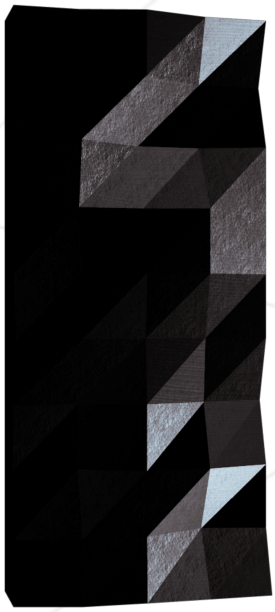

Introduction to Programming - 42

Day 00

Kai kai@42.us.org
Gaetan gaetan@42.us.org

Summary: This document is the subject of the day 00 of the introduction to programming piscine.

Contents

Chapter I

The Terminal

- The terminal is your best friend. But also your new working environment.
- The terminal allows you to work on your computer in a fast and textual way.
- Under MacOS, the terminal used is called iTerm. You can find it by clicking on the magnifying glass at the top right of your screen and typing its name ("iTerm"). Then click on the program to open it.

Chapter II

Preamble

Chapter III

Terminal

- To create a directory, the command is named `mkdir`. The mkdir command followed by the name of your choice creates a new directory.

```
?> mkdir example
?>
```

- - To list the contents of the current directory, use the `ls` command.

```
?> ls
example
?>
```

  Note the example directory that you created before.

- There are many options you can use to modify ls. You can find them by reading the `man`ual.

```
?> man ls
?>
```

- You can escape by pressing the "q" key!

- Options are added when yo call the command with a hypen and some letters. Thus, `ls -la` adds the options -a and -l to the command ls.

```
?> ls -la
total 2896
drwxr-xr-x  11 Elendar  staff      374 Jun 14 16:34 .
drwxr-xr-x   5 Elendar  staff      170 Jun  14 15:33 ..
-rw-r--r--@  1 Elendar  staff     6148 Jun 14 15:34 .DS_Store
drwxr-xr-x   2 Elendar  staff       68 Jun 14 15:59 example
?>
```

- Your directory 'example' is created. It's time to move in. The equivalent of a click on the directory is replaced by the command: `cd [name of directory]`.

```
?> cd example
?>
```

- You have just moved into your 'example' directory.

- To check where you are, and view the file tree, se the `pwd` command.

```
?> pwd
/Users/Elendar/bootcamp-42/example
?>
```

  Do not expect the exact same path on your machine as on the one in the example.

- `cd` which, actually means 'change directory', allows you to easily move from directory to directory. Small useful details:

- `cd ..` moves you up one level in the tree. For example, if you are in the 'example' subdirectory, this places you in the directory that contains 'example'.

- `cd` puts you back in your 'Home Directory', the place where you start when you open a new terminal. It's the root of the file tree.

- `touch` followed by the name of a file will create an empty file, which you can then fill using various text editors.

```
?> ls -la
total 0
drwxr-xr-x  2 Elendar  staff   68 Jun 14 18:29 .
drwxr-xr-x  7 Elendar  staff  238 Jun 14 17:24 ..
?> touch test
?> ls -la
total 0
drwxr-xr-x  3 Elendar  staff  102 Jun 14 18:29 .
drwxr-xr-x  7 Elendar  staff  238 Jun 14 17:24 ..
-rw-r--r--  1 Elendar  staff    0 Jun 14 18:29 test
?>
```

- `rm` followed by the name of a file will delete the file. `rm rf` means "remove recursively, with force" and will delete a directory.

Be careful! Files deleted with rm do not go to the Trash. You cannot undelete them.

```
?> ls -la
total 0
drwxr-xr-x  3 Elendar  staff  102 Jun 14 18:29 .
drwxr-xr-x  7 Elendar  staff  238 Jun 14 17:24 ..
-rw-r--r--  1 Elendar  staff    0 Jun 14 18:29 test
?> rm test
?> ls -la
total 0
drwxr-xr-x  2 Elendar  staff   68 Jun 14 18:29 .
drwxr-xr-x  7 Elendar  staff  238 Jun 14 17:24 ..
?>
?> ls -la
total 408
drwxr-xr-x  7 Elendar  staff      238 Jun 14 18:36 .
drwxr-xr-x  5 Elendar  staff      170 Jun 14 15:33 ..
drwxr-xr-x  2 Elendar  staff       68 Jun 14 18:30 example
?> rm -rf example
```

```
?> ls -la
total 374
drwxr-xr-x  6 Elendar  staff      204 Jun 14 18:36 .
drwxr-xr-x  5 Elendar  staff      170 Jun 14 15:33 ..
?>
```

- `chmod` allows you to give "read" or "write" or "run" rights to a file. It must be followed by arguments specifying which rights you want to give to who. Give it three numbers in a row between 0 and 7. 0 means no rights and 7 means that person can do anything to it. The first digit is for the user who owns that file (you if you created it); the second digit is for a category (group) of users; and the third digit represents the permissions for everyone (all users).

```
?> ls
42.rb
?> ./42.rb
zsh: permission denied: ./42.rb
?> chmod 700 42.rb
?> ./42.rb
La reponse est 42 !
?> ls -l
total 8
-rwx------  1 Elendar  staff  14 Jun 25 23:06 42.rb
?>
```

Note that `ls -l` gives you details about the permissions applied to each file or directory.

- `cat` is a command that allows you to view the contents of a file. Of course, if there is nothing in the file, you do not display anything.

```
?> cat bonjour.rb
#!/usr/bin/ruby
print "bonjour !"
?>
```

- `open` is a MacOS feature that allows you to run a certain program.

  Thus, `open` followed by the name of the pdf will open the pdf. Open. (The file name is important) will open the current directory in the Finder (the file exporter of your mac).

```
?> open dontpanic.pdf
?>
?> open .
?>
```

- Finally, pressing the Ctrl and C keys simultaneously will stop the programs or commands while driving. This may be useful for some unfortunate commands or infinite loops of your programs.

```
?> yes "ctrl + c"
ctrl + c
ctrl + c
ctrl + c ^C
?>
```

You are now ready for anything!