

Intro to the Command Line

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Overview

- General philosophy
- Basic commands
- More philosophy
- Advanced (basic) techniques

The Terminal

[illegible]

The Terminal

```
jfass@nickel:~$ ssh cabernet
```

```
.....  
/ ^ \      : / ( _ ) | |  
/ : / : | _ , | | _ , _ _ _ |  
| : | / | / \ _ | / / | / | / |  
| : \ _ ^ \ / | ^ \ / | _ / | | _ / |  
| : .genomecenter.ucdavis.edu  
 \ ;  
 \ /  
[...]
```

```
jfass@cabernet:~$
```

The Terminal

```
jfass@nickel:~$ ssh cabernet
```

```
.....
/^\
/ : / ( ) | |
| : | , | | _ , _ _ _ | _
| : | / | / \_ | / / | / | / | /
| : \_ / \_ / | \_ / | \_ / | \_ / | \_ /
| : .genomecenter.ucdavis.edu
\ ;
\ /
[...]
```

```
jfass@cabernet:~$ <ctrl>-l
```

The Terminal

```
jfass@cabernet:~$
```

`<ctrl>-l` or `-k ...`

Clears terminal, start at top

See also: `reset`

The Terminal

```
jfass@cabernet:~$
```

<-- prompt (includes \$ and one space after)

Infinite* possible configurations, in this case:

<uname>@<hostname>:<pwd>\$<space>

(pwd = present working directory)

Command Line Basics

```
jfass@cabernet:~$ <type command here>
```

Follow command with <enter>

Command Line Basics - Getting Out!

```
jfass@cabernet:~$ wrong command <control-c>
```

```
jfass@cabernet:~$ # looks like this:
```

```
jfass@cabernet:~$ wrong command ^C
```

```
jfass@cabernet:~$
```

```
jfass@cabernet:~$ sleep 1000
```

```
^C
```

```
jfass@cabernet:~$
```

<control-c>: escape from
entering a command ...

... kill a running command

Command Line Basics - Getting Out!

```
jfass@cabernet:~$ R
```

```
[...]
```

```
> <control-d>
```

```
Save workspace image? [y/n/c]: n
```

```
jfass@cabernet:~$
```

Escape from some interactive sessions (R, python, ...)

Command Line Basics - Getting Out!

```
jfass@cabernet:~$ yes | more
```

```
[...]
```

```
<q>
```

```
jfass@cabernet:~$
```

q = quit:

Escape from paginators!
(less, man, etc.)

Command Line Basics - Where Am I?

```
jfass@cabernet:~$ ls
```

```
[...]
```

```
jfass@cabernet:~$ pwd
```

```
[...]
```

list

present working directory

Command Line Basics - Options!

```
jfass@cabernet:~$ ls -R
```

```
[...]
```

```
[...]
```

```
<control-c>
```

list recursively

What did I just do???

Command Line Basics - Read The Manual (RTM)!

```
jfass@cabernet:~$ man ls
```

```
[...]
```

```
<q>
```

```
man <command>
```

Command Line Basics - Options, options, options!

```
jfass@cabernet:~$ ls -l
```

```
jfass@cabernet:~$ ls -a
```

```
jfass@cabernet:~$ ls -la
```

```
jfass@cabernet:~$ ls -ltrha
```

man <command>

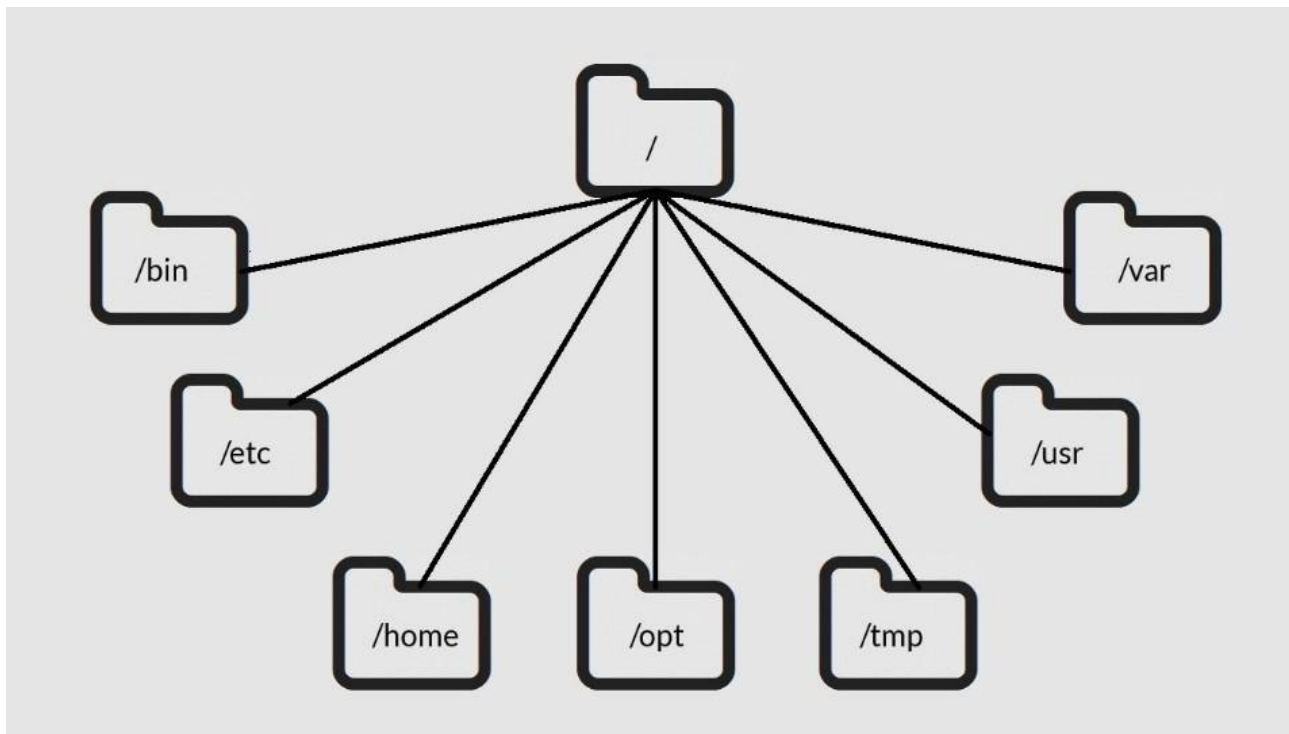
Command Line Basics - Directory Structure

```
jfass@cabernet:~$ ls -R  
  
[...]  
  
./R/x86_64-pc-linux-gnu-library/3.3/BH/include  
  
[...]  
  
<control-c>
```

'/' separates directories

Names can include many characters, but avoid spaces and other weird stuff.

Command Line Basics - Directory Structure



www.linuxtrainingacademy.com

Command Line Basics - '.' and '..'

```
jfass@cabernet:~$ ls -a
```

```
.
```

```
..
```

```
.bash_history
```

```
[...]
```

'.' = pwd

'..' = up one level

Command Line Basics - Absolute/Relative Address

```
jfass@cabernet:~$ ls /home/jfass/
```

```
[...]
```

```
jfass@cabernet:~$ ls ../jfass/
```

```
[same ...]
```

‘.’ = pwd

‘..’ = up one level

Command Line Basics - <Tab> Completion

```
jfass@cabernet:~$ ls /home/jfas<tab>
```

```
jfass@cabernet:~$ ls /home/jfass/
```

<tab> will literally save your life. Hours of it.

A single <tab> auto-completes when it's possible (when only a single possible completion exists).

Command Line Basics - <Tab> Completion

```
jfass@cabernet:~$ ls /home/j<tab>
```

```
jfass@cabernet:~$ ls /home/j
```

```
jfass@cabernet:~$ ls /home/j<tab><tab>
```

```
jacob/      [...]
```

```
jagadish/
```

```
jagomez/
```

```
jwbucha/
```

```
[...]
```

<tab> will literally save your life. Hours of it.

Two <tab>s in a row will show you all the possible completions.

Command Line Basics - <Tab> Completion

```
jfass@cabernet:~$ ls /h<tab>
```

Use it!

```
jfass@cabernet:~$ ls /home/<tab>
```

Watch out for RSI ...

```
jfass@cabernet:~$ ls /home/<tab>
```

```
jfass@cabernet:~$ ls /home/j<tab>
```

```
jfass@cabernet:~$ ls /home/j<tab>
```

```
jfass@cabernet:~$ ls /home/jf<tab>
```

```
jfass@cabernet:~$ ls /home/jfass/
```