

## Week 1 — *Introduction to Linux commands*

The goal of the present exercises is to discover the main Linux/Unix commands. It will bring you to your first use of standard Linux shell commands by experiencing the result of using some of these commands (the major ones ?).

This learning necessarily goes through practicing.

### Exercise 1: *Discovering Linux commands*

- Open Firefox and browse the moodle page of the class <http://moodle.epfl.ch/course/view.php?id=14115>
- Download the refcard of Linux commands.

### Exercise 2: *File manipulation*

- What is the current directory ? (pwd)
- Using `ls` command observe the result of

```
ls .
```

```
ls ..
```

```
ls -a
```

```
ls -l
```

```
ls ~
```

```
ls /
```

```
ls /usr/lib/*.so
```

Explain the resulting outputs. Use manpages to find information (man ls)

- List all the files with extension `.h` from the directory `/usr/include` (ls)

### Exercise 3: *Directory manipulation*

- Create a directory named “exercise” in your home directory (mkdir)
- rename this one by appending the current date (mv)
- enter the directory you just created (cd) and verify it (pwd)

#### Exercise 4: *Processes*

- Open an **emacs** to edit a new file named “toto.txt”. Type a few lines with the content of your choice. Save your modifications.
- Set as background the **emacs** process (Ctrl-z, bg)
- List the running processes you own (jobs, ps)
- Monitor the running processes (top) and quit (type q)  
*Note: you can also kill almost all processes in foreground by typing Ctrl-c*
- Close **emacs** and check that the process has disappeared (jobs)
- Run **emacs** one more time but this time directly in background ( **emacs &** )

#### Exercise 5: *Permissions and tricks*

- View your file content (cat, less)
- Change permission on your created file (chmod) so that you don't have permission to read anymore and check (ls -l).
- Seek for the lines containing the string “root” from the file “/etc/passwd” (grep root /etc/passwd).
- Try to do the same on file /etc/shadow. What happens ? Explain it with command “ls -l”.
- Select one line of your created file and redirect to a new file (grep word your\_file > new\_file)
- Erase the file you created (rm)
- Erase the directory you created (rmdir)

#### Exercise 6: *Generic tasks*

- Think of the tasks you might wish to do....
- Ask the assistants for ways to do these