

Modul 5

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Tugas Praktikum

```
Terminal - kayon-pc12@kayonpc12: ~  
File Edit View Terminal Tabs Help  
kayon-pc12@kayonpc12:~$ echo halo dunia  
halo dunia  
kayon-pc12@kayonpc12:~$ date  
Sat Nov 5 10:48:22 WIB 2019  
kayon-pc12@kayonpc12:~$ hostname  
kayonpc12  
kayon-pc12@kayonpc12:~$ arch  
x86_64  
kayon-pc12@kayonpc12:~$ uname -a  
Linux kayonpc12 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  
kayon-pc12@kayonpc12:~$ dmesg | more
```

-echo halo dunia = Menampilkan “halo dunia”.

- date** = Menampilkan Tanggal,bulan,hari dan Tahun pada saat mengoperasikan Linux.

-hostname = Menampilkan host/domain name system dan bias pula digunakan untuk mengeset nama host sistem

-arch = Menampilkan tipe Linux yang digunakan.

-uname -a = Menampilkan informasi Sistem Operasi (Distro,versi,nama mesin dll).

```

% Terminal - kayon-pc12@kayonpc12:~
File Edit View Terminal Tabs Help
kayon-pc12@kayonpc12:~$ dmesg | more
[    0.000000] microcode: microcode updated early to revision 0x27, date = 2019-02-26
[    0.000000] Linux version 5.0.0-31-generic (build@lgw01-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=a05b9986-44f9-44ad-8dc6-407b5bcc778 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: 'AUX registers'
[    0.000000] x86/fpu: xstate offset(2): 576, xstate size(2): 256
[    0.000000] x86/fpu: Enabled xstate features 0x7, context size is 832 bytes, using 'standard' format.
[    0.000000] BIOS-provided physical RAM map:
[    0.000000] BIOS-e820: [mem 0x0000000000000000-0x00000000000009d7fff] usable
[    0.000000] BIOS-e820: [mem 0x00000000000009d8000-0x00000000000009ffff] reserved
[    0.000000] BIOS-e820: [mem 0x0000000000000e000-0x0000000000000ffffff] reserved
[    0.000000] BIOS-e820: [mem 0x00000000000010000-0x000000000000c60affff] usable
[    0.000000] BIOS-e820: [mem 0x000000000000c60b000-0x000000000000c61ffff] ACPI NVS
[    0.000000] BIOS-e820: [mem 0x000000000000c612000-0x000000000000c6a2ffff] usable
[    0.000000] BIOS-e820: [mem 0x000000000000c6a3000-0x000000000000ce95ffff] reserved
[    0.000000] BIOS-e820: [mem 0x000000000000ce96000-0x000000000000d87c7ffff] usable
[    0.000000] BIOS-e820: [mem 0x000000000000d87c800-0x000000000000d9d0ffff] reserved
[    0.000000] BIOS-e820: [mem 0x000000000000d9d1000-0x000000000000d9e9ffff] ACPI data
[    0.000000] BIOS-e820: [mem 0x000000000000d9ea000-0x000000000000d9feffff] ACPI NVS
[    0.000000] BIOS-e820: [mem 0x000000000000d9ff000-0x000000000000dbffffff] reserved
[    0.000000] BIOS-e820: [mem 0x000000000000dbffffff000-0x000000000000dbfffffffff] usable
[    0.000000] BIOS-e820: [mem 0x000000000000dbffffff000-0x000000000000dbfffffffff] reserved
[    0.000000] BIOS-e820: [mem 0x000000000000fb00000-0x000000000000fbffffff] reserved
[    0.000000] BIOS-e820: [mem 0x000000000000fec0000-0x000000000000fecdffff] reserved
[    0.000000] BIOS-e820: [mem 0x000000000000fed0000-0x000000000000fed03fff] reserved
[    0.000000] BIOS-e820: [mem 0x000000000000fed1c00-0x000000000000fed1ffff] reserved
[    0.000000] BIOS-e820: [mem 0x000000000000fed2000-0x000000000000fed3ffff] reserved
[    0.000000] BIOS-e820: [mem 0x000000000000fed3ffff000-0x000000000000fed3fffffff] reserved
[    0.000000] BIOS-e820: [mem 0x000000000000fed3ffff000-0x000000000000fed3fffffff] usable
[    0.000000] NX (Execute Disable) protection: active
[    0.000000] SMBIOS 2.7 present.
[    0.000000] DMI: ASUSTek COMPUTER INC. BM2AD D310312510MT ED3/BM2AD D310312510MT ED3, BIOS 0802 07/28/2015
[    0.000000] tsc: Fast TSC calibration using PIT
[    0.000000] tsc: Detected 3292.324 MHz processor
[    0.001580] e820: update [mem 0x00000000-0x0000ffff] usable ==> reserved
[    0.001581] e820: remove [mem 0x00000000-0x0000ffff] usable
[    0.001587] last_pfn = 0x21fe00 max_arch_pfn = 0x400000000
--More--

```

-dmesg | more = Mencetak pesan-pesan pada waktu proses boot (menampilkan file `/var/log/dmesg`).

```

kayon-pc12@kayonpc12:~$ uptime
10:50:43 up 19 min, 1 user, load average: 0,14, 0,08, 0,10
kayon-pc12@kayonpc12:~$ whoami
kayon-pc12
kayon-pc12@kayonpc12:~$ who
kayon-pc12 tty7      2019-11-05 17:32 (:0)
kayon-pc12@kayonpc12:~$ id
uid=1000(kayon-pc12) gid=1000(kayon-pc12) groups=1000(kayon-pc12),4(adm),24(cdrom),27(sudo),30(dip),46(plugdev),118(lpadmin),126(sambashare)
kayon-pc12@kayonpc12:~$ last

wtm begins Tue Nov  5 10:36:51 2019
kayon-pc12@kayonpc12:~$ finger
Login      Name      Tty      Idle      Login Time   Office      Office Phone
kayon-pc12 kayon-pc12 tty7      Nov  5 17:32 (:0)
kayon-pc12@kayonpc12:~$ w
10:51:04 up 19 min, 1 user, load average: 0,10, 0,07, 0,09
USER      TTY      FROM      LOGIN@    IDLE      JCPU      PCPU      WHAT
kayon-pc12 tty7      -0-              17:32      ?          9.85s    0.01s    /bin/sh /etc/xdg/xfce4/xinitrc -- /etc/X11/xinit/xserverrc
kayon-pc12@kayonpc12:~$ top

```

-uptime = Menampilkan jumlah waktu pemakaian komputer oleh seseorang,terhitung proses reboot terakhir.

-whoami = Mengetahui siapa user yang sedang login di suatu komputer / terminal.

-who = Mengetahui daftar pemakai yang sedang aktif (login).

-id = Melihat identitas diri (nomor id dan group id)

-last = Meliht user sebelumnya yang telah login di Komputer tersebut.

-finger = Mempunyai fungsi hamper sama dengan who,hanya saja finger menyediakan informasi identitas user yang lebih lengkap daripada who.

-w = Mengetahui siapa saja yang sedang aktif.

```

Terminal - kayon-pc12@kayonpc12: ~
File Edit View Terminal Tabs Help
top - 10:52:15 up 20 min, 1 user, load average: 0,10, 0,08, 0,09
Tasks: 176 total, 1 running, 128 sleeping, 0 stopped, 0 zombie
%Cpu(s):  0,9 us,  0,4 sy,  0,0 ni, 98,6 id,  0,0 wa,  0,0 hi,  0,0 si,  0,0 st
KiB Mem : 8036880 total, 6387300 free, 438576 used, 1289904 buff/cache
KiB Swap: 947080 total, 947080 free,  0 used, 7181212 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR   S  %CPU  %MEM    TIME+  COMMAND
  919 root        20   0 455560 48308 33956  S   6,3   0,6   0:13.08 Xorg
3739 kayon-p+  20   0 582872 38944 29300  S   2,3   0,5   0:03.91 xfce4-terminal
3838 kayon-p+  20   0 385788 27972 22304  S   2,3   0,3   0:00.13 xfce4-screensho
  10 root        20   0      0      0      0  I   0,3   0,0   0:03.19 rcu_sched
1826 kayon-p+  20   0 191008 21928 17680  S   0,3   0,3   0:01.58 xfwm4
1830 kayon-p+  20   0 410184 29356 22868  S   0,3   0,4   0:01.30 xfce4-panel
1834 kayon-p+  20   0 505644 35008 24712  S   0,3   0,4   0:00.61 xfdesktop
3832 kayon-p+  20   0 51672  4100  3420  R   0,3   0,1   0:00.17 top
   1 root        20   0 225268 9080  6756  S   0,0   0,1   0:01.11 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/0:0H-kb
   8 root        0 -20   0      0      0  I   0,0   0,0   0:00.00 mm_percpu_wq
   9 root        20   0      0      0      0  S   0,0   0,0   0:00.00 ksoftirqd/0
  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_inject/0
  13 root        20   0      0      0      0  I   0,0   0,0   0:00.13 kworker/0:1-mm_
  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_inject/1
  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
  19 root        20   0      0      0      0  I   0,0   0,0   0:00.13 kworker/1:0-eve
  20 root        0 -20   0      0      0  I   0,0   0,0   0:00.01 kworker/1:0H-kb
  21 root        20   0      0      0      0  S   0,0   0,0   0:00.00 cpuhp/2
  22 root       -51   0      0      0      0  S   0,0   0,0   0:00.00 idle_inject/2
  23 root        rt    0      0      0      0  S   0,0   0,0   0:00.00 migration/2
  24 root        20   0      0      0      0  S   0,0   0,0   0:00.00 ksoftirqd/2
  26 root        0 -20   0      0      0  I   0,0   0,0   0:00.00 kworker/2:0H-kb
  27 root        20   0      0      0      0  S   0,0   0,0   0:00.00 cpuhp/3
  28 root       -51   0      0      0      0  S   0,0   0,0   0:00.00 idle_inject/3
  29 root        rt    0      0      0      0  S   0,0   0,0   0:00.00 migration/3
  30 root        20   0      0      0      0  S   0,0   0,0   0:00.01 ksoftirqd/3
  32 root        0 -20   0      0      0  I   0,0   0,0   0:00.00 kworker/3:0H-kb
  33 root        20   0      0      0      0  S   0,0   0,0   0:00.00 kdevtmpfs
  34 root        0 -20   0      0      0  I   0,0   0,0   0:00.00 netns
  35 root        20   0      0      0      0  S   0,0   0,0   0:00.00 rcu_tasks_kthre

```

-top = Melihat proses yang berjalan dengan urutan penggunaan CPU.

```

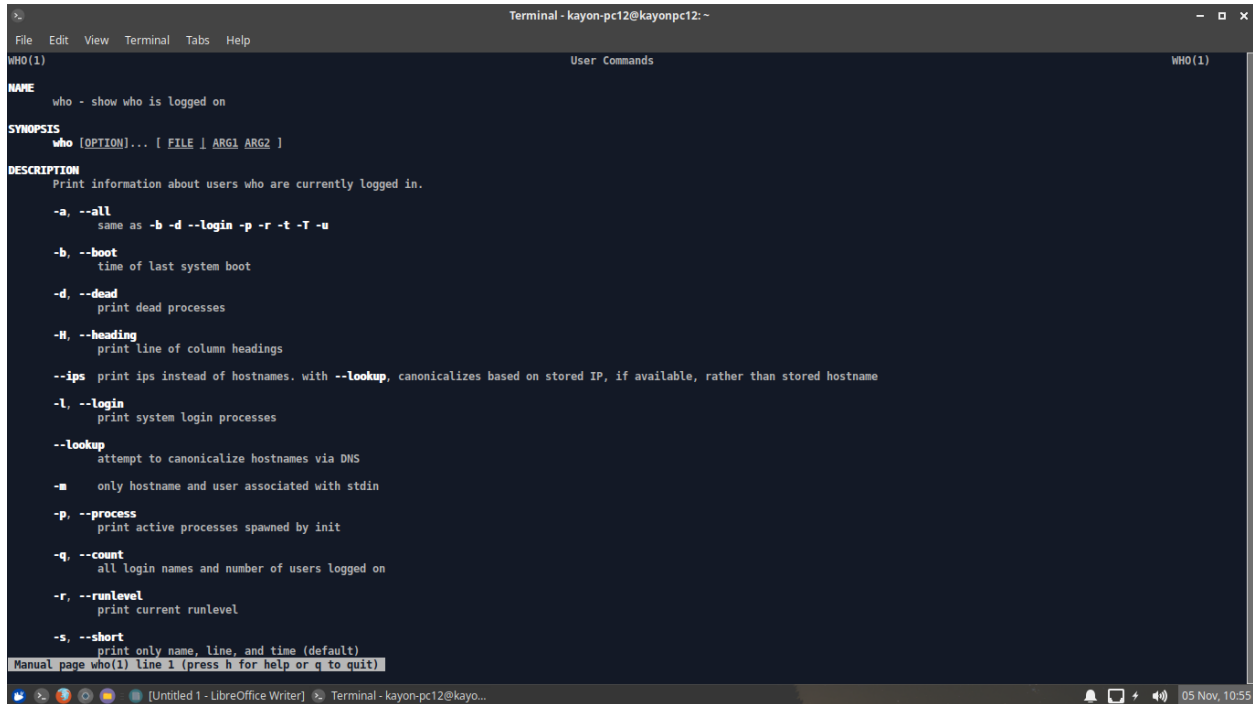
kayon-pc12@kayonpc12:~$ echo $SHELL
/bin/bash
kayon-pc12@kayonpc12:~$ echo {con,pre}{sent,fer}{s,ed}
consents consented confers confred presents presented prefers preferred
kayon-pc12@kayonpc12:~$ man ls

```

-**echo \$SHELL** = Melihat isi variable SHELL.

-**echo {con,pre}{sent,fer}{s,ed}** =Menampilkan gabungan kata yang ada pada kurung kurawal{}

-**man ls** = man adalah singkatan dari **manual** yaitu untuk menampilkan informasi banyu untuk semua perangkat UNIX .



```
Terminal - kayon-pc12@kayonpc12: ~
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)
Manual page who(1) line 1 (press h for help or q to quit)
```

-**man who** = Menampilkan siapa yang Login di Linux tersebut.



```
kayon-pc12@kayonpc12:~$ echo $SHELL
/bin/bash
kayon-pc12@kayonpc12:~$ echo {con,pre}{sent,fer}{s,ed}
consents consented confers conferred presents presented prefers preferred
kayon-pc12@kayonpc12:~$ man ls
kayon-pc12@kayonpc12:~$ man who
who: extra operand 'me'
Try 'who --help' for more information.
kayon-pc12@kayonpc12:~$ last

wtmp begins Tue Nov  5 10:36:51 2019
kayon-pc12@kayonpc12:~$
```

-**who can tell me about linux** = Menampilkan informasi bantuan perintah pada Linux.

-**last** = Melihat user sebelumnya yang telah login dikomputer.

-**clear**= Berfungsi untuk Membersihkan layer (sama dengan perintah CLD di DOS).

```
Terminal - root@kayonpc12: /home/kayon-pc12
File Edit View Terminal Tabs Help

kayon-pc12@kayonpc12:~$ fdisk -l
disk: cannot open /dev/sda: Permission denied
kayon-pc12@kayonpc12:~$ sudo su
[sudo] password for kayon-pc12:
oot@kayonpc12:/home/kayon-pc12# who can tell me about linux
ho: extra operand 'me'
ry 'who --help' for more information.
oot@kayonpc12:/home/kayon-pc12# man ls
oot@kayonpc12:/home/kayon-pc12# man who
oot@kayonpc12:/home/kayon-pc12# who can tell me about linux
ho: extra operand 'me'
ry 'who --help' for more information.
oot@kayonpc12:/home/kayon-pc12# who --help
sage: who [OPTION]... [ FILE | ARG1 ARG2 ]
rint 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, --mesg     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

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

NU coreutils online help: <http://www.gnu.org/software/coreutils/>
ull documentation at: <http://www.gnu.org/software/coreutils/who>
r available locally via: info '(coreutils) who invocation'
oot@kayonpc12:/home/kayon-pc12#
```

```
root@kayonpc12:/home/kayon-pc12# last
wtmp begins Tue Nov  5 10:36:51 2019
root@kayonpc12:/home/kayon-pc12# fdisk -l
Disk /dev/sda: 465.8 GiB, 500107862016 bytes, 976773168 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes
Disklabel type: dos
Disk identifier: 0x80e875a7

Device      Boot      Start      End  Sectors  Size Id Type
/dev/sda1   *          2048    206847    204800    100M  7 HPFS/NTFS/exFAT
/dev/sda2           206848 409602047 409395200    195.2G  7 HPFS/NTFS/exFAT
/dev/sda3 409602048 935811071 526209024    250.9G  7 HPFS/NTFS/exFAT
/dev/sda4 935811072 976771071 409600000    19.5G  83 Linux

root@kayonpc12:/home/kayon-pc12# users
kayon-pc12
root@kayonpc12:/home/kayon-pc12# 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/sda4 during installation
UUID=a05b9986-449f-4d49-8dc6-4077b5ccc778 /      ext4    errors=remount-ro 0      1
/swapfile none    swap    sw              0      0
```

-fdisk -l = Menampilkan isi disk/dev/sda yang tersedia.

-users = Menampilkan nama Users.

-cat /etc/fstab = Menampilkan informasi tentang deskripsi file system dan partisi harddisk yang akan kita gunakan dalam linuxbox.

```
root@kayonpc12:/home/kayon-pc12# 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@kayonpc12:/home/kayon-pc12# cal 10 2007
Oktober 2007
Mi Se Sa Ra Ka Ju Sa
1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31
```

-cal 9 1752 = Menampilkan bulan ke 9 (September) tahun 1752.

-cal 10 2007 = Menampilkan bulan ke 10(Oktober) tahun 2007.

```
root@kayonpc12:/home/kayon-pc12# 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             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@kayonpc12:/home/kayon-pc12#
```

-cal 2000 = Menampilkan kalender ditahun 2000.

```
root@kayonpc12:/home/kayon-pc12# bc -l
bc 1.07.1
Copyright 1991-1994, 1997, 1998, 2000, 2004, 2006, 2008, 2012-2017 Free Software Foundation, Inc.
This is free software with ABSOLUTELY NO WARRANTY.
For details type 'warranty'.
quit
root@kayonpc12:/home/kayon-pc12#
```

-bc -l = Menampilkan kalkulator

```
root@kayonpc12:/home/kayon-pc12# echo 5+4 | bc -l
9
root@kayonpc12:/home/kayon-pc12# yes please
```

-echo 5+4 | bc -l =Menampilkan penjumlahan 5+4 dengan kalkulator.


```
root@kayonpc12:/home/kayon-pc12# tail -f /var/log/message
```

-tail -f /var/log/message = Membaca file,namun dimulai dari baris akhirnya.

```
Terminal - root@kayonpc12:/home/kayon-pc12

root@kayonpc12:/home/kayon-pc12# lsmod
Module                  Size  Used by
intel_rapl              24576  0
x86_pkg_temp_thermal   20480  0
intel_powerclamp        20480  0
coretemp               20480  0
kvm_intel              241664  0
crc10dif_pclmul        16384  1
crc32_pclmul           16384  0
snd_hda_codec_realtek  114688  1
ghash_clmulni_intel    16384  0
snd_hda_codec_generic  77824  1 snd_hda_codec_realtek
aesni_intel            372736  0
ledtrig_audio          16384  2 snd_hda_codec_generic,snd_hda_codec_realtek
snd_hda_codec_hdmi     53248  1
snd_hda_intel          49152  2
aes_x86_64             20480  1 aesni_intel
snd_hda_codec          135168  4 snd_hda_codec_generic,snd_hda_codec_hdmi,snd_hda_intel,snd_hda_codec_realtek
snd_hda_core           86616  5 snd_hda_codec_generic,snd_hda_codec_hdmi,snd_hda_intel,snd_hda_codec,snd_hda_codec_realtek
crypto_simd            16384  1 aesni_intel
snd_hwdep              20480  1 snd_hda_codec
snd_pcm                102400  4 snd_hda_codec_hdmi,snd_hda_intel,snd_hda_codec,snd_hda_core
cryptd                 24576  3 crypto_simd,ghash_clmulni_intel,aesni_intel
snd_seq_midi           20480  0
joydev                 28672  0
input_leds             16384  0
eeepc_wmi              16384  0
glue_helper            16384  1 aesni_intel
asus_wmi               28672  1 eeepc_wmi
sparse_keymap          16384  1 asus_wmi
snd_seq_midi_event     16384  1 snd_seq_midi
wmi_bmof               16384  0
snd_rawmidi            36864  1 snd_seq_midi
snd_seq                69632  2 snd_seq_midi,snd_seq_midi_event
snd_seq_device         16384  3 snd_seq,snd_seq_midi,snd_rawmidi
snd_timer              36864  2 snd_seq,snd_pcm
intel_cstate           20480  0
snd                    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
intel_rapl_perf        16384  0
soundcore              16384  1 snd
lpc_ich                24576  0
mei_me                40960  0
mei                   106496  1 mei_me
mac_hid               16384  0
sch_fq_codel           20480  2
parport_pc            36864  1
```

-lsmod = Melihat module-module kernel yang telah di load.

```
Terminal - root@kayonpc12:/home/kayon-pc12

wmi                  28672  2 asus_wmi,wmi_bmof
video               49152  2 asus_wmi,i915
root@kayonpc12:/home/kayon-pc12# ps -aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.1 225268 9092 ?        Ss   10:31   0:01 /sbin/init splash
root         2  0.0  0.0      0     0 ?        S    10:31   0:00 [kthreadd]
root         3  0.0  0.0      0     0 ?        I<   10:31   0:00 [rcu_gp]
root         4  0.0  0.0      0     0 ?        I<   10:31   0:00 [rcu_par_gp]
root         6  0.0  0.0      0     0 ?        I<   10:31   0:00 [kworker/0:0H-kb]
root         8  0.0  0.0      0     0 ?        I<   10:31   0:00 [mm_percpu_wq]
root         9  0.0  0.0      0     0 ?        S    10:31   0:00 [ksoftirqd/0]
root        10  0.2  0.0      0     0 ?        I    10:31   0:07 [rcu_sched]
root        11  0.0  0.0      0     0 ?        S    10:31   0:00 [migration/0]
root        12  0.0  0.0      0     0 ?        S    10:31   0:00 [idle_inject/0]
root        13  0.0  0.0      0     0 ?        I<   10:31   0:00 [kworker/0:1-eve]
root        14  0.0  0.0      0     0 ?        S    10:31   0:00 [cpuhp/0]
root        15  0.0  0.0      0     0 ?        S    10:31   0:00 [cpuhp/1]
root        16  0.0  0.0      0     0 ?        S    10:31   0:00 [idle_inject/1]
root        17  0.0  0.0      0     0 ?        S    10:31   0:00 [migration/1]
root        18  0.0  0.0      0     0 ?        S    10:31   0:00 [ksoftirqd/1]
root        19  0.0  0.0      0     0 ?        I<   10:31   0:00 [kworker/1:0-eve]
root        20  0.0  0.0      0     0 ?        S    10:31   0:00 [kworker/1:0H-kb]
root        21  0.0  0.0      0     0 ?        S    10:31   0:00 [cpuhp/2]
root        22  0.0  0.0      0     0 ?        S    10:31   0:00 [idle_inject/2]
root        23  0.0  0.0      0     0 ?        S    10:31   0:00 [migration/2]
root        24  0.0  0.0      0     0 ?        S    10:31   0:00 [ksoftirqd/2]
root        26  0.0  0.0      0     0 ?        I<   10:31   0:00 [kworker/2:0H-kb]
root        27  0.0  0.0      0     0 ?        S    10:31   0:00 [cpuhp/3]
root        28  0.0  0.0      0     0 ?        S    10:31   0:00 [idle_inject/3]
root        29  0.0  0.0      0     0 ?        S    10:31   0:00 [migration/3]
root        30  0.0  0.0      0     0 ?        S    10:31   0:00 [ksoftirqd/3]
root        32  0.0  0.0      0     0 ?        I<   10:31   0:00 [kworker/3:0H-kb]
root        33  0.0  0.0      0     0 ?        S    10:31   0:00 [kdevtmpfs]
root        34  0.0  0.0      0     0 ?        I<   10:31   0:00 [netns]
root        35  0.0  0.0      0     0 ?        S    10:31   0:00 [rcu_tasks_kthre]
root        36  0.0  0.0      0     0 ?        S    10:31   0:00 [kauditd]
root        37  0.0  0.0      0     0 ?        S    10:31   0:00 [khungtaskd]
root        38  0.0  0.0      0     0 ?        S    10:31   0:00 [oom_reaper]
root        39  0.0  0.0      0     0 ?        I<   10:31   0:00 [writeback]
root        40  0.0  0.0      0     0 ?        S    10:31   0:00 [kcompactd0]
root        41  0.0  0.0      0     0 ?        SN   10:31   0:00 [ksmd]
root        42  0.0  0.0      0     0 ?        SN   10:31   0:00 [khugepaged]
root        43  0.0  0.0      0     0 ?        I<   10:31   0:00 [crypto]
root        44  0.0  0.0      0     0 ?        I<   10:31   0:00 [kintegrityd]
root        45  0.0  0.0      0     0 ?        I<   10:31   0:00 [kblockd]
root        46  0.0  0.0      0     0 ?        I<   10:31   0:00 [tpm dev wq]
```

-ps -aux = Melhat/menampilkan daftar proses yang sedang berjalan pada system.

```
Terminal - root@kayonpc12: /home/kayon-pc12
File Edit View Terminal Tabs Help
wmi 28672 2 asus_wmi,wmi_bmf
video 49152 2 asus_wmi,1915
root@kayonpc12: /home/kayon-pc12# ps -aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.1 225268 9092 ?        Ss   10:31   0:01 /sbin/init splash
root         2  0.0  0.0      0  0 ?        S    10:31   0:00 [kthreadd]
root         3  0.0  0.0      0  0 ?        I<   10:31   0:00 [rcu_gp]
root         4  0.0  0.0      0  0 ?        I<   10:31   0:00 [rcu_par_gp]
root         6  0.0  0.0      0  0 ?        I<   10:31   0:00 [kworker/0:0H-kb]
root         8  0.0  0.0      0  0 ?        I<   10:31   0:00 [mm_percpu_wq]
root         9  0.0  0.0      0  0 ?        S    10:31   0:00 [ksoftirqd/0]
root        10  0.2  0.0      0  0 ?        I    10:31   0:07 [rcu_sched]
root        11  0.0  0.0      0  0 ?        S    10:31   0:00 [migration/0]
root        12  0.0  0.0      0  0 ?        S    10:31   0:00 [idle_inject/0]
root        13  0.0  0.0      0  0 ?        I    10:31   0:00 [kworker/0:1-eve]
root        14  0.0  0.0      0  0 ?        S    10:31   0:00 [cpuhp/0]
root        15  0.0  0.0      0  0 ?        S    10:31   0:00 [idle_inject/1]
root        16  0.0  0.0      0  0 ?        S    10:31   0:00 [idle_inject/1]
root        17  0.0  0.0      0  0 ?        S    10:31   0:00 [migration/1]
root        18  0.0  0.0      0  0 ?        S    10:31   0:00 [ksoftirqd/1]
root        19  0.0  0.0      0  0 ?        I    10:31   0:00 [kworker/1:0-eve]
root        20  0.0  0.0      0  0 ?        I<   10:31   0:00 [kworker/1:0H-kb]
root        21  0.0  0.0      0  0 ?        S    10:31   0:00 [cpuhp/2]
root        22  0.0  0.0      0  0 ?        S    10:31   0:00 [idle_inject/2]
root        23  0.0  0.0      0  0 ?        S    10:31   0:00 [migration/2]
root        24  0.0  0.0      0  0 ?        S    10:31   0:00 [ksoftirqd/2]
root        26  0.0  0.0      0  0 ?        I<   10:31   0:00 [kworker/2:0H-kb]
root        27  0.0  0.0      0  0 ?        S    10:31   0:00 [cpuhp/3]
root        28  0.0  0.0      0  0 ?        S    10:31   0:00 [idle_inject/3]
root        29  0.0  0.0      0  0 ?        S    10:31   0:00 [migration/3]
root        30  0.0  0.0      0  0 ?        S    10:31   0:00 [ksoftirqd/3]
root        32  0.0  0.0      0  0 ?        I<   10:31   0:00 [kworker/3:0H-kb]
root        33  0.0  0.0      0  0 ?        S    10:31   0:00 [kdevtmpfs]
root        34  0.0  0.0      0  0 ?        I<   10:31   0:00 [netns]
root        35  0.0  0.0      0  0 ?        S    10:31   0:00 [rcu_tasks_kthre]
root        36  0.0  0.0      0  0 ?        S    10:31   0:00 [kauditd]
root        37  0.0  0.0      0  0 ?        S    10:31   0:00 [khungtaskd]
root        38  0.0  0.0      0  0 ?        S    10:31   0:00 [oom_reaper]
root        39  0.0  0.0      0  0 ?        I<   10:31   0:00 [writeback]
root        40  0.0  0.0      0  0 ?        S    10:31   0:00 [kcompactd0]
root        41  0.0  0.0      0  0 ?        SN   10:31   0:00 [ksmd]
root        42  0.0  0.0      0  0 ?        SN   10:31   0:00 [khugepaged]
root        43  0.0  0.0      0  0 ?        I<   10:31   0:00 [crypto]
root        44  0.0  0.0      0  0 ?        I<   10:31   0:00 [kintegrityd]
root        45  0.0  0.0      0  0 ?        I<   10:31   0:00 [kblockd]
root        46  0.0  0.0      0  0 ?        I<   10:31   0:00 [tpm dev wq]
```

-**lspci** = Melihat spesifikasi hardware dari computer yang sedang digunakan.

-**free** = Menampilkan Informasi Memory (dalam kilobytes).

```
Terminal - root@kayonpc12: /home/kayon-pc12
File Edit View Terminal Tabs Help
root@kayonpc12: /home/kayon-pc12# cat /proc/cpuinfo
processor       : 0
vendor_id      : GenuineIntel
cpu family     : 6
model          : 60
model name     : Intel(R) Core(TM) i5-4590 CPU @ 3.30GHz
stepping       : 3
microcode     : 0x27
cpu MHz        : 798.149
cache size     : 6144 KB
physical id    : 0
siblings       : 4
core id        : 0
cpu cores      : 4
apicid         : 0
initial apicid : 0
fpu            : yes
fpu exception  : yes
cpuid level    : 13
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 arch_perfmon
pebs bts rep_good nopl xtopology nonstop_tsc cpuid aperfperf pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtpr pdcm pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadli
ne_timer aes xsave avx f16c rdrand lahf_lm abm cpuid_fault epb invpcid_single pti ssbd ibrs ibpb stibp tpr_shadow vnmi flexpriority ept vpid ept_ad fsgsbase tsc_adjust bmi1 avx2 smep bmi2 erms
invpcid xsaveopt dtherm ida arat pln pts md_clear flush_lid
bugs            : cpu_meltdown spectre_v1 spectre_v2 spec_store_bypass l1tf mds swappgs
bogomips       : 6584.64
clflush size   : 64
cache alignment : 64
address sizes   : 39 bits physical, 48 bits virtual
power management:

processor       : 1
vendor_id      : GenuineIntel
cpu family     : 6
model          : 60
model name     : Intel(R) Core(TM) i5-4590 CPU @ 3.30GHz
stepping       : 3
microcode     : 0x27
cpu MHz        : 798.209
cache size     : 6144 KB
physical id    : 0
siblings       : 4
core id        : 1
cpu cores      : 4
apicid         : 2
```

-**cat /proc/cpuinfo** = Melihst idi dari sebuah file teks


```

root@kayonpc12:/home/kayon-pc12# finger root
Login: root                Name: root
Directory: /root          Shell: /bin/bash
Never logged in.
No mail.
No Plan.
root@kayonpc12:/home/kayon-pc12# uname -a
Linux kayonpc12 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@kayonpc12:/home/kayon-pc12#

```

-**fingerroot** =Melihat informasi user.

-**reboot** = MEngulang system

-**uname -a** = Menampilkan informasi system computer.

-**halt** = Me-restart sistem.

Tugas

1.) Jelaskan distro linux yang ada saat ini (minimal 5).

a.RedHat

adalah distro yang populer di perusahaan Linux. Poin terbesar dari perusahaan ini adalah Red Hat Package Manager(RPM) ialah sebuah perangkat lunak untuk manajemen paket-paket pada system Linux lita dan dianggap sebagai standar de-facto dalam pemaketan pada distro-distro turunannya dan yang mendukung distro ini secara luas.

b.Ubuntu

adalah salah satu distribusi Linux yang berbasis Debian dan memiliki interface desktop serta disponsori oleh Canonical Ltb.Ubuntu merupakan system operasi berbasis Linux yang tersedia secara bebas serta mempunyai dukungan baik yang berasal dari komunitas maupun tenaga ahli professional.Ubuntu juga aman dari virus dan malware walaupun tak memakai anti virus.

c.Xandros

adalah distro Linux yang berdasarkan pada system KDE (K Desktop Environtment) yaitu lingkungan desktop dan platform pengembangan aplikasi yang dibangun dengan toolkit Qt dari Trolltech.Tampilannya sangat miip dengan windows jadi mudah digunakan bagi yang berpengalaman maupun pemula.

d.Debian

adalah system operassi berbasis open source yang dikembangkan secara terbuka oleh para programmer yang ingin memodifikasinya. Sistem operasi ini adalah gabungan dari perangkat lunak yang dikembangkan dengan lisensi GNU,dan utamanya menggunakan kernel Linux,sehingga lebih suka disebut dengan nama Debian GNU/Linux.

e.Fedora

adalah system operasi berbasis Linux yang menampilkan perkembangan terakhir dalam perangkat lunak bebas dan terbuka untuk menggunakan,merubah, dan menyebarkan. Fedora sebelumnya bernama Fedora Core,terkadang disebut juga dengan

Fedora Linux merupakan distro Linux berbasis RPM dan yum yang dikembangkan oleh Fedora Project yang didukung oleh komunitas pemrogram serta disponsori oleh RedHat.

2.) Jelaskan 20 perintah yang sama diantara masing-masing distro.

- `man` = melihat buku manual dari sebuah program.
- `sudo` = menjalankan program sebagai user root atau super user.
- `ls` = melihat direktori
- `cd` = masuk ke direktori
- `mkdir` = membuat folder
- `pwd` = melihat direktori aktif
- `vim` = membuka text editor
- `cp<asal><tujuan>` = menyalin file dan folder bisa ke folder itu atau ke folder yang lain
- `mv <asal><tujuan>` = memindah file dan folder bisa ke folder itu atau ke folder yang lain
- `rm<file>` = menghapus file
- `find<nama file>` = mencari file
- `history` = melihat riwayat
- `cat` = melihat isi file
- `echo` = menampilkan baris teks
- `grep` = mencari kata
- `sort` = mengurutkan
- `wc` = menampilkan baris baru
- `chmod` = mengganti hak akses
- `chown` = mengganti hak akses

3.) Jelaskan maksud perintah 'init 0','init 1', 'init 2', 'init 3', 'init 4', 'init 5', dan 'init 6'.

Jenis-jenis runlevel:

1. init 0 => Digunakan utk maintenance, diagnostic hardware, booting selain dari disk

misal dari cdroom.

command : init 0, shutdown -i0

2. init 1 ==> Single user mode, digunakan utk 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

3. init 2 ==> multiuser mode, biasanya utk digunakan dalam network. tapi disini tidak ada resources yang di share.

command: init2, shutdown -i2

4. init 3 ==> memperluas multiuser mode,kita bisa membuat local resources share pada network kita. sehingga kita bisa berbagi data di level ini dalam network.

command: init 3, shutdown -i3

5. init 4 ==> utk alternative multiuser mode tetapi saat ini belum bisa digunakan.

command: init4, shutdown -i4

6. init 5 ==> utk shutdown/ power off.

command: init5, shutdown -i5

7. init 6 ==> men stop operating system kemudian reboot dan kembali ke initdefault nya yang ada di /etc/inittab

command: init 6, shutdown -i6

– Utk mengetahui runlevel kita saat ini gunakan perintah

#who -r

4.) Jelaskan maksud dari perintah 'quota'.

Qoota adalah nilai batas yang ditetapkan untuk mengelola akses ke sumber daya system dan jaringan atau jumlah penyimpanan yang digunakan oleh User atau Group tertentu. Disk quota bisa ditetapkan per user atau per group. Jika ditetapkan per user maka quota yang diterapkan mutlak milik user tersebut. Jika diterapkan per Group maka kapasitas yang ditetapkan adalah milik Bersama group tersebut.