INFORMÁTICA
Grado en Ingeniería en Electrónica y Automática Industrial

Practice 1.
Introduction to Linux Operating System.

This Practise is an initiation in the basic Linux commands and file management. To fulfil them you will need to use the commands in the following table. Use the `man` command (eg, type `man chmod` in the terminal) and the Linux documents provided to learn how to use them.

Command	Functionality
man	To access to the manual
ls	To list the contents of the directory
cd	To change directory
pwd	To show the contents of the current working directory
mkdir	To create a directory
cp	To copy files or directories
rm	To remove files or directories
mv	To move files or directories
cat	To show the contents of a file
chmod	To change files or directories permissions.
chown	To change files or directories owner
ln	To create a link to a file or directory

PART 1.

1. Create a text file (with `gedit` for instance) and save it in your user folder.

2. Open a terminal, move to your user folder and check that the file is there. Get its size and access permissions.

3. Change those permissions so that the file can just be modify by its owner (you). All the other users must just have permission to read.

4. Create a subdirectory in your user folder and move to it. Create a symbolic link to the file you have created.

5. Open the file through the symbolic link with `gedit`, modify the file and save it. Check that when you access the file directly (ie. not through the link) modifications are shown

6. Delete the symbolic link

7. Make a copy of the file in the subdirectory you have created. Remove the subdirectory and its contents.

PART 2.

1. Use `cat` command to print in a file the information typed in the terminal with the keyboard (use `Ctrl-D` to stop keyboard input). It will be necessary to redirect the output towards the file using ">".

2. Repeat Ex. 1 in such a way that the new information does no erase the information generated in Ex.1

3. Repeat Ex.1 with a different file.

4. Show both files on the screen using just one command.

5. Show the contents of a directory in such a way that just directories (not files) are shown. It will be necessary to use a pipe with `ls` and `grep.`

6. Repeat Ex.5 but showing just the files whose owner is the standard laboratory user (larq).

7. Repeat Ex.5 but showing just the files that have been created in January.

8. Do the following tasks:
    a. Use `cat` to create a process that prints information typed with the keyboard in the file `/dev/null`
    b. Obtain its PID (it could be necessary to open another terminal).
    c. Stop it with the appropriate signal (`SIGSTOP`).
    d. Check the state of the process.
    e. Obtain the process tree and localize the previous process in the tree.
    f. Make it finish orderly.
9. Obtain a list of all system processes that have been initiated by the administrator user *root*.