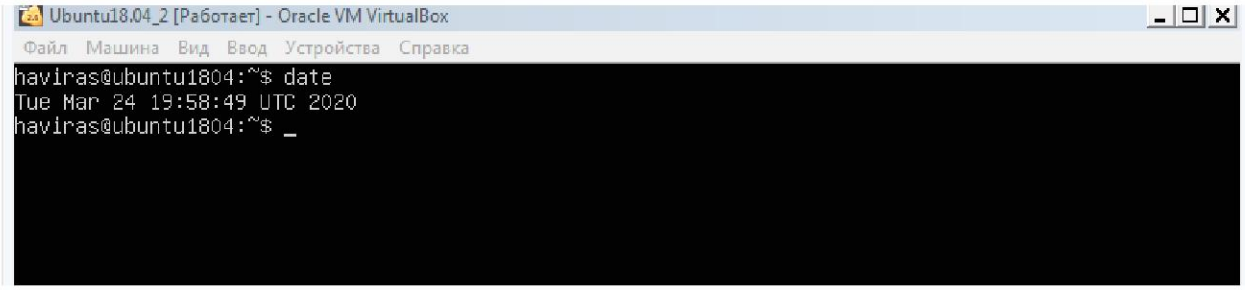
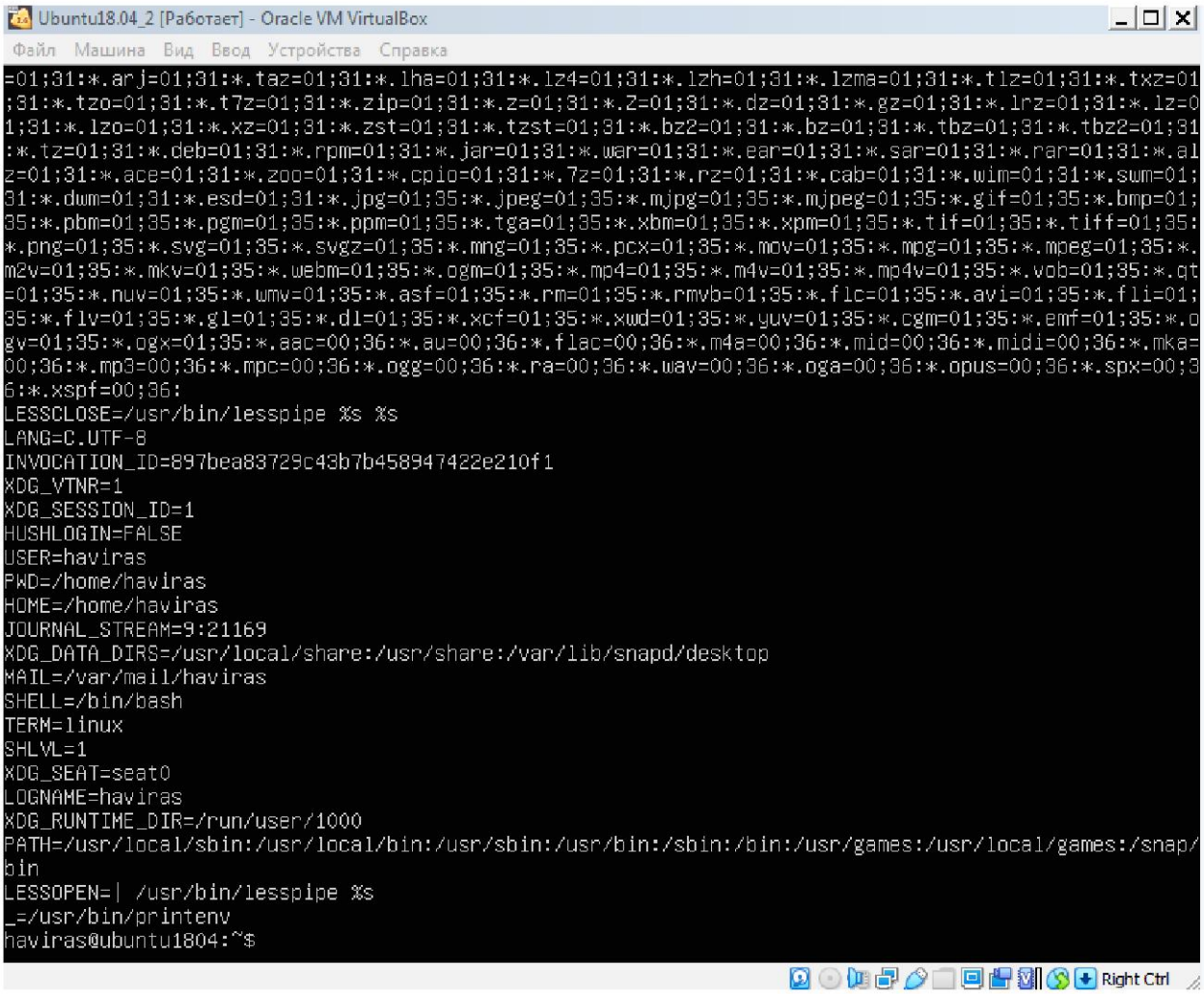
EPAM University Programs
DevOps external course
Module 4 DevOps Introduction
TASK 4.2

1. Set up Linux Virtual Machine in VirtualBox.



2. Familiarize yourself with the commands and utilities listed in the presentation (switching between **virtual terminals** (consoles);

printenv;



content of **/etc/profile**

```
haviras@ubuntu1804:~$ cat /etc/profile
# /etc/profile: system-wide .profile file for the Bourne shell (sh(1))
# and Bourne compatible shells (bash(1), ksh(1), ash(1), ...).

if [ "${PS1-}" ]; then
  if [ "${BASH-}" ] && [ "$BASH" != "/bin/sh" ]; then
    # The file bash.bashrc already sets the default PS1.
    # PS1='\h:\w\$ '
    if [ -f /etc/bash.bashrc ]; then
      . /etc/bash.bashrc
    fi
  else
    if [ "`id -u`" -eq 0 ]; then
      PS1='# '
    else
      PS1='$ '
    fi
  fi
fi

if [ -d /etc/profile.d ]; then
  for i in /etc/profile.d/*.sh; do
    if [ -r $i ]; then
      . $i
    fi
  done
  unset i
fi
haviras@ubuntu1804:~$
```

and **~/.bash_profile**,
нету такого файла ☹

```
haviras@ubuntu1804: ~
haviras@ubuntu1804:~$ ls -la
total 40
drwxr-xr-x 4 haviras haviras 4096 Mar 24 20:07 .
drwxr-xr-x 3 root    root    4096 Mar 24 14:28 ..
-rw------- 1 root    root     160 Mar 24 15:02 .bash_history
-rw-r--r-- 1 haviras haviras  220 Apr  4  2018 .bash_logout
-rw------- 1 haviras haviras 4096 Mar 24 20:07 .bash_profile.swp
-rw-r--r-- 1 haviras haviras 3771 Apr  4  2018 .bashrc
drwx------ 2 haviras haviras 4096 Mar 24 14:35 .cache
drwx------ 3 haviras haviras 4096 Mar 24 14:35 .gnupg
-rw-r--r-- 1 haviras haviras  807 Apr  4  2018 .profile
-rw-r--r-- 1 haviras haviras    0 Mar 24 14:36 .sudo_as_admin_successful
-rw------- 1 root    root     754 Mar 24 15:02 .viminfo
haviras@ubuntu1804:~$
```

$echo $HISTFILE $HISTSIZE $HISTFILESIZE

```
haviras@ubuntu1804:~$ echo $HISTFILE $HISTSIZE $HISTFILESIZE
/home/haviras/.bash_history 1000 2000
haviras@ubuntu1804:~$
```

, who,

```
haviras@ubuntu1804:~$ who
haviras  tty1         2020-03-24 19:31
haviras  pts/0        2020-03-24 20:02 (192.168.254.1)
haviras@ubuntu1804:~$
```

w,

```
haviras@ubuntu1804:~$ w
 21:47:46 up 40 min,  2 users,  load average: 0.21, 0.05, 0.02
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
haviras  tty1     -                24Mar20 16days  0.07s  0.05s -bash
haviras  pts/0    192.168.254.1    24Mar20  2.00s  0.11s  0.00s w
haviras@ubuntu1804:~$
```

whoami

```
haviras@ubuntu1804:~$ whoami
haviras
haviras@ubuntu1804:~$
```

, id

```
haviras@ubuntu1804: ~
haviras@ubuntu1804:~$ id
uid=1000(haviras) gid=1000(haviras) groups=1000(haviras),4(adm),24(cdrom),27(sud
o),30(dip),46(plugdev),108(lxd)
haviras@ubuntu1804:~$
```

). Make 5 screenshots.

3. Familiarize yourself with the commands (***uname***

```
haviras@ubuntu1804:~$ uname
Linux
haviras@ubuntu1804:~$ uname -a
Linux ubuntu1804 4.15.0-91-generic #92-Ubuntu SMP Fri Feb 28 11:09:48 UTC 2020 x
86_64 x86_64 x86_64 GNU/Linux
haviras@ubuntu1804:~$
```

, hostname

```
haviras@ubuntu1804:~$ hostname
ubuntu1804
haviras@ubuntu1804:~$
```

, uptime

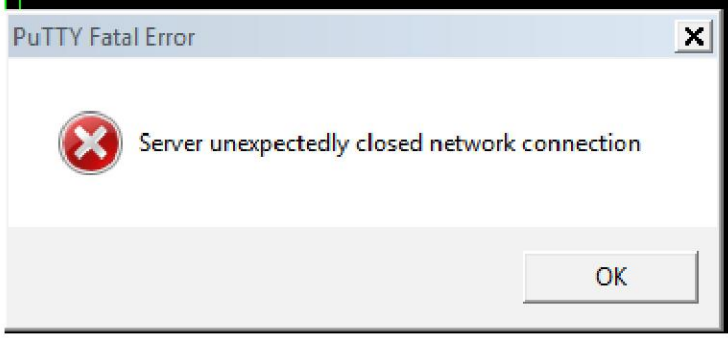
```
haviras@ubuntu1804:~$ uptime
 21:55:21 up 48 min,  2 users,  load average: 0.00, 0.10, 0.08
haviras@ubuntu1804:~$
```

, shutdown

```
haviras@ubuntu1804:~$ sudo -s shutdown -h 04:00
[sudo] password for haviras:
Sorry, try again.
[sudo] password for haviras:
Sorry, try again.
[sudo] password for haviras:
Shutdown scheduled for Fri 2020-04-10 04:00:00 UTC, use 'shutdown -c' to cancel.
haviras@ubuntu1804:~$ sudo shutdown -c
haviras@ubuntu1804:~$
```

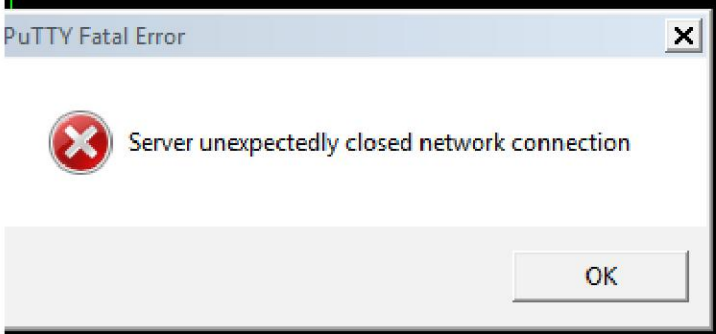
, halt

```
haviras@ubuntu1804:~$ sudo -s halt
[sudo] password for haviras:
```

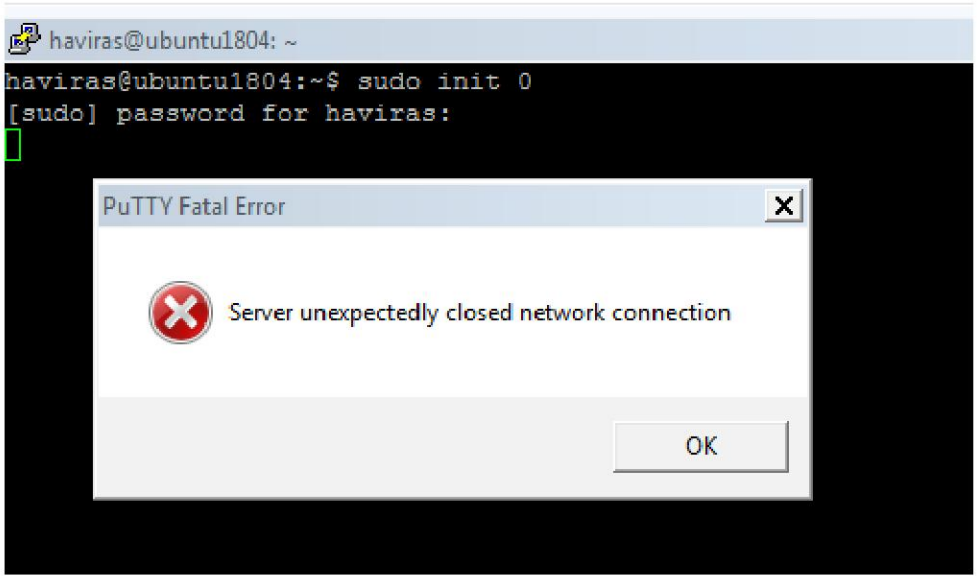


, reboot

```
haviras@ubuntu1804: ~
haviras@ubuntu1804:~$ sudo -s reboot
```



, init

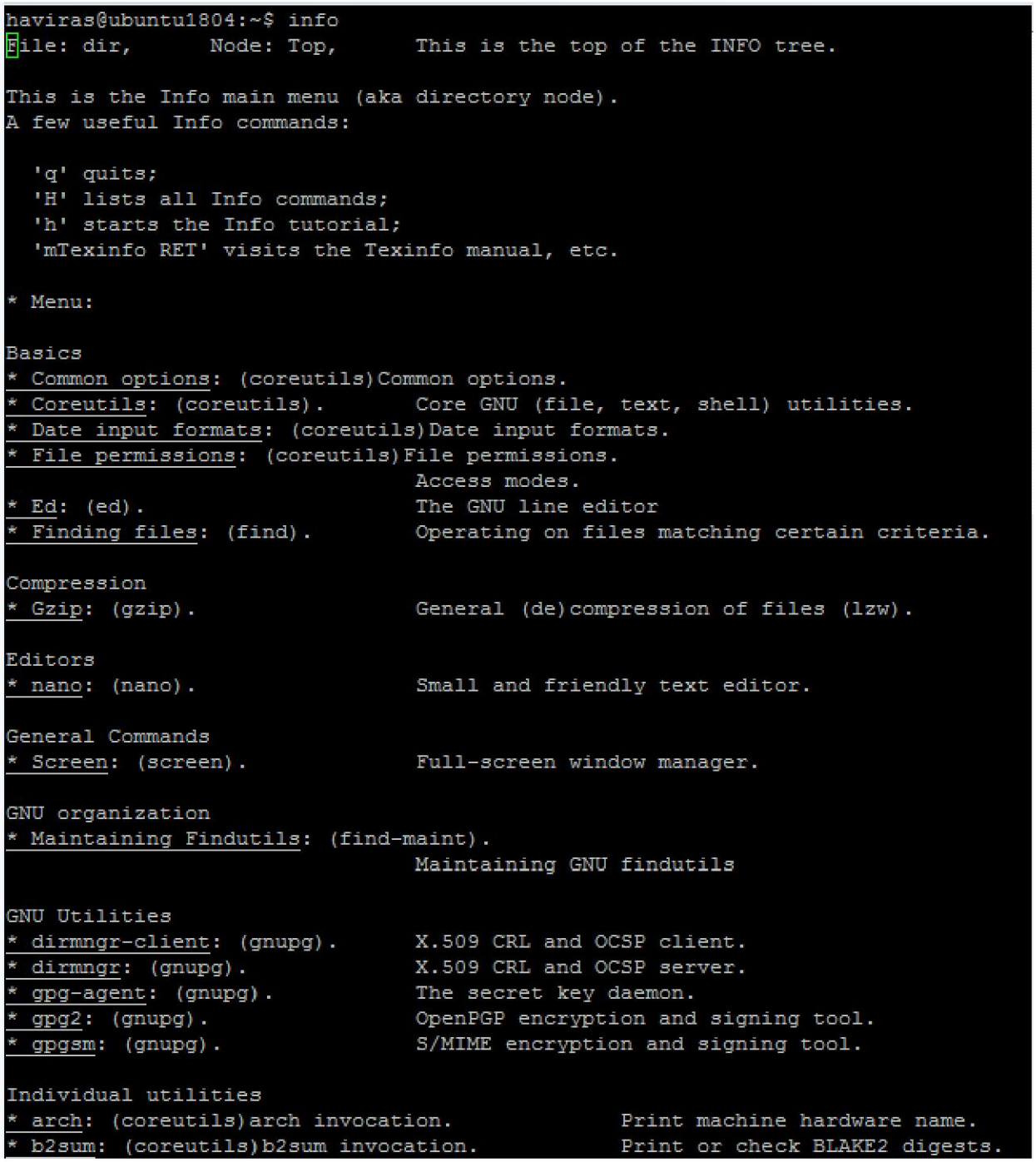


...). Make 5 screenshots.

4. Familiarize yourself with the help commands (***man***

```
haviras@ubuntu1804:~$ man man
MAN(1)                          Manual pager utils                          MAN(1)

NAME
       man - an interface to the on-line reference manuals

SYNOPSIS
       man  [-C  file]  [-d]  [-D]  [--warnings[=warnings]]  [-R encoding] [-L
       locale] [-m system[,...]] [-M path] [-S list]  [-e  extension]  [-i|-I]
       [--regex|--wildcard]   [--names-only]  [-a]  [-u]  [--no-subpages]  [-P
       pager] [-r prompt] [-7] [-E encoding] [--no-hyphenation] [--no-justifi□
       cation]  [-p  string]  [-t]  [-T[device]]  [-H[browser]] [-X[dpi]] [-Z]
       [[section] page[.section] ...] ...
       man -k [apropos options] regexp ...
       man -K [-w|-W] [-S list] [-i|-I] [--regex] [section] term ...
       man -f [whatis options] page ...
       man -l [-C file] [-d] [-D] [--warnings[=warnings]]  [-R  encoding]  [-L
       locale]  [-P  pager]  [-r  prompt]  [-7] [-E encoding] [-p string] [-t]
       [-T[device]] [-H[browser]] [-X[dpi]] [-Z] file ...
       man -w|-W [-C file] [-d] [-D] page ...
       man -c [-C file] [-d] [-D] page ...
       man [-?V]

DESCRIPTION
       man is the system's manual pager.  Each page argument given to  man  is
       normally  the  name of a program, utility or function.  The manual page
       associated with each of these arguments is then found and displayed.  A
       section,  if  provided, will direct man to look only in that section of
       the manual.  The default action is to search in all  of  the  available
       sections  following  a pre-defined order ("1 n l 8 3 2 3posix 3pm 3perl
       3am 5 4 9 6 7" by default, unless overridden by the  SECTION  directive
       in /etc/manpath.config), and to show only the first page found, even if
       page exists in several sections.

       The table below shows the section numbers of the manual followed by the
       types of pages they contain.

       1   Executable programs or shell commands
       2   System calls (functions provided by the kernel)
       3   Library calls (functions within program libraries)
       4   Special files (usually found in /dev)
       5   File formats and conventions eg /etc/passwd
       6   Games
       7   Miscellaneous  (including  macro  packages  and  conventions), e.g.
           man(7), groff(7)
       8   System administration commands (usually only for root)
       9   Kernel routines [Non standard]
```

, info


haviras@ubuntu1804:~$ info
File: dir, Node: Top, This is the top of the INFO tree.
This is the Info main menu (aka directory node).
A few useful Info commands:
'q' quits;
'H' lists all Info commands;
'h' starts the Info tutorial;
'mTexinfo RET' visits the Texinfo manual, etc.
* Menu:
Basics
* Common options: (coreutils)Common options.
* Coreutils: (coreutils). Core GNU (file, text, shell) utilities.
* Date input formats: (coreutils)Date input formats.
* File permissions: (coreutils)File permissions.
Access modes.
* Ed: (ed). The GNU line editor
* Finding files: (find). Operating on files matching certain criteria.
Compression
* Gzip: (gzip). General (de)compression of files (lzw).
Editors
* nano: (nano). Small and friendly text editor.
General Commands
* Screen: (screen). Full-screen window manager.
GNU organization
* Maintaining Findutils: (find-maint).
Maintaining GNU findutils
GNU Utilities
* dirmngr-client: (gnupg). X.509 CRL and OCSP client.
* dirmngr: (gnupg). X.509 CRL and OCSP server.
* gpg-agent: (gnupg). The secret key daemon.
* gpg2: (gnupg). OpenPGP encryption and signing tool.
* gpgsm: (gnupg). S/MIME encryption and signing tool.
Individual utilities
* arch: (coreutils)arch invocation. Print machine hardware name.
* b2sum: (coreutils)b2sum invocation. Print or check BLAKE2 digests.

, find

```
haviras@ubuntu1804:~$ find
.
./.viminfo
./.sudo_as_admin_successful
./.bash_history
./.bashrc
./.gnupg
./.gnupg/private-keys-v1.d
./.bash_logout
./.cache
./.cache/motd.legal-displayed
./.profile
haviras@ubuntu1804:~$ find  --help
Usage: find [-H] [-L] [-P] [-Olevel] [-D debugopts] [path...] [expression]

default path is the current directory; default expression is -print
expression may consist of: operators, options, tests, and actions:
operators (decreasing precedence; -and is implicit where no others are given):
      ( EXPR )   ! EXPR   -not EXPR   EXPR1 -a EXPR2   EXPR1 -and EXPR2
      EXPR1 -o EXPR2   EXPR1 -or EXPR2   EXPR1 , EXPR2
positional options (always true): -daystart -follow -regextype

normal options (always true, specified before other expressions):
      -depth --help -maxdepth LEVELS -mindepth LEVELS -mount -noleaf
      --version -xdev -ignore_readdir_race -noignore_readdir_race
tests (N can be +N or -N or N): -amin N -anewer FILE -atime N -cmin N
      -cnewer FILE -ctime N -empty -false -fstype TYPE -gid N -group NAME
      -ilname PATTERN -iname PATTERN -inum N -iwholename PATTERN -iregex PATTERN
      -links N -lname PATTERN -mmin N -mtime N -name PATTERN -newer FILE
      -nouser -nogroup -path PATTERN -perm [-/]MODE -regex PATTERN
      -readable -writable -executable
      -wholename PATTERN -size N[bcwkMG] -true -type [bcdpflsD] -uid N
      -used N -user NAME -xtype [bcdpfls]       -context CONTEXT

actions: -delete -print0 -printf FORMAT -fprintf FILE FORMAT -print
      -fprint0 FILE -fprint FILE -ls -fls FILE -prune -quit
      -exec COMMAND ; -exec COMMAND {} + -ok COMMAND ;
      -execdir COMMAND ; -execdir COMMAND {} + -okdir COMMAND ;

Valid arguments for -D:
exec, help, opt, rates, search, stat, time, tree
Use '-D help' for a description of the options, or see find(1)

Please see also the documentation at http://www.gnu.org/software/findutils/.
You can report (and track progress on fixing) bugs in the "find"
program via the GNU findutils bug-reporting page at
https://savannah.gnu.org/bugs/?group=findutils or, if
you have no web access, by sending email to <bug-findutils@gnu.org>.
haviras@ubuntu1804:~$
```

, locate

```
naviras@ubuntu1804:~$ locate "*.*" -n 20
/bin/fsck.btrfs
/bin/hostname.distrib
/bin/mkfs.btrfs
/bin/nc.openbsd
/bin/ntfs-3g.probe
/bin/sh.distrib
/boot/grub/menu.lst
/etc/.pwd.lock
/etc/adduser.conf
/etc/apparmor.d
/etc/at.deny
/etc/bash.bashrc
/etc/bash_completion.d
/etc/bindresvport.blacklist
/etc/binfmt.d
/etc/ca-certificates.conf
/etc/cron.d
/etc/cron.daily
/etc/cron.hourly
/etc/cron.monthly
naviras@ubuntu1804:~$
```

, whereis

```
root@ubuntu1804:/# whereis * -b
bin: /usr/local/bin
boot: /usr/share/man/man7/boot.7.gz
cdrom:
dev:
etc: /usr/local/etc
home:
initrd: /usr/share/man/man4/initrd.4.gz
initrd.img:
lib: /usr/local/lib /usr/src/linux-headers-4.15.0-91/lib /usr/src/linux-headers
4.15.0-96/lib /usr/src/linux-headers-4.15.0-91-generic/lib /usr/src/linux-heade
s-4.15.0-96-generic/lib
lib64:
lost+found:
media:
mnt:
opt: /etc/opt
proc: /usr/share/man/man5/proc.5.gz
root:
run:
sbin: /usr/local/sbin
snap: /usr/bin/snap /usr/share/man/man8/snap.8.gz
srv:
swap:
sys:
tmp:
usr: /usr/src/linux-headers-4.15.0-91/usr /usr/src/linux-headers-4.15.0-96/usr
usr/src/linux-headers-4.15.0-91-generic/usr /usr/src/linux-headers-4.15.0-96-ge
eric/usr
var:
vmlinuz:
vmlinuz:
root@ubuntu1804:/#
```

, less|zless

```
root@ubuntu1804:/var/log# less /var/log/syslog
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] Linux version 4.15.0-91-gener
c (buildd@lgw01-amd64-013) (gcc version 7.4.0 (Ubuntu 7.4.0-1ubuntu1~18.04.1))
92-Ubuntu SMP Fri Feb 28 11:09:48 UTC 2020 (Ubuntu 4.15.0-91.92-generic 4.15.18
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] Command line: BOOT_IMAGE=/boo
/vmlinuz-4.15.0-91-generic root=UUID=f2b8824f-183c-4d3f-acbb-77ea06c5b464 ro ma
be-ubiquity
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] KERNEL supported cpus:
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000]   Intel GenuineIntel
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000]   AMD AuthenticAMD
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000]   Centaur CentaurHauls
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] x86/fpu: Supporting XSAVE fea
ure 0x001: 'x87 floating point registers'
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] x86/fpu: Supporting XSAVE fea
ure 0x002: 'SSE registers'
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] x86/fpu: Supporting XSAVE fea
ure 0x004: 'AVX registers'
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] x86/fpu: xstate_offset[2]:  5
6, xstate_sizes[2]:  256
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] x86/fpu: Enabled xstate featu
es 0x7, context size is 832 bytes, using 'standard' format.
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] e820: BIOS-provided physical
AM map:
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] BIOS-e820: [mem 0x00000000000
0000-0x000000000009fbff] usable
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] BIOS-e820: [mem 0x00000000000
fc00-0x000000000009ffff] reserved
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] BIOS-e820: [mem 0x00000000000
0000-0x00000000000fffff] reserved
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] BIOS-e820: [mem 0x00000000001
0000-0x00000000a43effff] usable
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] BIOS-e820: [mem 0x00000000a43
0000-0x00000000a43fffff] ACPI data
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] BIOS-e820: [mem 0x00000000fec
0000-0x00000000fec00fff] reserved
Mar 24 14:28:58 ubuntu1804 kernel: [    0.000000] BIOS-e820: [mem 0x00000000fee
```

in /usr/share/doc

```
root@ubuntu1804:/usr/share/doc# less acl/README

Access control list package README

-------------------------------------

Package home: http://savannah.nongnu.org/projects/acl

See the file doc/INSTALL for build, installation and post-
install configuration steps.

Refer to the acl(5) manual page for general access control list
information and references to other related manual pages.

For more information on the build process, please refer to
doc/PORTING.
acl/README (END)
```

). Make 5 screenshots.