INTRODUCTION TO LINUX

LECTURE 5

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Agenda

- Numerical method for permissions
- Redirection

Permissions

- **Each file has *:***

1- ***user owner***: the user who ones the file

2- ***group*** : this file belongs to this group so all the group's members are able to edit this file

3- ***others***: neither user owner nor group member.

The file permissions are: 1- read ….r

2- write….w

3- execute…x

Numerical method for permissions

U	g	o
rwx	rwx	rwx

r →4

w →2

x →1

So if you have all permission your number is 7

Example: - rwx rwx rwx

7 7 7

Numerical method for permissions

Exercise: find the numerical number for each of the following permissions

- rw- r-- r-- ➔ 6 4 4

-rwx rw- r-x ➔ 7 6 5

7 5 4 ➔ rwx r-x r--

0 0 0 ➔ --- --- ---

5 7 6 ➔ r-x rwx rw-

Numerical method for permissions

To change a permission using the numerical method

Make it rwx rw- r-x

Chmod 765 filename

Make it r-- --- ---

Chmod 400 filename

To change a directory and what inside

Chmod –R 765 filename

Another way to set permission

To change a permission file –rw-r-xr--

Chmod 756 filename

Make it rw- rw- r-x

Chmod u-x,g-x,g+w,o-w,o+x

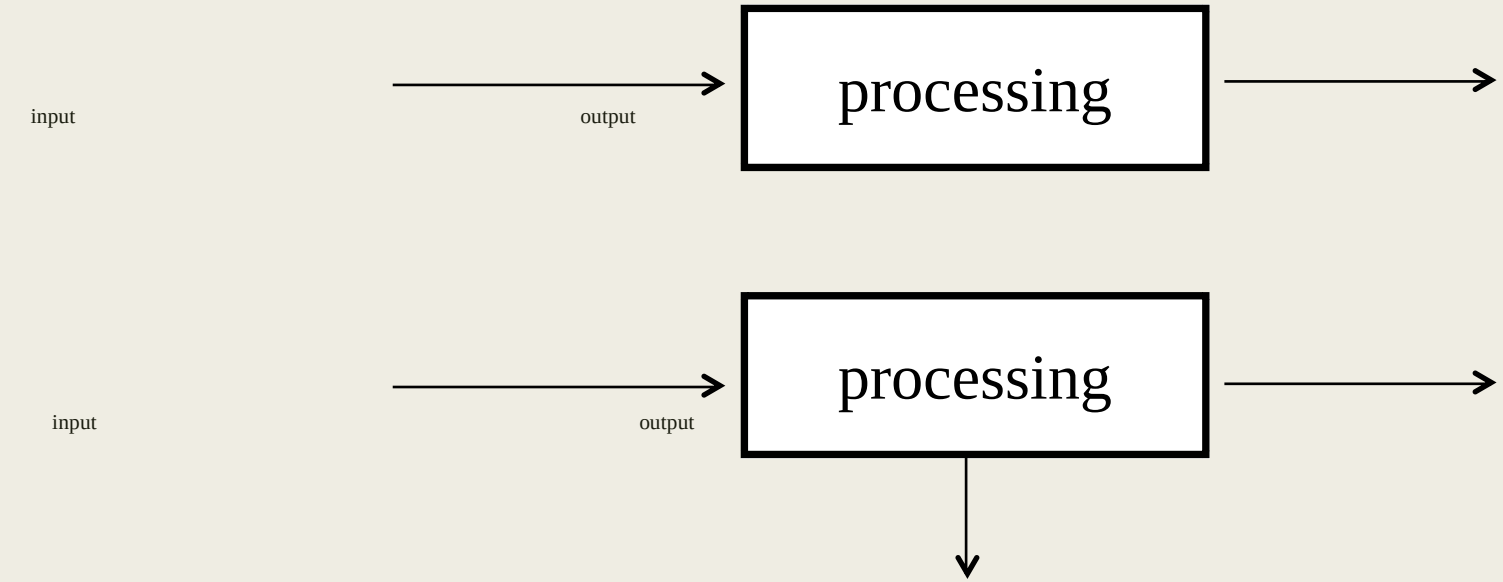
or

Chmod ug=rw,o=rx

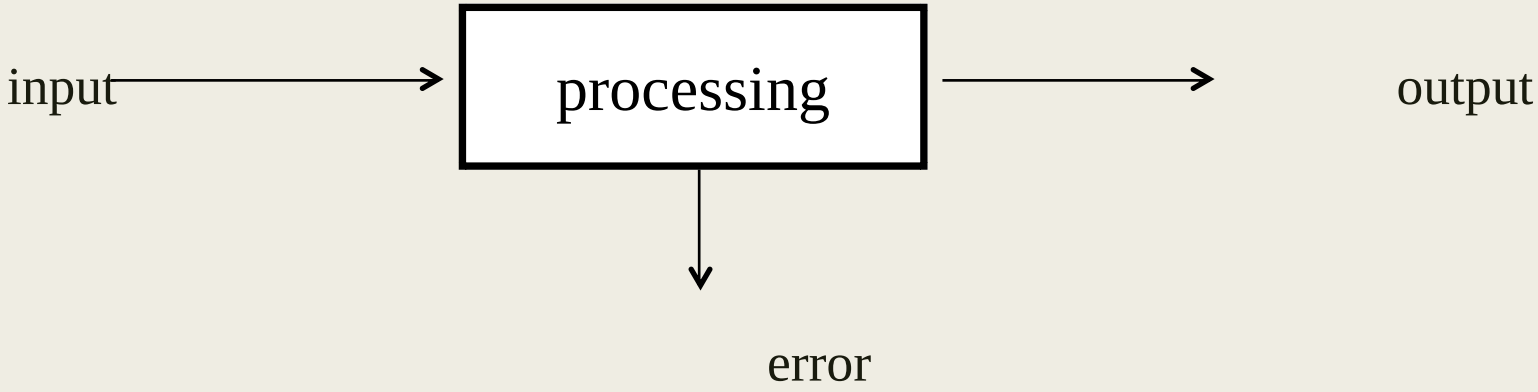
Question ➔ which method is better and why? (symbolic or numeric)

Redirection

- To execute an order



Redirection



action	descriptor	symbol	example
input	0	<	0 < or <
output	1	>	1> or >
error	2	>	2>

Redirection

- Lab:

Ls ….you have the output on the monitor

Ls 1>result.txt …the output saved on result.txt, not shown in the monitor.

Cat result.txt

Or

Ls > result.txt

Cat result.txt

You can mention the descriptor number not, same result

Redirection

- Lab:

Ls file22 ….you have an error in the monitor

Ls file22 2>error.txt …the error saved on error.txt, not shown in the monitor.

Cat error.txt

What if you tried to save an error in a normal file

Ls file22

Ls file22 > result21.txt

Cat result21.txt

What do you have in this file?– I have the file created but without the message

Redirection

- Lab:

If you have a result and an error at the same command:

```
Ls  file22  file2
Ls file22 file2 >result.txt  2>error.txt
Cat error.txt
Cat result.txt
```

If you have a result and an error at the same file:

```
Ls  file22  file2
Ls file22 file2 &>result.txt
Cat eresult.txt
```

Redirection overwrite problem

- Lab:

If you have a new result to be saved on the same output file

Ls -l file4 >result.txt

Cat eresult.txt…..the previous data are erased.

To solve such a problem add extra (>)

Ls -l file4 >>result.txt

Cat result.txt…..the new data are added

If you have a result and an error at the same file:

Ls file22 file2

Ls file22 file2 &>>result.txt

Cat eresult.txt

Redirection : to write in an output file

- To write a text in an output file:

If you would like to add a comment in an output file try the following command.

cat <<zahraa>> error.txt

- Testing
- New update
- zahraa

All the information before the word ”zahraa”

Redirection : to write in an output file

- To write from file in an output file:

If you would like to get information from file and copy it in an output file try the following command.

Cat <file2>error.txt…..file2 is the input file, and error is the output file

Cat error.txt

All the information in file2 are copied in error.txt