



Homework

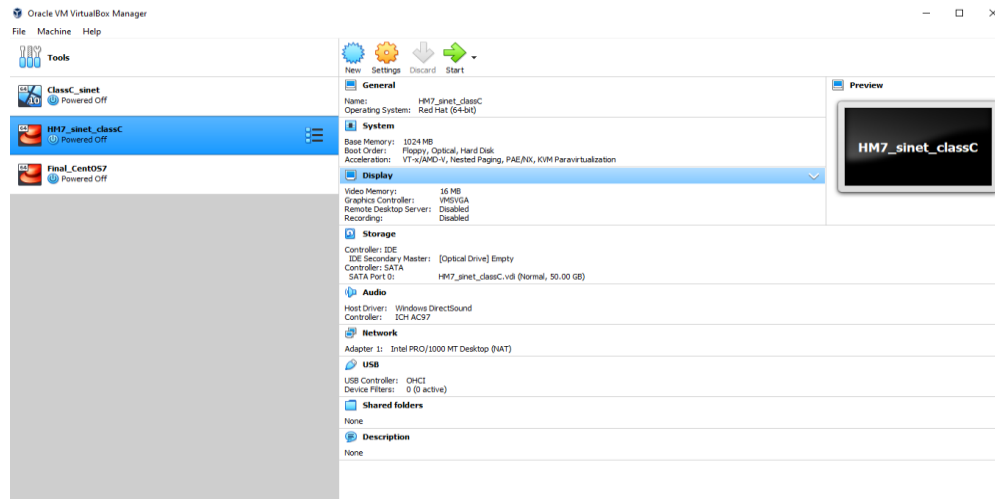
Operating System

Chapter9

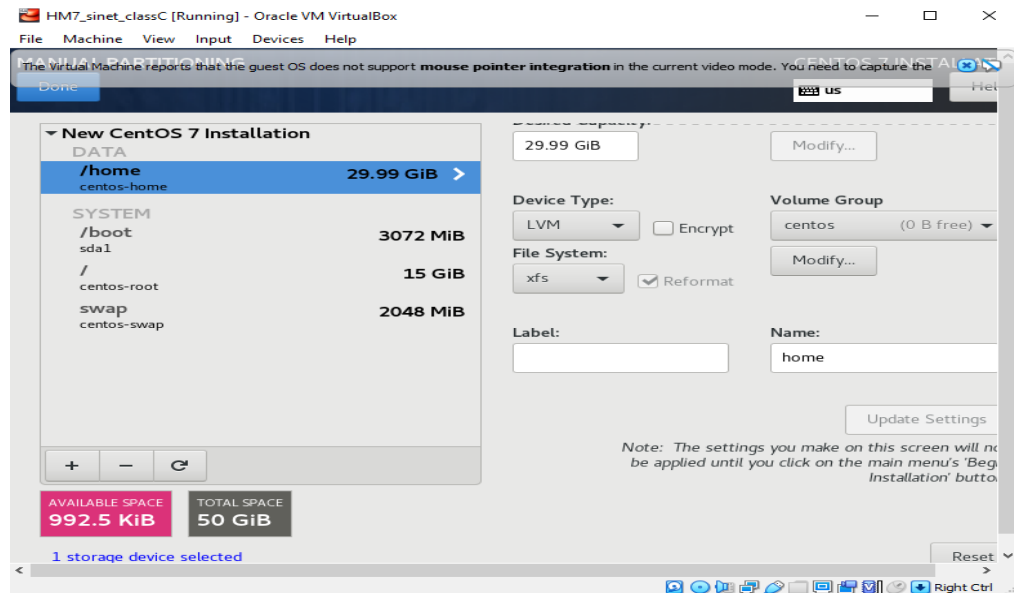


1. Install CentOS 7 on your VirtualBox

- Information of centos 7

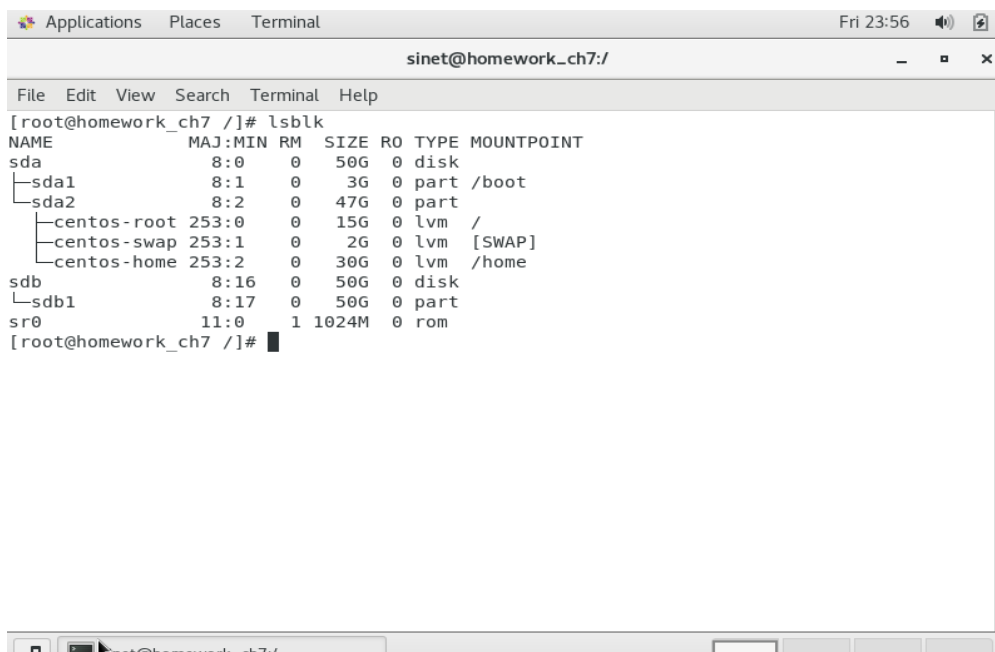
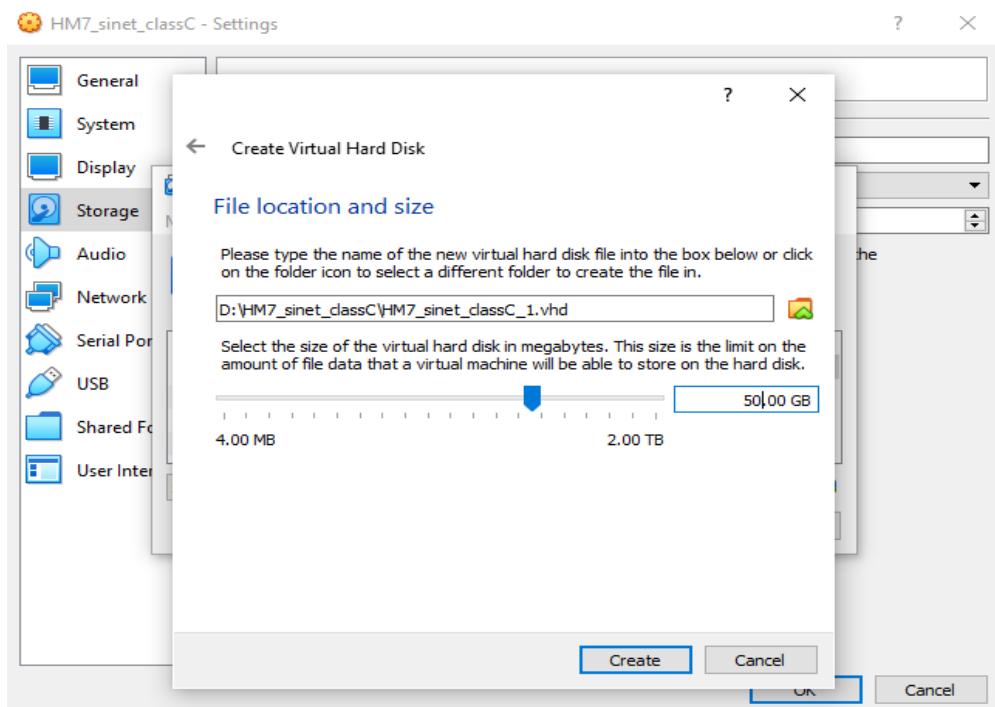


- Divide HDD



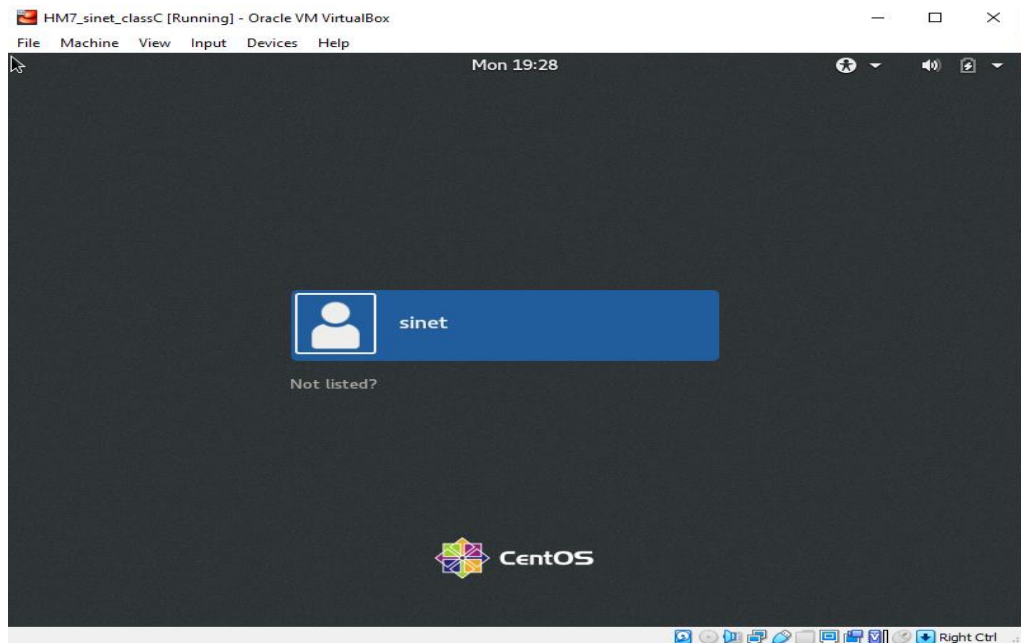


- Add new disk

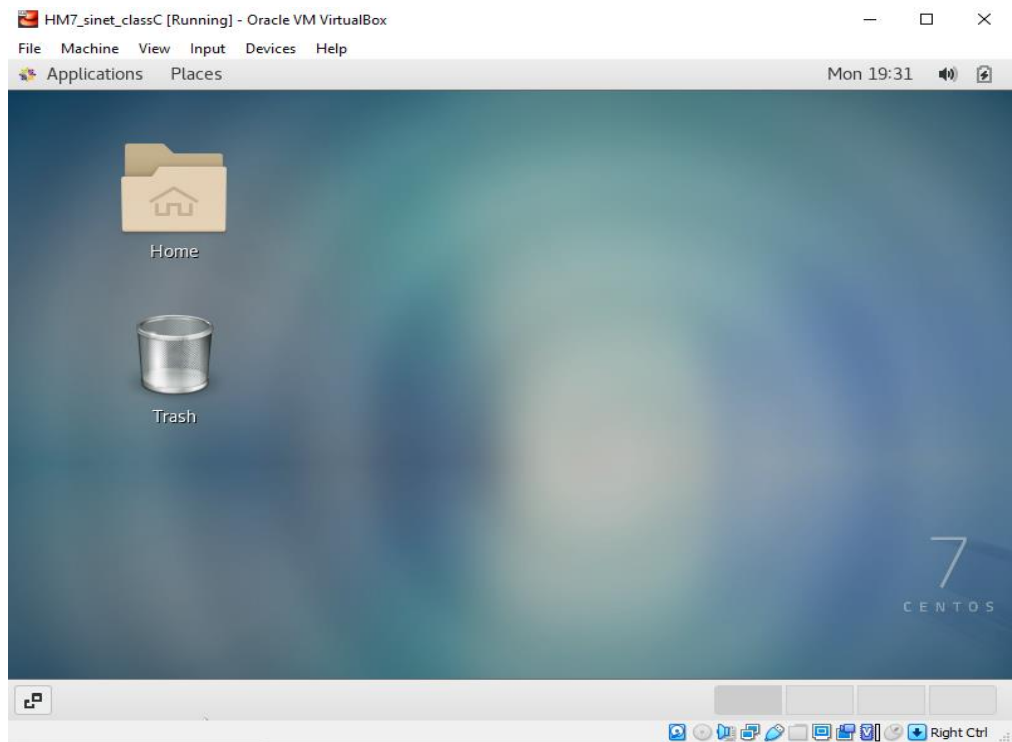




- Login centos 7



- Result of installing centos 7





2. Install package:

- Skype

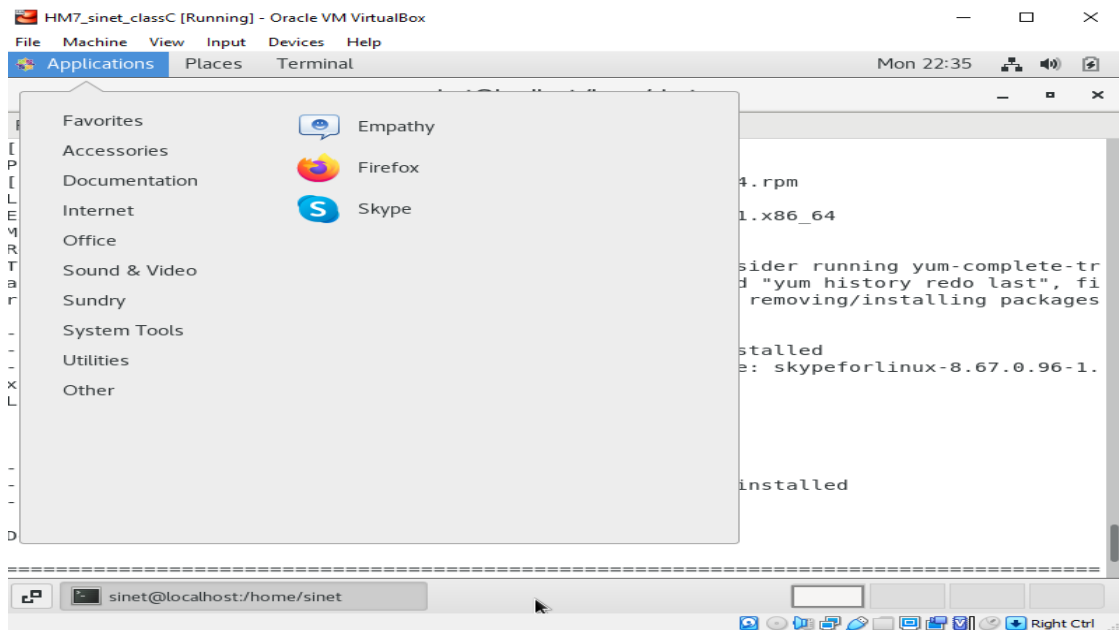
```
HM7_sinet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
sinet@localhost:~
File Edit View Search Terminal Help
* extras: mirror2.totbb.net
* updates: mirrors.viethosting.com
No package skype available.
Error: Nothing to do
[root@localhost sinet]# su sinet
[sinet@localhost ~]$ wget https://go.skype.com/skypeforlinux-64.rpm
--2021-01-18 21:44:04-- https://go.skype.com/skypeforlinux-64.rpm
Resolving go.skype.com (go.skype.com)... 40.118.109.53
Connecting to go.skype.com (go.skype.com)|40.118.109.53|:443... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://get.skype.com/getskype-webwrap-rpm [following]
--2021-01-18 21:44:06-- https://get.skype.com/getskype-webwrap-rpm
Resolving get.skype.com (get.skype.com)... 52.174.193.75
Connecting to get.skype.com (get.skype.com)|52.174.193.75|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://repo.skype.com/latest/skypeforlinux-64.rpm [following]
--2021-01-18 21:44:12-- https://repo.skype.com/latest/skypeforlinux-64.rpm
Resolving repo.skype.com (repo.skype.com)... 23.40.32.141, 2600:1417:3f:88c::1263, 2600:1417:3f:894::1263
Connecting to repo.skype.com (repo.skype.com)|23.40.32.141|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 113616838 (108M) [application/x-redhat-package-manager]
Saving to: 'skypeforlinux-64.rpm'

0% [          ] 543,662      12.9KB/s  eta 2h 20m
```

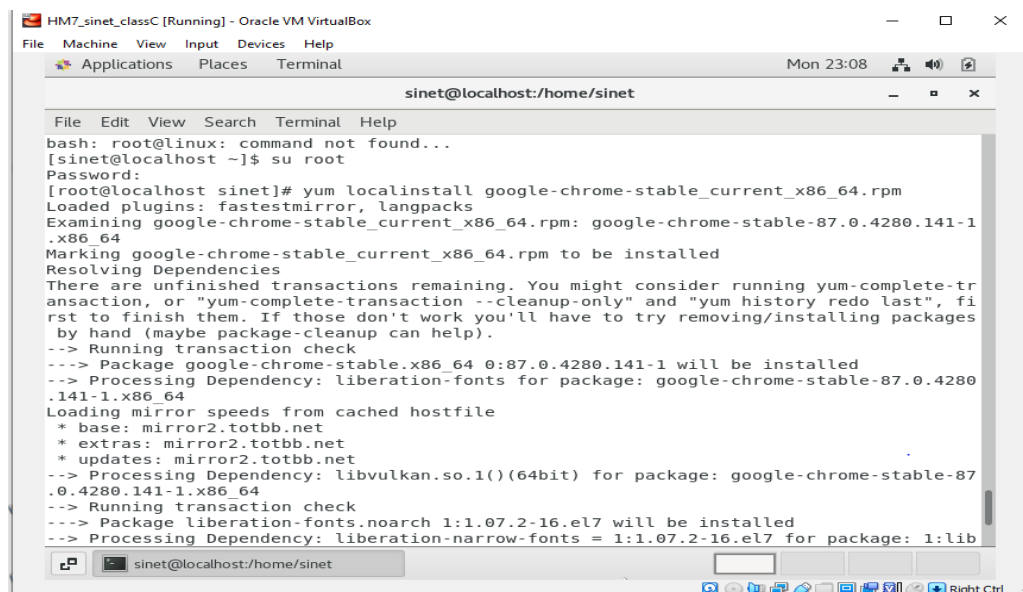
```
HM7_sinet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
sinet@localhost:/home/sinet
File Edit View Search Terminal Help
[sinet@localhost ~]$ su
Password:
[root@localhost sinet]# yum localinstall ./skypeforlinux-64.rpm
Loaded plugins: fastestmirror, langpacks
Examining ./skypeforlinux-64.rpm: skypeforlinux-8.67.0.96-1.x86_64
Marking ./skypeforlinux-64.rpm to be installed
Resolving Dependencies
There are unfinished transactions remaining. You might consider running yum-complete-tr
ansaction, or "yum-complete-transaction --cleanup-only" and "yum history redo last", fi
rst to finish them. If those don't work you'll have to try removing/installing packages
by hand (maybe package-cleanup can help).
--> Running transaction check
---> Package skypeforlinux.x86_64 0:8.67.0.96-1 will be installed
--> Processing Dependency: libXss.so.1()(64bit) for package: skypeforlinux-8.67.0.96-1.
x86_64
Loading mirror speeds from cached hostfile
* base: mirror.horizon.vn
* extras: mirror.horizon.vn
* updates: mirrors.viethosting.com
--> Running transaction check
---> Package libXScrnSaver.x86_64 0:1.2.2-6.1.el7 will be installed
--> Finished Dependency Resolution

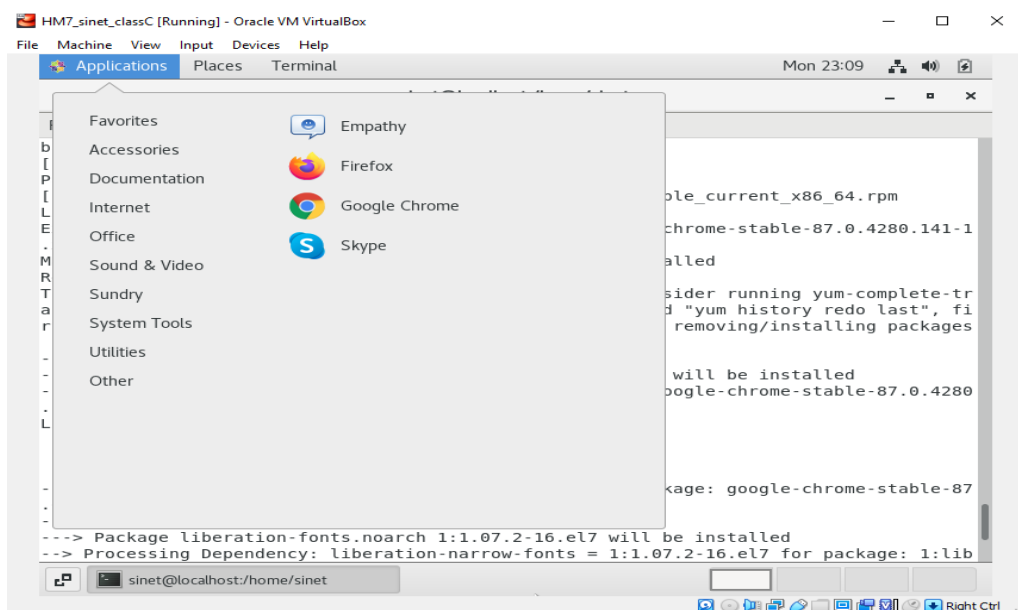
Dependencies Resolved

=====
sinet@localhost:/home/sinet
```

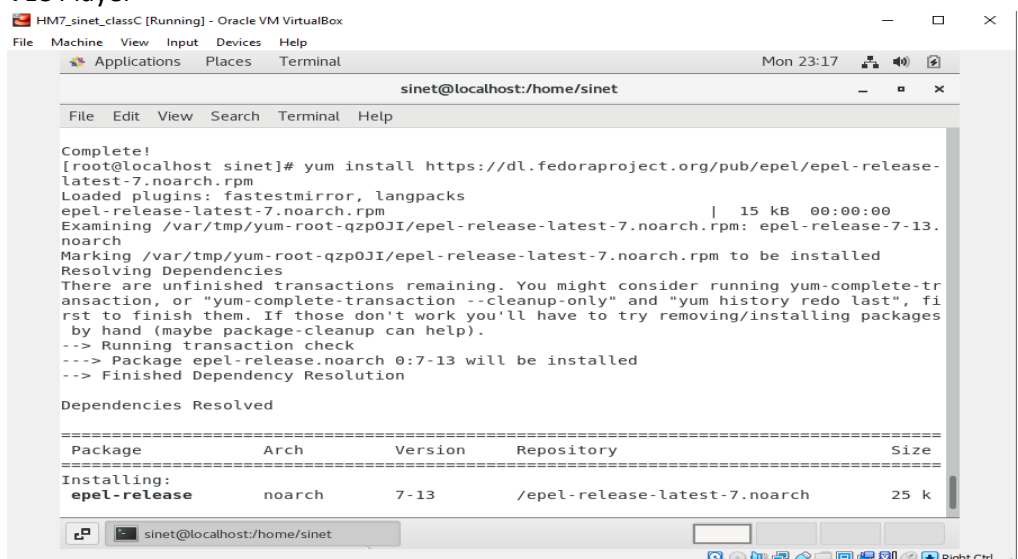


- Google Chrome





- **VLC Player**





```
HM7_siniet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
sinet@localhost:/home/sinet

File Edit View Search Terminal Help
sinet@localhost:/home/sinet
epel-release.noarch 0:7-13

Complete!
[root@localhost sinet]# yum install https://download1.rpmfusion.org/free/el/rpmfusion-free-release-7.noarch.rpm
Loaded plugins: fastestmirror, langpacks
rpmfusion-free-release-7.noarch.rpm
Examining /var/tmp/yum-root-qzp0JI/rpmfusion-free-release-7.noarch.rpm: rpmfusion-free-release-7-4.noarch
Marking /var/tmp/yum-root-qzp0JI/rpmfusion-free-release-7.noarch.rpm to be installed
Resolving Dependencies
There are unfinished transactions remaining. You might consider running yum-complete-transaction, or "yum-complete-transaction --cleanup-only" and "yum history redo last", first to finish them. If those don't work you'll have to try removing/installing packages by hand (maybe package-cleanup can help).
--> Running transaction check
--> Package rpmfusion-free-release.noarch 0:7-4 will be installed
--> Finished Dependency Resolution

epel/x86_64/metalink | 8.7 kB 00:00:00
epel/x86_64 | 4.7 kB 00:00:00
epel/x86_64/group_gz | 95 kB 00:00:00
epel/x86_64/updateinfo | 1.0 MB 00:00:03
epel/x86_64/primary_db | 6.9 MB 00:00:38

Dependencies Resolved

sinet@localhost:/home/sinet
```

```
HM7_siniet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
sinet@localhost:/home/sinet

File Edit View Search Terminal Help
sinet@localhost:/home/sinet

Complete!
[root@localhost sinet]# yum info vlc
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: mirror.cambo.host
* epel: fedora.cs.nctu.edu.tw
* extras: mirror.cambo.host
* rpmfusion-free-updates: mirror.lzu.edu.cn
* updates: mirror.cambo.host
rpmfusion-free-updates | 3.7 kB 00:00:00
(1/2): rpmfusion-free-updates/x86_64/group_gz | 1.4 kB 00:00:00
rpmfusion-free-updates/x86_64/ FAILED
http://mirrors.piconets.webwerks.in/rpmfusion-mirror/free/el/updates/7/x86_64/repodata/79b56ac95da16e69765db5df8a2e6bflae17a0c67edf9f6ba682f4dd5a302ed5-primary.sqlite.xz: [Error 14] HTTP Error 500 - Internal Server Error
Trying other mirror.
(2/2): rpmfusion-free-updates/x86_64/primary_db | 253 kB 00:00:01
Available Packages
Name : vlc
Arch : x86_64
Epoch : 1
Version : 3.0.11.1
Release : 3.el7
Size : 1.5 M
Repo : rpmfusion-free-updates/x86_64

sinet@localhost:/home/sinet
```




HM7_sinet_classC [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Applications Places Terminal

Mon 23:34

sinet@localhost:/home/sinet

```
File Edit View Search Terminal Help
[root@localhost sinet]# yum install vlc
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.bestthaihost.com
 * epel: my.mirrors.thegigabit.com
 * extras: mirrors.vhost.vn
 * rpmfusion-free-updates: free.nchc.org.tw
 * updates: mirrors.bkns.vn
Resolving Dependencies
There are unfinished transactions remaining. You might consider running yum-complete-tr
ansaction, or "yum-complete-transaction --cleanup-only" and "yum history redo last", fi
rst to finish them. If those don't work you'll have to try removing/installing packages
by hand (maybe package-cleanup can help).
--> Running transaction check
--> Package vlc.x86_64 1:3.0.11.1-3.el7 will be installed
--> Processing Dependency: vlc-core(x86-64) = 1:3.0.11.1-3.el7 for package: 1:vlc-3.0.1
1.1-3.el7.x86_64
--> Processing Dependency: libQt5X11Extras.so.5(Qt_5)(64bit) for package: 1:vlc-3.0.11.
1-3.el7.x86_64
--> Processing Dependency: libQt5Svg.so.5(Qt_5)(64bit) for package: 1:vlc-3.0.11.1-3.el
7.x86_64
--> Processing Dependency: libvlccore.so.9()(64bit) for package: 1:vlc-3.0.11.1-3.el7.x
86_64
--> Processing Dependency: libjack.so.0()(64bit) for package: 1:vlc-3.0.11.1-3.el7.x86_
64
--> Processing Dependency: libfluidsynth.so.1()(64bit) for package: 1:vlc-3.0.11.1-3.el
```

HM7_sinet_classC [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Applications Places Terminal

Mon 23:35

sinet@localhost:/home/sinet

Applications menu:

- Favorites
- Accessories
- Documentation
- Internet
- Office
- Sound & Video
- Sundry
- System Tools
- Utilities
- Other

Installed applications:

- Brasero
- Cheese
- LASH Panel
- Videos
- VLC media player

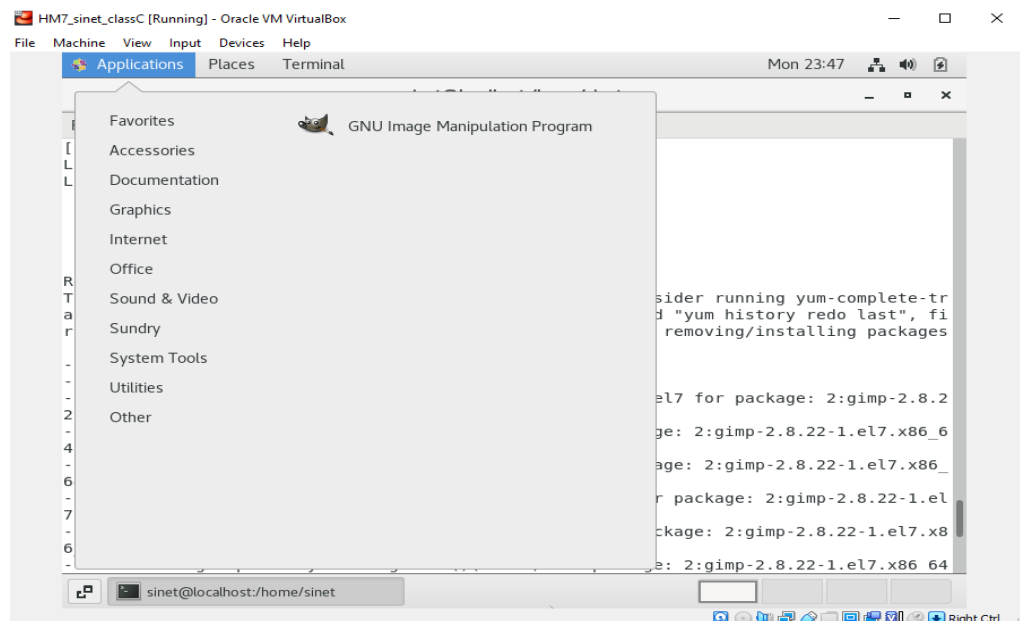
```
...sider running yum-complete-tr
d "yum history redo last", fi
removing/installing packages

...el7 for package: 1:vlc-3.0.1
...t) for package: 1:vlc-3.0.11.
...package: 1:vlc-3.0.11.1-3.el
...ckage: 1:vlc-3.0.11.1-3.el7.x
...ge: 1:vlc-3.0.11.1-3.el7.x86_
64
--> Processing Dependency: libfluidsynth.so.1()(64bit) for package: 1:vlc-3.0.11.1-3.el
```



- Gimp (Photo Editor)

```
sinet@localhost:/home/sinet
File Edit View Search Terminal Help
[root@localhost sinet]# yum install gimp -y
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirror2.totbb.net
 * epel: mirror.sjtu.edu.cn
 * extras: mirror2.totbb.net
 * rpmfusion-free-updates: mirror.lzu.edu.cn
 * updates: mirror2.totbb.net
Resolving Dependencies
There are unfinished transactions remaining. You might consider running yum-complete-transaction, or "yum-complete-transaction --cleanup-only" and "yum history redo last", first to finish them. If those don't work you'll have to try removing/installing packages by hand (maybe package-cleanup can help).
--> Running transaction check
--> Package gimp.x86_64 2:2.8.22-1.el7 will be installed
--> Processing Dependency: gimp-libs(x86-64) = 2:2.8.22-1.el7 for package: 2:gimp-2.8.22-1.el7.x86_64
--> Processing Dependency: gegl(x86-64) >= 0.2.0 for package: 2:gimp-2.8.22-1.el7.x86_64
--> Processing Dependency: babl(x86-64) >= 0.1.10 for package: 2:gimp-2.8.22-1.el7.x86_64
--> Processing Dependency: libwmf-lite-0.2.so.7()(64bit) for package: 2:gimp-2.8.22-1.el7.x86_64
--> Processing Dependency: libwmf-0.2.so.7()(64bit) for package: 2:gimp-2.8.22-1.el7.x86_64
--> Processing Dependency: libmng.so.1()(64bit) for package: 2:gimp-2.8.22-1.el7.x86_64
```





- VirtualBox

```
HM7_siniet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
sinet@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# yum install kernel-devel kernel-devel-$(uname -r) kernel-headers ke
rnel-headers-$(uname -r) make patch gcc
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirror2.totbb.net
 * epel: ftp.jaist.ac.jp
 * extras: mirror2.totbb.net
 * rpmfusion-free-updates: mirror.lzu.edu.cn
 * updates: mirrors.viethosting.com
Package 1:make-3.82-24.el7.x86_64 already installed and latest version
Resolving Dependencies
There are unfinished transactions remaining. You might consider running yum-complete-tr
ansaction, or "yum-complete-transaction --cleanup-only" and "yum history redo last", fi
rst to finish them. If those don't work you'll have to try removing/installing packages
by hand (maybe package-cleanup can help).
--> Running transaction check
--> Package gcc.x86_64 0:4.8.5-44.el7 will be installed
--> Processing Dependency: cpp = 4.8.5-44.el7 for package: gcc-4.8.5-44.el7.x86_64
--> Processing Dependency: glibc-devel >= 2.2.90-12 for package: gcc-4.8.5-44.el7.x86_6
4
--> Package kernel-devel.x86_64 0:3.10.0-1160.el7 will be installed
--> Package kernel-devel.x86_64 0:3.10.0-1160.11.1.el7 will be installed
--> Package kernel-headers.x86_64 0:3.10.0-1160.el7 will be installed
--> Package kernel-headers.x86_64 0:3.10.0-1160.11.1.el7 will be installed
--> Package patch.x86_64 0:2.7.1-12.el7_7 will be installed
--> Running transaction check
```

```
HM7_siniet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
sinet@localhost:~
File Edit View Search Terminal Help
You can use "yum check" to get yum show these errors.

...you can also use --setopt=protected_multilib=false to remove
this checking, however this is almost never the correct thing to
do as something else is very likely to go wrong (often causing
much more problems).

Protected multilib versions: kernel-headers-3.10.0-1160.el7.x86_64 != kernel-hea
ders-3.10.0-1160.11.1.el7.x86_64
[root@localhost ~]# wget https://download.virtualbox.org/virtualbox/rpm/el/virtualbox.r
epo -P /etc/yum.repos.d
--2021-01-18 23:56:53-- https://download.virtualbox.org/virtualbox/rpm/el/virtualbox.r
epo
Resolving download.virtualbox.org (download.virtualbox.org)... 104.91.72.85
Connecting to download.virtualbox.org (download.virtualbox.org)|104.91.72.85|:443... co
nnected.
HTTP request sent, awaiting response... 200 OK
Length: 259 [text/plain]
Saving to: '/etc/yum.repos.d/virtualbox.repo'

100%[=====] 259 --.-K/s in 0s

2021-01-18 23:56:55 (11.4 MB/s) - '/etc/yum.repos.d/virtualbox.repo' saved [259/259]

[root@localhost ~]#
```



```
HM7_siniet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
sinet@localhost:~$ yum install VirtualBox-5.2
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.thzhost.com
 * epel: mirror.poliwangi.ac.id
 * extras: mirrors.thzhost.com
 * rpmfusion-free-updates: mirrors.ustc.edu.cn
 * updates: mirrors.viethosting.com
virtualbox/7/x86_64/signature | 181 B 00:00:00
Retrieving key from https://www.virtualbox.org/download/oracle_vbox.asc
Importing GPG key 0x98AB5139:
  Userid : "Oracle Corporation (VirtualBox archive signing key) <info@virtualbox.org>"
  Fingerprint: 7b0f ab3a 13b9 0743 5925 d9c9 5442 2a4b 98ab 5139
  From : https://www.virtualbox.org/download/oracle_vbox.asc
Is this ok [y/N]: y
virtualbox/7/x86_64/signature | 2.9 kB 00:00:10 !!!
virtualbox/7/x86_64/primary.db | 174 kB 00:00:01
Resolving Dependencies
There are unfinished transactions remaining. You might consider running yum-complete-tr
ansaction, or "yum-complete-transaction --cleanup-only" and "yum history redo last", fi
rst to finish them. If those don't work you'll have to try removing/installing packages
by hand (maybe package-cleanup can help).
--> Running transaction check
--> Package VirtualBox-5.2.x86_64 0:5.2.44_139111_el7-1 will be installed
--> Finished Dependency Resolution
```

```
HM7_siniet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
sinet@localhost:~$ yum install VirtualBox-5.2
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.thzhost.com
 * epel: mirror.poliwangi.ac.id
 * extras: mirrors.thzhost.com
 * rpmfusion-free-updates: mirrors.ustc.edu.cn
 * updates: mirrors.viethosting.com
virtualbox/7/x86_64/signature | 181 B 00:00:00
Retrieving key from https://www.virtualbox.org/download/oracle_vbox.asc
Importing GPG key 0x98AB5139:
  Userid : "Oracle Corporation (VirtualBox archive signing key) <info@virtualbox.org>"
  Fingerprint: 7b0f ab3a 13b9 0743 5925 d9c9 5442 2a4b 98ab 5139
  From : https://www.virtualbox.org/download/oracle_vbox.asc
Is this ok [y/N]: y
virtualbox/7/x86_64/signature | 2.9 kB 00:00:10 !!!
virtualbox/7/x86_64/primary.db | 174 kB 00:00:01
Resolving Dependencies
There are unfinished transactions remaining. You might consider running yum-complete-tr
ansaction, or "yum-complete-transaction --cleanup-only" and "yum history redo last", fi
rst to finish them. If those don't work you'll have to try removing/installing packages
by hand (maybe package-cleanup can help).
--> Running transaction check
--> Package VirtualBox-5.2.x86_64 0:5.2.44_139111_el7-1 will be installed
--> Finished Dependency Resolution
```



- Notepad++

```
HM7_sinnet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
Tue 00:12

sinet@localhost:~
File Edit View Search Terminal Help
kernel modules (vboxdrv, vboxnetflt, vboxnetadp, vboxpci) before you can load
them. Please see your Linux system's documentation for more information.
Verifying : VirtualBox-5.2-5.2.44_139111_el7-1.x86_64 1/1

Installed:
VirtualBox-5.2.x86_64 0:5.2.44_139111_el7-1

Complete!
[root@localhost ~]# yum epel-release
Loaded plugins: fastestmirror, langpacks
No such command: epel-release. Please use /usr/bin/yum --help
[root@localhost ~]# yum install epel-release
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: mirror2.totbb.net
* epel: ftp.riken.jp
* extras: mirrors.vhost.vn
* rpmfusion-free-updates: mirrors.piconets.webwerks.in
* updates: mirrors.viethosting.com
base | 3.6 kB 00:00:00
extras | 2.9 kB 00:00:00
updates | 2.9 kB 00:00:00
Package epel-release-7-13.noarch already installed and latest version
Nothing to do
[root@localhost ~]#
```

```
HM7_sinnet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
Tue 00:22

sinet@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# yum install snapd
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: mirrors.bestthaihost.com
* epel: download.nus.edu.sg
* extras: mirrors.vhost.vn
* rpmfusion-free-updates: mirrors.ustc.edu.cn
* updates: mirrors.viethosting.com
Resolving Dependencies
There are unfinished transactions remaining. You might consider running yum-complete-tr
ansaction, or "yum-complete-transaction --cleanup-only" and "yum history redo last", fi
rst to finish them. If those don't work you'll have to try removing/installing packages
by hand (maybe package-cleanup can help).
--> Running transaction check
--> Package snapd.x86_64 0:2.47.1-1.el7 will be installed
--> Processing Dependency: snap-confine(x86-64) = 2.47.1-1.el7 for package: snapd-2.47.
1-1.el7.x86_64
--> Processing Dependency: snapd-selinux = 2.47.1-1.el7 for package: snapd-2.47.1-1.el7
.x86_64
--> Processing Dependency: squashfs-tools for package: snapd-2.47.1-1.el7.x86_64
--> Processing Dependency: squashfuse for package: snapd-2.47.1-1.el7.x86_64
--> Running transaction check
--> Package snap-confine.x86_64 0:2.47.1-1.el7 will be installed
--> Package snapd-selinux.noarch 0:2.47.1-1.el7 will be installed
--> Package squashfs-tools.x86_64 0:4.3-0.21.gitaae0aff4.el7 will be installed
--> Package squashfuse.x86_64 0:0.1.102-1.el7 will be installed
```



3. Basic Command Lines:

- Create directory

```
Applications Places Terminal Tue 13:53
sinet@localhost:/Training
File Edit View Search Terminal Help
[root@localhost ~]# mkdir -p Training/lesson Training/Quiz Training/Exam
[root@localhost ~]# //
bash: //: Is a directory
[root@localhost ~]# ll
total 36
lrwxrwxrwx. 1 root root 7 Jan 14 15:43 bin -> usr/bin
dr-xr-xr-x. 5 root root 4096 Jan 18 21:40 boot
drwxr-xr-x. 20 root root 3260 Jan 19 13:03 dev
drwxr-xr-x. 147 root root 8192 Jan 19 12:40 etc
drwxr-xr-x. 4 root root 34 Jan 19 13:37 Exam
drwxr-xr-x. 4 root root 26 Jan 19 13:37 Final
drwxr-xr-x. 3 root root 19 Jan 19 13:50 home
drwxr-xr-x. 4 root root 26 Jan 19 13:37 lesson
lrwxrwxrwx. 1 root root 7 Jan 14 15:43 lib -> usr/lib
lrwxrwxrwx. 1 root root 9 Jan 14 15:43 lib64 -> usr/lib64
drwxr-xr-x. 2 root root 6 Apr 11 2018 media
drwxr-xr-x. 4 root root 26 Jan 19 13:37 Mitderm
drwxr-xr-x. 2 root root 6 Apr 11 2018 mnt
drwxr-xr-x. 4 root root 30 Jan 18 23:06 opt
dr-xr-xr-x. 218 root root 0 Jan 19 12:28 proc
drwxr-xr-x. 5 root root 48 Jan 19 13:37 Quiz
dr-xr-x---. 7 root root 4096 Jan 19 12:31 root
drwxr-xr-x. 41 root root 1280 Jan 19 12:42 run
lrwxrwxrwx. 1 root root 8 Jan 14 15:43 sbin -> usr/sbin
drwxr-xr-x. 2 root root 6 Apr 11 2018 srv
dr-xr-xr-x. 13 root root 0 Jan 19 12:28 sys
```

```
Applications Places Terminal Tue 13:54
sinet@localhost:/Training
File Edit View Search Terminal Help
drwxr-xr-x. 4 root root 26 Jan 19 13:37 lesson
lrwxrwxrwx. 1 root root 7 Jan 14 15:43 lib -> usr/lib
lrwxrwxrwx. 1 root root 9 Jan 14 15:43 lib64 -> usr/lib64
drwxr-xr-x. 2 root root 6 Apr 11 2018 media
drwxr-xr-x. 4 root root 26 Jan 19 13:37 Mitderm
drwxr-xr-x. 2 root root 6 Apr 11 2018 mnt
drwxr-xr-x. 4 root root 30 Jan 18 23:06 opt
dr-xr-xr-x. 218 root root 0 Jan 19 12:28 proc
drwxr-xr-x. 5 root root 48 Jan 19 13:37 Quiz
dr-xr-x---. 7 root root 4096 Jan 19 12:31 root
drwxr-xr-x. 41 root root 1280 Jan 19 12:42 run
lrwxrwxrwx. 1 root root 8 Jan 14 15:43 sbin -> usr/sbin
drwxr-xr-x. 2 root root 6 Apr 11 2018 srv
dr-xr-xr-x. 13 root root 0 Jan 19 12:28 sys
drwxrwxrwt. 54 root root 8192 Jan 19 13:50 tmp
drwxr-xr-x. 5 root root 44 Jan 19 13:51 Training
drwxr-xr-x. 13 root root 155 Jan 14 15:43 usr
drwxr-xr-x. 22 root root 4096 Jan 19 00:18 var
[root@localhost ~]# cd /Training
[root@localhost Training]# ll
total 0
drwxr-xr-x. 2 root root 6 Jan 19 13:51 Exam
drwxr-xr-x. 2 root root 6 Jan 19 13:51 lesson
drwxr-xr-x. 2 root root 6 Jan 19 13:51 Quiz
[root@localhost Training]#
```



```
[root@localhost lesson]# cd /training
[root@localhost Training]# mkdir -p lesson/CA lesson/OS
[root@localhost Training]# ll
total 0
drwxr-xr-x. 2 root root 6 Jan 19 13:51 Exam
drwxr-xr-x. 4 root root 26 Jan 19 13:57 lesson
drwxr-xr-x. 2 root root 6 Jan 19 13:51 Quiz
[root@localhost Training]# cd /lesson
[root@localhost lesson]# ll
total 0
drwxr-xr-x. 2 root root 6 Jan 19 13:37 CA
drwxr-xr-x. 2 root root 6 Jan 19 13:37 OS
[root@localhost lesson]#
```

The screenshot shows a terminal window titled "sinet@localhost:/lesson/OS". The terminal output is as follows:

```
[root@localhost lesson]# ll
total 0
drwxr-xr-x. 2 root root 6 Jan 19 13:37 CA
drwxr-xr-x. 2 root root 6 Jan 19 13:37 OS
[root@localhost lesson]# cd CA/
[root@localhost CA]# touch Lesson1.txt
[root@localhost CA]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 19 14:10 Lesson1.txt
[root@localhost CA]# cd OS/
bash: cd: OS/: No such file or directory
[root@localhost CA]# cd /lesson
[root@localhost lesson]# cd OS/
[root@localhost OS]# touch Linux.txt
[root@localhost OS]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 19 14:12 Linux.txt
[root@localhost OS]#
```



```
sinet@localhost:/Quiz/ClassC
File Edit View Search Terminal Help
[root@localhost Training]# mkdir -p Quiz/ClassA Quiz/ClassB Quiz/ClassC
[root@localhost Training]# ll
total 0
drwxr-xr-x. 2 root root 6 Jan 19 13:51 Exam
drwxr-xr-x. 4 root root 26 Jan 19 13:57 lesson
drwxr-xr-x. 5 root root 48 Jan 19 16:05 Quiz
[root@localhost Training]# cd Quiz
[root@localhost Quiz]# ll
total 0
drwxr-xr-x. 2 root root 6 Jan 19 16:05 ClassA
drwxr-xr-x. 2 root root 6 Jan 19 16:05 ClassB
drwxr-xr-x. 2 root root 6 Jan 19 16:05 ClassC
[root@localhost Quiz]# cd ClassA
[root@localhost ClassA]# touch Q1.Geeko
[root@localhost ClassA]# cd /Quiz
[root@localhost Quiz]# cd ClassB
[root@localhost ClassB]# touch Q2.Mike
[root@localhost ClassB]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 19 16:08 Q2.Mike
[root@localhost ClassB]# cd /Quiz
[root@localhost Quiz]# cd ClassC
[root@localhost ClassC]# touch Q3.John
[root@localhost ClassC]#
```

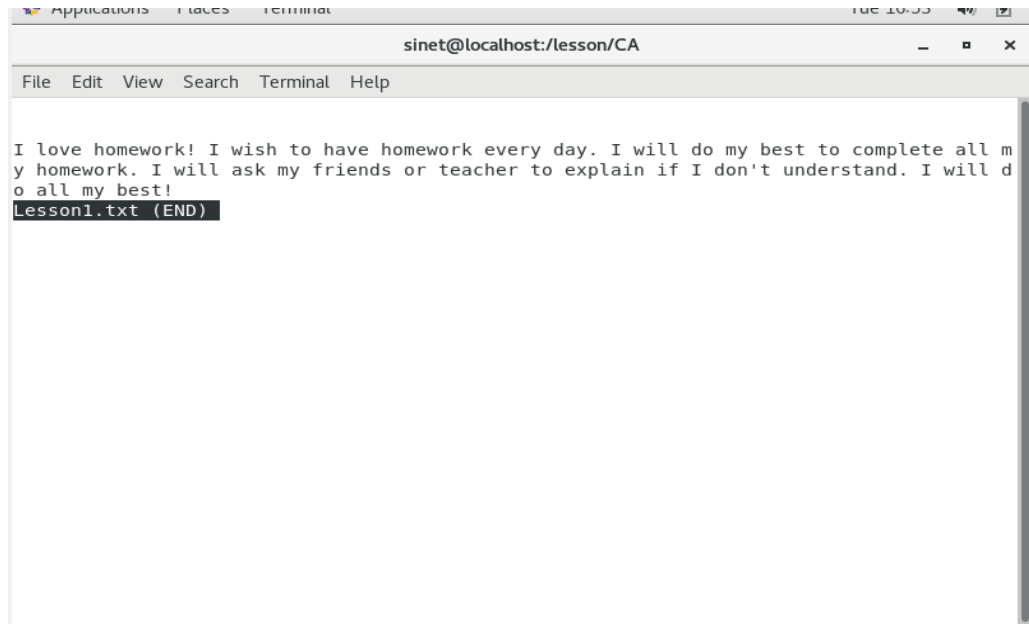
```
sinet@localhost:/Quiz/ClassC
File Edit View Search Terminal Help
drwxr-xr-x. 4 root root 26 Jan 19 13:57 lesson
drwxr-xr-x. 5 root root 48 Jan 19 16:05 Quiz
[root@localhost Training]# cd Quiz
[root@localhost Quiz]# ll
total 0
drwxr-xr-x. 2 root root 22 Jan 19 16:07 ClassA
drwxr-xr-x. 2 root root 6 Jan 19 16:05 ClassB
drwxr-xr-x. 2 root root 6 Jan 19 16:05 ClassC
[root@localhost Quiz]# cd ClassA
[root@localhost ClassA]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 19 16:07 Q1.Geeko
[root@localhost ClassA]# cd ClassB
bash: cd: ClassB: No such file or directory
[root@localhost ClassA]# cd /Quiz
[root@localhost Quiz]# cd ClassB
[root@localhost ClassB]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 19 16:08 Q2.Mike
[root@localhost ClassB]# cd /Quiz
[root@localhost Quiz]# cd ClassC
[root@localhost ClassC]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 19 16:09 Q3.John
[root@localhost ClassC]#
```




```
sinet@localhost:/Training/Exam/Midterm
File Edit View Search Terminal Help
drwxr-xr-x. 5 root root 48 Jan 19 16:05 Quiz
[root@localhost Training]# mkdir -p Exam/Midterm Exam/Midterm/CA Exam/Midterm/OS Exam/F
inal Exam/Final/CA Exam/Final/OS
[root@localhost Training]# ll
total 0
drwxr-xr-x. 4 root root 34 Jan 19 16:27 Exam
drwxr-xr-x. 4 root root 26 Jan 19 13:57 lesson
drwxr-xr-x. 5 root root 48 Jan 19 16:05 Quiz
[root@localhost Training]# cd Exam
[root@localhost Exam]# ll
total 0
drwxr-xr-x. 4 root root 26 Jan 19 16:27 Final
drwxr-xr-x. 4 root root 26 Jan 19 16:27 Midterm
[root@localhost Exam]# cd Midterm
[root@localhost Midterm]# ll
total 0
drwxr-xr-x. 2 root root 6 Jan 19 16:27 CA
drwxr-xr-x. 2 root root 6 Jan 19 16:27 OS
[root@localhost Midterm]# cd Final
bash: cd: Final: No such file or directory
[root@localhost Midterm]# ll
total 0
drwxr-xr-x. 2 root root 6 Jan 19 16:27 CA
drwxr-xr-x. 2 root root 6 Jan 19 16:27 OS
[root@localhost Midterm]#
```

- Insert text

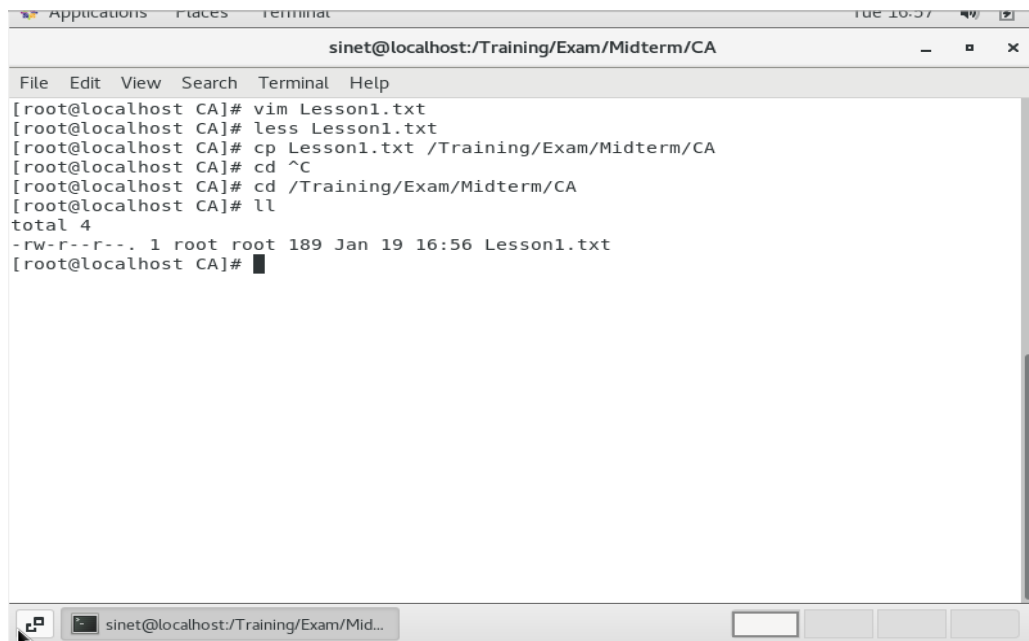
```
sinet@localhost:/lesson/CA
File Edit View Search Terminal Help
[root@localhost CA]# vim Lesson1.txt
```



```
sinet@localhost:/lesson/CA
File Edit View Search Terminal Help

I love homework! I wish to have homework every day. I will do my best to complete all m
y homework. I will ask my friends or teacher to explain if I don't understand. I will d
o all my best!
Lesson1.txt (END)
```

- Copy

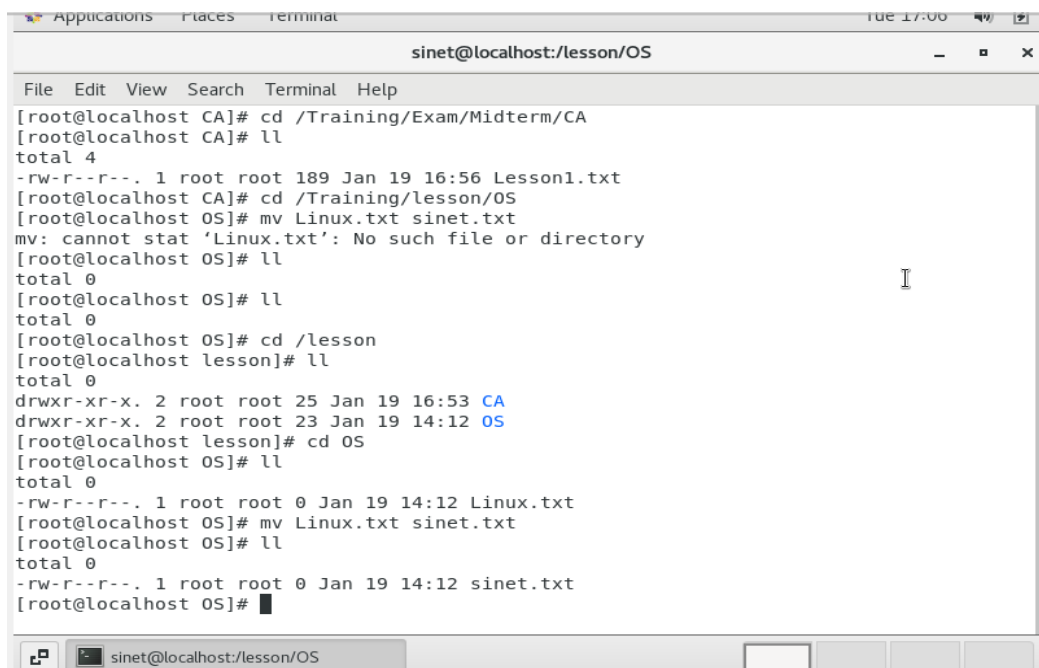


```
sinet@localhost:/Training/Exam/Midterm/CA
File Edit View Search Terminal Help

[root@localhost CA]# vim Lesson1.txt
[root@localhost CA]# less Lesson1.txt
[root@localhost CA]# cp Lesson1.txt /Training/Exam/Midterm/CA
[root@localhost CA]# cd ^C
[root@localhost CA]# cd /Training/Exam/Midterm/CA
[root@localhost CA]# ll
total 4
-rw-r--r--. 1 root root 189 Jan 19 16:56 Lesson1.txt
[root@localhost CA]#
```

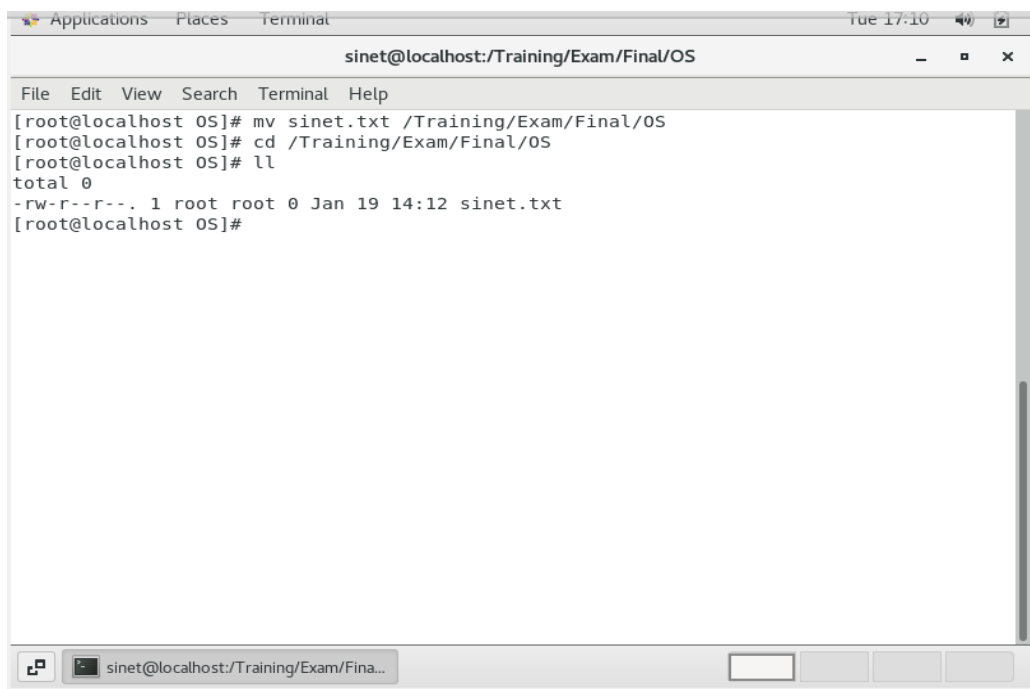


- Rename



```
sinet@localhost:/lesson/OS
File Edit View Search Terminal Help
[root@localhost CA]# cd /Training/Exam/Midterm/CA
[root@localhost CA]# ll
total 4
-rw-r--r--. 1 root root 189 Jan 19 16:56 Lesson1.txt
[root@localhost CA]# cd /Training/lesson/OS
[root@localhost OS]# mv Linux.txt sinet.txt
mv: cannot stat 'Linux.txt': No such file or directory
[root@localhost OS]# ll
total 0
[root@localhost OS]# ll
total 0
[root@localhost OS]# cd /lesson
[root@localhost lesson]# ll
total 0
drwxr-xr-x. 2 root root 25 Jan 19 16:53 CA
drwxr-xr-x. 2 root root 23 Jan 19 14:12 OS
[root@localhost lesson]# cd OS
[root@localhost OS]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 19 14:12 Linux.txt
[root@localhost OS]# mv Linux.txt sinet.txt
[root@localhost OS]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 19 14:12 sinet.txt
[root@localhost OS]#
```

- Remove



```
sinet@localhost:/Training/Exam/Final/OS
File Edit View Search Terminal Help
[root@localhost OS]# mv sinet.txt /Training/Exam/Final/OS
[root@localhost OS]# cd /Training/Exam/Final/OS
[root@localhost OS]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 19 14:12 sinet.txt
[root@localhost OS]#
```



- Use Cat command to view both files Lesson1.txt and yourname.txt

```
sinet@localhost:/Training/Exam/Final/OS
total 0
drwxr-xr-x. 2 root root 25 Jan 19 16:53 CA
drwxr-xr-x. 2 root root 6 Jan 19 17:10 OS
[root@localhost lesson]# cd OS
[root@localhost OS]# ll
total 0
[root@localhost OS]# cd /lesson
[root@localhost lesson]# cd CA
[root@localhost CA]# ll
total 4
-rw-r--r--. 1 root root 189 Jan 19 16:44 Lesson1.txt
[root@localhost CA]# cat Lesson1.txt
I love homework! I wish to have homework every day. I will do my best to complete all m
y homework. I will ask my friends or teacher to explain if I don't understand. I will d
o all my best!
[root@localhost CA]# cd /lesson
[root@localhost lesson]# cd OS
[root@localhost OS]# ll
total 0
[root@localhost OS]# cd /Training/Exam/Final/OS
[root@localhost OS]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 19 14:12 sinet.txt
[root@localhost OS]# cat sinet.txt
[root@localhost OS]#
```

- Copy file

```
HM7_sinet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
sinet@localhost:/Training/lesson/OS
File Edit View Search Terminal Help
[root@localhost ~]# cp /etc/passwd /Training/lesson/OS
[root@localhost ~]# cp /Traning/lesson/OS
cp: missing destination file operand after '/Traning/lesson/OS'
Try 'cp --help' for more information.
[root@localhost ~]# cd /
[root@localhost /]# cd Training/lesson/OS
[root@localhost OS]# ll
total 4
-rw-r--r--. 1 root root 2307 Jan 22 20:00 passwd
[root@localhost OS]#
```



- Use less command to view content within file passwd and search the word "mail" in the file

```
sinet@localhost:/etc
File Edit View Search Terminal Help
[root@localhost etc]# less passwd
```

```
sinet@localhost:/etc
File Edit View Search Terminal Help
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:99:99:Nobody:./:/sbin/nologin
systemd-network:x:192:192:systemd Network Management:./:/sbin/nologin
dbus:x:81:81:System message bus:./:/sbin/nologin
polkitd:x:999:998:User for polkitd:./:/sbin/nologin
libstoragemgmt:x:998:995:daemon account for libstoragemgmt:/var/run/lsm:/sbin/nologin
colord:x:997:994:User for colord:/var/lib/colord:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
saned:x:996:993:SANE scanner daemon user:/usr/share/sane:/sbin/nologin
gluster:x:995:992:GlusterFS daemons:/run/gluster:/sbin/nologin
saslauth:x:994:76:Saslauthd user:/run/saslauthd:/sbin/nologin
abrt:x:173:173:./etc/abrt:/sbin/nologin
setroubleshoot:x:993:990:./var/lib/setroubleshoot:/sbin/nologin
/mail
```



```
sinet@localhost:/etc
File Edit View Search Terminal Help
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:99:99:Nobody:/:/sbin/nologin
systemd-network:x:192:192:systemd Network Management:/:/sbin/nologin
dbus:x:81:81:System message bus:/:/sbin/nologin
polkitd:x:999:998:User for polkitd:/:/sbin/nologin
libstoragemgmt:x:998:995:daemon account for libstoragemgmt:/var/run/lsm:/sbin/nologin
colord:x:997:994:User for colord:/var/lib/colord:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
sane:x:996:993:SANE scanner daemon user:/usr/share/sane:/sbin/nologin
gluster:x:995:992:GlusterFS daemons:/run/gluster:/sbin/nologin
saslauthd:x:994:76:Saslauthd user:/run/saslauthd:/sbin/nologin
abrt:x:173:173:/:etc/abrt:/sbin/nologin
setroubleshoot:x:993:990:/:var/lib/setroubleshoot:/sbin/nologin
rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin
pulse:x:171:171:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin
radvd:x:75:75:radvd user:/:/sbin/nologin
chrony:x:992:987:/:var/lib/chrony:/sbin/nologin
unbound:x:991:986:Unbound DNS resolver:/etc/unbound:/sbin/nologin
qemu:x:107:107:qemu user:/:/sbin/nologin
tss:x:59:59:Account used by the trousers package to sandbox the tcsd daemon:/dev/null:/sbin/nologin
:
```

- Use grep command to search word "root" within file passwd

```
sinet@localhost:/etc
File Edit View Search Terminal Help
[root@localhost etc]# grep "root" passwd
root:x:0:0:root:/root:/bin/bash
operator:x:11:0:operator:/root:/sbin/nologin
[root@localhost etc]#
```

- use cut command to display only 1st and 5th field of all lines within file passwd



```
sinet@localhost:/etc

[root@localhost etc]# cat -f 1,5 -d ":" passwd
root:root
bin:bin
daemon:daemon
adm:adm
lp:lp
sync:sync
shutdown:shutdown
halt:halt
mail:mail
operator:operator
games:games
ftp:FTP User
nobody:Nobody
systemd-network:systemd Network Management
dbus:System message bus
polkitd:User for polkitd
libstoragemgmt:daemon account for libstoragemgmt
colord:User for colord
rpc:Rpcbind Daemon
sane:SANES scanner daemon user
gluster:GlusterFS daemons
saslauth:Saslauthd user
abrt:
setroubleshoot:
rtkit:RealtimeKit
```

- Remove file

```
sinet@localhost:/Training/Quiz/ClassB

[root@localhost ClassA]# rm -r Q1.Geeko
rm: remove regular empty file 'Q1.Geeko'? y
[root@localhost ClassA]# ll
total 0
[root@localhost ClassA]# cd /Training/Quiz/ClassB
[root@localhost ClassB]# rm -r Q2.Mike
rm: cannot remove 'Q2.Mike': No such file or directory
[root@localhost ClassB]# ll
total 0
[root@localhost ClassB]#
```



```
sinet@localhost:~/Training/Quiz/ClassA
File Edit View Search Terminal Help
[root@localhost ClassB]# ll
total 0
[root@localhost ClassB]# cd /Training/Quiz/ClassC
[root@localhost ClassC]# ll
total 0
[root@localhost ClassC]# cd /Training/Quiz/ClassA
[root@localhost ClassA]# ll
total 0
[root@localhost ClassA]#
```

- Show all histories of your commands but only the last 50 lines

```
sinet@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# history | tail -50
34 clear
35 grep "root" passwd
36 grep "final" passwd
37 ll
38 clear
39 cut -f 1,5 -d ":" passwd
40 clear
41 cd
42 cd /
43 clear
44 cd Training/Quiz/ClassA
45 re -r Q1.Geeko
46 ll
47 clear
48 rm -r Q1.Geeko
49 ll
50 cd /Training/Quiz/ClassB
51 rm -r Q2.Mike
52 ll
53 cd /Training/Quiz/ClassC
54 ll
55 clear
56 rm -r Q3.Jonh
57 clear
```

- Use command line to show your system's memory usage



```
HM7_sinet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal
sinet@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# cat /proc/meminfo
```

```
HM7_sinet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
SReclaimable:      31404 kB
SUnreclaim:        39672 kB
KernelStack:       7568 kB
PageTables:        33828 kB
NFS_Unstable:       0 kB
Bounce:            0 kB
WritebackTmp:       0 kB
CommitLimit:       2604524 kB
Committed_AS:      3860636 kB
VmallocTotal:      34359738367 kB
VmallocUsed:        28616 kB
VmallocChunk:      34359706624 kB
Percpu:            188 kB
HardwareCorrupted:  0 kB
AnonHugePages:     71680 kB
CmaTotal:           0 kB
CmaFree:            0 kB
HugePages_Total:   0
HugePages_Free:    0
HugePages_Rsvd:    0
HugePages_Surp:    0
Hugepagesize:      2048 kB
DirectMap4k:       73664 kB
DirectMap2M:       974848 kB
[root@localhost ~]#
```



- Use command line to show used and available disk space on your system

```
HM7_sinnet_classC [Running] - Oracle VM VirtualBox
sinet@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# df
Filesystem            1K-blocks      Used Available Use% Mounted on
devtmpfs                490496         0    490496   0% /dev
tmpfs                   507376         0    507376   0% /dev/shm
tmpfs                   507376    7752    499624   2% /run
tmpfs                   507376         0    507376   0% /sys/fs/cgroup
/dev/mapper/centos-root 15718400 5992536   9725864  39% /
/dev/sda1               3135488   216988   2918500   7% /boot
/dev/mapper/centos-home 31433732  231044  31202688   1% /home
tmpfs                   101476         24    101452   1% /run/user/1000
[root@localhost ~]#
```

- Create username

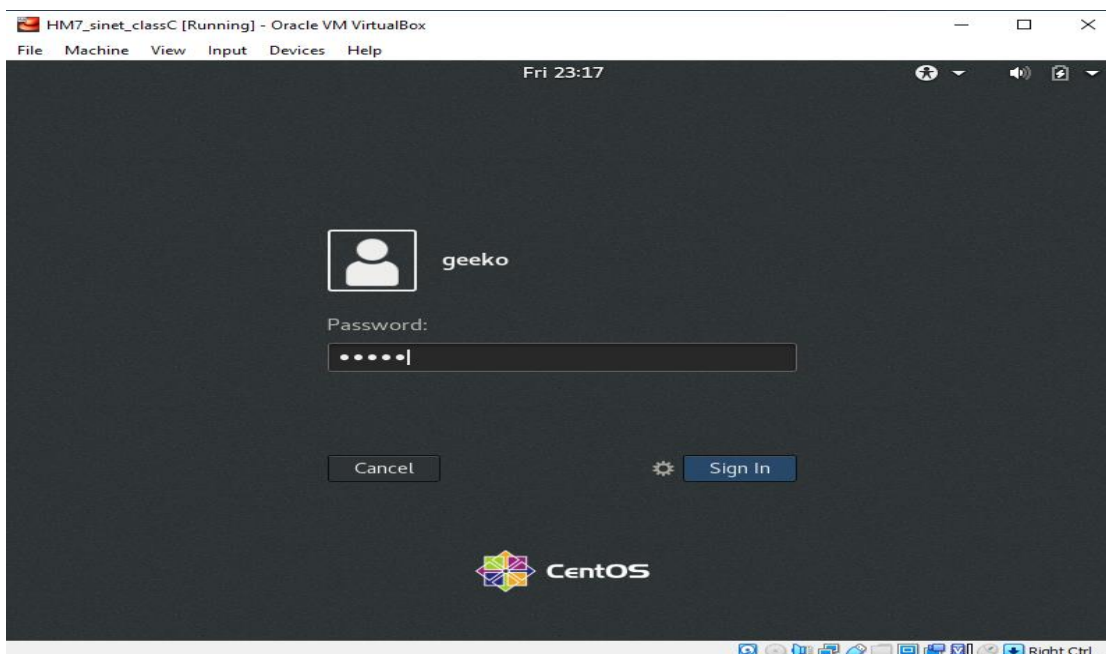
```
HM7_sinnet_classC [Running] - Oracle VM VirtualBox
sinet@localhost:/home
File Edit View Search Terminal Help
[root@localhost ~]# useradd geeko
[root@localhost ~]# passwd geeko
Changing password for user geeko.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]# cd /home
[root@localhost home]# ll
total 4
drwx----- 3 geeko geeko 78 Jan 22 23:05 geeko
drwx----- 16 sinet sinet 4096 Jan 22 22:17 sinet
[root@localhost home]#
```



- Change hostname

```
HM7_sinnet_classC [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
sinet@localhost:/home
File Edit View Search Terminal Help
[root@localhost home]# hostnamectl set-hostname homework_ch7
[root@localhost home]# su sinet
[sinet@homework_ch7 home]$ su
Password:
[root@homework_ch7 home]#
```

- Login by user geeko





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