

The Command Line

The command line is a text interface for your computer. It's a program that takes in commands, which it passes on to the computer's operating system to run.

From the command line, you can navigate through files and folders on your computer, just as you would with Finder on Mac OS or Windows Explorer on Windows. The difference is that the command line is fully text-based.

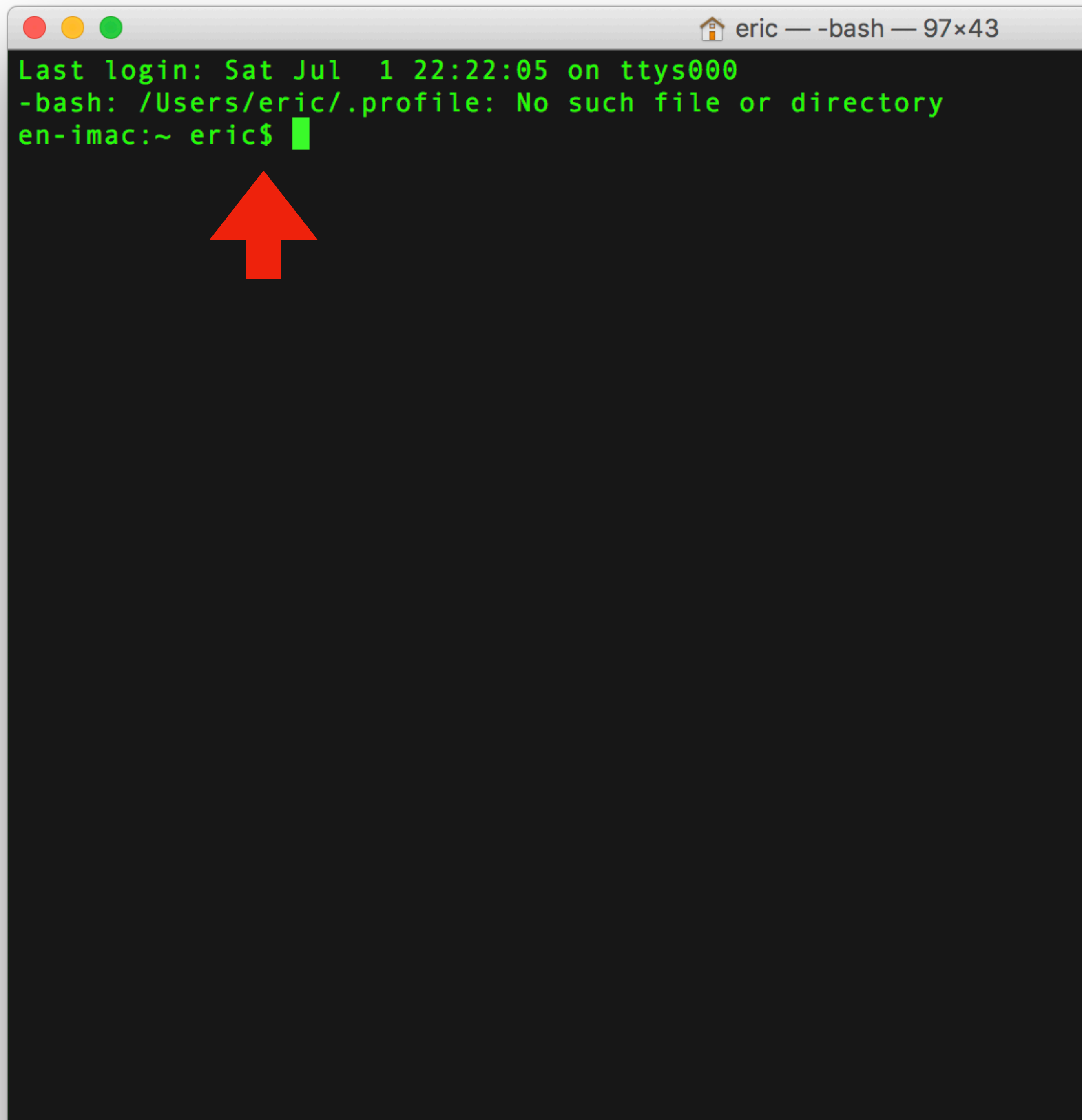


eric — -bash — 97x43

Last login: Sat Jul 1 22:22:05 on ttys000

-bash: /Users/eric/.profile: No such file or directory

en-imac:~ eric\$

A screenshot of a macOS terminal window. The title bar at the top shows three colored window control buttons (red, yellow, green) on the left, and a home icon followed by the text "eric — -bash — 97x43" on the right. The terminal content is displayed in green text on a black background. It shows the login message "Last login: Sat Jul 1 22:22:05 on ttys000", an error message "-bash: /Users/eric/.profile: No such file or directory", and the shell prompt "en-imac:~ eric\$". A large red arrow points upwards from below the prompt line to the green dollar sign character.

```
en-imac:~ eric$
```

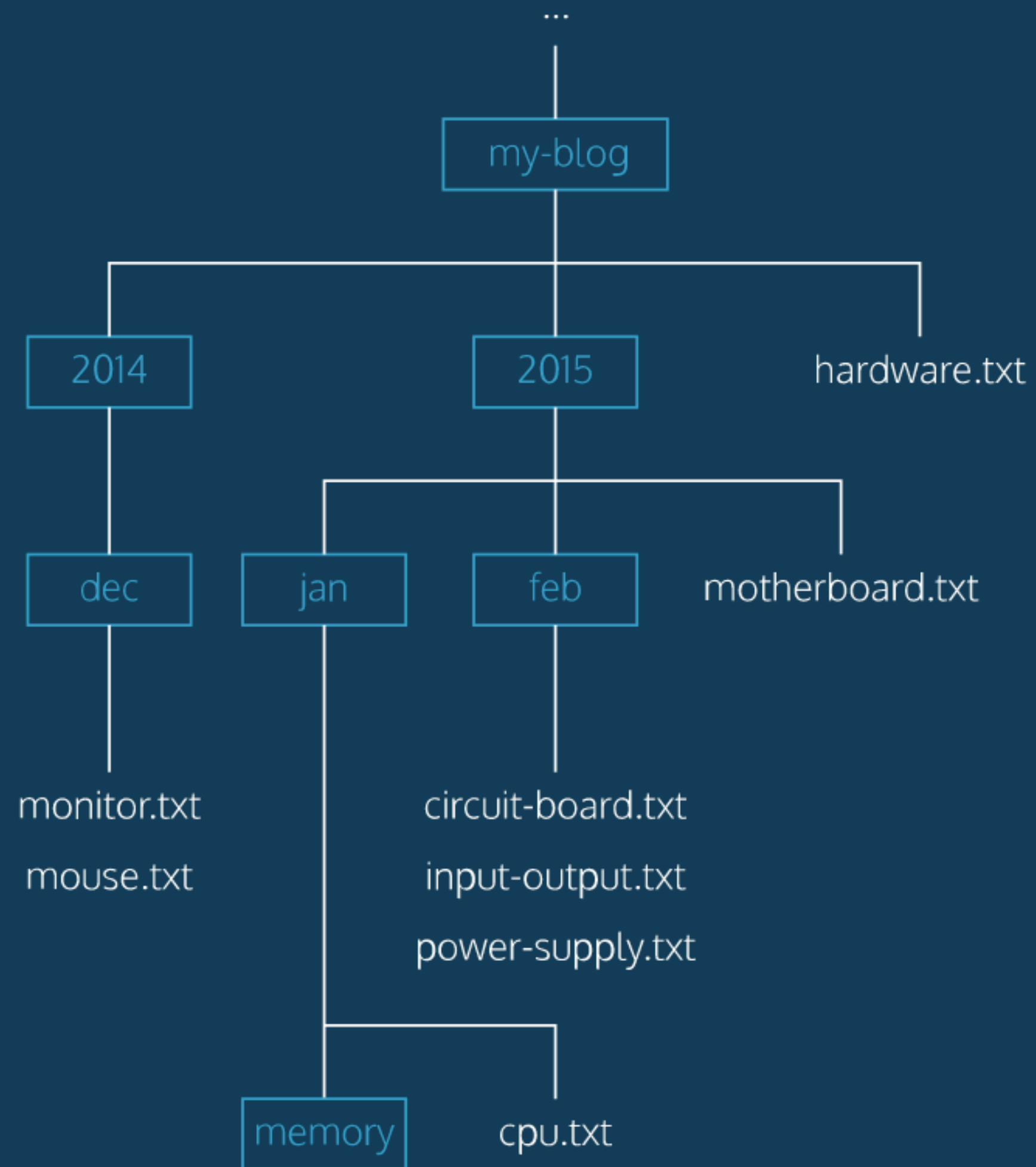
In the terminal, first you see **\$**. This is called a *shell prompt*. It appears when the terminal is ready to accept a command.

```
eric — -bash — 97x43
Last login: Sat Jul  1 22:22:05 on ttys000
-bash: /Users/eric/.profile: No such file or directory
[en-imac:~ eric$ ls
Applications                FontExplorer X
Creative Cloud Files         Library
Creative Cloud Files (archived) (1)  Movies
Desktop                     Music
Documents                   Pictures
Downloads                   Public
Dropbox                     Sites
en-imac:~ eric$
```

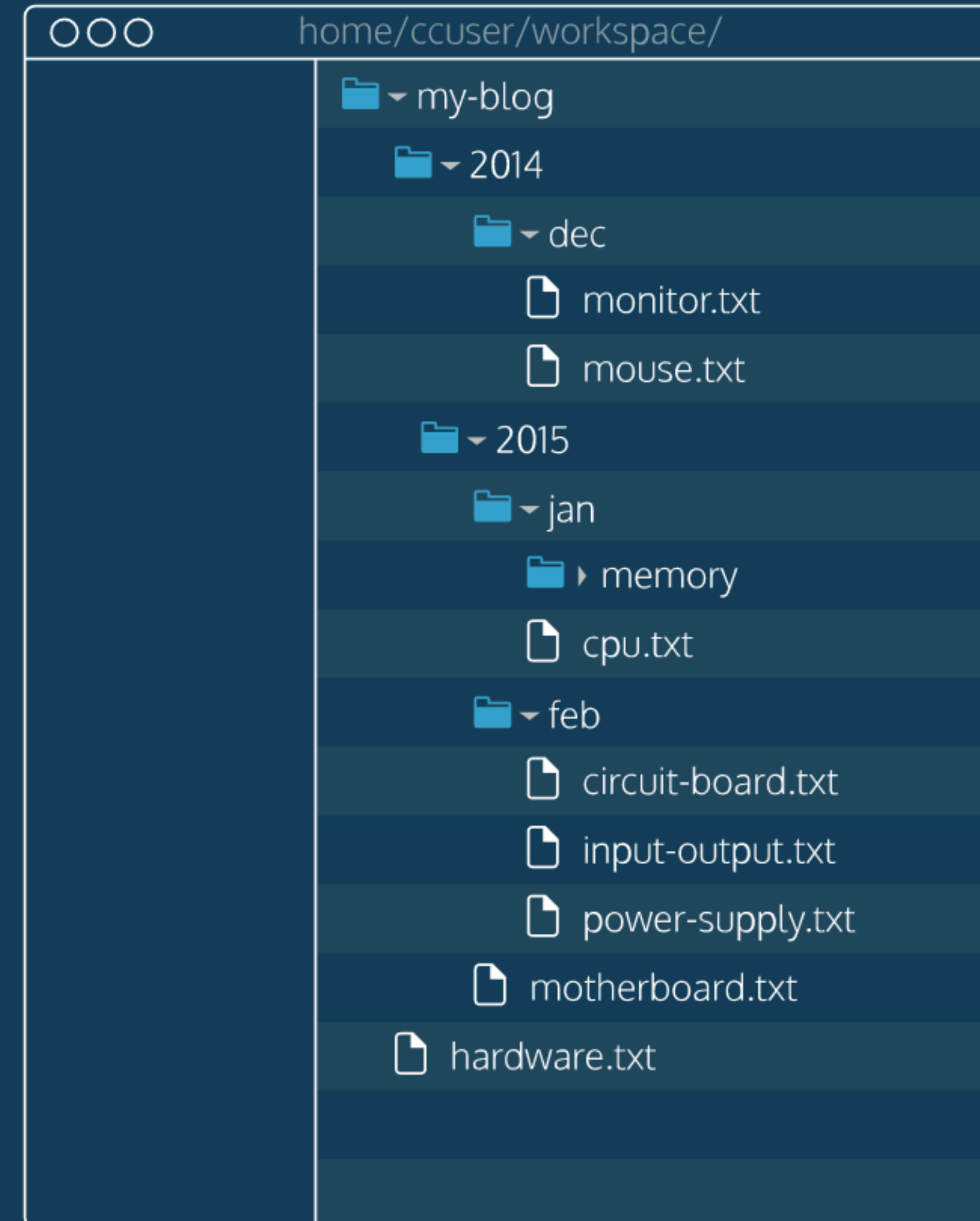
Lets try entering a *command*.
If we type **ls** and press return
we see a *list* of the *files* and
directories in the folder you
are currently in.

When using the command line, we refer to folders as *directories*. Files and directories on your computer are organized into a *filesystem*.

Filesystem Tree



File Manager Graphical Interface




```
eric — -bash — 97x43
Last login: Sat Jul  1 22:22:05 on ttys000
-bash: /Users/eric/.profile: No such file or directory
[en-imac:~ eric$ ls
Applications                                FontExplorer X
Creative Cloud Files                        Library
Creative Cloud Files (archived) (1)         Movies
Desktop                                    Music
Documents                                  Pictures
Downloads                                  Public
Dropbox                                    Sites
[en-imac:~ eric$ pwd
/Users/eric
[en-imac:~ eric$
```

Let's see how to navigate the filesystem from the command line. In the terminal, after the shell prompt, type **pwd** and press Enter.

```
eric — -bash — 97x43
Last login: Sat Jul  1 22:22:05 on ttys000
-bash: /Users/eric/.profile: No such file or directory
[en-imac:~ eric$ ls
Applications                               FontExplorer X
Creative Cloud Files                       Library
Creative Cloud Files (archived) (1)        Movies
Desktop                                   Music
Documents                                Pictures
Downloads                               Public
Dropbox                                 Sites
[en-imac:~ eric$ pwd
/Users/eric
en-imac:~ eric$ █
```

pwd stands for "print working directory". It outputs the name of the directory you are currently in, called the *working directory*.

eric — -bash — 97x43

Last login: Sat Jul 1 22:22:05 on ttys000

-bash: /Users/eric/.profile: No such file or directory

[en-imac:~ eric\$ ls

Applications	FontExplorer X
Creative Cloud Files	Library
Creative Cloud Files (archived) (1)	Movies
Desktop	Music
Documents	Pictures
Downloads	Public
Dropbox	Sites

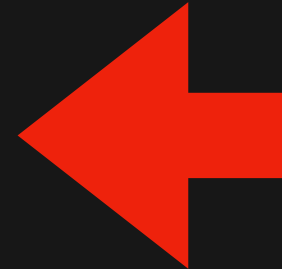
[en-imac:~ eric\$ pwd

/Users/eric

en-imac:~ eric\$ █

Together with **ls**,
the **pwd** command is useful to
show where you are in the
filesystem.

```
Desktop — -bash — 97x43
Last login: Sat Jul  1 22:22:05 on ttys000
-bash: /Users/eric/.profile: No such file or directory
[en-imac:~ eric$ ls
Applications                               FontExplorer X
Creative Cloud Files                       Library
Creative Cloud Files (archived) (1)        Movies
Desktop                                   Music
Documents                                Pictures
Downloads                               Public
Dropbox                                 Sites
[en-imac:~ eric$ pwd
/Users/eric
[en-imac:~ eric$ cd Desktop
[en-imac:Desktop eric$ pwd
/Users/eric/Desktop
en-imac:Desktop eric$
```



Now lets try typing **cd**.

This stands for "change directory". Just as you would click on a folder in Windows Explorer or Finder, **cd** switches you into the directory you specify. In other words, **cd** changes the working directory.

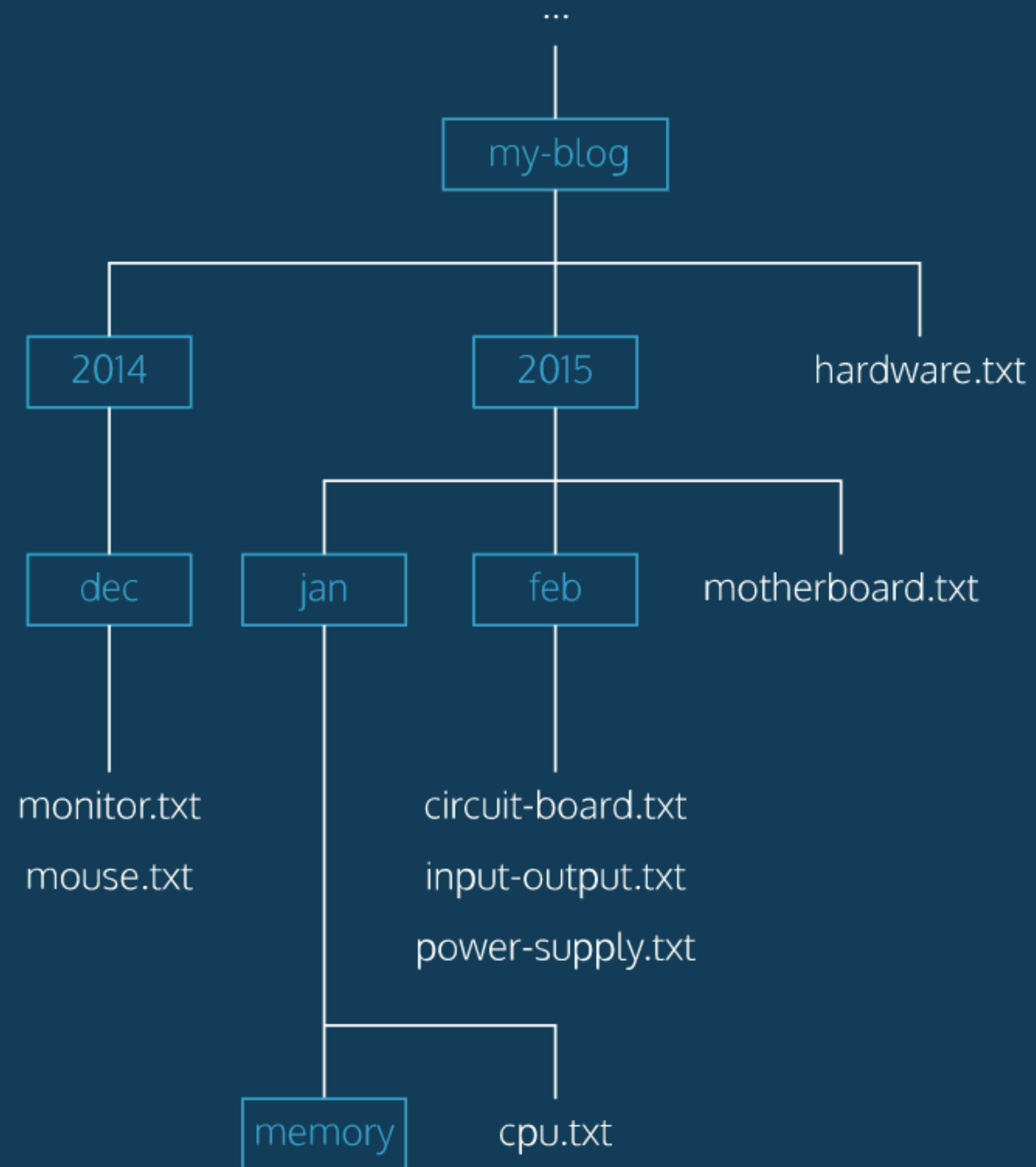
To navigate directly to a directory, use **cd** with the directory's path as an argument. You can also take several steps in one command. For example

```
cd jan/memory/
```

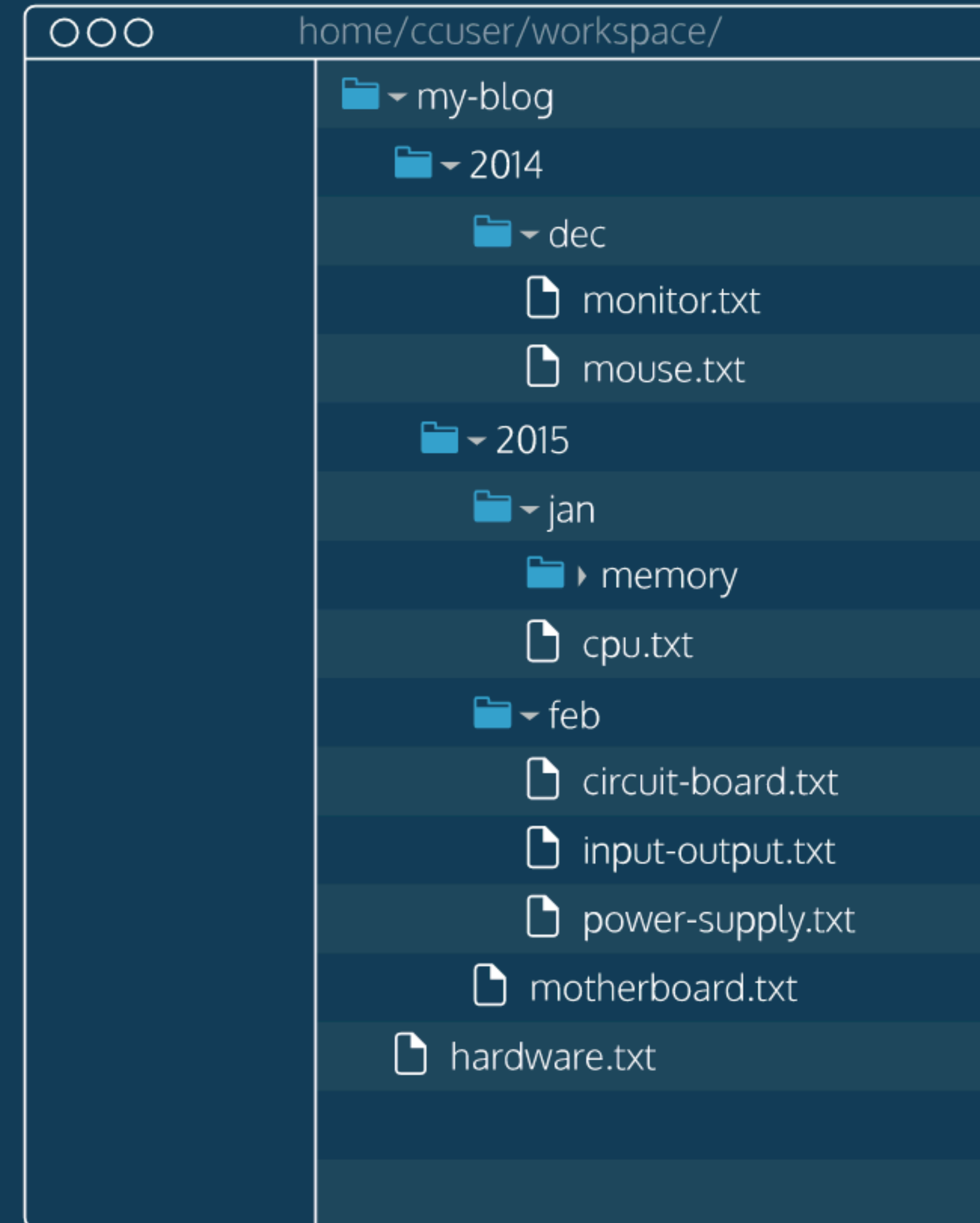
cd command navigates directly to the **jan/memory** directory. Passing **..** as the argument would move up one directory.

```
cd ..
```

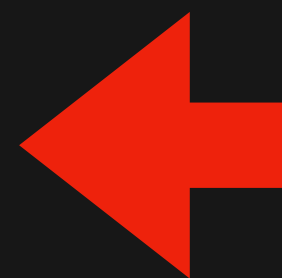
Filesystem Tree



File Manager Graphical Interface

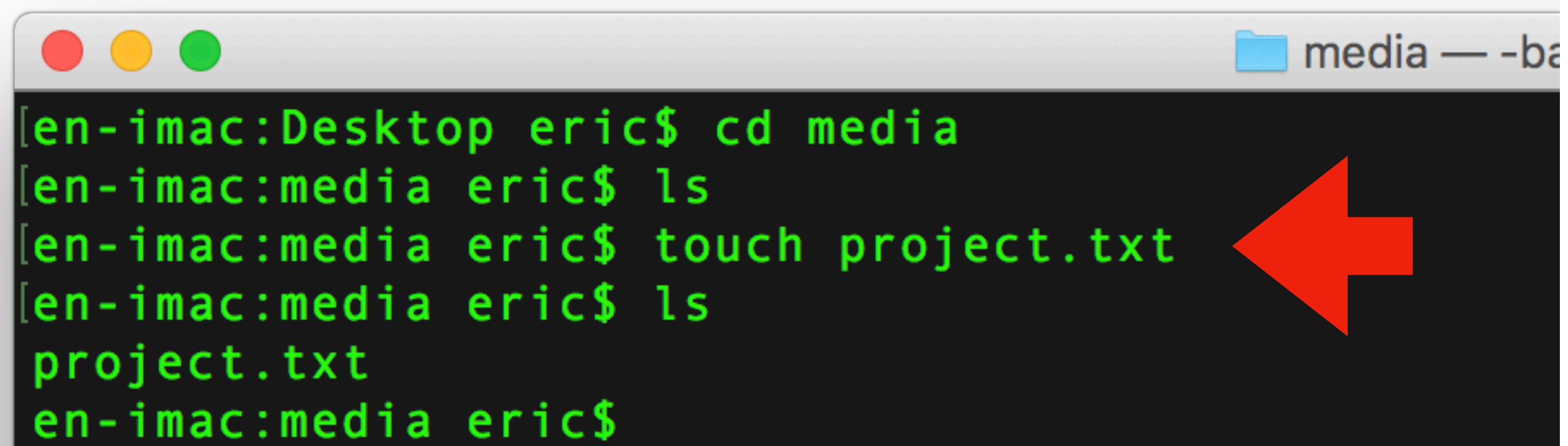



```
Applications
Creative Cloud Files
Creative Cloud Files (archived) (1)
Desktop
Documents
Downloads
Dropbox
en-imac:~ eric$ pwd
/Users/eric
en-imac:~ eric$ cd Desktop
en-imac:Desktop eric$ pwd
/Users/eric/Desktop
en-imac:Desktop eric$ mkdir media
en-imac:Desktop eric$ ls
160HKpVE.jpg
ARTS167_Introduction_to_Interactive_Design_2.pdf
Desktop Copy 64.tiff
Group 24.png
Group 26 Copy.png
Group 27.png
PM_19_June.pdf
Pablo-Helguera-Instituto-de-la-telenovela-ES-EN.pdf
Page 22.pdf
Production.pdf
Textos-de-sala-Andy-Warhol-Museo-Jumex.pdf
combine
event.pdf
fonts
happ.gif
ica_sketches
ica_sketches.indd
index.html
lab_1.key
lab_syl Folder
lab_syl.indd
landing_pages
lbya-printedmatter-homepage-092212
lecture #1
media
FontExplorer X
Library
Movies
Music
Pictures
Public
Sites
```



Now lets try typing **mkdir**.

This command stands for "make directory". It takes in a directory name as an argument, and then creates a new directory in the current working directory.



A terminal window titled "media" with a folder icon. The window has a dark background and green text. The commands and output are as follows:

```
[en-imac:Desktop eric$ cd media
[en-imac:media eric$ ls
[en-imac:media eric$ touch project.txt
[en-imac:media eric$ ls
project.txt
en-imac:media eric$
```

A large red arrow points from the right towards the `touch project.txt` command.

Now lets try typing **touch project.txt**

This command creates a new file inside the working directory. It takes in a filename as an argument, and then creates an empty file in the current working directory.

pwd

ls

cd

mkdir

touch

pwd outputs the name of the current working directory.

ls lists all files and directories in the working directory.

cd switches you into the directory you specify.

mkdir creates a new directory in the working directory.

touch creates a new file inside the working directory.