

LAPORAN PRAKTIKUM
SISTEM OPERASI



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Perintah dasar pada OS DragonFly

1. Gunakan perintah whoami untuk melihat user yang sedang aktif

```
Welcome to DragonFly!  
  
# whoami  
root  
#
```

2. Gunakan perintah ls untuk menampilkan isi dari direktori dan ls -l untuk informasi lebih detail dari isi sebuah direktori.

```
Welcome to DragonFly!  
  
# whoami  
root  
# ls  
.cshrc      .klogin     .login      .profile  
#  
  
# ls -l  
total 1  
-rw-r--r--  1 root  wheel  814 Feb 15  2016 .cshrc  
-rw-r--r--  1 root  wheel  219 Feb 15  2016 .klogin  
-rw-r--r--  1 root  wheel  373 Feb 15  2016 .login  
-rw-r--r--  1 root  wheel  263 Feb 15  2016 .profile  
#
```

3. Gunakan perintah pwd untuk mengetahui direktori yang sedang aktif saat ini

```
# pwd  
/root  
#
```

4. Untuk membuka sebuah direktori bisa menggunakan cd dan untuk keluar dari sebuah direktori gunakan perintah cd ..

```
# cd ..  
# ls  
COPYRIGHT      dev            libexec        root           usr  
bin             etc            mnt            sbin           var  
boot           home          pfs            sys  
compat         lib           proc           tmp  
#
```

5. Gunakan perintah mkdir untuk membuat sebuah direktori

```
# mkdir emir
# ls
COPYRIGHT      dev            lib            proc           tmp
bin            emir          libexec       root           usr
boot           etc           mnt           sbin          var
compat         home         pfs           sys
#
```

6. Gunakan perintah rmdir untuk menghapus sebuah direktori

```
# ls
COPYRIGHT      dev            lib            proc           tmp
bin            emir          libexec       root           usr
boot           etc           mnt           sbin          var
compat         home         pfs           sys
# rmdir emir
# ls
COPYRIGHT      dev            libexec       root           usr
bin            etc           mnt           sbin          var
boot           home         pfs           sys
compat         lib          proc          tmp
#
```

7. Gunakan perintah cp untuk menduplikasi file ataupun direktori

```
# ls
copythis      tothis
# cp copythis tothis
# ls
copythis      tothis
# cd tothis
# ls
copythis
#
```

8. Gunakan perintah mv untuk merubah nama file atau direktori

```
# ls
copythis
# mv copythis copied
# ls
copied
#
```

9. Gunakan perintah mv untuk memindahkan file atau direktori

```
# pwd
/emir
# ls
copythis      tothis
# mv /emir/copythis /emir/tothis
# ls
tothis
# cd tothis
# ls
copied        copythis
#
```

10. Gunakan perintah rm untuk menghapus file

```
# ls
copied        copythis
# rm copied
# ls
copythis
#
```

11. Gunakan perintah more untuk membaca isi dari sebuah file

```
#
# $FreeBSD: src/etc/etc.i386/ttys,v 1.8 2000/01/29 12:18:03 obrien Exp $
#      @(#)ttys      5.1 (Berkeley) 4/17/89
#
# This file specifies various information about terminals on the system.
# It is used by several different programs.  Common entries for the
# various columns include:
#
# name  The name of the terminal device.
#
# getty The program to start running on the terminal.  Typically a
#       getty program, as the name implies.  Other common entries
#       include none, when no getty is needed, and xdm, to start the
#       X Window System.
#
# type  The initial terminal type for this port.  For hardwired
#       terminal lines, this will contain the type of terminal used.
#       For virtual consoles, the correct type is cons25.  Other
#       common values include network for network connections on
#       pseudo-terminals, dialup for incoming modem ports, and unknown
#       when the terminal type cannot be predetermined.
#
# status Must be on or off.  If on, init will run the getty program on
#       the specified port.  If the word "secure" appears, this tty
--More--(14%)
```

12. Gunakan perintah tail untuk membaca sebagian isi dari file dimulai dari baris terbawah

```
# tail passwd
bind:*:53:53:Bind Sandbox:/:/sbin/nologin
proxy:*:62:62:Packet Filter pseudo-user:/nonexistent:/sbin/nologin
pflogd:*:64:64:pflogd privsep user:/var/empty:/sbin/nologin
uucp:*:66:66:UUCP pseudo-user:/var/spool/uucppublic:/usr/libexec/uucp/uucico
xten:*:67:67:X-10 daemon:/usr/local/xten:/sbin/nologin
pop:*:68:6:Post Office Owner:/nonexistent:/sbin/nologin
sdpd:*:70:70:sdpd privsep user:/var/empty:/sbin/nologin
dhcp:*:77:77:DHCP programs:/var/empty:/sbin/nologin
www:*:80:80:World Wide Web Owner:/nonexistent:/sbin/nologin
nobody:*:65534:65534:Unprivileged user:/nonexistent:/sbin/nologin
#
```

13. Gunakan perintah head untuk membaca sebagian isi dari file dimulai dari baris teratas

```
# head passwd
# $FreeBSD: src/etc/master.passwd,v 1.25.2.6 2002/06/30 17:57:17 des Exp $
#
root:*:0:0:Charlie &:/root:/bin/csh
toor:*:0:0:Bourne-again Superuser:/root:
daemon:*:1:1:Owner of many system processes:/root:/sbin/nologin
operator:*:2:5:System &:/sbin/nologin
bin:*:3:7:Binaries Commands and Source:/:/sbin/nologin
tty:*:4:65533:Tty Sandbox:/:/sbin/nologin
kmem:*:5:65533:KMem Sandbox:/:/sbin/nologin
mail:*:6:6:Mail user:/nonexistent:/sbin/nologin
#
```

14. Gunakan perintah find untuk mencari sebuah direktori atau file

```
# find /emir -name "copythis"
/emir/tothis/copythis
#
```

15. Gunakan perintah grep untuk mencari kata dari sebuah file

```
# grep "daemon" /etc/passwd
daemon:*:1:1:Owner of many system processes:/root:/sbin/nologin
xten:*:67:67:X-10 daemon:/usr/local/xten:/sbin/nologin
#
```

16. Gunakan perintah ps untuk melihat proses yang sedang berjalan pada OS

```
# ps
  PID TT  STAT      TIME COMMAND
  904 v0  IOLs    0:00.00 login [pam] (login)
  912 v0  SOL     0:00.02 -csh (csh)
  998 v0  ROL+    0:00.00 ps
  905 v1  IOLs+   0:00.00 /usr/libexec/getty Pc ttyv1
  906 v2  IOLs+   0:00.01 /usr/libexec/getty Pc ttyv2
  907 v3  IOLs+   0:00.00 /usr/libexec/getty Pc ttyv3
  908 v4  IOLs+   0:00.00 /usr/libexec/getty Pc ttyv4
  909 v5  IOLs+   0:00.00 /usr/libexec/getty Pc ttyv5
  910 v6  IOLs+   0:00.00 /usr/libexec/getty Pc ttyv6
  911 v7  IOLs+   0:00.00 /usr/libexec/getty Pc ttyv7
#
```

17. Gunakan perintah top untuk melihat proses yang sedang berjalan secara realtime pada OS

```
load averages: 0.00, 0.00, 0.00; up 0+00:24:42 00:44:25
13 processes: 1 running, 13 active
CPU states: 0.0% user, 0.0% nice, 0.8% system, 0.0% interrupt, 99.2% idle
Memory: 9852K Active, 5996K Inact, 78M Wired, 59M Buf, 360M Free
Swap: 1024M Total, 1024M Free
```

PID	USERNAME	NICE	SIZE	RES	STATE	C	TIME	CTIME	CPU	COMMAND
912	root	0	3780K	2968K	pause	0	0:00	0:00	0.00%	csch
906	root	0	2948K	1444K	tttyin	0	0:00	0:00	0.00%	getty
473	root	0	2580K	1232K	kqread	0	0:00	0:00	0.00%	syslogd
910	root	0	2948K	1444K	tttyin	0	0:00	0:00	0.00%	getty
911	root	0	2948K	1444K	tttyin	0	0:00	0:00	0.00%	getty
908	root	0	2948K	1444K	tttyin	0	0:00	0:00	0.00%	getty
909	root	0	2948K	1444K	tttyin	0	0:00	0:00	0.00%	getty
907	root	0	2948K	1444K	tttyin	0	0:00	0:00	0.00%	getty
905	root	0	2948K	1444K	tttyin	0	0:00	0:00	0.00%	getty
999	root	0	4588K	2448K	CPU0	0	0:00	0:00	0.00%	top
904	root	0	3852K	1864K	wait	0	0:00	0:00	0.00%	login
822	root	0	3400K	1304K	nanslp	0	0:00	0:00	0.00%	cron
407	root	0	9300K	336K	kqread	0	0:00	0:00	0.00%	devd

18. Gunakan perintah shutdown -h now untuk melakukan shutdown dan perintah shutdown -r now untuk melakukan restart OS

```
# shutdown -h now
Shutdown NOW!
shutdown: [pid 1001]
#
*** FINAL System shutdown message from root@ ***
System going down IMMEDIATELY

May 16 00:44:53 shutdown: halt by root:

# shutdown -r now
Shutdown NOW!
shutdown: [pid 921]
#
*** FINAL System shutdown message from root@ ***
System going down IMMEDIATELY

May 16 00:46:55 shutdown: reboot by root:

System shutdown time has arrived
```

19. Untuk mematikan proses yang sedang berjalan bisa menggunakan perintah `ps -aux | grep "nama perintah"`

```
# shutdown -r +60 &
[1] 920
# Shutdown at Wed May 16 01:49:45 2018.
shutdown: [pid 921]

*** System shutdown message from root@ ***
System going down at 01:49

ps -aux | grep "shutdown"
root    921  0.0  0.2  2464  1008 ??  S0<Ls  12:49AM  0:00.00 shutdown -r +6
root    926  0.0  0.1   640   472 v0  RQ0L+  12:50AM  0:00.00 grep shutdown
[1]  + Done
                                shutdown -r +60
#
```

20. Untuk penambahan user gunakan perintah `adduser`

```
Login class [default]:
Shell (sh csh tcsh git-shell nologin) [sh]:
Home directory [/home/emir]:
Home directory permissions (Leave empty for default):
Use password-based authentication? [yes]:
Use an empty password? (yes/no) [no]:
Use a random password? (yes/no) [no]:
Enter password:
Enter password again:
Lock out the account after creation? [no]:
Username      : emir
Password      : *****
Full Name     : emir
Uid           : 1001
Class        :
Groups       : emir wheel
Home         : /home/emir
Home Mode    :
Shell        : /bin/sh
Locked       : no
OK? (yes/no): y
adduser: INFO: Successfully added (emir) to the user database.
Add another user? (yes/no): n
Goodbye!
#
```

21. Gunakan perintah `passwd` “nama pengguna” untuk mengganti password sebuah user melalui root

```
# passwd emir
Changing local password for emir
New Password:
Retype New Password:
#
```

22. Gunakan perintah `df -h` untuk melihat penggunaan harddisk

```
# df -h
Filesystem                Size      Used Avail Capacity  Mounted on
ROOT                      8.4G      1.1G   7.3G     14%      /
devfs                     1.0K      1.0K     0B    100%    /dev
/dev/serno/UB7b92b123-75b3a1e2.s1a 1.0G    144M   784M     15%    /boot
/pfs/@@-1:00001           8.4G      1.1G   7.3G     14%    /var
/pfs/@@-1:00002           8.4G      1.1G   7.3G     14%    /tmp
/pfs/@@-1:00003           8.4G      1.1G   7.3G     14%    /home
/pfs/@@-1:00004           8.4G      1.1G   7.3G     14%    /usr/obj
/pfs/@@-1:00005           8.4G      1.1G   7.3G     14%    /var/crash
/pfs/@@-1:00006           8.4G      1.1G   7.3G     14%    /var/tmp
procfs                    4.0K      4.0K     0B    100%    /proc
#
```

23. Gunakan perintah `du` untuk mengetahui jumlah direktori dalam sebuah folder

```
# du emir
0      emir/tothis
0      emir
#
```

24. Gunakan simbol `|` untuk menggabungkan beberapa perintah kode

```
# mkdir 1 | mkdir 2 | ls
1      compat      etc      pfs      sys
2      dev         home     proc     tmp
COPYRIGHT  emir         lib      ramon    usr
bin       emirramon  libexec  root     var
boot     entropy    mnt      sbin
#
```

25. Gunakan perintah `su` untuk mengganti user

```
# su emir
$ whoami
emir
$
```

Perintah dasar pada OS FreeBSD

1. Gunakan perintah `whoami` untuk melihat user yang sedang aktif

```
Welcome to FreeBSD!

Release Notes, Errata: https://www.FreeBSD.org/releases/
Security Advisories:  https://www.FreeBSD.org/security/
FreeBSD Handbook:     https://www.FreeBSD.org/handbook/
FreeBSD FAQ:          https://www.FreeBSD.org/faq/
Questions List:       https://lists.FreeBSD.org/mailman/listinfo/freebsd-questions/
FreeBSD Forums:       https://forums.FreeBSD.org/

Documents installed with the system are in the /usr/local/share/doc/freebsd/
directory, or can be installed later with:  pkg install en-freebsd-doc
For other languages, replace "en" with a language code like de or fr.

Show the version of FreeBSD installed:  freebsd-version ; uname -a
Please include that output and any error messages when posting questions.
Introduction to manual pages:  man man
FreeBSD directory layout:      man hier

Edit /etc/motd to change this login announcement.
root@:~ # whoami
root
root@:~ #
```


2. Gunakan perintah `ls` untuk menampilkan isi dari direktori dan `ls -l` untuk informasi lebih detail dari isi sebuah direktori.

```
root@:/ # ls
.cshrc      COPYRIGHT    etc          mnt          sbin
.profile    bin          home         net          sys
.rnd        boot        lib          proc         tmp
.snap       dev         libexec      rescue       usr
.su.journal entropy     media        root         var
root@:/ #
```

```
-rw-r--r--  2 root wheel      249 Jul 21  2017 .profile
-rw-----  1 root wheel    1024 May  1 01:10 .rnd
drwxrwxr-x  2 root operator  512 May  1 01:06 .snap
-r-----  1 root wheel 33554432 May  1 01:06 .su.journal
-r--r--r--  1 root wheel   6199 Jul 21  2017 COPYRIGHT
drwxr-xr-x  2 root wheel   1024 Jul 21  2017 bin
drwxr-xr-x  8 root wheel   1536 May  1 01:09 boot
dr-xr-xr-x  8 root wheel    512 May  1 01:10 dev
-rw-----  1 root wheel   4096 May  1 01:10 entropy
drwxr-xr-x 27 root wheel   2560 May  1 01:12 etc
lrwxr-xr-x  1 root wheel     8 May  1 01:12 home -> usr/home
drwxr-xr-x  4 root wheel   1536 Jul 21  2017 lib
drwxr-xr-x  3 root wheel    512 May  1 01:06 libexec
drwxr-xr-x  2 root wheel    512 May  1 01:54 media
drwxr-xr-x  2 root wheel    512 Jul 21  2017 mnt
drwxr-xr-x  2 root wheel    512 Jul 21  2017 net
dr-xr-xr-x  2 root wheel    512 Jul 21  2017 proc
drwxr-xr-x  2 root wheel   2560 Jul 21  2017 rescue
drwxr-xr-x  2 root wheel    512 May  1 01:54 root
drwxr-xr-x  2 root wheel   2560 Jul 21  2017 sbin
lrwxr-xr-x  1 root wheel    11 Jul 21  2017 sys -> usr/src/sys
drwxrwxrwt  6 root wheel    512 May  1 01:10 tmp
drwxr-xr-x 16 root wheel    512 May  1 01:12 usr
drwxr-xr-x 24 root wheel    512 May  1 01:10 var
root@:/ #
```

3. Gunakan perintah `pwd` untuk mengetahui direktori yang sedang aktif saat ini

```
root@:/ # ls
.cshrc      COPYRIGHT    etc          mnt          sbin
.profile    bin          home         net          sys
.rnd        boot        lib          proc         tmp
.snap       dev         libexec      rescue       usr
.su.journal entropy     media        root         var
root@:/ # cd root
root@:~ # pwd
/root
root@:~ # ls
.cshrc      .history     .k5login     .login       .profile
root@:~ # pwd
/root
root@:~ #
```

4. Untuk membuka sebuah direktori bisa menggunakan `cd` dan untuk keluar dari sebuah direktori gunakan perintah `cd ..`

```
/root
root@:~ # cd ..
root@:/ # pwd
/
root@:/ # ls
.cshrc      COPYRIGHT  etc        mnt        sbin
.profile    bin        home       net        sys
.rnd        boot      lib        proc       tmp
.snap       dev       libexec    rescue     usr
.su.journal entropy    media      root       var
root@:/ #
```

5. Gunakan perintah `mkdir` untuk membuat sebuah direktori

```
root@:/ # ls
.cshrc      COPYRIGHT  etc        mnt        sbin
.profile    bin        home       net        sys
.rnd        boot      lib        proc       tmp
.snap       dev       libexec    rescue     usr
.su.journal entropy    media      root       var
root@:/ # mkdir emirramon
root@:/ # ls
.cshrc      bin        home       proc       usr
.profile    boot      lib        rescue     var
.rnd        dev       libexec    root
.snap       emirramon media      sbin
.su.journal entropy    mnt        sys
COPYRIGHT  etc        net        tmp
root@:/ #
```

6. Gunakan perintah `rmdir` untuk menghapus sebuah direktori

```
root@:/ # mkdir emirramon
root@:/ # ls
.cshrc      bin        home       proc       usr
.profile    boot      lib        rescue     var
.rnd        dev       libexec    root
.snap       emirramon media      sbin
.su.journal entropy    mnt        sys
COPYRIGHT  etc        net        tmp
root@:/ # rmdir emirramon
root@:/ # ls
.cshrc      COPYRIGHT  etc        mnt        sbin
.profile    bin        home       net        sys
.rnd        boot      lib        proc       tmp
.snap       dev       libexec    rescue     usr
.su.journal entropy    media      root       var
root@:/ #
```

7. Gunakan perintah cp untuk menduplikasi file ataupun direktori

```
root@:/home/emirramon/games # ls
pubg
root@:/home/emirramon/games # pwd
/usr/home/emirramon/games
root@:/home/emirramon/games # cp /usr/home/emirramon/games/pubg /usr/home/emirramon/software
root@:/home/emirramon/games # ls
pubg
root@:/home/emirramon/games # cd ..
root@:/home/emirramon # cd software
root@:/home/emirramon/software # ls
pubg
root@:/home/emirramon/software #
```

8. Gunakan perintah mv untuk merubah nama file atau direktori

```
root@:/home/emirramon # cd software
root@:/home/emirramon/software # ls
pubg
root@:/home/emirramon/software # ls
pubg
root@:/home/emirramon/software # mv pubg installpubg
root@:/home/emirramon/software # ls
installpubg
root@:/home/emirramon/software #
```

9. Gunakan perintah mv untuk memindahkan file atau direktori

```
root@:/home/emirramon/games # pwd
/usr/home/emirramon/games
root@:/home/emirramon/games # ls
pubg
root@:/home/emirramon/games # mv pubg movies
root@:/home/emirramon/games # ls
movies
root@:/home/emirramon/games # mv movies pubg
root@:/home/emirramon/games # ls
pubg
root@:/home/emirramon/games # mv /usr/home/emirramon/games/pubg /usr/home/emirramon/movies
root@:/home/emirramon/games # ls
root@:/home/emirramon/games # cd ..
root@:/home/emirramon # cd movies
root@:/home/emirramon/movies # ls
pubg
root@:/home/emirramon/movies #
```

10. Gunakan perintah rm untuk menghapus file

```
root@:/home/emirramon # cd movies
root@:/home/emirramon/movies # ls
pubg
root@:/home/emirramon/movies # rm pubg
root@:/home/emirramon/movies # ls
root@:/home/emirramon/movies #
```

11. Gunakan perintah more untuk membaca isi dari sebuah file

```
root@:/ # ls
.cshrc      COPYRIGHT    etc          mnt          sbin
.profile    bin          home         net          sys
.rnd        boot         lib          proc         tmp
.snap       dev          libexec      rescue       usr
.su.journal entropy     media        root         var
root@:/ # more .profile
# $FreeBSD: releng/11.1/etc/root/dot.profile 278616 2015-02-12 05:35:00Z cperciv
a $
#
PATH=/sbin:/bin:/usr/sbin:/usr/bin:/usr/local/sbin:/usr/local/bin:~/bin
export PATH
HOME=/root
export HOME
TERM=${TERM:-xterm}
export TERM
PAGER=more
export PAGER
--More--(END)
```

12. Gunakan perintah tail untuk membaca sebagian isi dari file dimulai dari baris terbawah

```
root@:/ # ls
.cshrc      COPYRIGHT    etc          mnt          sbin
.profile    bin          home         net          sys
.rnd        boot         lib          proc         tmp
.snap       dev          libexec      rescue       usr
.su.journal entropy     media        root         var
root@:/ # tail -1 .profile
export PAGER
root@:/ # tail -2 .profile
PAGER=more
export PAGER
root@:/ # tail -7 .profile
export PATH
HOME=/root
export HOME
TERM=${TERM:-xterm}
export TERM
PAGER=more
export PAGER
root@:/ #
```

13. Gunakan perintah head untuk membaca sebagian isi dari file dimulai dari baris teratas

```
root@:/ # ls
.cshrc      COPYRIGHT    etc          mnt          sbin
.profile    bin          home         net          sys
.rnd        boot         lib          proc         tmp
.snap       dev          libexec      rescue       usr
.su.journal entropy     media        root         var
root@:/ # head -4 .profile
# $FreeBSD: releng/11.1/etc/root/dot.profile 278616 2015-02-12 05:35:00Z cperciv
a $
#
PATH=/sbin:/bin:/usr/sbin:/usr/bin:/usr/local/sbin:/usr/local/bin:~/bin
export PATH
root@:/ #
root@:/ #
```

14. Gunakan perintah find untuk mencari sebuah direktori atau file

```
root@:/ # ls
.cshrc          COPYRIGHT      etc            mnt            sbin
.profile        bin           home          net            sys
.rnd            boot          lib           proc           tmp
.snap           dev           libexec       rescue         usr
.su.journal     entropy       media         root           var
root@:/ # find usr -name "installpubg"
usr/home/emirramon/software/installpubg
root@:/ #
```

15. Gunakan perintah grep untuk mencari kata dari sebuah file

```
root@:/ # ls
.cshrc          COPYRIGHT      etc            mnt            sbin
.profile        bin           home          net            sys
.rnd            boot          lib           proc           tmp
.snap           dev           libexec       rescue         usr
.su.journal     entropy       media         root           var
root@:/ # grep "root" /etc/passwd
root:*:0:0:Charlie &:/root:/bin/csh
toor:*:0:0:Bourne-again Superuser:/root:
daemon:*:1:1:Owner of many system processes:/root:/usr/sbin/nologin
root@:/ #
```

16. Gunakan perintah ps untuk melihat proses yang sedang berjalan pada OS

```
root@:/ # ps
  PID TT  STAT      TIME COMMAND
  854 v0  Is   0:00.01 login [pam] (login)
  855 v0  S    0:00.14 -csh (csh)
1383 v0  R+   0:00.00 ps
  702 v1  Is+  0:00.00 /usr/libexec/getty Pc ttyv1
  703 v2  Is+  0:00.00 /usr/libexec/getty Pc ttyv2
  704 v3  Is+  0:00.00 /usr/libexec/getty Pc ttyv3
  705 v4  Is+  0:00.00 /usr/libexec/getty Pc ttyv4
  706 v5  Is+  0:00.00 /usr/libexec/getty Pc ttyv5
  707 v6  Is+  0:00.00 /usr/libexec/getty Pc ttyv6
  708 v7  Is+  0:00.00 /usr/libexec/getty Pc ttyv7
root@:/ #
```

17. Gunakan perintah top untuk melihat proses yang sedang berjalan secara realtime pada OS

```
last pid: 1384: load averages: 0.43, 0.47, 0.40 up 0+01:56:00 03:06:13
16 processes: 1 running, 15 sleeping
CPU: 0.0% user, 0.0% nice, 0.0% system, 0.0% interrupt, 100% idle
Mem: 4828K Active, 133M Inact, 79M Wired, 12M Buf, 250M Free
Swap: 512M Total, 512M Free

  PID USERNAME   THR PRI NICE   SIZE    RES STATE   TIME    WCPU COMMAND
 1384 root          1  20    0 20160K   3336K RUN      0:00    0.01% top
   649 root          1  20    0 20636K   6336K select  0:00    0.00% sendmail
   352 root          1  20    0  9560K   5044K select  0:01    0.00% devd
   423 root          1  20    0 10492K   2384K select  0:00    0.00% syslogd
   855 root          1  20    0 19660K   3628K pause   0:00    0.00% csh
   656 root          1  20    0 12592K   2428K nanslp  0:00    0.00% cron
   854 root          1  20    0 43764K   2948K wait    0:00    0.00% login
   707 root          1  52    0 10484K   2076K ttyin   0:00    0.00% getty
   652 smmsp        1  20    0 20636K   6032K pause   0:00    0.00% sendmail
   708 root          1  52    0 10484K   2076K ttyin   0:00    0.00% getty
   702 root          1  52    0 10484K   2076K ttyin   0:00    0.00% getty
   704 root          1  52    0 10484K   2076K ttyin   0:00    0.00% getty
   706 root          1  52    0 10484K   2076K ttyin   0:00    0.00% getty
   705 root          1  52    0 10484K   2076K ttyin   0:00    0.00% getty
   703 root          1  52    0 10484K   2076K ttyin   0:00    0.00% getty
   621 root          1  52    0 57812K   7172K select  0:00    0.00% sshd
```

18. Gunakan perintah shutdown -h now untuk melakukan shutdown dan perintah shutdown -r now untuk melakukan restart OS

```
root@:~ # shutdown -h now
Shutdown NOW!
shutdown: [pid 689]
root@:~ #

*** FINAL System shutdown message from root@ ***

System going down IMMEDIATELY

System shutdown time has arrived
May 1 03:15:16 shutdown: halt by root:
Stopping cron.
Stopping sshd.
Stopping devd.
Writing entropy file:.
Writing early boot entropy file:.
Terminated
.
May 1 03:15:16 syslogd: exiting on signal 15
Waiting (max 60 seconds) for system process `vnlr' to stop... done
Waiting (max 60 seconds) for system process `bufdaemon' to stop... done
Waiting (max 60 seconds) for system process `syncer' to stop...
Syncing disks, vnodes remaining... 0 0
```

```
root@:~ # shutdown -r now
Shutdown NOW!
shutdown: [pid 685]
root@:~ #

*** FINAL System shutdown message from root@ ***

System going down IMMEDIATELY

System shutdown time has arrived
May 1 03:17:44 shutdown: reboot by root:
Stopping cron.
Stopping sshd.
Stopping devd.
Writing entropy file:.
Writing early boot entropy file:.
Terminated
.
May 1 03:17:44 syslogd: exiting on signal 15
Waiting (max 60 seconds) for system process `vnlr' to stop... done
Waiting (max 60 seconds) for system process `bufdaemon' to stop... done
Waiting (max 60 seconds) for system process `syncer' to stop...
Syncing disks, vnodes remaining... 2
```

19. Untuk mematikan proses yang sedang berjalan bisa menggunakan perintah `ps -aux | grep "nama perintah"`

```
root@:~ # ps -aux | grep "shutdown"
root 694  0.0  0.1  412  328 v0  R+   03:24   0:00.00 grep shutdown
root@:~ # kill 694
694: No such process
root@:~ # ps -aux | grep "login"
root 674  0.0  0.6 43764 2948 v0  Is   03:18   0:00.01 login [pam] (login)
root 698  0.0  0.1  412  328 v0  R+   03:25   0:00.00 grep login
root@:~ # kill 674
root@:~ #
FreeBSD/amd64 (Amnesiac) (ttyv0)
login: █
```

20. Untuk penambahan user gunakan perintah `adduser`

```
Login group [moonra]:
Login group is moonra. Invite moonra into other groups? [!]: wheel
Login class [default]:
Shell (sh csh tcsh nologin) [sh]:
Home directory [/home/moonra]:
Home directory permissions (Leave empty for default):
Use password-based authentication? [yes]:
Use an empty password? (yes/no) [no]:
Use a random password? (yes/no) [no]:
Enter password:
Enter password again:
Lock out the account after creation? [no]:
Username      : moonra
Password      : *****
Full Name     : moonra
Uid           : 1002
Class        :
Groups       : moonra wheel
Home         : /home/moonra
Home Mode    :
Shell        : /bin/sh
Locked       : no
OK? (yes/no): y
adduser: INFO: Successfully added (moonra) to the user database.
Add another user? (yes/no): █
```

21. Gunakan perintah `passwd` "nama pengguna" untuk mengganti password sebuah user melalui root

```
root@:~ # passwd moonra
Changing local password for moonra
New Password:
Retype New Password:
Mismatch; try again, EOF to quit.
New Password:
Retype New Password:
root@:~ # █
```

22. Gunakan perintah `df -h` untuk melihat penggunaan harddisk

```
root@:~ # whoami
root
root@:~ # df -h
Filesystem      Size  Used Avail Capacity  Mounted on
/dev/ada0s1a    9.2G  1.5G   6.9G    18%      /
devfs           1.0K  1.0K   0B    100%    /dev
root@:~ # █
```


23. Gunakan perintah `du` untuk mengetahui jumlah direktori dalam sebuah folder

```
root@:~ # df -h
Filesystem      Size  Used Avail Capacity  Mounted on
/dev/ada0s1a    9.2G  1.5G   6.9G    18%      /
devfs           1.0K  1.0K   0B    100%     /dev
root@:~ # du /usr/home/emirramon
4      /usr/home/emirramon/games
4      /usr/home/emirramon/movies
4      /usr/home/emirramon/software
48     /usr/home/emirramon
root@:~ #
```

24. Gunakan symbol `|` untuk menggabungkan beberapa perintah kode

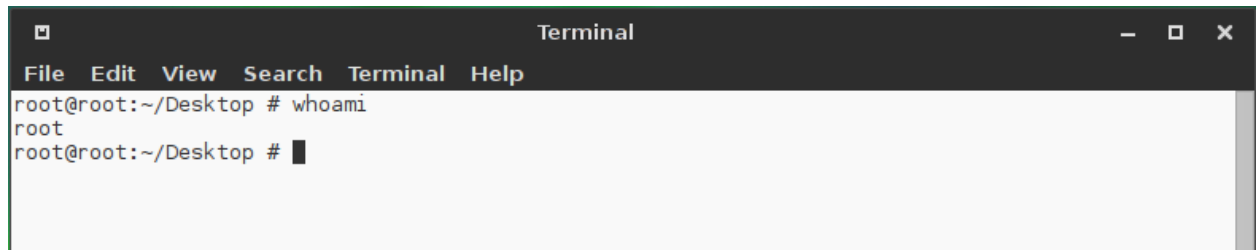
```
root@:/home/emirramon # mkdir photos | mkdir fotoku | mv /usr/home/emirramon/fotoku /usr/home/emirramon/photos
root@:/home/emirramon # ls
.cshrc          .mail_aliases  .rhosts        movies
.login          .mailrc        .shrc          photos
.login_conf     .profile       games          software
root@:/home/emirramon # photos
photos: Command not found.
root@:/home/emirramon # cd photos
root@:/home/emirramon/photos # ls
fotoku
root@:/home/emirramon/photos #
```

25. Gunakan perintah `su` untuk mengganti user

```
root@:/home/emirramon/photos # whoami
root
root@:/home/emirramon/photos # su emirramon
$
```

Perintah dasar pada OS GhostBSD

1. Gunakan perintah `whoami` untuk melihat user yang sedang aktif



```
root@root:~/Desktop # whoami
root
root@root:~/Desktop #
```

2. Gunakan perintah `ls` untuk menampilkan isi dari direktori dan `ls -l` untuk informasi lebih detail dari isi sebuah direktori.

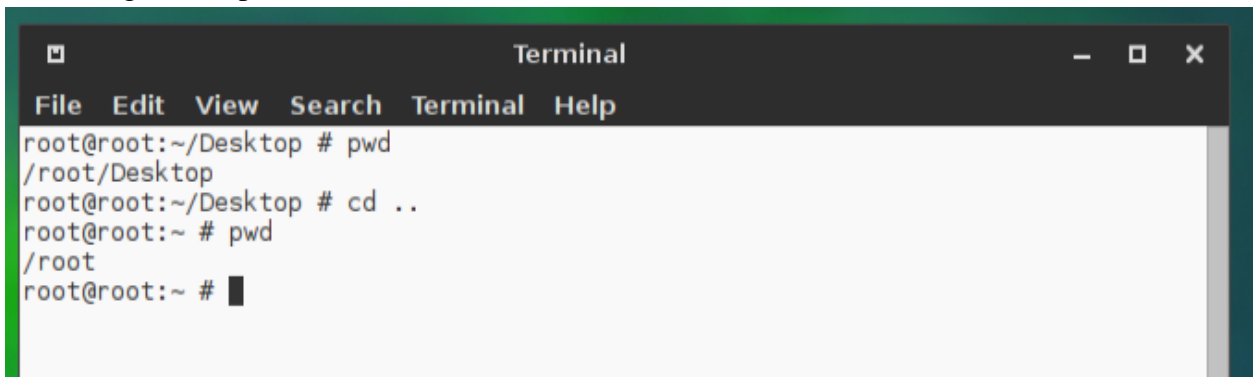
```
Terminal
File Edit View Search Terminal Help
root@root:~/Desktop # whoami
root
root@root:~/Desktop # ls
root@root:~/Desktop # cd ..
root@root:~ # ls
.ICEauthority          .local                Desktop
.cache                 .login               Documents
.config                .profile             Downloads
.cshrc                 .vboxclient-clipboard.pid  Movies
.dbus                  .vboxclient-display.pid  Music
.gtk-bookmarks         .vboxclient-draganddrop.pid  Pictures
.gvfs                  .vboxclient-hostversion.pid  pc-sysinstall.log
.history                .vboxclient-seamless.pid
.k5login                .xprofile
root@root:~ #
```

```
Terminal
File Edit View Search Terminal Help
.history                .vboxclient-seamless.pid
.k5login                .xprofile
root@root:~ # ls -l
total 100
-rw----- 1 root wheel 374 Apr 30 21:38 .ICEauthority
drwx----- 8 root wheel 512 Apr 30 21:38 .cache
drwxr-xr-x 6 root wheel 512 Apr 24 20:03 .config
-r--r--r-- 2 root wheel 966 Sep 12 2015 .cshrc
drwx----- 3 root wheel 512 Apr 24 20:03 .dbus
-r--r--r-- 1 root wheel 149 Sep 12 2015 .gtk-bookmarks
drwx----- 2 root wheel 512 Apr 24 20:03 .gvfs
-rw----- 1 root wheel 41 Apr 30 21:46 .history
-r--r--r-- 1 root wheel 149 Sep 12 2015 .k5login
drwx----- 3 root wheel 512 Apr 24 20:03 .local
-r--r--r-- 1 root wheel 297 Sep 12 2015 .login
-r--r--r-- 2 root wheel 254 Sep 12 2015 .profile
-rw-r----- 1 root wheel 5 Apr 30 21:38 .vboxclient-clipboard.pid
-rw-r----- 1 root wheel 5 Apr 30 21:38 .vboxclient-display.pid
-rw-r----- 1 root wheel 5 Apr 30 21:38 .vboxclient-draganddrop.pid
-rw-r----- 1 root wheel 6 Apr 30 22:13 .vboxclient-hostversion.pid
-rw-r----- 1 root wheel 6 Apr 30 22:13 .vboxclient-seamless.pid
-rwxr-xr-x 1 root wheel 32 Apr 24 20:00 .xprofile
drwxr-xr-x 2 root wheel 512 Apr 24 20:03 Desktop
dr-xr-xr-x 2 root wheel 512 Sep 12 2015 Documents
dr-xr-xr-x 2 root wheel 512 Sep 12 2015 Downloads
dr-xr-xr-x 2 root wheel 512 Sep 12 2015 Movies
dr-xr-xr-x 2 root wheel 512 Sep 12 2015 Music
dr-xr-xr-x 2 root wheel 512 Sep 12 2015 Pictures
-rw-r--r-- 1 root wheel 2362 Apr 24 20:00 pc-sysinstall.log
root@root:~ #
```

3. Gunakan perintah pwd untuk mengetahui direktori yang sedang aktif saat ini

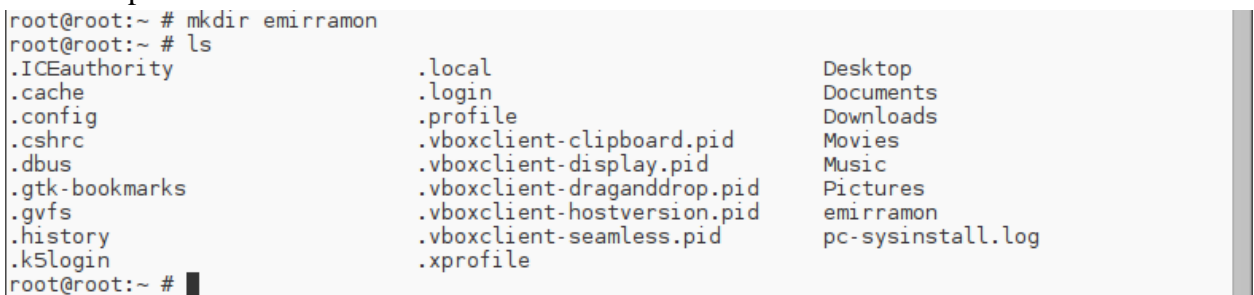
```
Terminal
File Edit View Search Terminal Help
root@root:~/Desktop # pwd
/root/Desktop
root@root:~/Desktop #
```

4. Untuk membuka sebuah direktori bisa menggunakan `cd` dan untuk keluar dari sebuah direktori gunakan perintah `cd ..`



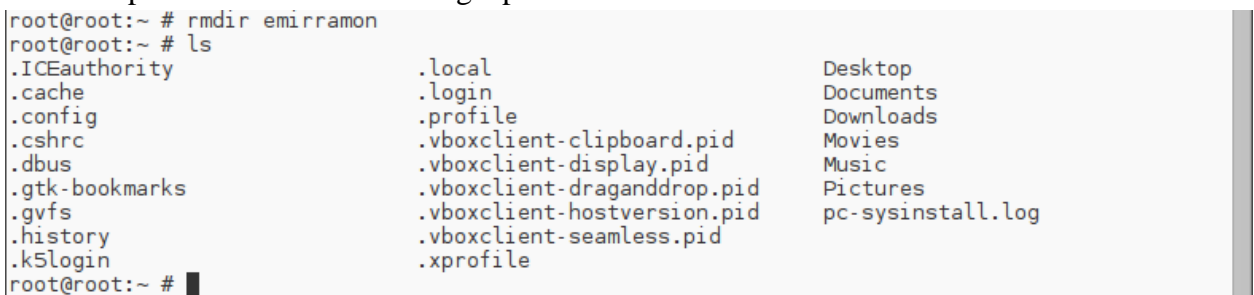
```
Terminal
File Edit View Search Terminal Help
root@root:~/Desktop # pwd
/root/Desktop
root@root:~/Desktop # cd ..
root@root:~ # pwd
/root
root@root:~ #
```

5. Gunakan perintah `mkdir` untuk membuat sebuah direktori



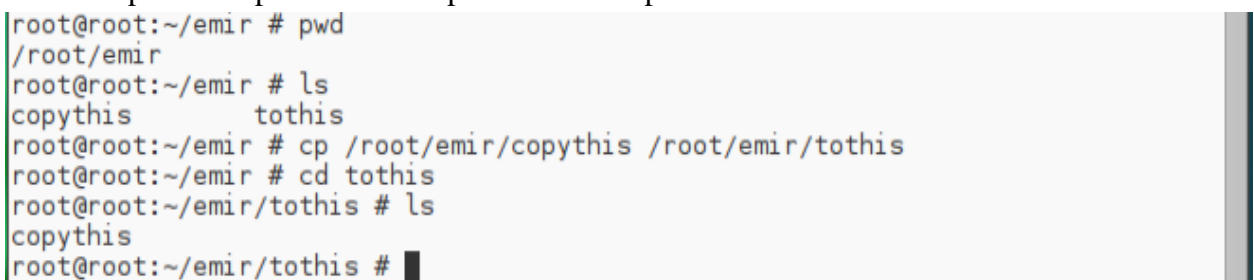
```
root@root:~ # mkdir emirramon
root@root:~ # ls
.ICEauthority      .local             Desktop
.cache             .login             Documents
.config            .profile            Downloads
.cshrc              .vboxclient-clipboard.pid  Movies
.dbus               .vboxclient-display.pid   Music
.gtk-bookmarks      .vboxclient-draganddrop.pid Pictures
.gvfs               .vboxclient-hostversion.pid emirramon
.history             .vboxclient-seamless.pid  pc-sysinstall.log
.k5login            .xprofile
```

6. Gunakan perintah `rmdir` untuk menghapus sebuah direktori



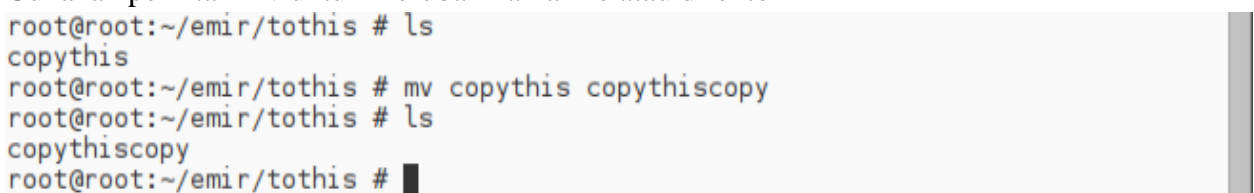
```
root@root:~ # rmdir emirramon
root@root:~ # ls
.ICEauthority      .local             Desktop
.cache             .login             Documents
.config            .profile            Downloads
.cshrc              .vboxclient-clipboard.pid  Movies
.dbus               .vboxclient-display.pid   Music
.gtk-bookmarks      .vboxclient-draganddrop.pid Pictures
.gvfs               .vboxclient-hostversion.pid pc-sysinstall.log
.history             .vboxclient-seamless.pid
.k5login            .xprofile
```

7. Gunakan perintah `cp` untuk menduplikasi file ataupun direktori



```
root@root:~/emir # pwd
/root/emir
root@root:~/emir # ls
copythis          tothis
root@root:~/emir # cp /root/emir/copythis /root/emir/tothis
root@root:~/emir # cd tothis
root@root:~/emir/tothis # ls
copythis
root@root:~/emir/tothis #
```

8. Gunakan perintah `mv` untuk merubah nama file atau direktori



```
root@root:~/emir/tothis # ls
copythis
root@root:~/emir/tothis # mv copythis copythiscopy
root@root:~/emir/tothis # ls
copythiscopy
root@root:~/emir/tothis #
```

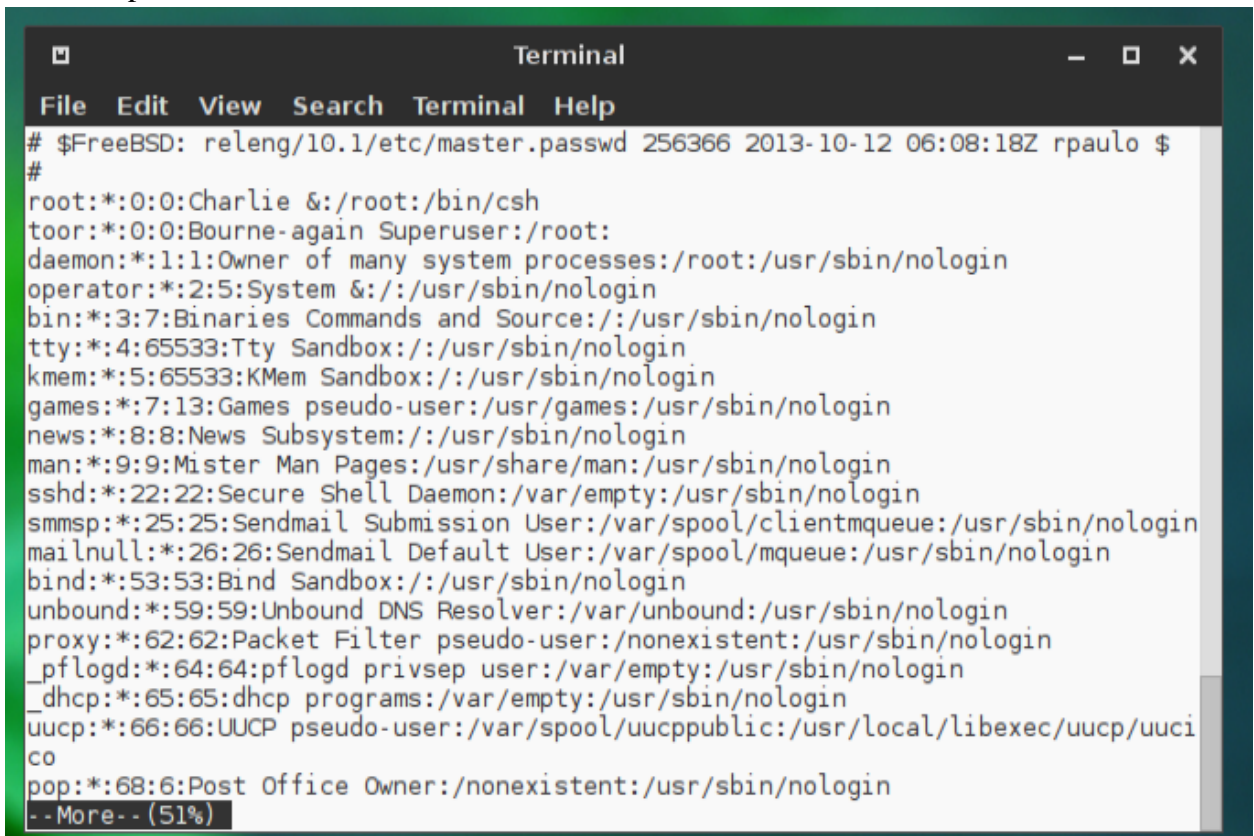
9. Gunakan perintah mv untuk memindahkan file atau direktori

```
root@root:~/emir/tothis # ls
copythiscopy
root@root:~/emir/tothis # mkdir movehere
root@root:~/emir/tothis # ls
copythiscopy  movehere
root@root:~/emir/tothis # mv /root/emir/tothis/copythiscopy /root/emir/tothis/movehere
root@root:~/emir/tothis # ls
movehere
root@root:~/emir/tothis # cd movehere
root@root:~/emir/tothis/movehere # ls
copythiscopy
root@root:~/emir/tothis/movehere #
```

10. Gunakan perintah rm untuk menghapus file

```
root@root:~/emir/tothis/movehere # ls
copythiscopy
root@root:~/emir/tothis/movehere # rm copythiscopy
root@root:~/emir/tothis/movehere # ls
root@root:~/emir/tothis/movehere #
```

11. Gunakan perintah more untuk membaca isi dari sebuah file



The screenshot shows a terminal window titled "Terminal" with a menu bar containing "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal output shows the command `# $FreeBSD: releng/10.1/etc/master.passwd 256366 2013-10-12 06:08:18Z rpaulo $` followed by the `#` prompt. The contents of the `/etc/master.passwd` file are displayed, showing system user entries. The output is truncated by the `more` command, showing `-- More -- (51%)` at the bottom.

```
# $FreeBSD: releng/10.1/etc/master.passwd 256366 2013-10-12 06:08:18Z rpaulo $
#
root:*:0:0:Charlie &:/root:/bin/csh
toor:*:0:0:Bourne-again Superuser:/root:
daemon:*:1:1:Owner of many system processes:/root:/usr/sbin/nologin
operator:*:2:5:System &:/usr/sbin/nologin
bin:*:3:7:Binaries Commands and Source:/usr/sbin/nologin
tty:*:4:65533:Tty Sandbox:/usr/sbin/nologin
kmem:*:5:65533:KMem Sandbox:/usr/sbin/nologin
games:*:7:13:Games pseudo-user:/usr/games:/usr/sbin/nologin
news:*:8:8:News Subsystem:/usr/sbin/nologin
man:*:9:9:Mister Man Pages:/usr/share/man:/usr/sbin/nologin
sshd:*:22:22:Secure Shell Daemon:/var/empty:/usr/sbin/nologin
smmsp:*:25:25:Sendmail Submission User:/var/spool/clientmqueue:/usr/sbin/nologin
mailnull:*:26:26:Sendmail Default User:/var/spool/mqueue:/usr/sbin/nologin
bind:*:53:53:Bind Sandbox:/usr/sbin/nologin
unbound:*:59:59:Unbound DNS Resolver:/var/unbound:/usr/sbin/nologin
proxy:*:62:62:Packet Filter pseudo-user:/nonexistent:/usr/sbin/nologin
_pflogd:*:64:64:pflogd privsep user:/var/empty:/usr/sbin/nologin
_dhcp:*:65:65:dhcp programs:/var/empty:/usr/sbin/nologin
uucp:*:66:66:UUCP pseudo-user:/var/spool/uucppublic:/usr/local/libexec/uucp/uucico
pop:*:68:6:Post Office Owner:/nonexistent:/usr/sbin/nologin
-- More -- (51%)
```

12. Gunakan perintah tail untuk membaca sebagian isi dari file dimulai dari baris terbawah

```
root@root:/etc # tail passwd
polkitd:*:565:565:Polkit Daemon User:/var/empty:/usr/sbin/nologin
polkit:*:562:562:PolicyKit User:/nonexistent:/usr/sbin/nologin
haldaemon:*:560:560:HAL Daemon User:/nonexistent:/usr/sbin/nologin
webcamd:*:145:145:Webcamd user:/var/empty:/usr/sbin/nologin
colord:*:970:970:colord color management daemon:/nonexistent:/usr/sbin/nologin
avahi:*:558:558:Avahi Daemon User:/nonexistent:/usr/sbin/nologin
pulse:*:563:563:PulseAudio System User:/nonexistent:/usr/sbin/nologin
gdm:*:92:92:GNOME Display Manager:/usr/local/etc/gdm/home:/usr/sbin/nologin
transmission:*:921:921:Transmission Daemon User:/usr/local/etc/transmission/home:/usr/sbin/nologin
emir:*:1001:1001:emirramon:/home/emir:/bin/sh
root@root:/etc #
```

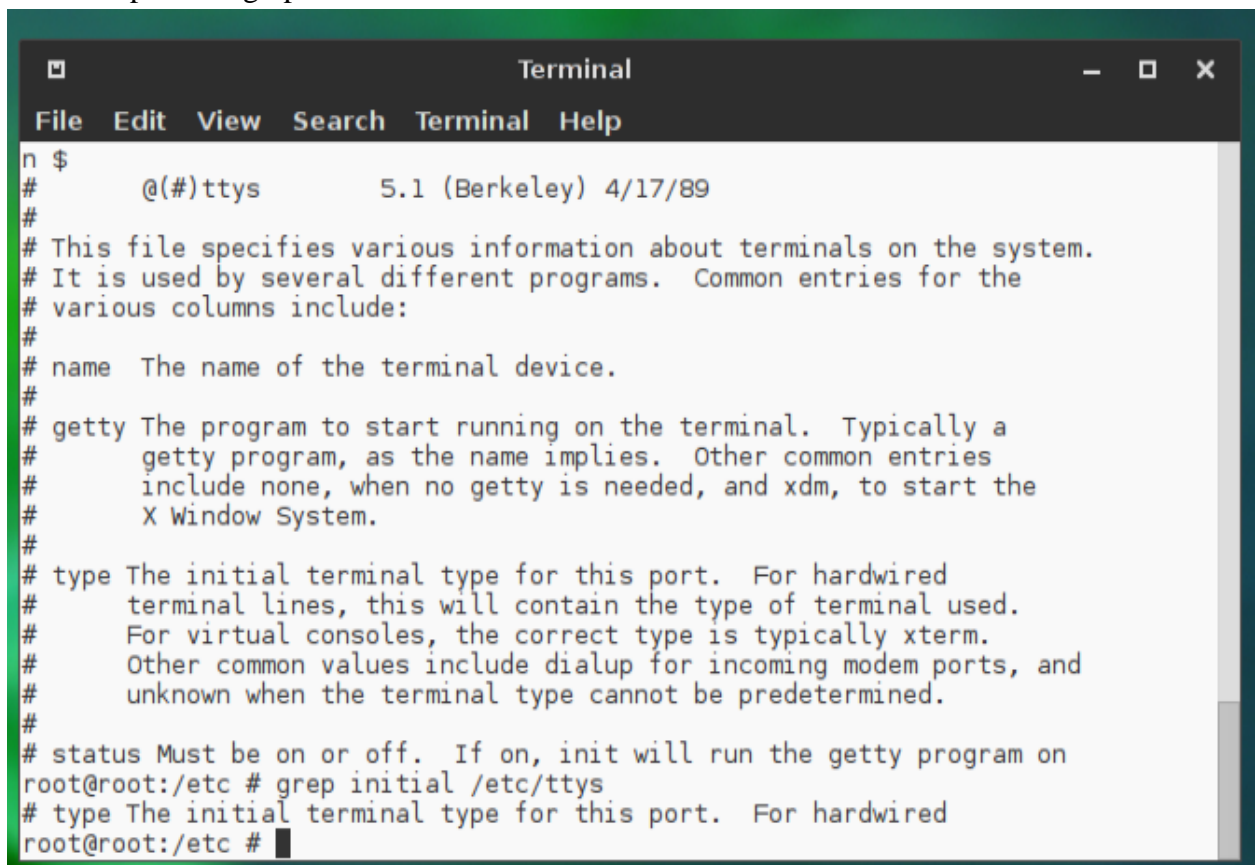
13. Gunakan perintah head untuk membaca sebagian isi dari file dimulai dari baris teratas

```
root@root:/etc # head passwd
# $FreeBSD: releng/10.1/etc/master.passwd 256366 2013-10-12 06:08:18Z rpaulo $
#
root:*:0:0:Charlie &:/root:/bin/csh
toor:*:0:0:Bourne-again Superuser:/root:
daemon:*:1:1:Owner of many system processes:/root:/usr/sbin/nologin
operator:*:2:5:System &:/usr/sbin/nologin
bin:*:3:7:Binaries Commands and Source:/usr/sbin/nologin
tty:*:4:65533:Tty Sandbox:/usr/sbin/nologin
kmem:*:5:65533:KMem Sandbox:/usr/sbin/nologin
games:*:7:13:Games pseudo-user:/usr/games:/usr/sbin/nologin
root@root:/etc #
```

14. Gunakan perintah find untuk mencari sebuah direktori atau file

```
root@root:/ # ls
.cshrc          System          dev             libexec         root
.profile        bin             efi.img         mach_kernel     sbin
.rnd            boot            entropy         media            sys
.snap           boot.catalog    etc             mnt             tmp
.suournal       cdmnt-install  home           proc            usr
COPYRIGHT       compat          lib             rescue          var
root@root:/ # find /root -name "movehere"
/root/emir/tothis/movehere
root@root:/ #
```


15. Gunakan perintah grep untuk mencari kata dari sebuah file



```
Terminal
File Edit View Search Terminal Help
n $
#      @(#)ttys      5.1 (Berkeley) 4/17/89
#
# This file specifies various information about terminals on the system.
# It is used by several different programs.  Common entries for the
# various columns include:
#
# name  The name of the terminal device.
#
# getty The program to start running on the terminal.  Typically a
#       getty program, as the name implies.  Other common entries
#       include none, when no getty is needed, and xdm, to start the
#       X Window System.
#
# type  The initial terminal type for this port.  For hardwired
#       terminal lines, this will contain the type of terminal used.
#       For virtual consoles, the correct type is typically xterm.
#       Other common values include dialup for incoming modem ports, and
#       unknown when the terminal type cannot be predetermined.
#
# status Must be on or off.  If on, init will run the getty program on
root@root:/etc # grep initial /etc/ttys
# type The initial terminal type for this port.  For hardwired
root@root:/etc #
```

16. Gunakan perintah ps untuk melihat proses yang sedang berjalan pada OS



```
root@root:/etc # ps
  PID TT  STAT   TIME COMMAND
   762 v0-  I    0:00.06 /usr/local/sbin/gdm
  3562 v0   Is+  0:00.00 /usr/libexec/getty Pc ttyv0
   835 v1   Is+  0:00.00 /usr/libexec/getty Pc ttyv1
   836 v2   Is+  0:00.00 /usr/libexec/getty Pc ttyv2
   837 v3   Is+  0:00.00 /usr/libexec/getty Pc ttyv3
   838 v4   Is+  0:00.00 /usr/libexec/getty Pc ttyv4
   839 v5   Is+  0:00.00 /usr/libexec/getty Pc ttyv5
   840 v6   Is+  0:00.00 /usr/libexec/getty Pc ttyv6
   841 v7   Is+  0:00.00 /usr/libexec/getty Pc ttyv7
45617 0    Ss   0:00.03 csh
52891 0    R+   0:00.00 ps
root@root:/etc #
```

17. Gunakan perintah top untuk melihat proses yang sedang berjalan secara realtime pada OS

```
Terminal
File Edit View Search Terminal Help
last pid: 53078; load averages: 0.80, 0.76, 0.78 up 0+04:43:49 16:44:24
74 processes: 1 running, 73 sleeping
CPU: 2.3% user, 0.0% nice, 0.0% system, 0.4% interrupt, 97.3% idle
Mem: 49M Active, 290M Inact, 105M Wired, 92M Buf, 529M Free
Swap: 994M Total, 994M Free

  PID USERNAME      THR PRI NICE   SIZE    RES STATE   TIME    WCPU COMMAND
  999 root              2  52   0   214M   30516K select   0:16    0.00% python2.7
  887 root              1  21   0   156M   55428K select   0:09    0.00% Xorg
  977 root              6  20   0   255M   27016K uwait    0:08    0.00% mate-setti
  998 root              4  20   0   191M   24320K uwait    0:05    0.00% mate-scre
  989 root              2  22   0   207M   25448K select   0:05    0.00% mate-volum
  979 root              4  20   0   204M   27572K uwait    0:04    0.00% mate-panel
  980 root              4  20   0   251M   36248K uwait    0:04    0.00% caja
  997 root              3  20   0   217M   26248K select   0:03    0.00% mate-power
  879 root              1  20   0  23272K   2612K select   0:03    0.00% hald-addon
  996 root              4  20   0  67916K   9420K uwait    0:02    0.00% ibus-daemo
  886 root              4  20   0  49864K   7468K uwait    0:02    0.00% accounts-d
 1054 root              4  20   0   206M   29896K uwait    0:02    0.00% clock-appl
45616 root              5  30   0   201M   29732K select   0:02    0.00% mate-termi
  853 haldaemon        2  36   0  56648K   8204K select   0:02    0.00% hald
  664 root              6  20   0  22020K   2840K uwait    0:01    0.00% VBoxServic
  932 root              2  21   0  48712K   6396K select   0:01    0.00% upowerd
 1039 root              3  20   0  66872K   8456K uwait    0:01    0.00% ibus-engin
```

18. Gunakan perintah shutdown -h now untuk melakukan shutdown dan perintah shutdown -r now untuk melakukan restart OS

```
root@root:/etc # shutdown -h now
Shutdown NOW!
shutdown: [pid 53351]
root@root:/etc #
System shutdown time has arrived
```

19. Untuk mematikan proses yang sedang berjalan bisa menggunakan perintah ps -aux | grep "nama perintah"

```
root@root:/usr/home/emir/Desktop # shutdown -r +60 &
[1] 1154
root@root:/usr/home/emir/Desktop # Shutdown at Mon May 14 18:43:29 2018.
shutdown: [pid 1155]
ps -aux | grep "shutdown"
root      1155  0.0  0.2 12340  1916  -  S<s    5:43PM 0:00.00 shutdown -r +60
[1]  + Done                               shutdown -r +60
root@root:/usr/home/emir/Desktop # kill 1155
root@root:/usr/home/emir/Desktop #
```

20. Untuk penambahan user gunakan perintah adduser

```
Terminal
File Edit View Search Terminal Help
Login group is ramon. Invite ramon into other groups? []:
Login class [default]:
Shell (sh csh tcsh fish git-shell ksh93 zsh rzsh bash rbash nologin) [sh]:
Home directory [/home/ramon]:
Home directory permissions (Leave empty for default):
Use password-based authentication? [yes]:
Use an empty password? (yes/no) [no]:
Use a random password? (yes/no) [no]:
Enter password:
Enter password again:
Lock out the account after creation? [no]:
Username   : ramon
Password   : *****
Full Name  : ramon
Uid        : 1002
Class      :
Groups     : ramon
Home       : /home/ramon
Home Mode  :
Shell      : /bin/sh
Locked     : no
OK? (yes/no): y
adduser: INFO: Successfully added (ramon) to the user database.
Add another user? (yes/no):
```

21. Gunakan perintah passwd “nama pengguna” untuk mengganti password sebuah user melalui root

```
root@root:/usr/home/emir/Desktop # passwd ramon
Changing local password for ramon
New Password:
Retype New Password:
root@root:/usr/home/emir/Desktop #
```

22. Gunakan perintah df -h untuk melihat penggunaan harddisk

```
root@root:/usr/home/emir/Desktop # df -h
Filesystem      Size  Used Avail Capacity  Mounted on
/dev/label/rootfs0  9.7G  5.4G   3.5G    61%      /
devfs            1.0K  1.0K    0B   100%    /dev
procfs           4.0K  4.0K    0B   100%    /proc
linprocfs        4.0K  4.0K    0B   100%    /compat/linux/proc
root@root:/usr/home/emir/Desktop #
```

23. Gunakan perintah du untuk mengetahui jumlah direktori dalam sebuah folder

```
root@root:/ # du /media
4      /media
root@root:/ #
```


24. Gunakan symbol | untuk menggabungkan beberapa perintah kode

```
root@root:/ # mkdir emirramon | mkdir ramonemir | ls
.cshrc      bin          emirramon    mach_kernel  sbin
.profile    boot         entropy      media         sys
.rnd        boot.catalog etc          mnt           tmp
.snap       cdmnt-install gdm.core     proc          usr
.sujournal  compat      home         ramonemir     var
COPYRIGHT   dev         lib          rescue
System      efi.img     libexec      root
```

25. Gunakan perintah su untuk mengganti user

```
root@root:/ # su emir
$ whoami
emir
$ su ramon
Password:
$ whoami
ramon
$
```

Perintah dasar pada OS NetBSD

1. Gunakan perintah whoami untuk melihat user yang sedang aktif

```
Welcome to NetBSD!

Terminal type is vt100.
We recommend that you create a non-root account and use su(1) for root access.
# whoami
root
#
```

2. Gunakan perintah ls untuk menampilkan isi dari direktori dan ls -l untuk informasi lebih detail dari isi sebuah direktori.

```

Terminal type is vt100.
We recommend that you create a non-root account and use su(1) for root
# whoami
root
# ls
.cshrc      .klogin     .login      .profile    .shrc
#

```

```

Welcome to NetBSD!

Terminal type is vt100.
We recommend that you create a non-root account and use su(1) for root
# whoami
root
# ls
.cshrc      .klogin     .login      .profile    .shrc
# ls -l
total 10
-r--r--r--  2 root  wheel  1303 Sep 25  2015 .cshrc
-rw-----  1 root  wheel   59 Sep 25  2015 .klogin
-rw-r--r--  1 root  wheel  244 Sep 25  2015 .login
-r--r--r--  2 root  wheel  855 Sep 25  2015 .profile
-rw-r--r--  1 root  wheel  221 Sep 25  2015 .shrc
#

```

- Gunakan perintah pwd untuk mengetahui direktori yang sedang aktif saat ini

```

-rw-r--r--  1 root  wheel  221 Sep 25  2015 .shrc
# pwd
/root
#

```

- Untuk membuka sebuah direktori bisa menggunakan cd dan untuk keluar dari sebuah direktori gunakan perintah cd ..

```

# pwd
/root
# cd ..
# pwd
/
#

```

- Gunakan perintah mkdir untuk membuat sebuah direktori

```

# pwd
/
# mkdir emir
# ls
.cshrc      bin          cdrom        etc          libdata     netbsd       root         t
.profile    boot         dev          kern         libexec     proc         sbin         u
altroot     boot.cfg     emir         lib          mnt         rescue      stand        v
#

```

6. Gunakan perintah rmdir untuk menghapus sebuah direktori

```
# mkdir emir
# ls
.cshrc    bin      cdrom    etc      libdata  netbsd   root     t
.profile  boot     dev      kern     libexec  proc     sbin     u
altroot   boot.cfg emir     lib      mnt      rescue  stand    v
# rmdir emir
# ls
.cshrc    bin      cdrom    kern     libexec  proc     sbin     u
.profile  boot     dev      lib      mnt      rescue  stand    v
altroot   boot.cfg etc      libdata  netbsd   root     tmp
#
```

7. Gunakan perintah cp untuk menduplikasi file ataupun direktori

```
# ls
copythis  tothis
# pwd
/ramon
# cp copythis tothis
# ;s
-sh: Syntax error: ";" unexpected
# ls
copythis  tothis
# cd tothis
# ls
copythis
# pwd
/ramon/tothis
#
```

8. Gunakan perintah mv untuk merubah nama file atau direktori

```
# ls
copythis  tothis
# mv copythis blabla
# ls
blabla tothis
#
```

9. Gunakan perintah mv untuk memindahkan file atau direktori

```
# ls
blabla tothis
# mv blabla tothis
# ls
tothis
# cd tothis
# ls
blabla    copythis
# pwd
/ramon/tothis
#
```

10. Gunakan perintah rm untuk menghapus file

```
# ls
blabla    copythis
# pwd
/ramon/tothis
# rm blabla
# ls
copythis
#
```

11. Gunakan perintah `more` untuk membaca isi dari sebuah file

```
# more rc.conf
#
$NetBSD: rc.conf,v 1.97 2014/07/14 12:29:48 mbalmer Exp $
#
# See rc.conf(5) for more information.
#
# Use program=YES to enable program, NO to disable it. program_flags are
# passed to the program on the command line.
#
# Load the defaults in from /etc/defaults/rc.conf (if it's readable).
# These can be overridden below.
#
if [ -r /etc/defaults/rc.conf ]; then
    . /etc/defaults/rc.conf
fi
#
# If this is not set to YES, the system will drop into single-user mode.
#
rc_configured=YES
#
# Add local overrides below.
#
wscons=YES
#
```

12. Gunakan perintah `tail` untuk membaca sebagian isi dari file dimulai dari baris terbawah

```
# tail passwd
_timedc:*:22:22:& pseudo-user:/nonexistent:/sbin/nologin
_sdpg:*:23:23:& pseudo-user:/nonexistent:/sbin/nologin
_httpd:*:24:24:& pseudo-user:/var/www:/sbin/nologin
_mdnsd:*:25:25:& pseudo-user:/nonexistent:/sbin/nologin
_tests:*:26:26:& pseudo-user:/nonexistent:/sbin/nologin
_tcpdump:*:27:27:& pseudo-user:/var/chroot/tcpdump:/sbin/nologin
_tss:*:28:28:& pseudo-user:/var/tpm:/sbin/nologin
_rtadvd:*:30:30:& pseudo-user:/var/chroot/rtadvd:/sbin/nologin
uucp:*:66:1:UNIX-to-UNIX Copy:/nonexistent:/sbin/nologin
nobody:*:32767:39:Unprivileged user:/nonexistent:/sbin/nologin
#
```

13. Gunakan perintah head untuk membaca sebagian isi dari file dimulai dari baris teratas

```
# head passwd
root:*:0:0:Charlie &:/root:/bin/sh
toor:*:0:0:Bourne-again Superuser:/root:/bin/sh
daemon:*:1:1:The devil himself:/:/sbin/nologin
operator:*:2:5:System &:/usr/guest/operator:/sbin/nologin
bin:*:3:7:Binaries Commands and Source:/:/sbin/nologin
games:*:7:13:& pseudo-user:/usr/games:/sbin/nologin
postfix:*:12:12:& pseudo-user:/var/spool/postfix:/sbin/nologin
named:*:14:14:& pseudo-user:/var/chroot/named:/sbin/nologin
ntpd:*:15:15:& pseudo-user:/var/chroot/ntpd:/sbin/nologin
sshd:*:16:16:& pseudo-user:/var/chroot/sshd:/sbin/nologin
#
```

14. Gunakan perintah find untuk mencari sebuah direktori atau file

```
# find /ramon -name "tothis"
/ramon/tothis
#
```

15. Gunakan perintah grep untuk mencari kata dari sebuah file

```
# grep "root" /etc/passwd
root:*:0:0:Charlie &:/root:/bin/sh
toor:*:0:0:Bourne-again Superuser:/root:/bin/sh
named:*:14:14:& pseudo-user:/var/chroot/named:/sbin/nologin
ntpd:*:15:15:& pseudo-user:/var/chroot/ntpd:/sbin/nologin
sshd:*:16:16:& pseudo-user:/var/chroot/sshd:/sbin/nologin
_pflogd:*:18:18:& pseudo-user:/var/chroot/pflogd:/sbin/nologin
_tcpdump:*:27:27:& pseudo-user:/var/chroot/tcpdump:/sbin/nologin
_rtadvd:*:30:30:& pseudo-user:/var/chroot/rtadvd:/sbin/nologin
#
```

16. Gunakan perintah ps untuk melihat proses yang sedang berjalan pada OS

```
# ps
  PID TTY          STAT       TIME COMMAND
   762 ttyE0      Is        0:00.01 login
  1615 ttyE0      S          0:00.06 -sh
  1692 ttyE0      O+         0:00.00 ps
  1614 ttyE1      Is+        0:00.00 /usr/libexec/getty Pc ttyE1
  1631 ttyE2      Is+        0:00.00 /usr/libexec/getty Pc ttyE2
  1627 ttyE3      Is+        0:00.00 /usr/libexec/getty Pc ttyE3
#
```

17. Gunakan perintah top untuk melihat proses yang sedang berjalan secara realtime pada OS

```
load averages:  0.01,  0.01,  0.00;                up 0+00:18:57                16
12 processes: 11 sleeping, 1 on CPU
CPU states:  0.0% user,  0.0% nice,  1.0% system,  0.0% interrupt, 99.0%
Memory: 33M Act, 5020K Exec, 25M File, 178M Free
Swap:

```

PID	USERNAME	PRI	NICE	SIZE	RES	STATE	TIME	WCPU	CPU	COMMAND
1687	root	43	0	17M	1576K	CPU	0:00	0.00%	0.00%	top
0	root	96	0	0K	8848K	atath	0:00	0.00%	0.00%	[systemd]
762	root	85	0	59M	3560K	wait	0:00	0.00%	0.00%	login
561	root	85	0	24M	1984K	kqueue	0:00	0.00%	0.00%	syslogd
1615	root	85	0	13M	1736K	wait	0:00	0.00%	0.00%	sh
1347	root	85	0	11M	1360K	nanoslp	0:00	0.00%	0.00%	cron
1627	root	85	0	13M	1352K	ttyraw	0:00	0.00%	0.00%	getty
1631	root	85	0	13M	1352K	ttyraw	0:00	0.00%	0.00%	getty
1614	root	85	0	13M	1352K	ttyraw	0:00	0.00%	0.00%	getty
1240	root	85	0	13M	1276K	kqueue	0:00	0.00%	0.00%	powerd
1	root	85	0	13M	1260K	wait	0:00	0.00%	0.00%	init
1520	root	85	0	15M	1116K	kqueue	0:00	0.00%	0.00%	inetd

18. Gunakan perintah shutdown -h now untuk melakukan shutdown dan perintah shutdown -r now untuk melakukan restart OS

```
# shutdown -h now
Shutdown NOW!
shutdown: [pid 1653]
# wall: You have write permission turned off; no reply possible

*** FINAL System shutdown message from root@ ***
System going down IMMEDIATELY

May 22 16:53:10  shutdown: halt by root:

# shutdown -r now
Shutdown NOW!
shutdown: [pid 1648]
# wall: You have write permission turned off; no reply possible

*** FINAL System shutdown message from root@ ***
System going down IMMEDIATELY

May 22 16:54:26  shutdown: reboot by root:
```

19. Untuk mematikan proses yang sedang berjalan bisa menggunakan perintah `ps -aux | grep "nama perintah"`

```
# shutdown -r +60 &
Shutdown at Tue May 22 17:55:54 2018.
shutdown: [pid 1648]
[1] Done shutdown -r +60
# wall: You have write permission turned off; no reply possible

*** System shutdown message from root@ ***
System going down at 17:55

ps -aux | grep "shutdown"
root 1648  0.0  0.4 8820 1060 ?        S<s    4:55PM 0:00.00 shutdown -r +60
# kill 1648
#
```

20. Untuk penambahan user gunakan perintah `useradd -m -g wheel "nama user"`

```
# useradd -m emir
#
```

21. Gunakan perintah `passwd "nama pengguna"` untuk mengganti password sebuah user melalui root

```
# passwd emir
Changing password for emir.
New Password:
Retype New Password:
Please enter a longer password.
New Password:
Retype New Password:
#
```

22. Gunakan perintah `df -h` untuk melihat penggunaan harddisk

```
# df -h
Filesystem      Size      Used      Avail %Cap Mounted on
/dev/wd0a        2.0G      879M      1.0G  45% /
kernfs          1.0K      1.0K        0B 100% /kern
ptyfs           1.0K      1.0K        0B 100% /dev/pts
procfs          4.0K      4.0K        0B 100% /proc
tmpfs           64M        0B        64M   0% /var/shm
#
```

23. Gunakan perintah `du` untuk mengetahui jumlah direktori dalam sebuah folder

```
# du /ramon
2    /ramon/tothis
4    /ramon
#
```

24. Gunakan simbol `|` untuk menggabungkan beberapa perintah kode

```
# pwd
/root
# ls
.cshrc  .klogin  .login  .profile  .shrc
# mkdir emir ; mkdir ramon ; ls
.cshrc  .klogin  .login  .profile  .shrc      emir      ramon
#
```

25. Gunakan perintah su untuk mengganti user

```
# su emir
$ whoami
emir
$
```

Perintah dasar pada OS OpenBSD

1. Gunakan perintah whoami untuk melihat user yang sedang aktif

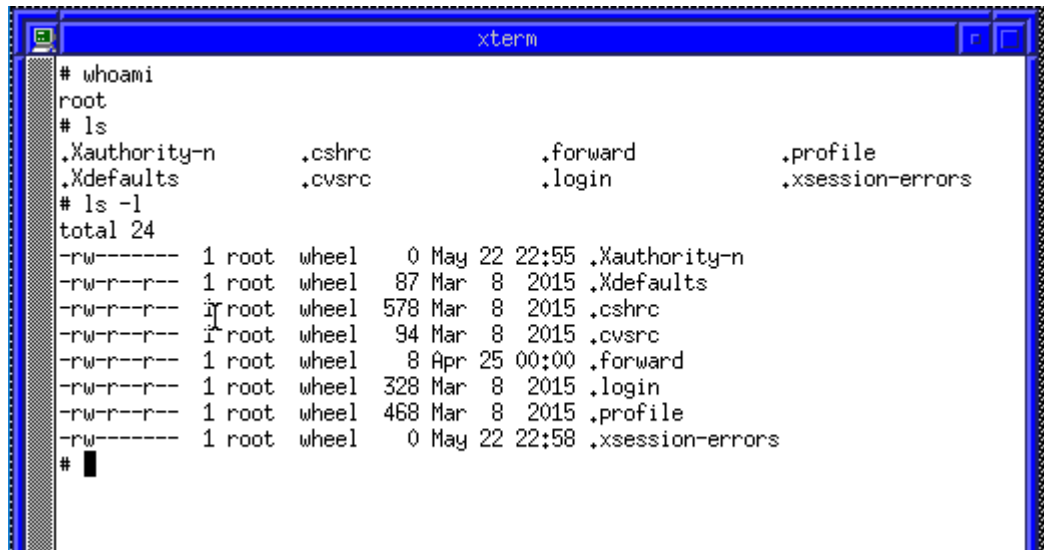


```
xterm
# whoami
root
#
```

2. Gunakan perintah ls untuk menampilkan isi dari direktori dan ls -l untuk informasi lebih detail dari isi sebuah direktori.



```
xterm
# whoami
root
# ls
.Xauthority-n      .cshrc             .forward           .profile
.Xdefaults         .cvsrc             .login             .xsession-errors
#
```



```
xterm
# whoami
root
# ls
.Xauthority-n      .cshrc             .forward           .profile
.Xdefaults         .cvsrc             .login             .xsession-errors
# ls -l
total 24
-rw----- 1 root  wheel   0 May 22 22:55 .Xauthority-n
-rw-r--r-- 1 root  wheel  87 Mar  8 2015 .Xdefaults
-rw-r--r-- 1 root  wheel 578 Mar  8 2015 .cshrc
-rw-r--r-- 1 root  wheel  94 Mar  8 2015 .cvsrc
-rw-r--r-- 1 root  wheel   8 Apr 25 00:00 .forward
-rw-r--r-- 1 root  wheel 328 Mar  8 2015 .login
-rw-r--r-- 1 root  wheel 468 Mar  8 2015 .profile
-rw----- 1 root  wheel   0 May 22 22:58 .xsession-errors
#
```


3. Gunakan perintah pwd untuk mengetahui direktori yang sedang aktif saat ini

```
xterm
# whoami
root
# ls
.Xauthority-n      .cshrc             .forward           .profile
.Xdefaults         .cvsrc             .login             .xsession-errors
# ls -l
total 24
-rw----- 1 root  wheel   0 May 22 22:55 .Xauthority-n
-rw-r--r-- 1 root  wheel  87 Mar  8 2015 .Xdefaults
-rw-r--r-- 1 root  wheel 578 Mar  8 2015 .cshrc
-rw-r--r-- 1 root  wheel  94 Mar  8 2015 .cvsrc
-rw-r--r-- 1 root  wheel   8 Apr 25 00:00 .forward
-rw-r--r-- 1 root  wheel 328 Mar  8 2015 .login
-rw-r--r-- 1 root  wheel 468 Mar  8 2015 .profile
-rw----- 1 root  wheel   0 May 22 22:58 .xsession-errors
# pwd
/root
#
```

4. Untuk membuka sebuah direktori bisa menggunakan cd dan untuk keluar dari sebuah direktori gunakan perintah cd ..

```
# pwd
/root
# cd ..
# ls
.cshrc  altroot  boot    bsd.rd  etc      mnt      sbin    tmp      var
.profile bin      bsd     dev     home    root     sys     usr
# pwd
/
#
```

5. Gunakan perintah mkdir untuk membuat sebuah direktori

```
# ls
.cshrc  altroot  boot    bsd.rd  etc      mnt      sbin    tmp      var
.profile bin      bsd     dev     home    root     sys     usr
# mkdir emir
# ls
.cshrc  altroot  root    bsd.rd  emir     home    root     sys     usr  var
.profile bin      bsd     dev     etc      mnt     sbin     tmp     var
#
```

6. Gunakan perintah rmdir untuk menghapus sebuah direktori

```
# ls
.cshrc  altroot  boot    bsd.rd  emir     home    root     sys     usr  var
.profile bin      bsd     dev     etc      mnt     sbin     tmp     var
# rmdir emir
# ls
.cshrc  altroot  boot    bsd.rd  etc      mnt     sbin     tmp     var
.profile bin      bsd     dev     home    root     sys     usr
#
```

7. Gunakan perintah cp untuk menduplikasi file ataupun direktori

```
# ls
.cshrc  bin      bsd.rd  etc      ramon    sys      var
.profile boot    dev     home    root     tmp
altroot bsd      emir    mnt     sbin     usr

# cp emir ramon
# ls
.cshrc  bin      bsd.rd  etc      ramon    sys      var
.profile boot    dev     home    root     tmp
altroot bsd      emir    mnt     sbin     usr

# cd ramon
# ls
emir
#
```

8. Gunakan perintah mv untuk merubah nama file atau direktori

```
# cd ramon
# ls
emir
# mv emir emirchange
# ls
emirchange
#
```

9. Gunakan perintah mv untuk memindahkan file atau direktori

```
# ls
emirchange
# mkdir moveemirhere
# ls
emirchange  moveemirhere
# pwd
/ramon
# mv /ramon/emirchange /ramon/moveemirhere
# ls
moveemirhere
# cd moveemirhere
# ls
emirchange
#
```

10. Gunakan perintah rm untuk menghapus file

```
# ls
emirchange
# ls
emirchange
# rm emirchange
# ls
#
```

11. Gunakan perintah `more` untuk membaca isi dari sebuah file

```
csh,login      hotplug      monthly      rc              syslog.conf
csh.logout     iked             motd         rc.conf        systrace
daily          isakmpd          mtree        rc.conf.local  termcap
disktab        ksh,kshrc        myname       rc.d            ttys
dumpdates      ldap             netstart     rmt            weekly
examples       localtime        networks     rpc
fbtab          locate.rc        newsyslog.conf services
firmware       login.conf       nppd         shells
fonts          magic            passwd       signify

# more login.conf
# $OpenBSD: login.conf,v 1.4 2015/02/17 10:18:36 sthen Exp $

#
# Sample login.conf file.  See login.conf(5) for details.
#
#
# Standard authentication styles:
#
# passwd       Use only the local password file
# chpass       Do not authenticate, but change users password (change
#              the YP password if the user has one, else change the
#              local password)
# lchpass      Do not login; change user's local password instead
```

12. Gunakan perintah `tail` untuk membaca sebagian isi dari file dimulai dari baris terbawah

```
# tail rc.conf
syslogd_flags=      # add more flags, e.g. "-u -a /chroot/dev/log"
pf_rules=/etc/pf.conf # Packet filter rules file
ipsec_rules=/etc/ipsec.conf # IPsec rules file
pflogd_flags=      # add more flags, e.g. "-s 256"
shlib_dirs=         # extra directories for ldconfig, separated
                   # by space

# rc.d(8) packages scripts
# started in the specified order and stopped in reverse order
pkg_scripts=
#
```

13. Gunakan perintah `head` untuk membaca sebagian isi dari file dimulai dari baris teratas

```
# head rc.conf
# $OpenBSD: rc.conf,v 1.200 2014/12/03 20:13:49 florian Exp $

# DO NOT EDIT THIS FILE!!
#
# This file defines the default service selection as shipped in a
# release.  Upgrades of your system will modify this file.
#
# To select the service options you desire, please override these
# options in the file /etc/rc.conf.local
#
#
```

14. Gunakan perintah `find` untuk mencari sebuah direktori atau file

```
# find /ramon -name "moveemirhere"
/ramon/moveemirhere
#
```

15. Gunakan perintah grep untuk mencari kata dari sebuah file

```
# grep "select" /etc/rc.conf
# This file defines the default service selection as shipped in a
# To select the service options you desire, please override these
#
```

16. Gunakan perintah ps untuk melihat proses yang sedang berjalan pada OS

```
# ps
  PID TT  STAT      TIME COMMAND
10851 p1  Ss      0:00.03 -ksh (ksh)
19021 p1  R+      0:00.00 ps
 2936 C0  Is+     0:00.00 /usr/libexec/getty std.9600 ttyC0
29782 C1  Is+     0:00.00 /usr/libexec/getty std.9600 ttyC1
25212 C2  Is+     0:00.00 /usr/libexec/getty std.9600 ttyC2
11778 C3  Is+     0:00.00 /usr/libexec/getty std.9600 ttyC3
17449 C5  Is+     0:00.00 /usr/libexec/getty std.9600 ttyC5
#
```

17. Gunakan perintah top untuk melihat proses yang sedang berjalan secara realtime pada OS

```
load averages: 0.54, 0.44, 0.31 root.openbsd 23:16:05
32 processes: 1 running, 30 idle, 1 on processor
CPU states: 0.1% user, 0.0% nice, 0.2% system, 0.0% interrupt, 99.7% idle
Memory: Real: 41M/109M act/tot Free: 129M Cache: 32M Swap: 0K/81M

  PID USERNAME PRI NICE  SIZE  RES STATE   WAIT   TIME   CPU COMMAND
 5667 _x11      2   0   14M   23M sleep   select 0:01  0.10% Xorg
    1 root      10   0   516K  524K idle    wait   0:01  0.00% init
10726 root     28   0  2072K 5256K run     -       0:00  0.00% xterm
 4874 root     10   0 1256K 6012K idle    wait   0:00  0.00% xdm
 4113 root      2   0   980K 3244K sleep   select 0:00  0.00% fvwm
11415 _pflogd    4   0   680K  372K sleep   bpf     0:00  0.00% pflogd
10851 root     18   0   636K  752K sleep   pause   0:00  0.00% ksh
10997 _syslogd    2   0  1104K 1432K idle    kqread 0:00  0.00% syslogd
28533 _x11      2   0   756K 3228K idle    poll    0:00  0.00% xconsole
22802 root      2   0   612K 2260K idle    select 0:00  0.00% FvwmPager
16928 root      2   0  1104K 1338K idle    netio   0:00  0.00% syslogd
18154 root     18   0   628K  708K idle    pause   0:00  0.00% sh
 7597 root      2   0  1560K 2128K idle    kqread 0:00  0.00% smtpd
 4445 root     18   0   684K 1916K idle    pause   0:00  0.00% xdm
20905 root      2   0   776K 1084K sleep   poll    0:00  0.00% cron
20766 _smtpd     2   0  1412K 1960K idle    kqread 0:00  0.00% smtpd
 6761 root      2   0  2448K 1336K idle    netio   0:00  0.00% Xorg
 6289 _smtpd     2   0  1548K 2656K idle    kqread 0:00  0.00% smtpd
```

18. Gunakan perintah shutdown -h now untuk melakukan shutdown dan perintah shutdown -r now untuk melakukan restart OS

```
xterm
# shutdown -h now
Shutdown NOW!
shutdown: [pid 8064]
#
*** FINAL System shutdown message from root@root.openbsd ***
System going down IMMEDIATELY
```

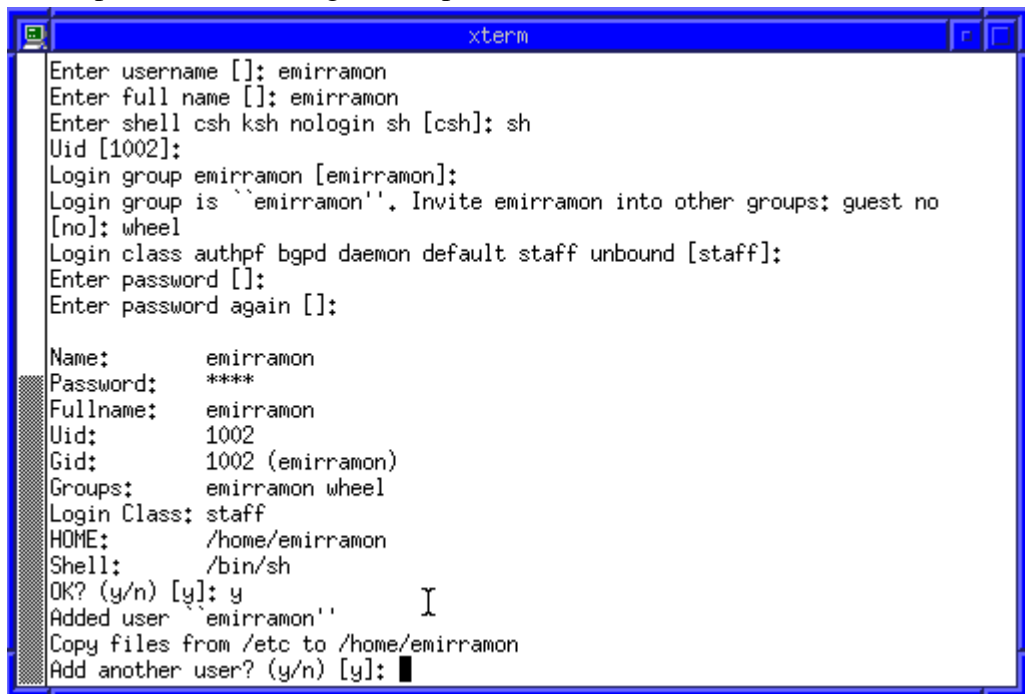
```
xterm
# shutdown -r now
Shutdown NOW!
shutdown: [pid 19871]
*** FINAL System shutdown message from root@root.openbsd ***
System going down IMMEDIATELY
#
```

19. Untuk mematikan proses yang sedang berjalan bisa menggunakan perintah `ps -aux | grep "nama perintah"`

```
xterm
# shutdown -r +60 &
[1] 2621
# Shutdown at Wed May 23 00:24:05 2018.
shutdown: [pid 20660]
*** System shutdown message from root@root.openbsd ***
System going down at 00:24

ps -aux | grep "shutdown"
root    20660  0.0  0.1  496   296 ??  S<s   11:24PM   0:00.00 shutdown -r +
root    25342  0.0  0.4   320   908 p1  R+    11:24PM   0:00.00 grep shutdown
[1] + Done                shutdown -r +60
# kill 25342
ksh: kill: 25342: No such process
# kill 20660
#
```

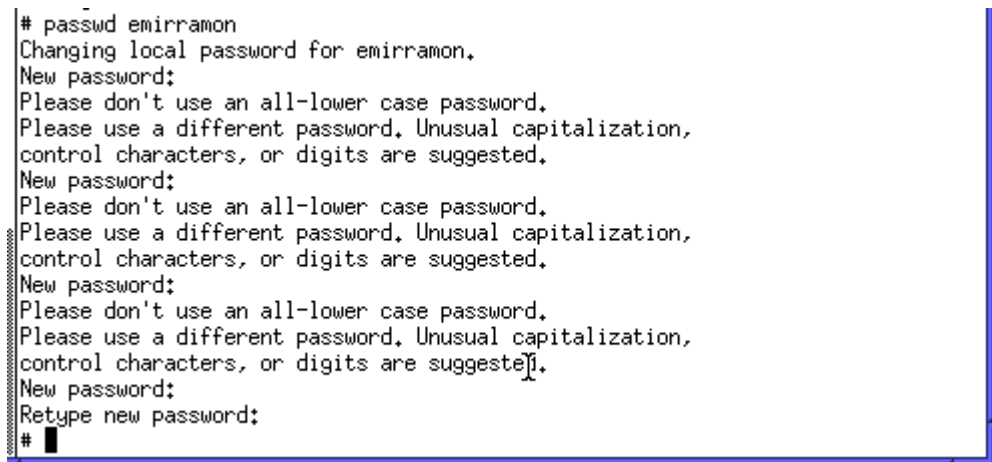
20. Untuk penambahan user gunakan perintah adduser



```
xterm
Enter username []: emirramon
Enter full name []: emirramon
Enter shell csh ksh nologin sh [csh]: sh
Uid [1002]:
Login group emirramon [emirramon]:
Login group is `emirramon'. Invite emirramon into other groups: guest no
[no]: wheel
Login class authpf bgpd daemon default staff unbound [staff]:
Enter password []:
Enter password again []:

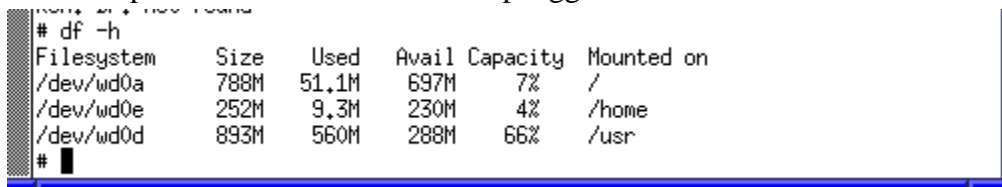
Name:      emirramon
Password:   ****
Fullname:   emirramon
Uid:        1002
Gid:        1002 (emirramon)
Groups:     emirramon wheel
Login Class: staff
HOME:       /home/emirramon
Shell:      /bin/sh
OK? (y/n) [y]: y
Added user `emirramon'
Copy files from /etc to /home/emirramon
Add another user? (y/n) [y]:
```

21. Gunakan perintah passwd “nama pengguna” untuk mengganti password sebuah user melalui root



```
xterm
# passwd emirramon
Changing local password for emirramon.
New password:
Please don't use an all-lower case password.
Please use a different password. Unusual capitalization,
control characters, or digits are suggested.
New password:
Please don't use an all-lower case password.
Please use a different password. Unusual capitalization,
control characters, or digits are suggested.
New password:
Please don't use an all-lower case password.
Please use a different password. Unusual capitalization,
control characters, or digits are suggested.
New password:
Retype new password:
#
```

22. Gunakan perintah df -h untuk melihat penggunaan harddisk



```
xterm
# df -h
Filesystem      Size  Used Avail Capacity  Mounted on
/dev/wd0a        788M   51.1M   697M    7%      /
/dev/wd0e        252M    9.3M   230M    4%      /home
/dev/wd0d        893M   560M   288M   66%      /usr
#
```

23. Gunakan perintah du untuk mengetahui jumlah direktori dalam sebuah folder

```
# ls
.Xauthority      .cshrc           .forward         .profile
.Xdefaults       .cvsrc           .login           .xsession-errors
# cd ..
# ls
.cshrc  bin      bsd.rd  etc      ramon    sys      var
.profile boot    dev     home    root     tmp      xdm.core
altroot bsd      emir    mnt     sbin     usr
# du ramon
4      ramon/moveemirhere
8      ramon
#
```

24. Gunakan symbol | untuk menggabungkan beberapa perintah kode

```
# ls
.cshrc  bin      bsd.rd  etc      ramon    sys      var
.profile boot    dev     home    root     tmp      xdm.core
altroot bsd      emir    mnt     sbin     usr
# mkdir moon | rm emir | ls
.cshrc  bin      bsd.rd  home    ramon    sys      var
.profile boot    dev     mnt     root     tmp      xdm.core
altroot bsd      etc     moon    sbin     usr
#
```

25. Gunakan perintah su untuk mengganti user

```
# su emirramon
$ whoami
emirramon
$
```