

## **Assessable Task 1st Term**

# **Computer Systems 23/24**

Desarrollo de Aplicaciones Web

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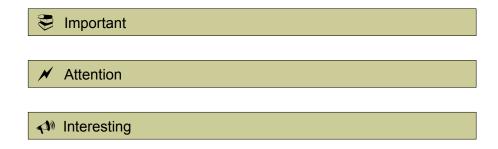


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## Nomenclature

Throughout this unit different symbols will be used to distinguish important elements within the content. These symbols are:







# ÍNDICE

## 1. EXERCISE 1

Section a

Section b

Section c

## 2. EXERCISE 2

Section a

Section b

## 3. EXERCISE 3





#### 1.Exercise 1

#### Section a

Using the terminal, go to your home directory and from there create the following directory structure, as well as the files in /tmp. You must use only one command for each hierarchical level and use relative paths:

```
My Files
| -- Cook Recipes
| -- Salty
| -- Sweet
| -- Doughnut.jpg
| -- Comics
| -- Man of Steel.txt
| -- Wonder Woman.txt
| -- Movies
| -- Superheroes
| -- Comedy
```

### Section b

From your personal folder, using absolute paths, perform the following 3 tasks:

- Use a command to create a file called Mac and cheese.txt inside the /Cook Recipes/Salty directory and using pipes or redirection, enter "To make macaroni and cheese, you must first buy macaroni and cheese".
- Delete the Sweet directory.
- 3. Now copy the file Man of Steel.txt into the Movies/Superheroes directory with the name Man of Steel\_copy.txt and enter the text Up up and away!.

#### Section c

Now, you can use absolute or relative paths as you like it. But comment what are you using and perform the following tasks:

- Create a hard link to Man of Steel.txt inside the Comics directory and name it Man of Steel\_hard.txt. Create also, a symbolic link to Wonder Woman.txt and place it in Movies/Superheroes with the name Wonder Woman\_soft.txt.
- 2. Modify the contents of the file Man of Steel\_copy.txt. Are the files Man of Steel.txt and Man of Steel\_hard.txt modified? Why?



- 3. If you delete the file Man of Steel.txt, what will happen to Man of Steel\_hard.txt and Man of Steel\_copy.txt?
- 4. Delete the Comics directory. What happens to the file Wonder Woman\_soft.txt?



#### 2.Exercise 2

Specify the command/s to achieve the next requirements:

#### Section a

Create the next users in a **non-interactive way**. Each one of them must have a home folder, their shell must be **/bin/sh** and their password must be their user followed by \_password and the user name is **case-sensitive**:

- gru
- kevin
- stuart
- nefario
- agnes
- supermegavillain

Explain the command/s you use for both creating the user and achieving the requirements (home, shell, password) and why you chose that way. Think it thoroughly.

### Section b

Only the next groups can exist, specify the command to create them:

- masteroftheuniverse
- minions
- kids
- researchanddevelopment

Given the next folder and files structure (which you don't need to create, because it already exists):

Accomplish the next requirements:

- Gru can access anything anywhere besides from the folder operation\_birthday, which cannot see anything (not even listing the files).
- Agnes can only access to operation\_birthday and she's the only able to write inside of it.
- Nefario can access to operation\_birthday, but can't delete anything
- The minions stuart and kevin cannot access anything besides from the folder bananas.



- Nefario should only access to the science folder and should be the only one able to write in that folder.
- The supermegavillain, because of a silly Gru's mistake, can access to the evilplans.

Specify the commands to define the permissions on the folders and file structure and the belongings to each of the groups.





### 3.Exercise 3

On a computer with Ubuntu 22.04 installed you have a directory named /user/important\_data with important information, and you want to copy the data each day on a different hard disk in case the main system disk fails. The directory is on a ext4 file system.

In the copy, you must preserve the attributes: permissions, timestamps, and ownership.

It will not create historical data: each day, the directory should have the same data as the original directory.

Explain how you would do this. Indicate:

- How you should prepare the system: which commands you would run, which user should run them, and which configuration files you would modify, how and why.
- The command(s) you should run daily for the backup, who should run it and why.