

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
  > ls -lat
  ' ' short      '--' long
  options      options
  -l : long    --version
  -a : all
  -t : time

  > 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
  LS(1)          General Commands Manual      LS(1)
  NAME
  ls - list directory contents
  SYNOPSIS
  ls [-@ABCFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz1%]
  [-c --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 requested
  associated information.

operator operand
演算子    被演算子

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

  > open .
```

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

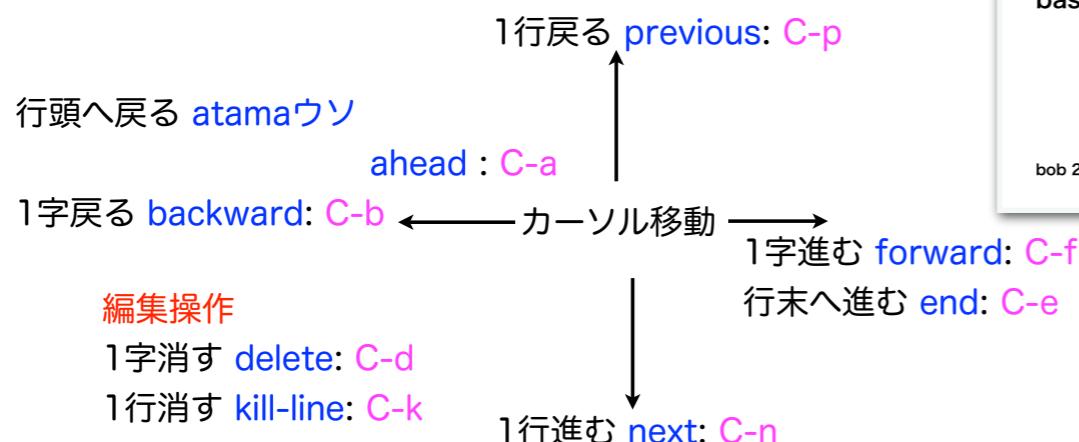
  > head A_file
  > tail A_file

  > wc A_file
#word count A

  > grep string A_file
#search string in A

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

5 line edit key bind



linux basics

basic commands
bob 2025/11/3

4 process commands

```
> ps
#process status

  > fg
#fore ground
  > bg
#back ground

  > kill -9 pid
#kill forcibly pid process

pid : process ID
```