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Kelas: Sistem Operasi (A)

Laporan Tugas-1



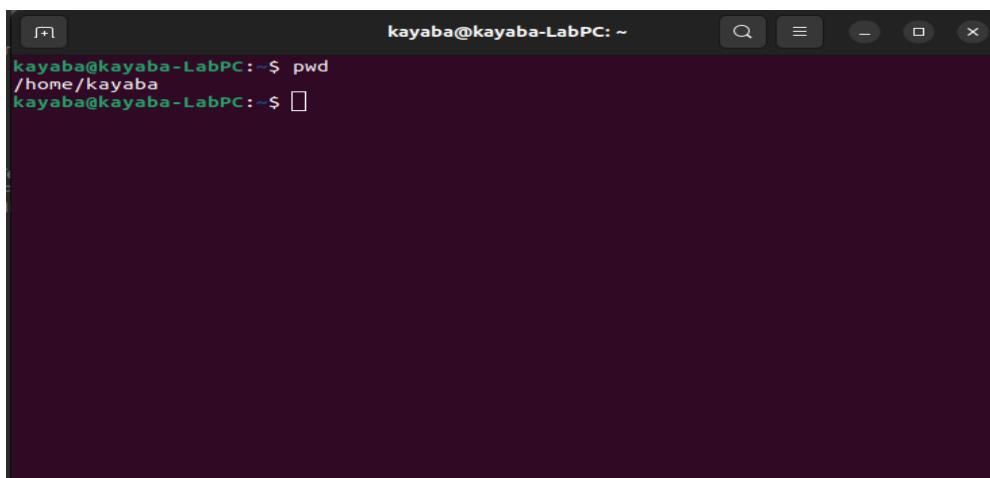
BASH

THE BOURNE-AGAIN SHELL

Bash merupakan penerjemah perintah yang berjalan pada konsol/command line interpreter di mana si pengguna dapat memberi perintah(command(s)) yang dapat mengakibatkan sesuatu dalam sebuah sistem operasi berubah. Bash juga dapat membaca perintah dari berkas yang disebut skrip. Soal penamaan, Bash adalah singkatan dari Bourne Again Shell. Bash merupakan versi baru dari Bourne Shell yang dikembangkan oleh Steve Bourne. Pemrograman Bash-Shell itu sendiri adalah pengeksekusian kumpulan perintah menggunakan skrip yang ditulis ke dalam bahasa Shell, sehingga dapat dieksekusi oleh sistem operasi. Pada Linux sendiri, penggunaan Bash ini dijalankan melalui Terminal. Terminal adalah sebuah program semacam Command Prompt pada Windows. Berikut adalah perintah dasar dari Bash yang wajib kalian ketahui:

1.pwd:

Digunakan untuk mengecek direktori yang user akses/gunakan



```
kayaba@kayaba-LabPC: ~  
kayaba@kayaba-LabPC:~$ pwd  
/home/kayaba  
kayaba@kayaba-LabPC:~$
```

2. ls

Digunakan untuk mengecek direktori yang user akses/digunakan

```
kayaba@kayaba-LabPC: ~  
LS(1) User Commands LS(1)  
  
NAME  
    ls - list directory contents  
  
SYNOPSIS  
    ls [OPTION]... [FILE]...  
  
DESCRIPTION  
    List information about the FILES (the current directory by default).  
    Sort entries alphabetically if none of -cftuvSUX nor --sort is speci-  
    fied.  
  
    Mandatory arguments to long options are mandatory for short options  
    too.  
  
    -a, --all  
        do not ignore entries starting with .  
  
    -A, --almost-all  
        do not list implied . and ..  
  
    --author  
  
Manual page ls(1) line 1 (press h for help or q to quit)
```

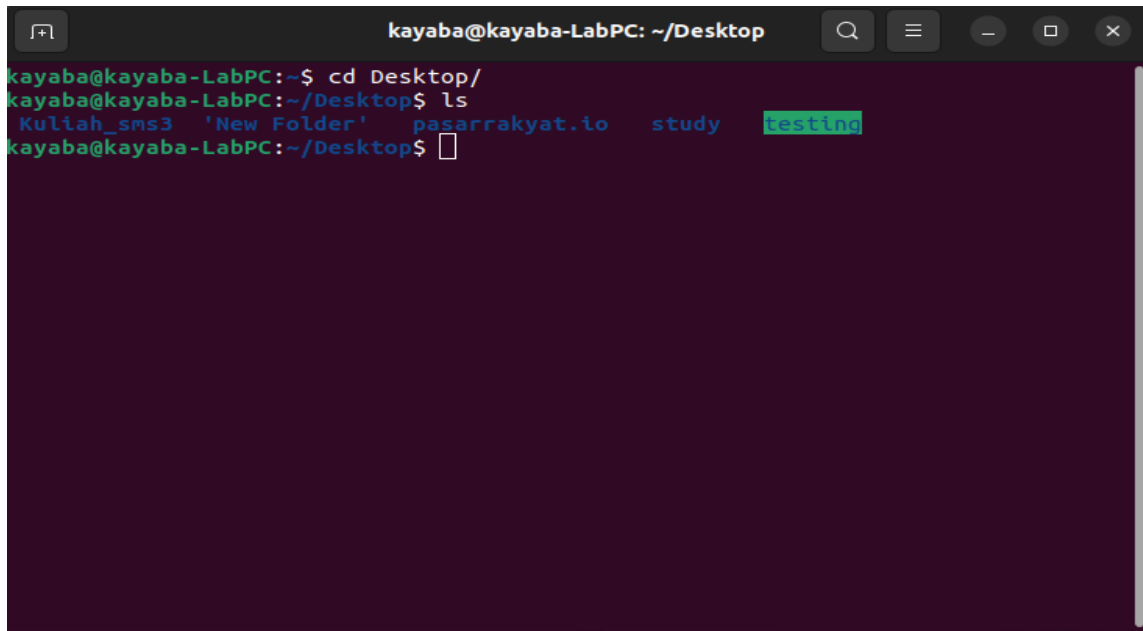
3. ll atau ls -li

Untuk mengetahui hak akses serta waktu berakhir dari sebuah berkas/direktori diubah

```
kayaba@kayaba-LabPC: ~  
kayaba@kayaba-LabPC:~$ ll  
total 220  
drwxr-x--- 24 kayaba kayaba   36 Sep 11 21:26 ./  
drwxr-xr-x  3 root  root      3 Sep  3 17:07 ../  
-rw----- 1 kayaba kayaba 27377 Sep 11 15:41 .bash_history  
-rw-r--r-- 1 kayaba kayaba  220 Sep  3 17:03 .bash_logout  
-rw-r--r-- 1 kayaba kayaba  3771 Sep  3 17:03 .bashrc  
drwx----- 23 kayaba kayaba   25 Sep 11 14:15 .cache/  
drwx----- 26 kayaba kayaba   32 Sep  7 23:57 .config/  
drwxr-xr-x  7 kayaba kayaba   12 Sep  8 02:46 Desktop/  
drwxr-xr-x  3 kayaba kayaba   11 Sep  7 23:58 Documents/  
drwxr-xr-x  4 kayaba kayaba   28 Sep 11 21:13 Downloads/  
drwx----- 2 kayaba kayaba    2 Sep  7 08:25 .gconf/  
-rw-rw-r-- 1 kayaba kayaba  138 Sep  7 19:12 .gitconfig  
drwx----- 2 kayaba kayaba    4 Sep 11 21:07 .gnupg/  
drwxrwxr-x  3 kayaba kayaba    3 Sep  8 10:06 .ipython/  
drwxr-xr-x  4 root  root      8 Sep  5 14:06 katoolin/  
-rw----- 1 kayaba kayaba   20 Sep 11 21:26 .lessht  
drwx----- 6 kayaba kayaba    6 Sep  3 18:20 .local/  
drwxr-xr-x  2 kayaba kayaba    2 Sep  3 17:44 Music/  
drwxrwxr-x  4 kayaba kayaba    5 Sep  7 12:34 .npm/  
drwxr-xr-x  3 kayaba kayaba    3 Sep  4 16:12 Pictures/  
drwx----- 3 kayaba kayaba    3 Sep  3 17:54 .pki/  
-rw-r--r-- 1 kayaba kayaba  807 Sep  3 17:03 .profile
```

4.cd (change directory)

Digunakan untuk berpindah direktori dari ke direktori yang lainnya

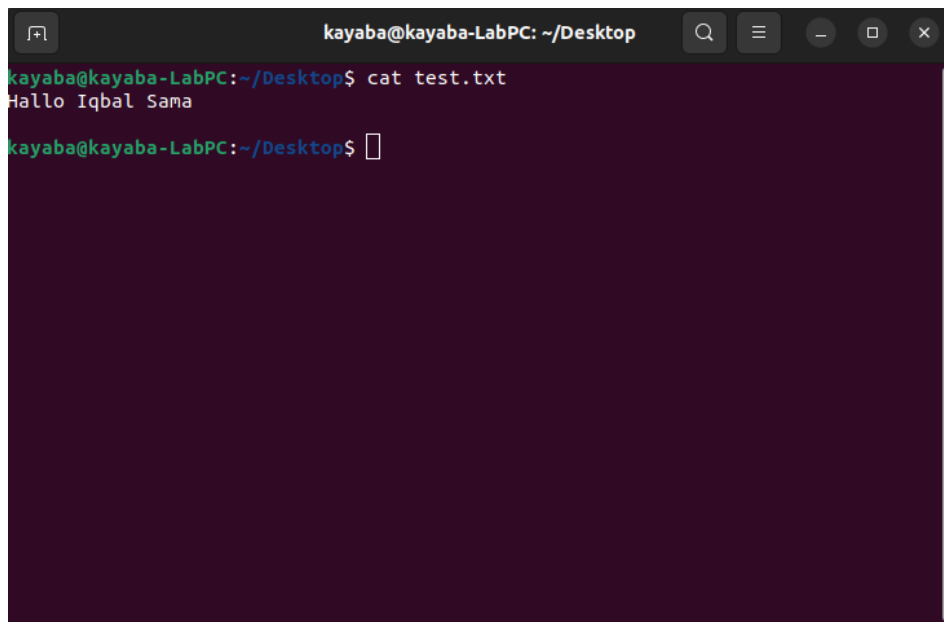
A terminal window titled 'kayaba@kayaba-LabPC: ~/Desktop' with standard window controls. The terminal shows the following commands and output:

```
kayaba@kayaba-LabPC:~$ cd Desktop/  
kayaba@kayaba-LabPC:~/Desktop$ ls  
Kuliah_sms3  'New Folder'  pasarrakyat.io  study  testing  
kayaba@kayaba-LabPC:~/Desktop$
```

The word 'testing' in the output is highlighted in green.

5 cat

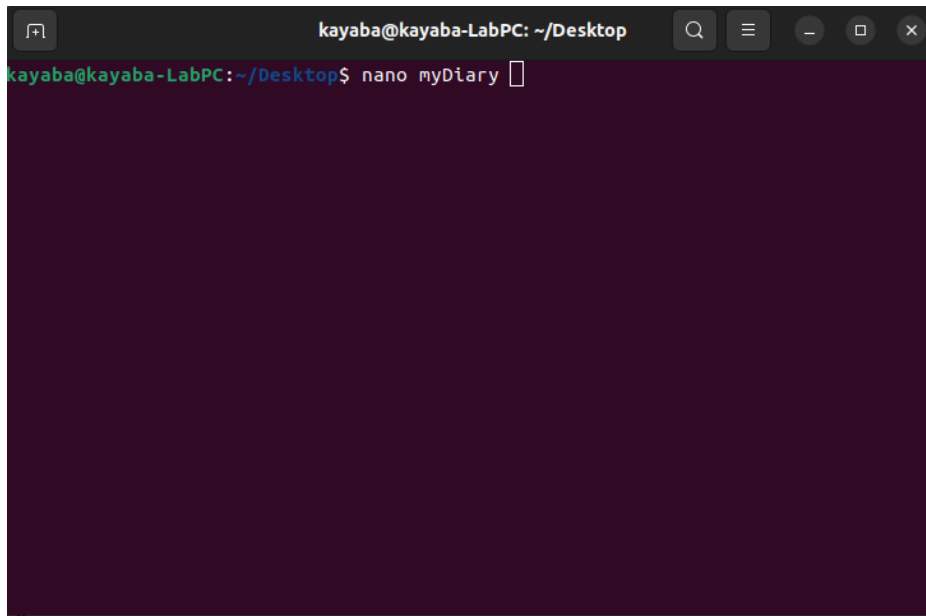
Digunakan untuk melihat isi dari membuat file

A terminal window titled 'kayaba@kayaba-LabPC: ~/Desktop' with standard window controls. The terminal shows the following commands and output:

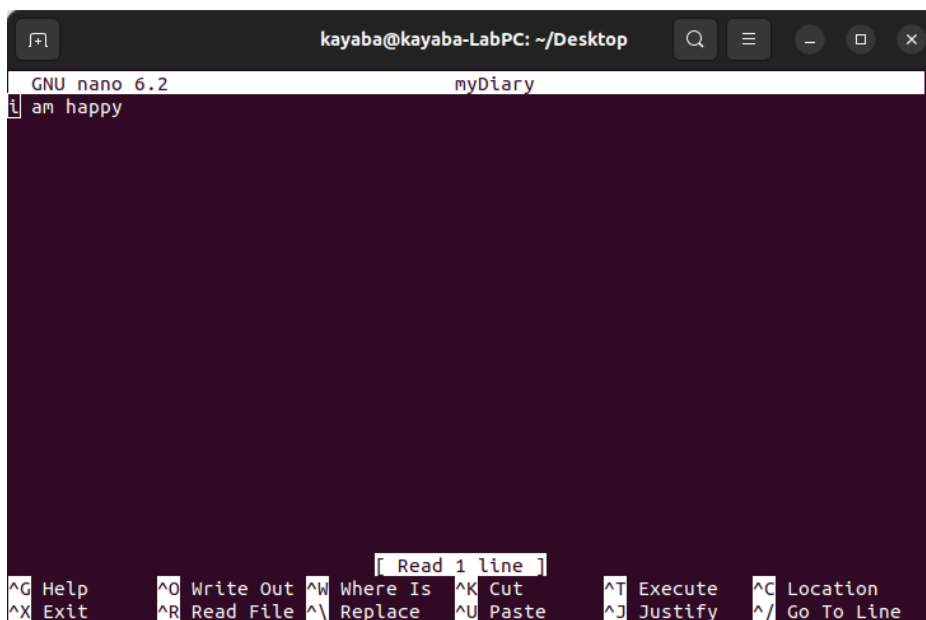
```
kayaba@kayaba-LabPC:~/Desktop$ cat test.txt  
Hallo Iqbal Sama  
kayaba@kayaba-LabPC:~/Desktop$
```

6. nano

Digunakan sebagai teks editor dalam membuat file



```
kayaba@kayaba-LabPC: ~/Desktop
kayaba@kayaba-LabPC:~/Desktop$ nano myDiary
```



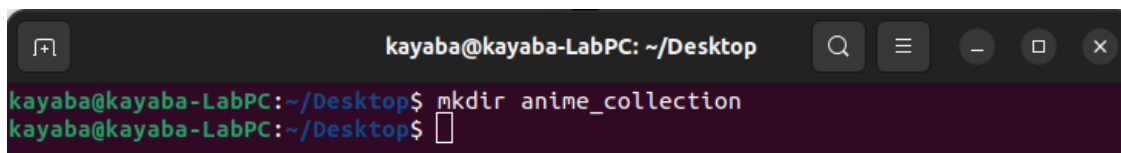
```
GNU nano 6.2 myDiary
i am happy
```

[Read 1 line]

^G Help	^O Write Out	^W Where Is	^K Cut	^T Execute	^C Location
^X Exit	^R Read File	^_ Replace	^U Paste	^J Justify	^_ Go To Line

7 mkdir

Digunakan untuk membuat direktori/folder baru



```
kayaba@kayaba-LabPC: ~/Desktop
kayaba@kayaba-LabPC:~/Desktop$ mkdir anime_collection
kayaba@kayaba-LabPC:~/Desktop$
```

8. rm

Digunakan untuk menghapus sebuah teks

```
kayaba@kayaba-LabPC: ~/Desktop
kayaba@kayaba-LabPC:~/Desktop$ ls
anime_collection  myDiary      pasarrakyat.io  testing
Kuliah_sms3      'New Folder' study           test.txt
kayaba@kayaba-LabPC:~/Desktop$ rm myDiary
kayaba@kayaba-LabPC:~/Desktop$ ls
anime_collection  'New Folder' study    test.txt
Kuliah_sms3      pasarrakyat.io testing
kayaba@kayaba-LabPC:~/Desktop$
```

9. rmdir

Digunakan untuk menghapus sebuah direktori.

Apabila direktori tersebut tidak kosong maka perintah yang dapat digunakan adalah

`rm -rf <name_directory>`

```
kayaba@kayaba-LabPC: ~/Desktop
kayaba@kayaba-LabPC:~/Desktop$ ls
anime_collection  'New Folder' study    test.txt
Kuliah_sms3      pasarrakyat.io testing
kayaba@kayaba-LabPC:~/Desktop$ rm -rf anime_collection/
kayaba@kayaba-LabPC:~/Desktop$ ls
Kuliah_sms3  'New Folder' pasarrakyat.io study testing test.txt
kayaba@kayaba-LabPC:~/Desktop$
```

10. mv

Digunakan untuk memindahkan sesuatu berkas

```
kayaba@kayaba-LabPC: ~/Desktop
anime_collection  'New Folder' study    test.txt
Kuliah_sms3      pasarrakyat.io testing
kayaba@kayaba-LabPC:~/Desktop$ rm -rf anime_collection/
kayaba@kayaba-LabPC:~/Desktop$ ls
Kuliah_sms3  'New Folder' pasarrakyat.io study testing test.txt
kayaba@kayaba-LabPC:~/Desktop$ mkdir anime_collections
kayaba@kayaba-LabPC:~/Desktop$ mv ~/Documents/
mv: missing destination file operand after '/home/kayaba/Documents/'
Try 'mv --help' for more information.
kayaba@kayaba-LabPC:~/Desktop$ mv anime_collections ~/Documents/
kayaba@kayaba-LabPC:~/Desktop$ ls ~/Documents/
50ayx0x
anime_collections
Bash.pdf
E-book
'imgres?imgurl=http:%2F%2Fwww.google.com%2Flogos%2Fdoodles%2F2015%2Fgoogles-new-
logo-5078286822539264.3-hp2x.gif'
'imgres?imgurl=http:%2F%2Fwww.google.com%2Flogos%2Fdoodles%2F2015%2Fgoogles-new-
logo-5078286822539264.3-hp2x.gif.1'
Iris.csv
out.png
wget-log
wget-log.1
kayaba@kayaba-LabPC:~/Desktop$
```

11 cp

Digunakan untuk memindahkan sesuatu

```
kayaba@kayaba-LabPC: ~/Documents
kayaba@kayaba-LabPC:~/Documents$ ls
50ayx0x
anime_collections
Bash.pdf
E-book
'imgres?imgurl=http:%2F%2Fwww.google.com%2Flogos%2Fdoodles%2F2015%2Fgoogles-new-
logo-5078286822539264.3-hp2x.gif'
'imgres?imgurl=http:%2F%2Fwww.google.com%2Flogos%2Fdoodles%2F2015%2Fgoogles-new-
logo-5078286822539264.3-hp2x.gif.1'
Iris.csv
out.png
wget-log
wget-log.1
kayaba@kayaba-LabPC:~/Documents$ cp -r anime_collections ~/Desktop/
kayaba@kayaba-LabPC:~/Documents$
```

12 df (disk free)

Digunakan untuk melihat ruangan tersisa dari partisi yang ter-mount

```
kayaba@kayaba-LabPC:~/Documents$ df
Filesystem                                1K-blocks    Used Available Use% Mounted on
tmpfs                                      801820      2200    799620   1% /run
rpool/ROOT/ubuntu_mb6omt                 211398016  5528192  205869824   3% /
tmpfs                                      4009096    130800    3878296   4% /dev/shm
tmpfs                                      5120         4      5116   1% /run/lock
rpool/USERDATA/kayaba_il134q             211194112  5324288  205869824   3% /home/kayaba
rpool/ROOT/ubuntu_mb6omt/srv             205869952     128  205869824   1% /srv
rpool/ROOT/ubuntu_mb6omt/usr/local       206011776  141952  205869824   1% /usr/local
rpool/ROOT/ubuntu_mb6omt/var/mail        205869952     128  205869824   1% /var/mail
rpool/USERDATA/root_il134q              205929728   59904  205869824   1% /root
rpool/ROOT/ubuntu_mb6omt/var/lib         210197376  4327552  205869824   3% /var/lib
rpool/ROOT/ubuntu_mb6omt/var/log         205945088   75264  205869824   1% /var/log
rpool/ROOT/ubuntu_mb6omt/var/games       205869952     128  205869824   1% /var/games
rpool/ROOT/ubuntu_mb6omt/var/snap        205872512   2688  205869824   1% /var/snap
rpool/ROOT/ubuntu_mb6omt/var/spool       205869952     128  205869824   1% /var/spool
rpool/ROOT/ubuntu_mb6omt/var/www         205869952     128  205869824   1% /var/www
rpool/ROOT/ubuntu_mb6omt/var/lib/AccountsService 205870336     512  205869824   1% /var/lib/AccountsService
rpool/ROOT/ubuntu_mb6omt/var/lib/apt     205987328  117504  205869824   1% /var/lib/apt
rpool/ROOT/ubuntu_mb6omt/var/lib/dpkg    205913984  44160  205869824   1% /var/lib/dpkg
rpool/ROOT/ubuntu_mb6omt/var/lib/NetworkManager 205870080     256  205869824   1% /var/lib/NetworkManager
bpool/BOOT/ubuntu_mb6omt                 1833856   162560   1671296   9% /boot
/dev/sda2                                524252     16284   507968   4% /boot/efi
tmpfs                                      801816      124    801692   1% /run/user/1000
kayaba@kayaba-LabPC:~/Documents$
```

13 top

Ini merupakan perintah melihat aktivitas program yang berjalan

```
top - 21:54:22 up 51 min, 1 user, load average: 0,88, 0,87, 0,97
Tasks: 339 total, 1 running, 338 sleeping, 0 stopped, 0 zombie
%Cpu(s): 2,0 us, 4,0 sy, 0,0 ni, 94,0 id, 0,0 wa, 0,0 hi, 0,0 si, 0,0 st
MiB Mem : 7830,3 total, 2463,8 free, 4423,7 used, 942,8 buff/cache
MiB Swap: 2048,0 total, 2048,0 free, 0,0 used, 2929,0 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM    TIME+  COMMAND
 7661 kayaba    9  -11 3070884 23716 16264 S   6,7   0,3   0:55.53 pulseaudio
 8185 kayaba   20   0 5114428 433012 125236 S   6,7   5,4   7:18.03 gnome-shell
22822 kayaba   20   0 1125,2g 298592 108976 S   6,7   3,7   8:33.52 chrome
   1 root      20   0 168084 10800 5640 S   0,0   0,1   0:02.07 systemd
   2 root      20   0      0      0      0 S   0,0   0,0   0:01.11 kthreadd
   3 root      0 -20      0      0      0 I   0,0   0,0   0:00.00 rcu_gp
   4 root      0 -20      0      0      0 I   0,0   0,0   0:00.00 rcu_par_gp
   5 root      0 -20      0      0      0 I   0,0   0,0   0:00.00 netns
   7 root      0 -20      0      0      0 I   0,0   0,0   0:00.00 kworker/0:0H-events_highpri
   9 root      0 -20      0      0      0 I   0,0   0,0   0:00.00 mm_percpu_wq
  10 root     20   0      0      0      0 S   0,0   0,0   0:00.00 rcu_tasks_rude_
  11 root     20   0      0      0      0 S   0,0   0,0   0:00.00 rcu_tasks_trace
  12 root     20   0      0      0      0 S   0,0   0,0   0:00.15 ksoftirqd/0
  13 root     20   0      0      0      0 I   0,0   0,0   0:02.43 rcu_sched
  14 root     rt    0      0      0      0 S   0,0   0,0   0:00.13 migration/0
  15 root    -51   0      0      0      0 S   0,0   0,0   0:00.00 idle_inject/0
  16 root     20   0      0      0      0 I   0,0   0,0   0:02.73 kworker/0:1-events
  17 root     20   0      0      0      0 S   0,0   0,0   0:00.00 cpuhp/0
  18 root     20   0      0      0      0 S   0,0   0,0   0:00.00 cpuhp/1
  19 root    -51   0      0      0      0 S   0,0   0,0   0:00.00 idle_inject/1
  20 root     rt    0      0      0      0 S   0,0   0,0   0:00.10 migration/1
  21 root     20   0      0      0      0 S   0,0   0,0   0:00.12 ksoftirqd/1
  23 root      0 -20      0      0      0 I   0,0   0,0   0:00.00 kworker/1:0H-events_highpri
  24 root     20   0      0      0      0 S   0,0   0,0   0:00.00 cpuhp/2
  25 root    -51   0      0      0      0 S   0,0   0,0   0:00.00 idle_inject/2
  26 root     rt    0      0      0      0 S   0,0   0,0   0:00.10 migration/2
  27 root     20   0      0      0      0 S   0,0   0,0   0:00.46 ksoftirqd/2
  29 root      0 -20      0      0      0 I   0,0   0,0   0:00.00 kworker/2:0H-events_highpri
  30 root     20   0      0      0      0 S   0,0   0,0   0:00.00 cpuhp/3
  31 root    -51   0      0      0      0 S   0,0   0,0   0:00.00 idle_inject/3
  32 root     rt    0      0      0      0 S   0,0   0,0   0:00.10 migration/3
```

14 free

Digunakan untuk mengetahui berapa Sumber daya RAM (Random Access Memory)

```
kayaba@kayaba-LabPC:~/Documents$ free
              total        used        free      shared  buff/cache   available
Mem:           8018192       4572392       2474616       239848       971184       2951904
Swap:          2097148           0       2097148
```

15 python

Digunakan untuk menjalankan python interpreter

```
kayaba@kayaba-LabPC:~/Documents$ python3
Python 3.10.6 (main, Aug 10 2022, 11:40:04) [GCC 11.3.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

16 version

Digunakan untuk mengetahui sebuah versi dari sesuatu perangkat lunak

```
kayaba@kayaba-LabPC:~/Documents$ python3 -V
Python 3.10.6
kayaba@kayaba-LabPC:~/Documents$
```

17 whereis

Digunakan untuk mengetahui locale sebuah aplikasi

```
kayaba@kayaba-LabPC:~/Documents$ whereis vim
vim: /usr/bin/vim /etc/vim /usr/share/vim /usr/share/man/man1/vim.1.gz
kayaba@kayaba-LabPC:~/Documents$
```

18 which

Digunakan untuk mendapatkan direktori utama yang menyimpan berkas-berkas sesuatu perangkat lunak tersimpan

```
kayaba@kayaba-LabPC:~/Documents$ which g++  
/usr/bin/g++  
kayaba@kayaba-LabPC:~/Documents$
```

19 whatis

Digunakan untuk mendapatkan definisi dari sebuah perangkat lunak

```
kayaba@kayaba-LabPC:~/Documents$ whatis g++  
g++ (1)          - GNU project C and C++ compiler  
kayaba@kayaba-LabPC:~/Documents$
```

20 locate and find

Sama-sama digunakan mencari berkas

21 ping

Digunakan untuk mengetahui alamat ip komputer kita

```
kayaba@kayaba-LabPC:~/Documents$ ping 192.168.18.183  
PING 192.168.18.183 (192.168.18.183) 56(84) bytes of data.  
64 bytes from 192.168.18.183: icmp_seq=1 ttl=64 time=0.021 ms  
64 bytes from 192.168.18.183: icmp_seq=2 ttl=64 time=0.019 ms  
64 bytes from 192.168.18.183: icmp_seq=3 ttl=64 time=0.019 ms  
64 bytes from 192.168.18.183: icmp_seq=4 ttl=64 time=0.019 ms  
64 bytes from 192.168.18.183: icmp_seq=5 ttl=64 time=0.017 ms  
64 bytes from 192.168.18.183: icmp_seq=6 ttl=64 time=0.020 ms  
64 bytes from 192.168.18.183: icmp_seq=7 ttl=64 time=0.018 ms  
64 bytes from 192.168.18.183: icmp_seq=8 ttl=64 time=0.018 ms  
64 bytes from 192.168.18.183: icmp_seq=9 ttl=64 time=0.025 ms  
64 bytes from 192.168.18.183: icmp_seq=10 ttl=64 time=0.028 ms  
64 bytes from 192.168.18.183: icmp_seq=11 ttl=64 time=0.022 ms  
64 bytes from 192.168.18.183: icmp_seq=12 ttl=64 time=0.017 ms  
64 bytes from 192.168.18.183: icmp_seq=13 ttl=64 time=0.019 ms  
64 bytes from 192.168.18.183: icmp_seq=14 ttl=64 time=0.021 ms  
64 bytes from 192.168.18.183: icmp_seq=15 ttl=64 time=0.479 ms  
64 bytes from 192.168.18.183: icmp_seq=16 ttl=64 time=0.158 ms  
64 bytes from 192.168.18.183: icmp_seq=17 ttl=64 time=0.031 ms  
^C
```