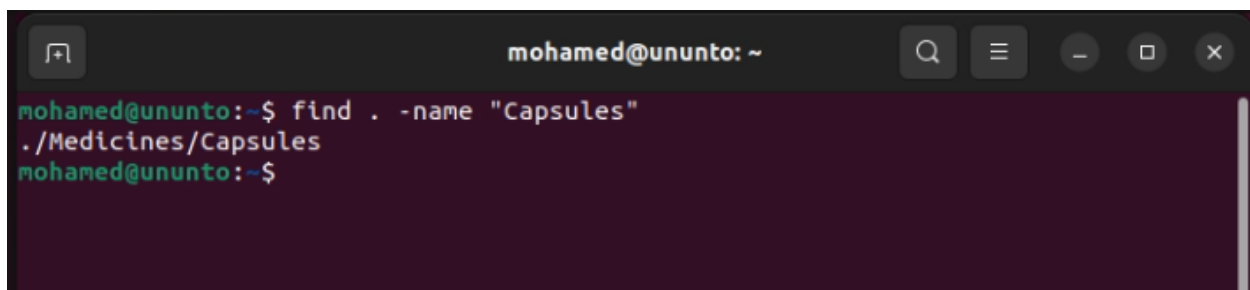
The text editor window has a title bar '\*Modified\_Employees ~/Accountant' and shows a table with three columns: 'name', 'old\_salary', and 'new\_salary'. The table contains three rows of data:

	name	old_salary	new_salary
1	sara	2700 \$	4000 \$
3	ali	3000 \$	4500 \$

A 'Save' button is visible in the top right corner of the text editor window, and a 'Save the current file' message is displayed below it.

## 7- Find Capsules file

find . -name "Capsules"

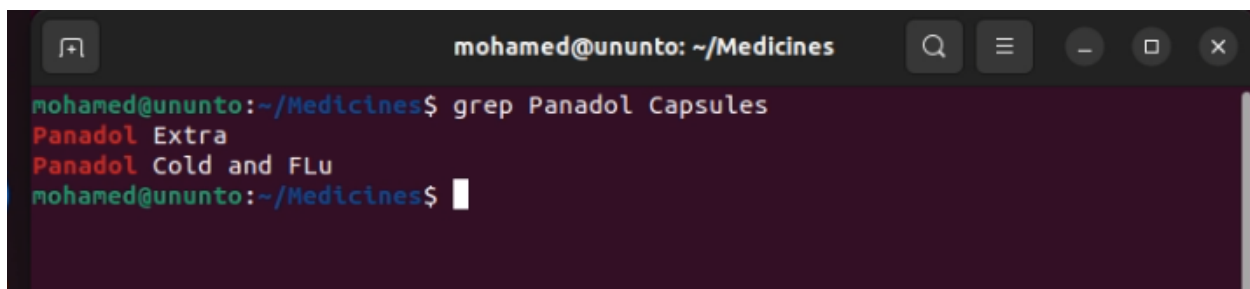


The screenshot shows a terminal window with a title bar 'mohamed@ununto: ~'. The terminal shows the following command and output:

```
mohamed@ununto:~$ find . -name "Capsules"
./Medicines/Capsules
mohamed@ununto:~$
```

## Search for Panadol

grep Panadol Capsules



The screenshot shows a terminal window with a title bar 'mohamed@ununto: ~/Medicines'. The terminal shows the following command and output:

```
mohamed@ununto:~/Medicines$ grep Panadol Capsules
Panadol Extra
Panadol Cold and FLu
mohamed@ununto:~/Medicines$
```

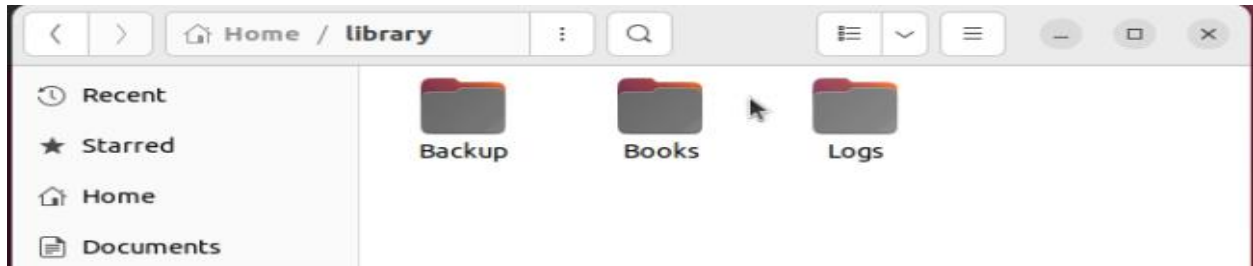
## Problem 2 :

You work as administrator in a digital library, your manager told you to arrange the folders of the books .

- 1- You **create 4 folders** with types of book (History / Science / Sport / Programming )
- 2- **Move** Python book to Programming folder
- 3- A student came to you and wants to borrow a book , you have to **add the student at the end** of borrow\_logs file which we **follow changes on it**.
- 4- You add the student twice by wrong in borrow\_logs file and you want to **delete the redundancy**.
- 5- You find an old book called old physics and you want to **remove** it.
- 6- You want to **Archive** books folders in Books.Rar and then **Decompress the Archive**

Answer : First we need to know the design of the library

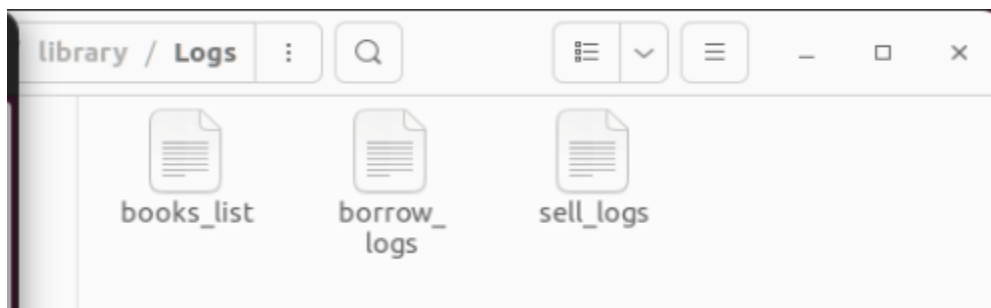
We have 3 directories (Backup / Books / Log )



In Books we have 4 directories (Science / Sport / History / Programming)

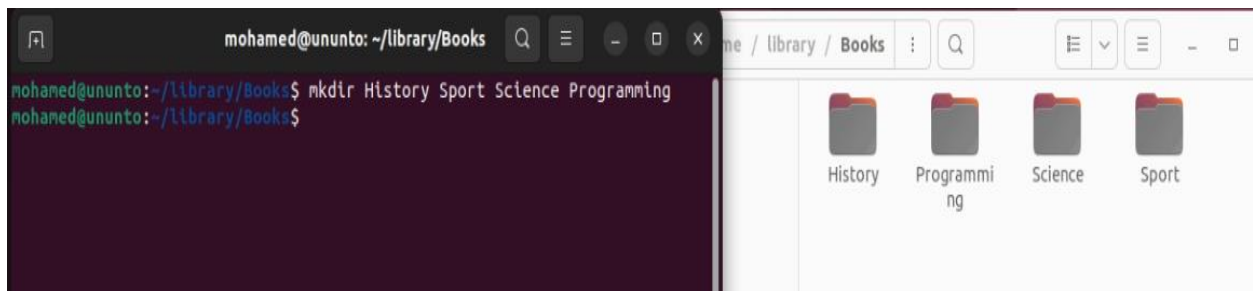


In Logs we have 3 files (books\_list / borrow\_logs / sell\_logs )



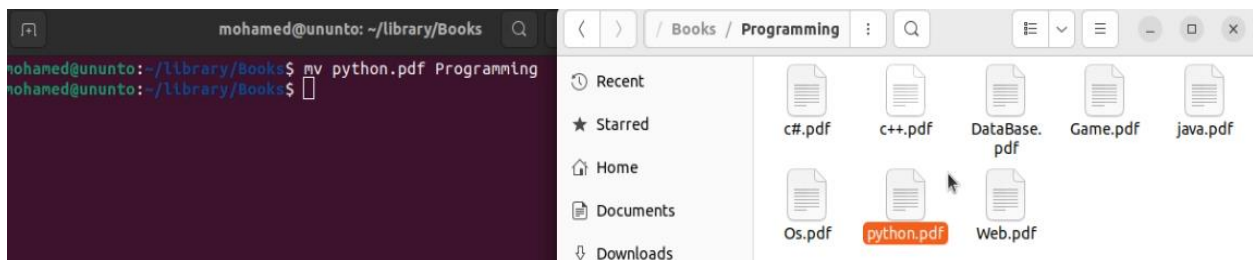
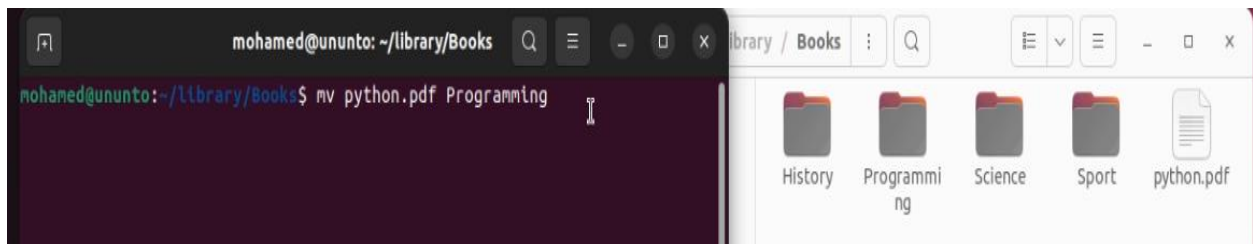
## 1- Create Books Folders

`mkdir Sport History Programming Science`



## 2- Move python.pdf book to Programming folder

`mv python.pdf Programming`

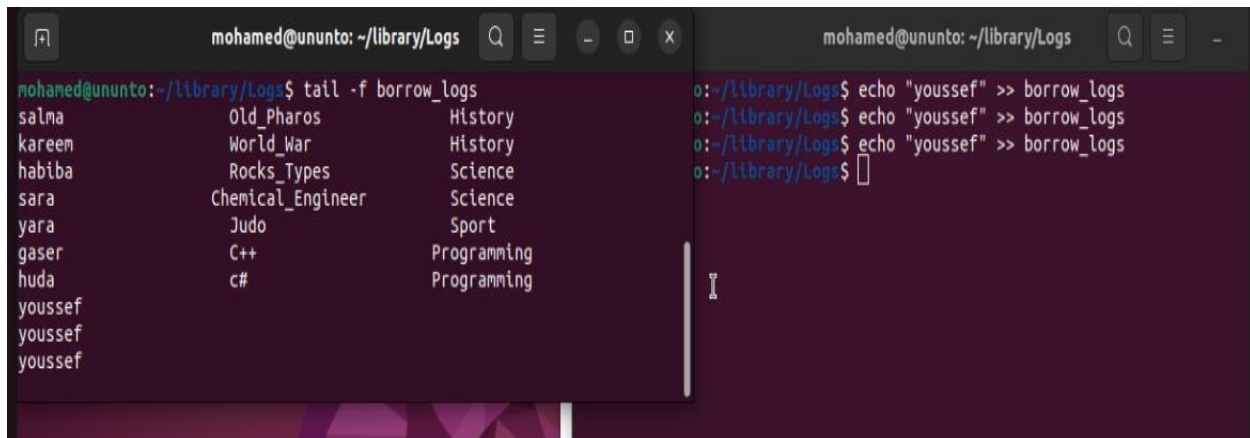




### 3- Add Student called Youssef to borrow\_logs file and follow changes on the file .

To follow file : `tail -f borrow_logs`

To add Youssef : `echo "Youssef" >> borrow_logs`



```
mohamed@ununto: ~/library/Logs
mohamed@ununto:~/library/Logs$ tail -f borrow_logs
salma      Old_Pharos      History
kareem     World_War       History
habiba     Rocks_Types     Science
sara       Chemical_Engineer Science
yara       Judo            Sport
gaser      C++             Programming
huda       c#              Programming
youssef
youssef
youssef

o:~/library/Logs$ echo "youssef" >> borrow_logs
o:~/library/Logs$ echo "youssef" >> borrow_logs
o:~/library/Logs$ echo "youssef" >> borrow_logs
o:~/library/Logs$
```

**Hint :** Here you add Youssef 3 times by wrong

Now u want to delete the redundancy

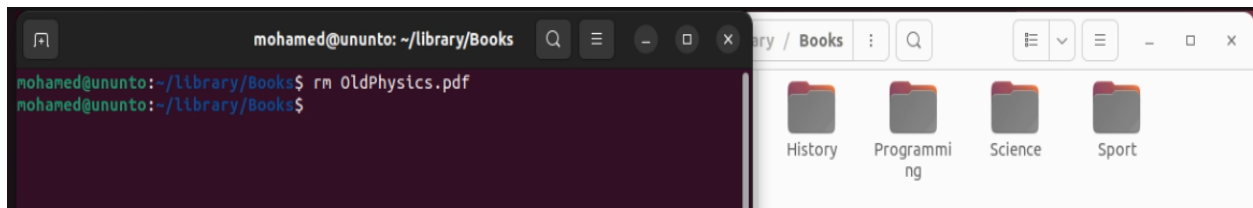
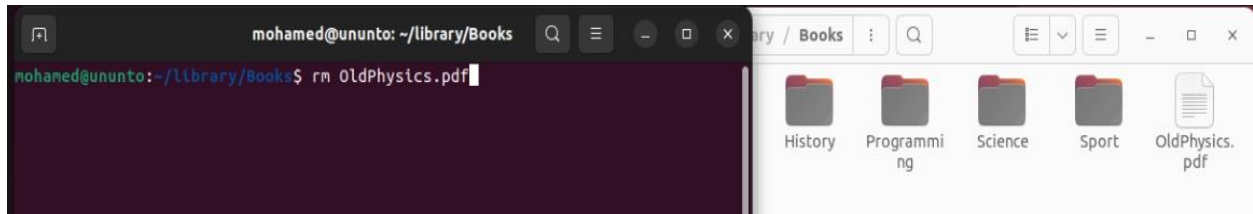
### 4- We will use **uniq** command to delete consecutive line



```
mohamed@ununto:~/library/Logs$ uniq borrow_logs
name      book_name      type
Ali       Tennis         Sport
mazen     DataBase       Programming
salma     Old_Pharos     History
kareem    World_War      History
habiba    Rocks_Types    Science
sara      Chemical_Engineer Science
yara      Judo           Sport
gaser     C++            Programming
huda      c#             Programming
youssef
mohamed@ununto:~/library/Logs$
```

## 5- Remove OldPhysics.pdf Book

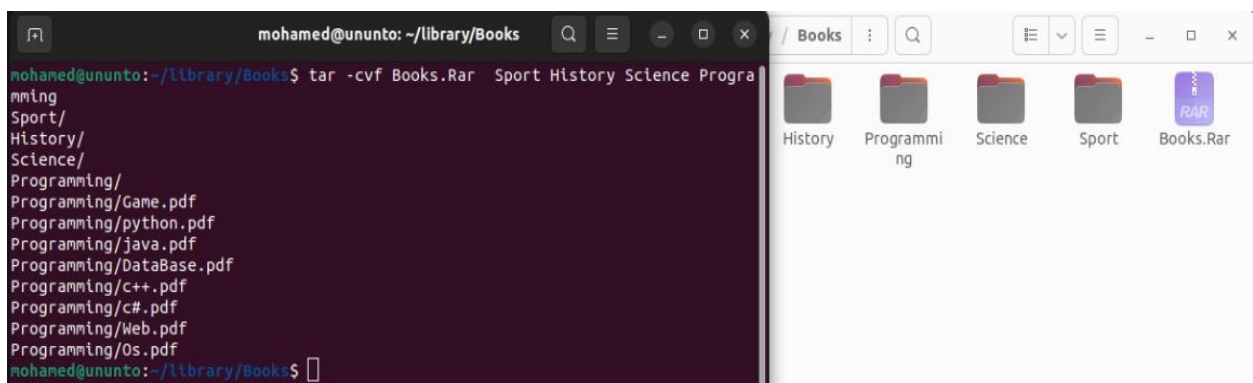
`rm OldPhysics.pdf`



## 6- Archive Books directories into Books.Rar

To archive we use : `tar -cvf Books.Rar History Sport Science Programming`

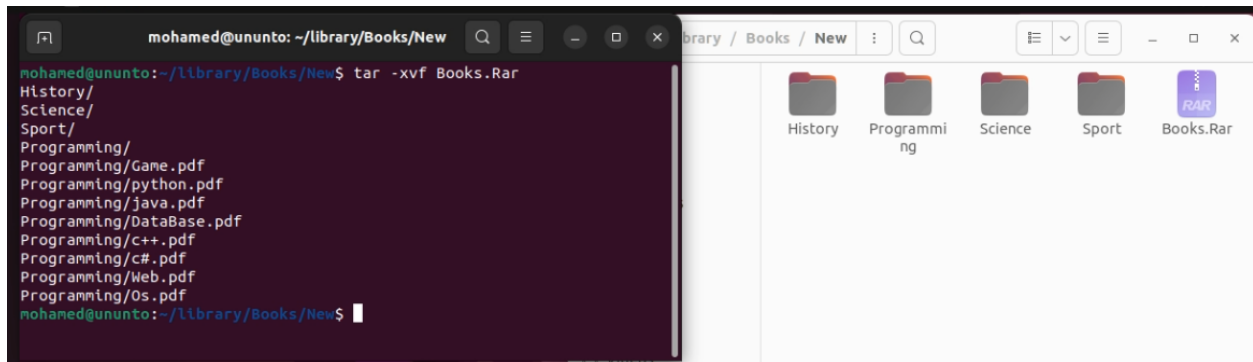
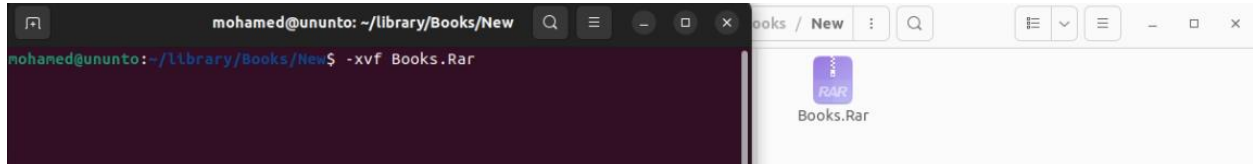
**c** : means create      **v** : means verbose      **f** : means file



## Decompress the archive

To decompress the archive use : `tar -xvf Books.Rar`

**x** : means excute



**Hint** after decompress the archive the archived file remains the same Books.Rar