TD1/9: Use basic Linux commands

Exercise 1: Move around

1. Go to the root directory
2. Display the content of the current (root) directory
3. Check your current location
4. Try to create a directory named *test*
5. Go to the general home directory (should contain folders named after each user)
6. Go to your home directory
7. Go back to the general home directory (located "*just above*")
8. Go again "*just above*", you should be back to the root directory
9. Go directly to your home directory (named after you). It should be a very simple command, which take no name as parameter of the path
10. Try to create a directory named *test*
11. Go into this new directory
12. Check your current location

Exercise 2: Create, Rename, copy, delete

1. Go to your home directory (should be named after you, you might be there by default)
2. Check your current location
3. Create a folder *linux_ex_1*
4. Go into this folder
5. Create an empty text file named *[first_name]_[last_name].txt* (e.g. *alexis_bogroff.txt*)
6. Create a folder *notes*
7. Move your text file into this folder
8. Rename the text file by appending the current year *[first_name]_[last_name]_[current_year].txt*
9. Make a copy of this folder, name it *notes_2022*
10. Delete the first folder (*notes*) using the verbose option

Exercise 3: Create and run a script

1. Create a script *script_1.sh* in the folder *linux_ex_1*
2. In the script, write the commands that would output the following :
   Script running please wait ...
   Done.
3. Quit editing and save the script
4. Display the content of the script (using a command, not from an editor)
5. Run the script

Exercise 4: Accessing or modifying a file : permissions and root privilege

Exercise 4:.1 Change the rights for accessing or modifying a file

1. Create a file *credentials* in the folder *linux_ex_1*
   (a) Write any kind of (fake) personal information within the file
   (b) Display the file content
   (c) Display the current permissions
2. Change the current permissions to : read only for all users
   (a) Display the new permissions
   (b) Modify and save the file
   (c) Display the file content
3. Change the permissions back to read and write for all users
   (a) Display the new permissions
   (b) Modify and save the file
   (c) Display the file content

On the same file :

1. Add the execute permission to the owner
   (a) Display the new permissions
2. Remove the read permission to other users
   (a) Display the new permissions
3. Change the permissions to read, write and execute for all users
   (a) Display the new permissions

Exercise 4:.2 Access root files

1. Go to the root folder
2. Create a file in root user mode named *.private_file*
   (a) Write some information in the file
   (b) Display the file content
   (c) Display all the files in the folder including hidden files
3. Modify the file in normal user mode
   (a) Write some new information in the file
   (b) Display the file content
4. Modify the file in root user mode
   (a) Write some new information in the file
   (b) Display the file content
5. Change permissions to read, write and execute for all users
   (a) Modify the file content in normal user mode
   (b) Display the file content

Exercise 4:.3 Change a file owner

1. Change permissions of *.private_file* to read and write for all users, in normal user mode
2. Set the new file owner as the current user
3. Change permissions of *.private_file* to read and write for all users, in normal user mode

Exercise 4:.4 Manage Packages (tools / functions)

1. Update your main package manager named *apt*
2. Upgrade *apt*
3. Install the package *cmatrix*
4. Launch *cmatrix*
5. Quit *cmatrix*
6. Install the package *tmux*
7. Launch *tmux*
8. Say *"Hello session 0"* using bash in your current *tmux* session
9. Launch *cmatrix* in your current *tmux* session
10. Detach from the current *tmux* session (without stopping *cmatrix*)
11. Create a new *tmux* session
12. Say *"Hello session 1"* using bash in your new *tmux* session
13. Detach from the current *tmux* session
14. List all running sessions
15. Attach again to session 0
16. Detach again
17. Attach again to session 1
18. Detach again
19. List all running sessions
20. Kill all *tmux* sessions and quit *tmux*
21. List all sessions

Exercise 4:.5 Use functions arguments / parameters

1. Display the *cmatrix* help function
2. Launch *cmatrix* and make it display white characters (in place of the green)
3. Re-launch *cmatrix* and slow down the speed of characters actualization
4. Stop *cmatrix*
5. Launch *cmatrix* with both :

— A slow speed of characters actualization
— Blue characters

6. Display *cmatrix* manual (different from the *help* notice)
7. Display the *tmux* help function
8. Display the *tmux* manual