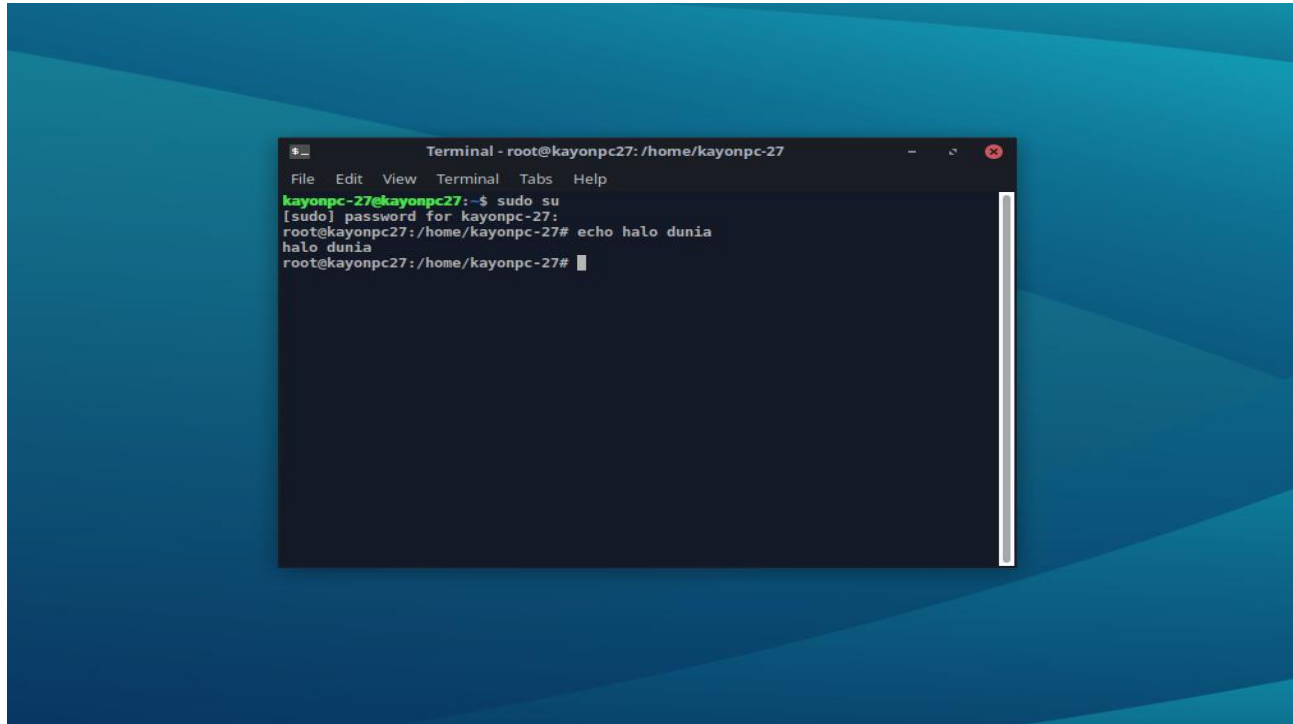


Nama : Hanan Askarim  
Nim : L200180170  
Kelas : D

## PRAKTIKUM MODUL 5



```
root@kayonpc27: /home/kayonpc-27# date
Km Okt 10 07:34:59 WIB 2019
root@kayonpc27: /home/kayonpc-27# hostname
kayonpc27
root@kayonpc27: /home/kayonpc-27# arch
x86_64
root@kayonpc27: /home/kayonpc-27# uname -a
Linux kayonpc27 5.0.0-31-generic #33-18.04.1-Ubuntu SMP Tue Oct 1 10:20:39 UTC 2019 x86_64 x86_64 x86_64 GNU/Linux
root@kayonpc27: /home/kayonpc-27# dmesg | more
[ 0.000000] microcode: microcode updated early to revision 0xccc, date = 2019-04-01
[ 0.000000] Linux version 5.0.0-31-generic (buildde1gw01-amd64-046) (gcc version 7.4.0 (Ubuntu 7.4.0-1ubuntu1-18.04.1)) #33-18.04.1-Ubuntu SMP Tue Oct 1 10:20:39 UTC 2019 (Ubuntu 5.0.0-31.33-18.04.1-generic 5.0.21)
[ 0.000000] Command line: BOOT_IMAGE=/boot/vmlinuz-5.0.0-31-generic root=UUID=393a0316-a0b4-4644-ace8-841a954072f7 ro quiet splash vt.handoff=1
[ 0.000000] KERNEL supported cpus:
[ 0.000000] Intel GenuineIntel
[ 0.000000] AMD AuthenticAMD
[ 0.000000] Hygon HygonGenuine
[ 0.000000] Centaur CentaurHauls
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x001: 'x87 floating point registers'
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x002: 'SSE registers'
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x004: 'AVX registers'
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x008: 'MPX bounds registers'
[ 0.000000] x86/fpu: Supporting XSAVE feature 0x010: 'MPX CSR'
[ 0.000000] x86/fpu: xstate_offset[2]: 576, xstate_sizes[2]: 256
[ 0.000000] x86/fpu: xstate_offset[3]: 832, xstate_sizes[3]: 64
[ 0.000000] x86/fpu: xstate_offset[4]: 896, xstate_sizes[4]: 64
[ 0.000000] x86/fpu: Enabled xstate features 0x1f, context size is 960 bytes, using 'compact' format.
root@kayonpc27: /home/kayonpc-27# uptime
07:36:54 up 15 min, 1 user, load average: 0.00, 0.05, 0.07
root@kayonpc27: /home/kayonpc-27# whoami
root
root@kayonpc27: /home/kayonpc-27# who
kayonpc-27 tty7 2019-10-10 07:22 (:0)
root@kayonpc27: /home/kayonpc-27# id
```

```
mkdir /root/.bin; sudo groups=$(cat /etc/passwd | grep root | cut -d: -f1)
root@kayonpc27:/home/kayonpc-27# last
kayonpc- tty7      :0        Thu Oct 10 07:22   gone - no logout
reboot  system boot 5.0.0-31-generic Thu Oct 10 07:21   still running
reboot  system boot 5.0.0-31-generic Thu Oct 10 07:18 - 07:19   (00:00)
kayonpc- tty7      :0        Wed Oct 9 17:28 - 17:30   (00:02)
reboot  system boot 5.0.0-31-generic Wed Oct 9 17:27 - 17:30   (00:02)
kayonpc- tty7      :0        Wed Oct 9 23:33 - 17:27   (-6:06)
reboot  system boot 5.0.0-31-generic Wed Oct 9 23:33 - 17:27   (-6:05)
reboot  system boot 5.0.0-31-generic Wed Oct 9 15:55 - 08:58   (-6:56)
kayonpc- tty7      :0        Tue Oct 8 14:44 - 17:38   (02:53)
reboot  system boot 5.0.0-31-generic Tue Oct 8 14:43 - 17:38   (02:54)
kayonpc- tty7      :0        Tue Oct 8 14:37 - 14:42   (00:04)
reboot  system boot 5.0.0-31-generic Tue Oct 8 14:37 - 14:42   (00:04)
reboot  system boot 5.0.0-31-generic Tue Oct 8 14:25 - 14:29   (00:04)
reboot  system boot 5.0.0-27-generic Tue Oct 8 19:48 - 14:19   (-5:29)
reboot  system boot 5.0.0-27-generic Mon Oct 7 23:11 - 16:11   (-6:50)
reboot  system boot 5.0.0-27-generic Mon Oct 7 17:38 - 10:39   (-6:50)
reboot  system boot 5.0.0-27-generic Mon Oct 7 17:37 - 17:37   (00:00)
```

```
wtmp begins Sat Oct 5 11:58:54 2019
root@kayonpc27:/home/kayonpc-27# finger
Login      Name      Tty      Idle Login Time   Office      Office Phone
kayonpc-27 kayonPC-27  tty7     16 Oct 10 07:22 (-:0)
root@kayonpc27:/home/kayonpc-27# w
07:37:56 up 16 min, 1 user, load average: 0.14, 0.10, 0.09
USER      TTY      FROM      LOGIN@   IDLE   JCPU   PCPU   WHAT
kayonpc- tty7      :0        07:22    16:12    19.03s  0.05s  /bin/sh /etc/xid
root@kayonpc27:/home/kayonpc-27# top
```

```
top - 07:39:26 up 17 min, 1 user, load average: 0.13, 0.11, 0.09
Tasks: 174 total, 1 running, 124 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.1 us, 0.0 sy, 0.0 ni, 99.9 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
KiB Mem : 8113660 total, 6801524 free, 483300 used, 828836 buff/cache
KiB Swap: 902668 total, 902668 free, 0 used, 7361008 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
2449	root	20	0	51648	4072	3444	R	0.3	0.1	0:00.23	top
1	root	20	0	159876	9092	6692	S	0.0	0.1	0:01.22	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	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
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:+
8	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu_+
9	root	20	0	0	0	0	S	0.0	0.0	0:00.01	ksoftirqd/0
10	root	20	0	0	0	0	I	0.0	0.0	0:00.74	rcu_sched
11	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	migration/0
12	root	-51	0	0	0	0	S	0.0	0.0	0:00.00	idle_injec+
13	root	20	0	0	0	0	I	0.0	0.0	0:01.59	kworker/0:+
14	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/1
16	root	-51	0	0	0	0	S	0.0	0.0	0:00.00	idle_injec+
17	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	migration/1
18	root	20	0	0	0	0	S	0.0	0.0	0:00.00	ksoftirqd/1

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
2449	root	20	0	51648	4072	3444	R	0.3	0.1	0:00.23	top
1	root	20	0	159876	9092	6692	S	0.0	0.1	0:01.22	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	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
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:+
8	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu_+
9	root	20	0	0	0	0	S	0.0	0.0	0:00.01	ksoftirqd/0
10	root	20	0	0	0	0	I	0.0	0.0	0:00.74	rcu_sched
11	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	migration/0
12	root	-51	0	0	0	0	S	0.0	0.0	0:00.00	idle_injec+
13	root	20	0	0	0	0	I	0.0	0.0	0:01.59	kworker/0:+
14	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/1
16	root	-51	0	0	0	0	S	0.0	0.0	0:00.00	idle_injec+
17	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	migration/1
18	root	20	0	0	0	0	S	0.0	0.0	0:00.00	ksoftirqd/1

```
root@kayonpc27:/home/kayonpc-27# echo $SHELL
/bin/bash
root@kayonpc27:/home/kayonpc-27# echo {con,pre} {sent,fer} {s,ed}
con pre sent fer s ed
root@kayonpc27:/home/kayonpc-27# man ls
```

```
Terminal - root@kayonpc27: /home/kayonpc27/
File Edit View Terminal Tabs Help
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 specified.
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
with -l, print the author of each file

-b, --escape
print C-style escapes for nongraphic characters

--block-size=SIZE
scale sizes by SIZE before printing them; e.g., '--block-size=M' prints sizes in units of 1,048,576 bytes; see SIZE format below

-B, --ignore-backups
do not list implied entries ending with ~

-c with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first

-C list entries by columns

--color[=WHEN]
colorize the output; WHEN can be 'always' (default if omitted), 'auto', or 'never'; more info below

-d, --directory
list directories themselves, not their contents

-D, --dired
generate output designed for Emacs' dired mode

-f do not sort, enable -aU, disable -ls --color

-F, --classify
append indicator (one of */=>@|) to entries

--file-type
likewise, except do not append '*'

--format=WORD
Manual page ls(1) line 1/206 24% (press h for help or q to quit)
```

```
Terminal - root@kayonpc27: /home/kayonpc27/
File Edit View Terminal Tabs Help

--hyperlink[=WHEN]
hyperlink file names; WHEN can be 'always' (default if omitted), 'auto', or 'never'

--indicator-style=WORD
append indicator with style WORD to entry names: none (default), slash (-p), file-type (--file-type), classify (-F)

-i, --inode
print the index number of each file

-I, --ignore=PATTERN
do not list implied entries matching shell PATTERN

-k, --kibibytes
default to 1024-byte blocks for disk usage

-l use a long listing format

-L, --dereference
when showing file information for a symbolic link, show information for the file the link references rather than for the link itself

-m fill width with a comma separated list of entries

-n, --numeric-uid-gid
like -l, but list numeric user and group IDs

-N, --literal
print entry names without quoting

-o like -l, but do not list group information

-p, --indicator-style=slash
append / indicator to directories

-q, --hide-control-chars
print ? instead of nongraphic characters

--show-control-chars
show nongraphic characters as-is (the default, unless program is 'ls' and output is a terminal)

-Q, --quote-name
enclose entry names in double quotes

--quoting-style=WORD
use quoting style WORD for entry names: literal, locale, shell, shell-always, shell-escape, shell-escape-always, c, escape

-r, --reverse
reverse order while sorting

-R, --recursive
list subdirectories recursively

-s, --size
print the allocated size of each file, in blocks
Manual page ls(1) line 85/206 63% (press h for help or q to quit)
```

```
Terminal - root@kayonpc27: /home/kayonpc27
File Edit View Terminal Tabs Help
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 specified.
  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
    with -l, print the author of each file
  -b, --escape
    print C-style escapes for nongraphic characters
  --block-size=SIZE
    scale sizes by SIZE before printing them; e.g., '--block-size=M' prints sizes in units of 1,048,576 bytes; see SIZE format below
  -B, --ignore-backups
    do not list implied entries ending with ~
  -c
    with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first
  -C
    list entries by columns
  --color[=WHEN]
    colorize the output; WHEN can be 'always' (default if omitted), 'auto', or 'never'; more info below
  -d, --directory
    list directories themselves, not their contents
  -D, --dired
    generate output designed for Emacs' dired mode
  -f
    do not sort, enable -aU, disable -ls --color
  -F, --classify
    append indicator (one of */=>@|) to entries
  --file-type
    likewise, except do not append '*'
  --format=WORD
Manual page ls(1) line 1/206 24% (press h for help or q to quit)
```

```
Terminal - root@kayonpc27: /home/kayonpc27
File Edit View Terminal Tabs Help
--hyperlink[=WHEN]
  hyperlink file names; WHEN can be 'always' (default if omitted), 'auto', or 'never'
--indicator-style=WORD
  append indicator with style WORD to entry names: none (default), slash (-p), file-type (--file-type), classify (-F)
-i, --inode
  print the index number of each file
-I, --ignore=PATTERN
  do not list implied entries matching shell PATTERN
-k, --kibibytes
  default to 1024-byte blocks for disk usage
-l
  use a long listing format
-L, --dereference
  when showing file information for a symbolic link, show information for the file the link references rather than for the link itself
-m
  fill width with a comma separated list of entries
-n, --numeric-uid-gid
  like -l, but list numeric user and group IDs
-N, --literal
  print entry names without quoting
-o
  like -l, but do not list group information
-p, --indicator-style=slash
  append / indicator to directories
-q, --hide-control-chars
  print ? instead of nongraphic characters
--show-control-chars
  show nongraphic characters as-is (the default, unless program is 'ls' and output is a terminal)
-Q, --quote-name
  enclose entry names in double quotes
--quoting-style=WORD
  use quoting style WORD for entry names: literal, locale, shell, shell-always, shell-escape, shell-escape-always, c, escape
-r, --reverse
  reverse order while sorting
-R, --recursive
  list subdirectories recursively
-s, --size
  print the allocated size of each file, in blocks
Manual page ls(1) line 85/206 63% (press h for help or q to quit)
```

```
Terminal - root@kayonpc27: /home/kayonpc-27

File Edit View Terminal Tabs Help
    assume tab stops at each COLS instead of 8

-u with -lt: sort by, and show, access time; with -l: show access time and sort by name; otherwise: sort by access time, newest first
-U do not sort; list entries in directory order
-v natural sort of (version) numbers within text
-w, --width=COLS
    set output width to COLS. 0 means no limit
-x list entries by lines instead of by columns
-X sort alphabetically by entry extension
-Z, --context
    print any security context of each file
-l list one file per line. Avoid '\n' with -q or -b
--help display this help and exit
--version
    output version information and exit

The SIZE argument is an integer and optional unit (example: 10K is 10*1024). Units are K,M,G,T,P,E,Z,Y (powers of 1024) or KB,MB,... (powers of 1000).

Using color to distinguish file types is disabled both by default and with --color=never. With --color=auto, ls emits color codes only when standard output is connected to a terminal. The
LS_COLORS environment variable can change the settings. Use the dircolors command to set it.

Exit status:
0 if OK,
1 if minor problems (e.g., cannot access subdirectory),
2 if serious trouble (e.g., cannot access command-line argument).

AUTHOR
    Written by Richard M. Stallman and David MacKenzie.

REPORTING BUGS
    GNU coreutils online help: <http://www.gnu.org/software/coreutils/>
    Report ls translation bugs to <http://translationproject.org/team/>

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SEE ALSO
    Full documentation at: <http://www.gnu.org/software/coreutils/ls>
    or available locally via: info '(coreutils) ls invocation'

GNU coreutils 8.28
Manual page ls(1) line 154/206 (END) (press h for help or q to quit) LS(1)

10 Okt, 07:48
```

```
Terminal - root@kayonpc27: /home/kayonpc-27

File Edit View Terminal Tabs Help
WHO(1) User Commands WHO(1)

NAME
    who - show who is logged on

SYNOPSIS
    who [OPTION]... [ FILE | ARG1 ARG2 ]

DESCRIPTION
    Print information about users who are currently logged in.

-a, --all
    same as -b -d --login -p -r -t -T -u

-b, --boot
    time of last system boot

-d, --dead
    print dead processes

-H, --heading
    print line of column headings

--ips print ips instead of hostnames. with --lookup, canonicalizes based on stored IP, if available, rather than stored hostname

-l, --login
    print system login processes

--lookup
    attempt to canonicalize hostnames via DNS

-m only hostname and user associated with stdin

-p, --process
    print active processes spawned by init

-q, --count
    all login names and number of users logged on

-r, --runlevel
    print current runlevel

-s, --short
    print only name, line, and time (default)

-t, --time
    print last system clock change

-T, -w, --msg
    add user's message status as +, - or ?

-u, --users
    list users logged in

Manual page who(1) line 1/83 56% (press h for help or q to quit)

10 Okt, 07:50
```

```
#=
Terminal - root@kayonpc27: /home/kayonpc27

File Edit View Terminal Tabs Help

-m only hostname and user associated with stdin
-p, --process
    print active processes spawned by init
-q, --count
    all login names and number of users logged on
-r, --runlevel
    print current runlevel
-s, --short
    print only name, line, and time (default)
-t, --time
    print last system clock change
-T, -w, --msg
    add user's message status as +, - or ?
-u, --users
    list users logged in
--message
    same as -T
--writable
    same as -T
--help
    display this help and exit
--version
    output version information and exit

If FILE is not specified, use /var/run/utmp. /var/log/wtmp as FILE is common. If ARG1 ARG2 given, -m presumed: 'am i' or 'mom likes' are usual.

AUTHOR
    Written by Joseph Arceneaux, David MacKenzie, and Michael Stone.

REPORTING BUGS
    GNU coreutils online help: <http://www.gnu.org/software/coreutils/>
    Report translation bugs to <http://translationproject.org/team/>

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SEE ALSO
    Full documentation at: <http://www.gnu.org/software/coreutils/who>
    or available locally via: info '(coreutils) who invocation'

GNU coreutils 8.28
Manual page who(1) line 31/83 (END) (press h for help or q to quit)
January 2018
WHO(1
```

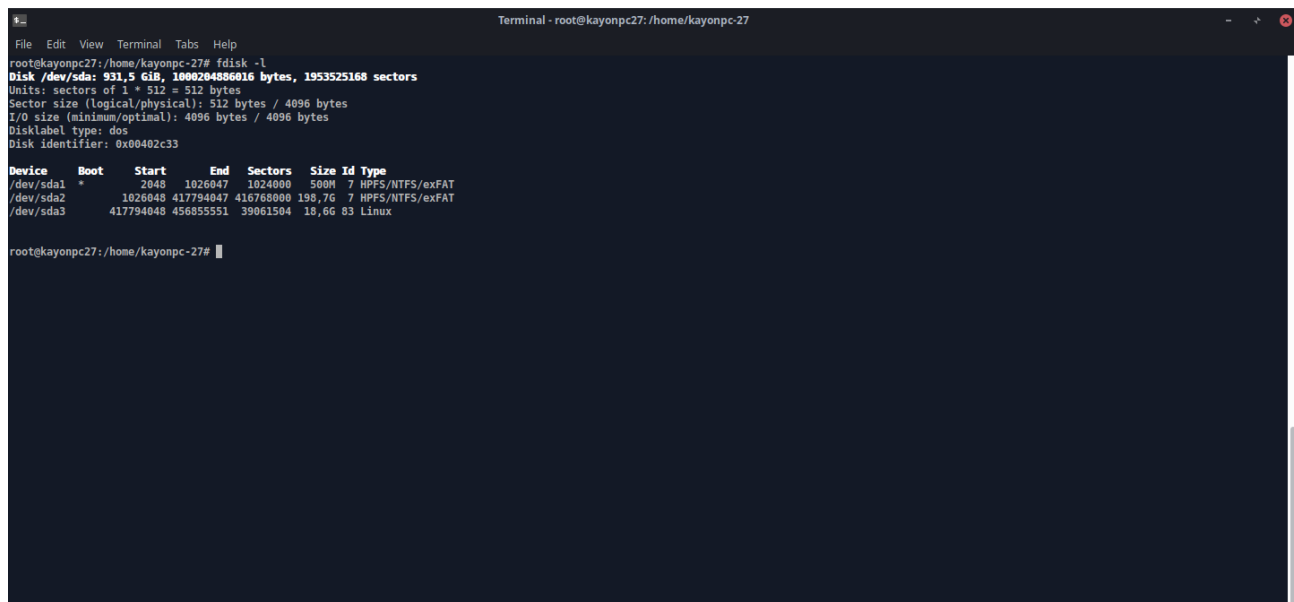
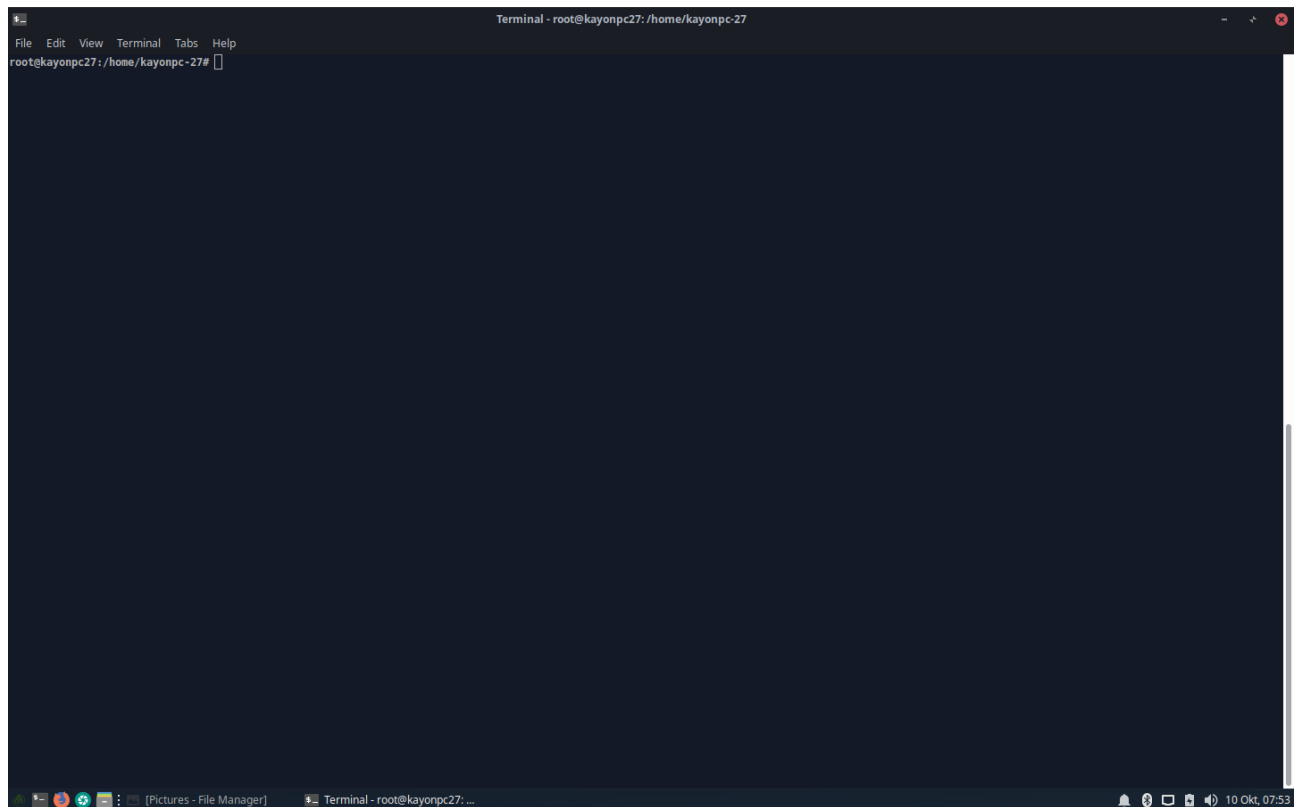
```
#=
Terminal - root@kayonpc27: /home/kayonpc27

File Edit View Terminal Tabs Help

top - 07:39:26 up 17 min, 1 user, load average: 0.13, 0.11, 0.09
Tasks: 174 total, 1 running, 124 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.1 us, 0.0 sy, 0.0 ni, 99.9 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
KiB Mem : 8113668 total, 6801524 free, 483300 used, 828836 buff/cache
KiB Swap: 902668 total, 902668 free, 0 used, 7361008 avail Mem

  PID USER      PR  NI   VIRT   RES   SHR  S  %CPU  %MEM     TIME+ COMMAND
 2449 root        20   0 51648 4072 3444  R   0.3   0.1   0:00.23 top
    1 root        20   0 159876 9092 6692  S   0.0   0.1   0:01.22 systemd
    2 root        20   0   0   0   0  S   0.0   0.0   0:00.00 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
    6 root        0 -20   0   0   0  I   0.0   0.0   0:00.00 kworker/0:++
    8 root        0 -20   0   0   0  I   0.0   0.0   0:00.00 mm_percpu_+
    9 root        20   0   0   0   0  S   0.0   0.0   0:00.01 ksoftirqd/0
   10 root        20   0   0   0   0  I   0.0   0.0   0:00.74 rcu_sched
   11 root        rt    0   0   0   0  S   0.0   0.0   0:00.00 migration/0
   12 root       -51   0   0   0   0  S   0.0   0.0   0:00.00 idle_injec+
   13 root        20   0   0   0   0  I   0.0   0.0   0:01.59 kworker/0:++
   14 root        20   0   0   0   0  S   0.0   0.0   0:00.00 cpuhp/0
   15 root        20   0   0   0   0  S   0.0   0.0   0:00.00 cpuhp/1
   16 root       -51   0   0   0   0  S   0.0   0.0   0:00.00 idle_injec+
   17 root        rt    0   0   0   0  S   0.0   0.0   0:00.00 migration/1
   18 root        20   0   0   0   0  S   0.0   0.0   0:00.00 ksoftirqd/1
root@kayonpc27:/home/kayonpc-27# echo $$SHELL
/bin/bash
root@kayonpc27:/home/kayonpc-27# echo {con,pre} {sent,fer} {s,ed}
con pre sent fer s ed
root@kayonpc27:/home/kayonpc-27# man ls
root@kayonpc27:/home/kayonpc-27# man who
root@kayonpc27:/home/kayonpc-27# who can tell me about linux
who: extra operand 'me'
Try 'who --help' for more information.
root@kayonpc27:/home/kayonpc-27# last
kayonpc- tty7          :0               Thu Oct 10 07:22   gone - no logout
reboot system boot  5.0.0-31-generic Thu Oct 10 07:21   still running
reboot system boot  5.0.0-31-generic Thu Oct 10 07:18 - 07:19 (00:00)
kayonpc- tty7          :0               Wed Oct 9 17:28 - 17:30 (00:02)
reboot system boot  5.0.0-31-generic Wed Oct 9 17:27 - 17:30 (00:02)
kayonpc- tty7          :0               Wed Oct 9 23:33 - 17:27 (-6:06)
reboot system boot  5.0.0-31-generic Wed Oct 9 23:33 - 17:27 (-6:05)
reboot system boot  5.0.0-31-generic Wed Oct 9 15:55 - 00:58 (-6:56)
kayonpc- tty7          :0               Tue Oct 8 14:44 - 17:38 (02:53)
reboot system boot  5.0.0-31-generic Tue Oct 8 14:43 - 17:38 (02:54)
kayonpc- tty7          :0               Tue Oct 8 14:37 - 14:42 (00:04)
reboot system boot  5.0.0-31-generic Tue Oct 8 14:37 - 14:42 (00:04)
reboot system boot  5.0.0-31-generic Tue Oct 8 14:25 - 14:29 (00:04)
reboot system boot  5.0.0-27-generic Tue Oct 8 19:48 - 14:19 (-5:29)
reboot system boot  5.0.0-27-generic Mon Oct 7 23:11 - 16:11 (-6:59)
reboot system boot  5.0.0-27-generic Mon Oct 7 17:38 - 10:39 (-6:58)
reboot system boot  5.0.0-27-generic Mon Oct 7 17:37 - 17:37 (00:00)

utmp begins Sat Oct 5 11:58:54 2019
root@kayonpc27:/home/kayonpc-27#
```



```
/dev/sda2          1020048 417794047 410700000 190,70  7 ntfs/ntfs-exfat
/dev/sda3          417794048 456855551 39061504  18,6G 83 Linux
```

```
root@kayonpc27:/home/kayonpc-27# users
kayonpc-27
root@kayonpc27:/home/kayonpc-27#
```

```
root@kayonpc27:/home/kayonpc-27# cat /etc/fstab
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# <file system> <mount point> <type> <options>          <dump> <pass>
# / was on /dev/sda3 during installation
UUID=393a0316-a0b4-4644-ace8-841a954072f7 /          ext4    errors=remount-ro 0      1
/swapfile                                 none    swap    sw      0      0
root@kayonpc27:/home/kayonpc-27#
```

```
root@kayonpc27:/home/kayonpc-27# cal 2000
      2000
   Januari      Februari      Maret
Mi Se Sa Ra Ka Ju Sa  Mi Se Sa Ra Ka Ju Sa  Mi Se Sa Ra Ka Ju Sa
      1          1 2 3 4 5          1 2 3 4
 2 3 4 5 6 7 8    6 7 8 9 10 11 12  5 6 7 8 9 10 11
 9 10 11 12 13 14 15 13 14 15 16 17 18 19 12 13 14 15 16 17 18
16 17 18 19 20 21 22 20 21 22 23 24 25 26 19 20 21 22 23 24 25
23 24 25 26 27 28 29 27 28 29          26 27 28 29 30 31
30 31

   April      Mei      Juni
Mi Se Sa Ra Ka Ju Sa  Mi Se Sa Ra Ka Ju Sa  Mi Se Sa Ra Ka Ju Sa
      1          1 2 3 4 5 6          1 2 3
 2 3 4 5 6 7 8    7 8 9 10 11 12 13  4 5 6 7 8 9 10
 9 10 11 12 13 14 15 14 15 16 17 18 19 20 11 12 13 14 15 16 17
16 17 18 19 20 21 22 21 22 23 24 25 26 27 18 19 20 21 22 23 24
23 24 25 26 27 28 29 28 29 30 31      25 26 27 28 29 30
30

   Juli      Agustus      September
Mi Se Sa Ra Ka Ju Sa  Mi Se Sa Ra Ka Ju Sa  Mi Se Sa Ra Ka Ju Sa
      1          1 2 3 4 5          1 2
 2 3 4 5 6 7 8    6 7 8 9 10 11 12  3 4 5 6 7 8 9
 9 10 11 12 13 14 15 13 14 15 16 17 18 19 10 11 12 13 14 15 16
16 17 18 19 20 21 22 20 21 22 23 24 25 26 17 18 19 20 21 22 23
23 24 25 26 27 28 29 27 28 29 30 31      24 25 26 27 28 29 30
30 31

   Oktober      November      Desember
Mi Se Sa Ra Ka Ju Sa  Mi Se Sa Ra Ka Ju Sa  Mi Se Sa Ra Ka Ju Sa
 1 2 3 4 5 6 7        1 2 3 4          1 2
 8 9 10 11 12 13 14  5 6 7 8 9 10 11  3 4 5 6 7 8 9
15 16 17 18 19 20 21 12 13 14 15 16 17 18 10 11 12 13 14 15 16
22 23 24 25 26 27 28 19 20 21 22 23 24 25 17 18 19 20 21 22 23
29 30 31          26 27 28 29 30      24 25 26 27 28 29 30
31

root@kayonpc27:/home/kayonpc-27#
```

```
root@kayonpc27:/home/kayonpc-27# cal 9 1752
      September 1752
Mi Se Sa Ra Ka Ju Sa
      1 2 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
```

```
root@kayonpc27:/home/kayonpc-27#
```



```
root@kayonpc27:/home/kayonpc-27# cal 10 2007
      Oktober 2007
Mo      1  2  3  4  5  6
Tu      7  8  9 10 11 12 13
We     14 15 16 17 18 19 20
Th     21 22 23 24 25 26 27
Fr     28 29 30 31

root@kayonpc27:/home/kayonpc-27#
```

```
root@kayonpc27: /home/kayonpc-27# bc -l
bc: invalid option -- 'l'
usage: bc [options] [file ...]
-h --help          print this usage and exit
-i --interactive   force interactive mode
-l --mathlib       use the predefined math routines
-q --quiet         don't print initial banner
-s --standard      non-standard bc constructs are errors
-w --warn          warn about non-standard bc constructs
-v --version       print version information and exit
root@kayonpc27: /home/kayonpc-27#
```

A screenshot of a terminal window with a dark background. The title bar at the top reads "Terminal - root@kayonpc27: /home/kayonpc-27". The menu bar includes "File", "Edit", "View", "Terminal", "Tabs", and "Help". The terminal content consists of 30 lines, each starting with the word "please" followed by a cursor. The window is part of a desktop environment with other icons visible in the taskbar at the bottom.

```
root@kayonpc27:/home/kayonpc-27# pwd
/home/kayonpc-27
root@kayonpc27:/home/kayonpc-27#
```

```
Terminal - root@kayonpc27: /home/kayonpc-27
File Edit View Terminal Tabs Help
1085 lspci
1086 free
1087 cat /proc/cpuinfo
1088 finger root
1089 ls
1090 ls -l
1091 ls -l/home
1092 whakls mkdir
1093 whatis mkdir
1094 mkdir informatika
1095 rmdir informatika
1096 touch rpl.txt
1097 touch rpl.txt
1098 rm rpl.txt
1099 which mkdir
1100 whereis ls
1101 df
1102 du
1103 free
1104 pstree
1105 exit
1106 echo halo dunia
1107 date
1108 hostname
1109 arch
1110 uname -a
1111 dmesg | more
1112 uptime
1113 whoami
1114 who
1115 id
1116 last
1117 finger
1118 w
1119 top
1120 echo $SHELL
1121 echo {con,pre} {sent,fer} {s,ed}
1122 man ls
1123 man who
1124 who can tell me abaaout linux
1125 last
1126 clear
1127 fdisk -l
1128 users
1129 cat /etc/fstab
1130 cal 2000
1131 cal 9 1752
1132 cal 10 2007
1133 bc -l
1134 echo 5+4 | bc -l
1135 yes please
1136 pwd
1137 history
root@kayonpc27: /home/kayonpc-27#
```

```
root@kayonpc27:/home/kayonpc-27# tail -f /var/log/message
tail: cannot open '/var/log/message' for reading: No such file or directory
tail: no files remaining
root@kayonpc27:/home/kayonpc-27#
```

```
File Edit View Terminal Tabs Help
snd_seq_midi_event 16384 1 snd_seq_midi
snd_rawmidi 36864 1 snd_seq_midi
snd_hda_codec 135168 4 snd_hda_codec_generic,snd_hda_codec_hdmi,snd_hda_intel,snd_hda_codec_realtek
snd_seq 69632 2 snd_seq_midi,snd_seq_midi_event
snd_hda_core 86616 5 snd_hda_codec_generic,snd_hda_codec_hdmi,snd_hda_intel,snd_hda_codec,snd_hda_codec_realtek
snd_hwdep 20480 1 snd_hda_codec
mei_me 40960 0
snd_pcm 102400 4 snd_hda_codec_hdmi,snd_hda_intel,snd_hda_codec,snd_hda_core
mei 106496 1 mei_me
snd_seq_device 16384 3 snd_seq,snd_seq_midi,snd_rawmidi
snd_timer 36864 2 snd_seq,snd_pcm
soundcore 86616 15 snd_hda_codec_generic,snd_seq,snd_seq_device,snd_hda_codec_hdmi,snd_hwdep,snd_hda_intel,snd_hda_codec,snd_hda_codec_realtek,snd_timer,snd_pcm,snd_rawmidi
rcpi_pad 184320 1 snd
vml_bmf 16384 0
mac_hid 16384 0
sch_fq_codel 20480 6
parport_pc 36864 0
ppdev 24576 0
lp 20480 0
parport 53248 3 parport_pc,lp,ppdev
ip_tables 32768 0
x_tables 40960 1 ip_tables
autofs4 45056 2
btrfs 117552 0
xor 24576 1 btrfs
zstd_compress 163840 1 btrfs
raid6_pq 114688 1 btrfs
libcrc32c 16384 1 btrfs
dm_mirror 24576 0
dm_region_hash 20480 1 dm_mirror
dm_log 20480 2 dm_region_hash,dm_mirror
rtsx_usb_sdmmc 28672 0
rtsx_usb 24576 2 rtsx_usb_sdmmc,rtsx_usb_ms
hid_generic 16384 0
usbhid 53248 0
hid 126976 2 usbhid,hid_generic
nouveau 1871872 3
mxm_wmi 16384 1 nouveau
i2c_algo_bit 16384 1 nouveau
ttm 102400 1 nouveau
drm_kms_helper 180224 1 nouveau
syscopyarea 16384 1 drm_kms_helper
sysfillrect 16384 1 drm_kms_helper
sysimgblt 16384 1 drm_kms_helper
fb_sys_fops 16384 1 drm_kms_helper
drm 483328 6 drm_kms_helper,ttm,nouveau
r8169 86616 0
ahci 40960 1
realtek 20480 0
libahci 32768 1 ahci
wmi 28672 3 wmi_bmf,mxm_wmi,nouveau
video 49152 1 nouveau
root@kayonpc27:/home/kayonpc-27#
```

```
File Edit View Terminal Tabs Help
kayonpc# 1460 0.0 0.4 521120 38856 ? Ssl 07:22 0:02 xfdesktop
kayonpc# 1464 0.0 0.2 293656 18440 ? Ssl 07:22 0:00 xfsettingsd
kayonpc# 1469 0.0 0.4 598300 34996 ? Ssl 07:22 0:00 update-notifier
kayonpc# 1470 0.0 0.3 379664 30632 ? Ssl 07:22 0:00 xfce4-power-manager
kayonpc# 1472 0.0 0.1 367768 8764 ? Ssl 07:22 0:00 /usr/lib/at-spi2-core/at-spi-bus-launcher
kayonpc# 1475 0.0 0.0 292420 6924 ? Ssl 07:22 0:00 /usr/lib/gvfs/gvfsd
kayonpc# 1480 0.0 0.0 432820 7928 ? Ssl 07:22 0:00 /usr/lib/gvfs/gvfsd-fuse /run/user/1080/gvfs -f -o big_writes
kayonpc# 1486 0.0 0.3 351836 30400 ? Ssl 07:22 0:00 /usr/lib/policykit-1-gnome/polkit-gnome-authentication-agent-1
kayonpc# 1492 0.0 0.0 49920 4220 ? S 07:22 0:00 /usr/bin/dbus-daemon --config-file=/usr/share/defaults/at-spi2/accessibility.conf --nofork --print-address 3
kayonpc# 1495 0.0 0.0 220704 6916 ? Ssl 07:22 0:00 /usr/lib/at-spi2-core/at-spi2-registryd --use-gnome-session
kayonpc# 1508 0.0 0.7 692072 62188 ? Ssl 07:22 0:00 /usr/bin/python3 /usr/bin/blueman-applet
kayonpc# 1509 0.0 0.4 262036 32796 ? Ssl 07:22 0:00 /usr/bin/python3 /usr/share/system-config-printer/applet.py
kayonpc# 1510 0.0 0.3 423400 29916 ? Ssl 07:22 0:00 light-locker
kayonpc# 1513 0.0 0.3 669176 42772 ? Ssl 07:22 0:01 nm-applet
kayonpc# 1518 0.0 0.0 187772 5032 ? Ssl 07:22 0:00 /usr/lib/dconf/dconf-service
kayonpc# 1526 0.0 0.2 427628 17752 ? Ssl 07:22 0:00 /usr/lib/x86_64-linux-gnu/xfce4/notifyd/xfce4-notifyd
root 1529 0.0 0.1 322844 8580 ? Ssl 07:22 0:00 /usr/lib/upower/upowerd
kayonpc# 1543 0.0 0.1 574796 11180 ? Ssl 07:22 0:00 /usr/bin/pulseaudio --start --log-target=syslog
rtkit 1547 0.0 0.0 183500 2952 ? Ssl 07:22 0:00 /usr/lib/rtkit/rtkit-daemon
kayonpc# 1559 0.0 0.5 840604 42756 ? Ssl 07:22 0:02 /usr/lib/x86_64-linux-gnu/xfce4/panel/wrapper-2.0 /usr/lib/x86_64-linux-gnu/xfce4/panel/plugins/libwhiskermenu.so 1 8388646 whiskermenu Wh
kayonpc# 1567 0.0 0.1 183908 15580 ? S 07:22 0:00 /usr/lib/x86_64-linux-gnu/xfce4/panel/wrapper-1.0 /usr/lib/x86_64-linux-gnu/xfce4/panel/plugins/libsysstray.so 4 8388653 sysstray Notificati
kayonpc# 1568 0.0 0.4 416660 35956 ? Ssl 07:22 0:00 /usr/lib/x86_64-linux-gnu/xfce4/panel/wrapper-2.0 /usr/lib/x86_64-linux-gnu/xfce4/panel/plugins/libnotification-plugin.so 5 8388654 notifi
kayonpc# 1569 0.0 0.4 492896 34852 ? Ssl 07:22 0:00 /usr/lib/x86_64-linux-gnu/xfce4/panel/wrapper-2.0 /usr/lib/x86_64-linux-gnu/xfce4/panel/plugins/libindicator-plugin.so 6 8388655 indicator
kayonpc# 1570 0.0 0.4 570524 36960 ? Ssl 07:22 0:00 /usr/lib/x86_64-linux-gnu/xfce4/panel/wrapper-2.0 /usr/lib/x86_64-linux-gnu/xfce4/panel/plugins/libstatusnotifier.so 7 8388656 statusnotif
kayonpc# 1571 0.0 0.4 418868 37816 ? Ssl 07:22 0:00 /usr/lib/x86_64-linux-gnu/xfce4/panel/wrapper-2.0 /usr/lib/x86_64-linux-gnu/xfce4/panel/plugins/libxfce4powermanager.so 8 8388657 power-ma
kayonpc# 1572 0.1 0.4 712804 39020 ? Ssl 07:22 0:03 /usr/lib/x86_64-linux-gnu/xfce4/panel/wrapper-2.0 /usr/lib/x86_64-linux-gnu/xfce4/panel/plugins/libpulseaudio-plugin.so 9 8388658 pulseaud
kayonpc# 1594 0.0 0.1 391932 9932 ? Ssl 07:22 0:00 /usr/lib/x86_64-linux-gnu/indicator-messages/indicator-messages-service
kayonpc# 1600 0.0 0.1 320652 10648 ? Ssl 07:22 0:00 /usr/lib/gvfs/gvfs-udisks2-volume-monitor
kayonpc# 1604 0.0 0.0 379280 7748 ? Ssl 07:22 0:00 /usr/lib/gvfs/gvfs-afc-volume-monitor
kayonpc# 1611 0.0 0.0 289264 6672 ? Ssl 07:22 0:00 /usr/lib/gvfs/gvfs-gphoto2-volume-monitor
kayonpc# 1615 0.0 0.0 276340 4940 ? Ssl 07:22 0:00 /usr/lib/gvfs/gvfs-mtp-volume-monitor
kayonpc# 1620 0.0 0.0 274812 5736 ? Ssl 07:22 0:00 /usr/lib/gvfs/gvfs-gea-volume-monitor
kayonpc# 1629 0.0 0.1 384352 9668 ? Ssl 07:22 0:00 /usr/lib/gvfs/gvfsd-trash --spawner :1.14 /org/gtk/gvfs/exec_spaw/0
kayonpc# 1638 0.0 0.0 82724 6960 ? Ss 07:22 0:00 /usr/lib/bluetooth/obexd
root 1645 0.0 0.0 0 0 ? Sc 07:22 0:00 [krfcomm]
root 1677 0.0 0.1 382896 14240 ? Ssl 07:22 0:00 /usr/lib/packagekit/packagekitd
kayonpc# 2210 2.3 0.5 600948 48540 ? Ssl 07:24 1:03 /usr/bin/xfce4-terminal
kayonpc# 2214 0.0 0.0 30248 5164 pts/0 Ss 07:24 0:00 bash
root 2223 0.0 0.0 73424 4376 pts/0 S 07:25 0:00 sudo su
root 2237 0.0 0.0 72712 3964 pts/0 S 07:26 0:00 su
root 2238 0.0 0.0 30220 5100 pts/0 S 07:26 0:00 bash
root 2301 0.0 0.1 108148 8164 ? Ss 07:26 0:00 /usr/sbin/cupsd -l
root 2302 0.0 0.1 303520 10776 ? Ssl 07:26 0:00 /usr/sbin/cups-browsed
kayonpc# 2386 0.0 0.0 204836 4864 ? Ssl 07:29 0:00 /usr/lib/gvfs/gvfsd-metadata
kayonpc# 2469 0.0 0.2 457208 22840 ? SSl 07:41 0:00 /usr/lib/x86_64-linux-gnu/tumbler-1/tumblerd
root 2578 0.0 0.0 0 0 ? I 07:50 0:00 [kworker/u8:3-ew]
root 2640 0.3 0.0 0 0 ? I 07:56 0:02 [kworker/u8:0-ew]
root 2688 2.2 0.0 0 0 ? I 08:02 0:10 [kworker/u8:1-ew]
root 2717 2.9 0.0 0 0 ? I 08:05 0:08 [kworker/u8:2-ew]
root 2718 3.1 0.0 0 0 ? I 08:05 0:09 [kworker/u8:4-ew]
root 2745 0.0 0.0 0 0 ? I 08:07 0:00 [kworker/3:0]
root 2768 0.0 0.0 0 0 ? I 08:09 0:00 [kworker/2:0]
root 2770 0.0 0.0 47236 3628 pts/0 R+ 08:10 0:00 ps -aux
root@kayonpc27:/home/kayonpc-27#
```

```
root@kayonpc27:/home/kayonpc-27# lspci
00:00.0 Host bridge: Intel Corporation Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Host Bridge/DRAM Registers (rev 07)
00:01.0 PCI bridge: Intel Corporation Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor PCIe Controller (x16) (rev 07)
00:14.0 USB controller: Intel Corporation 100 Series/C230 Series Chipset Family USB 3.0 xHCI Controller (rev 31)
00:16.0 Communication controller: Intel Corporation 100 Series/C230 Series Chipset Family MEI Controller #1 (rev 31)
00:17.0 SATA controller: Intel Corporation Q170/Q150/B150/H170/H110/Z170/CM236 Chipset SATA Controller [AHCI Mode] (rev 31)
00:1c.0 PCI bridge: Intel Corporation 100 Series/C230 Series Chipset Family PCI Express Root Port #6 (rev f1)
00:1d.0 PCI bridge: Intel Corporation 100 Series/C230 Series Chipset Family PCI Express Root Port #9 (rev f1)
00:1f.0 ISA bridge: Intel Corporation H110 Chipset LPC/eSPI Controller (rev 31)
00:1f.2 Memory controller: Intel Corporation 100 Series/C230 Series Chipset Family Power Management Controller (rev 31)
00:1f.3 Audio device: Intel Corporation 100 Series/C230 Series Chipset Family HD Audio Controller (rev 31)
00:1f.4 SMBus: Intel Corporation 100 Series/C230 Series Chipset Family SMBus (rev 31)
01:00.0 VGA compatible controller: NVIDIA Corporation GK208B [GeForce GT 720] (rev a1)
01:00.1 Audio device: NVIDIA Corporation GK208 HDMI/DP Audio Controller (rev a1)
02:00.0 Ethernet controller: Realtek Semiconductor Co., Ltd. RTL8111/8168/8411 PCI Express Gigabit Ethernet Controller (rev 0c)
03:00.0 Network controller: Intel Corporation Dual Band Wireless-AC 3165 Plus Bluetooth (rev 79)
root@kayonpc27:/home/kayonpc-27#
```

```
root@kayonpc27:/home/kayonpc-27# free
              total        used        free      shared  buff/cache   available
Mem:           8113660      497848      6776436         4016       839376      7346036
Swap:          902668           0       902668
root@kayonpc27:/home/kayonpc-27#
```

```
Terminal - root@kayonpc27:/home/kayonpc-27
File Edit View Terminal Tabs Help
cpu MHz          : 900.066
cache size       : 6144 KB
physical id      : 0
siblings         : 4
core id          : 2
cpu cores        : 4
apicid           : 4
initial apicid   : 4
fpu              : yes
fpu_exception    : yes
cpuid level      : 22
wp               : yes
flags             : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs b
ts rep_good nopl xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq pni pclmulqdq dtes64 monitor ds_cpl vmx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_ti
mer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb invpcid_single pti ssbd ibrs ibpb stibp tpr_shadow vmml flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms i
nvpcid mpx rdtseed adx smap clflushopt intel_pt xsaveopt xsavec xgetbv1 xsaves dtherm ida arat pln pts hwp hwp_notify hwp_act_window hwp_epp md_clear flush_lid
bugs              : cpu_meltdown spectre_v1 spectre_v2 spec_store_bypass l1tf mds swapgs
bogomips         : 5424.00
clflush size     : 64
cache alignment  : 64
address sizes    : 39 bits physical, 48 bits virtual
power management:

processor         : 3
vendor_id        : GenuineIntel
cpu family       : 6
model            : 94
model name       : Intel(R) Core(TM) i5-6400 CPU @ 2.70GHz
stepping         : 3
microcode        : 0xcc
cpu MHz          : 900.007
cache size       : 6144 KB
physical id      : 0
siblings         : 4
core id          : 3
cpu cores        : 4
apicid           : 6
initial apicid   : 6
fpu              : yes
fpu_exception    : yes
cpuid level      : 22
wp               : yes
flags             : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs b
ts rep_good nopl xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq pni pclmulqdq dtes64 monitor ds_cpl vmx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_ti
mer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb invpcid_single pti ssbd ibrs ibpb stibp tpr_shadow vmml flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms i
nvpcid mpx rdtseed adx smap clflushopt intel_pt xsaveopt xsavec xgetbv1 xsaves dtherm ida arat pln pts hwp hwp_notify hwp_act_window hwp_epp md_clear flush_lid
bugs              : cpu_meltdown spectre_v1 spectre_v2 spec_store_bypass l1tf mds swapgs
bogomips         : 5424.00
clflush size     : 64
cache alignment  : 64
address sizes    : 39 bits physical, 48 bits virtual
power management:

root@kayonpc27:/home/kayonpc-27#
```

```
root@kayonpc27:/home/kayonpc-27# finger root
Login: root
Directory: /root
Shell: /bin/bash
Never logged in.
No mail.
No Plan.
root@kayonpc27:/home/kayonpc-27#
```

```
Terminal - root@kayonpc26: /home/kayon-pc26/Desktop

File Edit View Terminal Tabs Help

root@kayonpc26: /home/kayon-pc26/Desktop# ls
root@kayonpc26: /home/kayon-pc26/Desktop# ls -l
total 0
root@kayonpc26: /home/kayon-pc26/Desktop# ls -l/home
ls: invalid option -- '/'
Try 'ls --help' for more information.
root@kayonpc26: /home/kayon-pc26/Desktop# whatis ls
ls (1) - list directory contents
root@kayonpc26: /home/kayon-pc26/Desktop# whatis mkdir
mkdir (1) - make directories
mkdir (2) - create a directory
root@kayonpc26: /home/kayon-pc26/Desktop# mkdir informatika
root@kayonpc26: /home/kayon-pc26/Desktop# rmdir informatika
root@kayonpc26: /home/kayon-pc26/Desktop# touch rpl.txt
root@kayonpc26: /home/kayon-pc26/Desktop# rm rpl.txt
root@kayonpc26: /home/kayon-pc26/Desktop# which mkdir
/bin/mkdir
root@kayonpc26: /home/kayon-pc26/Desktop# whereis ls
ls: /bin/ls /usr/share/man/man1/ls.1.gz
root@kayonpc26: /home/kayon-pc26/Desktop# df
Filesystem      1K-blocks    Used Available Use% Mounted on
udev             1927520         0   1927520   0% /dev
tmpfs             392800     1524    391276   1% /run
/dev/sda8        30106212 14050588 14503256  56% /
tmpfs            1963996     3036    1933612   2% /dev/shm
tmpfs             5120         4      5116   1% /run/lock
tmpfs            1963996         0   1963996   0% /sys/fs/cgroup
/dev/sda1        262144    85440   176704  33% /boot/efi
tmpfs            392796      24    392772   1% /run/user/1000
root@kayonpc26: /home/kayon-pc26/Desktop# du
4
root@kayonpc26: /home/kayon-pc26/Desktop# free
              total        used        free      shared  buff/cache   available
Mem:           3927992      945096      1676152         17836       1306744       2465196
Swap:          1425428           0       1425428

root@kayonpc26: /home/kayon-pc26/Desktop# pstree
systemd -- NetworkManager -- dhclient
        |   |
        |   +-- 3*[NetworkManager]
        |
        +-- Thunar -- 2*[Thunar]
            |
            +-- accounts-daemon -- 2*[accounts-daemon]
                |
                +-- acpid
                    |
                    +-- avahi-daemon -- avahi-daemon
                        |
                        +-- bluetoothd
                            |
                            +-- cron
                                |
                                +-- cups-browsed -- 2*[cups-browsed]
                                    |
                                    +-- cupsd
```

```
Terminal - root@kayonpc26: /home/kayon-pc26/Desktop

File Edit View Terminal Tabs Help

gvfs-udisks2-vo -- 2*[{gvfs-udisks2-vo}]
gvfsd -- gvfsd-dnssd -- 2*[{gvfsd-dnssd}]
        |
        +-- gvfsd-network -- 3*[{gvfsd-network}]
            |
            +-- gvfsd-smb-brows -- 3*[{gvfsd-smb-brows}]
                |
                +-- gvfsd-trash -- 2*[{gvfsd-trash}]
                    |
                    +-- 2*[{gvfsd}]
                        |
                        +-- gvfsd-fuse -- 5*[{gvfsd-fuse}]
                            |
                            +-- gvfsd-metadata -- 2*[{gvfsd-metadata}]
                                |
                                +-- indicator-messa -- 3*[{indicator-messa}]
                                    |
                                    +-- obexd
                                        |
                                        +-- tumblerd -- 4*[{tumblerd}]
                                            |
                                            +-- xfce4-notifyd -- 2*[{xfce4-notifyd}]
                                                |
                                                +-- xfconfd
                                                    |
                                                    +-- systemd-journal
                                                        |
                                                        +-- systemd-logind
                                                            |
                                                            +-- systemd-resolve
                                                                |
                                                                +-- systemd-timesyn -- {systemd-timesyn}
                                                                    |
                                                                    +-- systemd-udev
                                                                        |
                                                                        +-- thermald -- {thermald}
                                                                            |
                                                                            +-- udisksd -- 4*[{udisksd}]
                                                                                |
                                                                                +-- unattended-upgr -- {unattended-upgr}
                                                                                    |
                                                                                    +-- upowerd -- 2*[{upowerd}]
                                                                                        |
                                                                                        +-- whoopsie -- 2*[{whoopsie}]
                                                                                            |
                                                                                            +-- wpa_supplicant
                                                                                                |
                                                                                                +-- xfce4-panel -- firefox -- Web Content -- 27*[{Web Content}]
                                                                                                    |
                                                                                                    +-- Web Content -- 19*[{Web Content}]
                                                                                                        |
                                                                                                        +-- WebExtensions -- 24*[{WebExtensions}]
                                                                                                            |
                                                                                                            +-- 61*[{firefox}]
                                                                                                                |
                                                                                                                +-- panel-1-whisker -- oosplash -- soffice.bin -- 5*[{soffice.bin}]
                                                                                                                    |
                                                                                                                    +-- 2*[{oosplash}]
                                                                                                                        |
                                                                                                                        +-- 2*[{panel-1-whisker}]
                                                                                                                            |
                                                                                                                            +-- panel-4-systray
                                                                                                                                |
                                                                                                                                +-- panel-5-notific -- 2*[{panel-5-notific}]
                                                                                                                                    |
                                                                                                                                    +-- panel-6-indicat -- 2*[{panel-6-indicat}]
                                                                                                                                        |
                                                                                                                                        +-- panel-7-statusn -- 2*[{panel-7-statusn}]
                                                                                                                                            |
                                                                                                                                            +-- panel-8-power-m -- 2*[{panel-8-power-m}]
                                                                                                                                                |
                                                                                                                                                +-- panel-9-pulseau -- 2*[{panel-9-pulseau}]
                                                                                                                                                    |
                                                                                                                                                    +-- 2*[{xfce4-panel}]
                                                                                                                                                        |
                                                                                                                                                        +-- xfce4-power-man -- 2*[{xfce4-power-man}]
                                                                                                                                                            |
                                                                                                                                                            +-- xfce4-terminal -- bash -- sudo -- su -- pstree
                                                                                                                                                                |
                                                                                                                                                                +-- 2*[{xfce4-terminal}]
                                                                                                                                                                    |
                                                                                                                                                                    +-- xfdesktop -- 2*[{xfdesktop}]
                                                                                                                                                                        |
                                                                                                                                                                        +-- xfsettingsd -- 2*[{xfsettingsd}]
                                                                                                                                                                            |
                                                                                                                                                                            +-- xfwm4
root@kayonpc26: /home/kayon-pc26/Desktop#
```

**TABEL KETERANGAN**

NO	DAFTAR PERINTAH	KETERANGAN
1.	echo halo dunia	Menampilkan pesan “halo dunia”
2.	Date	Menampilkan keterangan waktu pada saat pemrosesan
3.	Hostname	Menampilkan nama sistem operasi yang terletak pada pc
4.	Arch	Menampilkan jenis arsitektur dari sebuah mesin
5.	uname -a	Menampilkan informasi sistem informasi
6.	dmesg   more	Menampilkan pesan-pesan pada waktu proses boot dengan menampilkan perlayar
7.	Uptime	Mengetahui informasi tentang lama sistem berjalan setelah terakhir reboot atau mati
8.	Whoami	Menanyakan siapa yang sekarang sedang bekerja
9.	Who	Menampilkan siapa saja yang login/masuk
10.	Id	Menampilkn identitas users
11.	Last	Menampilkn daftar login terakhir yang ada pada sistem dengan melakukan pengambilan data dari file/var/log/wtmp
12.	Finger	Melihat informasi finger
13.	W	Untuk mengetahui siapa yang sedang aktif
14.	Top	Melihat semua proses yang sedang berjalan, diurutkan dari proses yang paling besar
15.	echo \$SHELL	Bin/bash
16.	echo {con, pre} {sent, fer} {s, ed}	Menyusun kata-kata
17.	man ls	Menampilkam informasi tentang ls
18.	man who	Menampilkan informasi tentang who
19.	who can tell me about linux	Gagal (karena tidak bisa)
20.	Last	Menampilkn daftar login terakhir yang ada pada sistem dengan melakukan pengambilan data dari file/var/log/wtmp
21.	Clear	Perintah menghapus semua data pada layar
22.	fdisk -l	Menampilkan list partisi pada perangkat
23.	Users	Menampilkan daftar user yang sedang aktif pada sebuah Perangkat
24.	cat /etc /fstab	Melihat file sistem yang telah disetup
25.	cal 2000	Menampilkan kalender pada tahun 2000
26.	cal 9 1975	Menampilkan kalender pada bulan September tahun 1975
27.	cal 10 2007	Menampilkan kalender pada bulan oktober tahun 2007
28.	bc -l	Menampilkan versi bc (bahasa kalkulator)
29.	echo 5+4   bc -l	Menampilkan hasil penjumlahan (9)
30.	yes please	Mencetak string “Please” sampai interrupt
31.	Pwd	Digunakan untuk memperlihatkan didirektori mana posisi kita berada sekarang
32.	History	Menampilkan riwayat perintah yang digunakan
33.	tail -f /var/log/message	Tidak bisa menampilkan pesan
34.	Lsmmod	Menampilkan module/drive yang diload ke kernel
35.	ps -axu	Melihat seluruh proses yang dijalankan, walaupun tanpa

		terminal control, juga ditampilkan nama dari user untuk setiap proses
36.	Lspci	Melihat spesifikasi hardware dari computer yang sedang Digunakan
37.	Free	Melihat informasi pengguna memory
38.	cat /proc/cpuinfo	Melihat pada/proc directory yang bukan merupakan file Nyata
39.	finger root	Melihat informasi finger root
40.	Reboot	Menghidupkan ulang atau melakukan restart sistem sebuah computer yang sedang hidup atau sedang Berjalan
41	Halt	Perintah yang hanya bisa dijalankan oleh super user atau anda harus login sebagai root. Perintah ini untuk memberikan kernel supaya mematikan sistem atau shut-down
1.	Ls	Menampilkan isi dari suatu direktori
2.	ls -l	Perintah untuk melihat dengan daftar list dari suatu Direktori
3.	ls -l/home	Menampilkan semua file lengkap yang ada di home
4.	what is ls	Manampilkan manual atau deskripsi dari perintah ls
5.	whatis mkdir	Manampilkan manual atau deskripsi dari perintah mkdir
6.	mkdir informatika	Untuk membuat sebuah direktori informatika
7.	rmdir informatika	Untuk menghapus direktori informatika
8.	touch rpl.txt	Membuat file rpl.txt
9.	rm rpl.txt	Menghapus file rpl.txt
10.	which mkdir	Mengehtahui letak file perintah
11.	whereis ls	Menunjukkan lokasi file ls
12.	Df	Untuk melihat report sisa ruang disk space pada linux System
13.	Dv	Untuk melihat summary ukuran pemakaian volume untuk setiap folder atau file yang ada dalam system
14.	Free	Untuk menampilkan informasi pengguna memori(RAM dan swap)
15.	Pstree	Menampilkan semua proses pada sistem dalam bentuk hirarki/parent

## TUGAS

### 1. DISTRO LINUX SAAT INI

#### a. Ubuntu.

Ubuntu berasal dari bahasa Afrika yakni “Humanity to Others” yang berarti “Kemanusiaan Untuk Sesama”. Atas dasar itulah diluncurkannya Linux Ubuntu yang dirilis pada 20 Oktober 2004. Tujuannya adalah agar selalu gratis tanpa adanya biaya lisensi, dan siap untuk dipergunakan dalam kondisi yang stabil.

#### b. Open Suse.

Bermula pada awal tahun 1990-an dimana linux masih berukuran 50 keping dan dapat diunduh di internet. Pada 2 September 1992, SuSE GmbH mendirikan di Jerman dan mulai menjual linux.

Berikut versi-versi OpenSuSE:

#### c. Mandriva.

Linux mandriva diilis pertama kali didasarkan pada Red Hat Linux (versi 5.1) dan Perangkat Lunak Kompilasi KDE (versi 1.0) pada bulan Juli 1998. Pada tanggal 18 September 2010, karena ketidakpastian keuangan dan PHK oleh Edge-TI, anak perusahaan Mandriva banyak mempekerjakan staf perusahaan bekerja pada distribusi Mandriva, garpu dari Mandriva bernama Mageia. Tujuan awal dari diciptakannya Mandrake Linux adalah untuk mempermudah penggunaanya dalam melakukan instalasi dan penggunaan Linux itu sendiri. Dari awal hingga versi 8.0, Mandrake menamai produk utamanya dengan Linux Mandrake. Sedang versi 8.1 sampai 9.2 dinamaiMandrake Linux. Pada bulan Februari 2004, Mandrakesoft kalah dalam suatu kasus di pengadilan terhadap Hearst Corporation, pemilik King Features Syndicate. Hearst menuduh MandrakeSoft melanggar hak cipta karakter King Features bernama 'Mandrake the Magician'. Mulai dari versi 10.0, Mandrake Linux dikenal sebagai Mandrakelinux, demikian pula logonya. Versi pertama dari Mandrake Pindah dirilis



pada Desember 2003 (tetapi hanya didistribusikan ke pelanggan pada bulan Januari 2004, akibat penundaan produksi).

**d. Blankon.**

BlankOn Linux adalah sebuah distribusi Linux berbasis Debian yang dikembangkan oleh tim pengembang BlankOn Indonesia dengan dukungan dari YPLI. YPLI merupakan pengembang BlankOn pertama tahun 2004 dengan nama kode Bianglala. BlankOn merupakan turunan dari distro Fedora Core 3, namun berakhir sampai versi 1.1 dan akhirnya mati suri. Tahun 2007 pengembang BlankOn mulai dibangkitkan lagi oleh YLPI dengan turunan dari Ubuntu versi 7.10.

Versi-versi Blankon:

**e. Ubuntu Server.**

Ubuntu yang didesain untuk server. Pertama kali dirilis pada 20 Oktober 2004.

**f. CentOS.**

merupakan singkatan dari *Community Enterprise Operating System* dan merupakan salah satu contoh Distro Linux yang dikembangkan oleh The CentOS Project. Sistem operasi ini dibuat menggunakan kode sumber yang berasal dari Red Hat. Oleh karena itu, dalam hal produk CentOS ini sangatlah mirip dengan Red Hat Enterprise Linux.

**g. Fedora.**

Fedora ini merupakan salah satu Distro Linux yang dikembangkan karena disponsori dan didukung oleh Red Hat namun dibuat oleh tim khusus bernama Fedora Project. Bahkan nama Fedora ini diambil dari salah satu karakter dalam logo Red Hat itu sendiri. Sama halnya dengan Red Hat, sistem operasi Fedora juga menggunakan sistem *RPM Package Manager*.

**2. 20 PERINTAH YANG SAMA**

- a.** Head = menampilkan beberapa baris awal pada file teks
- b.** Nano = mengedit isi dari suatu file teks
- c.** Vi = teks editor yang sangat ampuh yang hampir selalu terdapat dalam setiap instalasi Linux.
- d.** Wc = menghitung jumlah baris, kata atau karakter dari sebuah file teks
- e.** Man = menampilkan dokumentasi (manual pages) dari sebuah perintah
- f.** Apropos = menampilkan dokumentasi (manual pages) yang berhubungan dengan kata kunci yang telah diberikan.
- g.** Find = memindai dan mencari pada struktur direktori dari file
- h.** Tar = mengextract sebuah file
- i.** Gzip = melakukan kompresi pada file atau folder menjadi file dengan ekstensi.gz
- j.** Date = menampilkan jam dan tanggal waktu sekarang

- k. Cal** = menampilkan kalender
- l. Touch** = mengubah waktu modifikasi dari sebuah file atau membuat sebuah file kosong
- m. Ps** = menampilkan proses yang berjalan pada sistem
- n. Kill** = mematikan atau memberikan sinyal lain pada sebuah proses
- o. Su** = super user
- p. Userdel** = menghapus user dari sistem
- q. Passwd** = mengganti password user
- r. Ifconfig** = mengkonfigurasi interface jaringan
- s. Halt** = mematikan sistem
- t. Reboot** = merestart sistem

### 3. PERINTAH

- a. init 0** : Digunakan untuk maintenance, diagnostic hardware, booting selain dari disk misal dari cdroom.  
command : init 0, shutdown -i0
- b. init 1** : Single user mode, digunakan untuk menambahkan patches, backup/restore system. di level ini kita bisa menjalankan/access semua file tapi user lain tidak bisa login ke dalam sytem kita.  
command: init 1, shutdown -i1
- c. init 2** : Multiuser mode, biasanya untuk digunakan dalam network. tapi disini tidak ada resources yang di share.  
command: init2, shutdown -i2
- d. init 3** : Memperluas multiuser mode, kita bisa membuat local resources share pada network kita. sehingga kita bisa berbagi data dilevel ini dalam network.  
command: init 3, shutdown -i3
- e. init 4** : Untuk alternative multiuser mode tetapi saat ini belum bisa digunakan.  
command: init4, shutdown -i4
- f. init 5** : Untuk shutdown/ power off.  
command: init5, shutdown -i5
- g. init 6** : Menstop operating system kemudian reboot dan kembali ke initdefault nya yang ada di /etc/inittab  
command: init 6, shutdown -i6

### 4. PERINTAH QUOTA

Perintah *quota* berfungsi untuk menampilkan statistik penggunaan disk, limit ruang kosong yang tersedia untuk sebuah user atau group. Jika dijalankan tanpa argumen, hanya akan menampilkan kuota disk dari user.