0 commands

terminal(shell)は命令(command)を受け取って，被演算子(operand)に演算を加える．オプションによってその振る舞いを調整する．

```
> ls -lat
```

command com options
prompt

'-' short options
-l : long
-a : all
-t : time

'--' long options
--version

```
> ls
```

```
> ls
command/   dir/       file/      line_edit/
> ls -lat
total 0
drwxr-xr-x   5 bob  staff  160 11  3 14:46 .semi_lattice/
drwxr-xr-x   7 bob  staff  224 11  3 14:45 ./
drwxr-xr-x   2 bob  staff   64 11  3 14:45 line_edit/
...
```

```
> pwd [.] #print working dir
```

```
> pwd
/Users/bob/Desktop/lecture_25f/multi_scale_25f/linux_basic
```

```
> man ls
```

operator operand
演算子　被演算子

```
LS(1)                General Commands Manual                LS(1)

NAME
     ls – list directory contents

SYNOPSIS
     ls [-@ABCFGHILOPRSTUWabcdefghiklmnopqrstuvwxy1%,]
        [--color=when] [-D format] [file ...]

DESCRIPTION
     For each operand that names a file of a type other than
     directory, ls displays its name as well as any requested,
     associated information.  For each operand that names a
     file of type directory, ls displays the names of files
     contained within that directory, as well as any requeste
     associated information.
```

q(quit)で終了

1 dir commands

```
> mkdir hoge
> rmdir hoge
> full_path, absolute_path, 絶対パス
```

```
readlink -f linux_basic.key.pdf
/Users/bob/Desktop/Lectures/MultiScale/multi_scale_25f/w7_bundle/linux_basic.key.pdf
realpath linux_basic.key.pdf
/Users/bob/Desktop/Lectures/MultiScale/multi_scale_25f/w7_bundle/linux_basic.key.pdf
```

```
> relative_path, 相対パス
> ls [.]
> ls ..
#above dir
> cd bin
> cd ..
> cd [~]
#tilde home
```

```
> tree -L 3
> sudo apt install tree
```

```
multi_scale_25f/
├── bin
│   ├── auto_git
│   ├── linux_bins
│   ├── mk_cli_copilot
│   │   ├── auto_git
│   │   └── chat_form
│   └── tidy
├── linux_basic
│   ├── command
│   ├── dir
│   ├── file
│   └── line_edit
└── readme.html
```

```
> open .
```

linux basics

basic commands

bob 2025/11/3

2 file commands

```
> mv A_file B_file
#rename A_file to B_file
> mv A_file B_dir
#move A_file to B_dir
> mv * B_dir
#move *(wild card, all files) to B_dir

> rm A_file
#remove A_file
> rm -rf B_dir
#remove recursively
 and forcibly B_dir

> cp A_file B_file
#copy A_file to B_file
> cp A_file B_dir
#copy A_file in B_dir
```

3 text commands

```
> cat A_file
#catenate A
> bat A_file
> sudo apt install bat

> head A_file
> tail A_file

> wc A_file
#word count A

> grep string A_file
#search string in A

> diff A_file B_file
#show diff btw A B
```

4 process commands

```
> ps
#process status

> fg
#fore ground
> bg
#back ground

> kill -9 pid
#kill forcibly pid process
```

pid : process ID

5 line edit key bind

1行戻る previous: C-p

行頭へ戻る atamaウソ

ahead : C-a

1字戻る backward: C-b ←― カーソル移動 ―→ 1字進む forward: C-f

行末へ進む end: C-e

編集操作
1字消す delete: C-d
1行消す kill-line: C-k

1行進む next: C-n

```
> my_help l kick_off edit
    -                   c-p(previ
    - c-a(ahead), c-b(back), c-
    -                   c-n(next)
    - c-d(delete), c-k(kill-lin
    - c-y(yank, paste)
```