

Operating Systems I, 2019/2020 Tasks

1. Implement a **file manager** that:

- A. List files/directories.
- B. Change permissions of files.
- C. Make/delete files/directories.
- D. Create symbolic link files.

2. Implement a **user manager** that:

- A. Add/delete users
- B. Add/delete groups
- C. Change information of users
- D. Change account information e.g. password expiration
- E. Assign specific users to specific groups

3. Implement a **process manager** that:

- A. List all the processes in the system.
- B. List all the processes grouped by user.
- C. Display process ID of all the processes.
- D. Run/stop a specific process
- E. Send specific signals to specific process.

4. Simulate a **shell** that accepts DOS commands and displays the output (results):

Example: when user writes "dir", the shell runs "ls" command.

- Note: you have to use external text file for mapping between Linux
- and
- DOS commands.

Required for all tasks

• **Menu Interface**

- The task has to provide a menu interface to let the user picks the option he wants.
- The task should not be closed after executing only one option, instead the menu has to re-appear until the user picks exit.

• **Manual Page**

- You have to implement the manual page for your task, so for example if the task name is task3, when the user types "man task3" in the terminal, the manual page for your task should appear.

Bonus

• **GUI (Graphical User Interface)**

- Two Bonus points will be granted if the project has GUI (i.e. buttons, textboxes, etc.)

التاسك مش إختياري، رقم التاسك بيتحدد بناء على رقم ال أي دي بتاع أعضاء الفريق
أعضاء الموجودين في الفريق، وبعدين ببساطة هنجمع رقم الأحاد بتاع ال

$$\text{Task Number} = \text{sum} \% 4 + 1$$