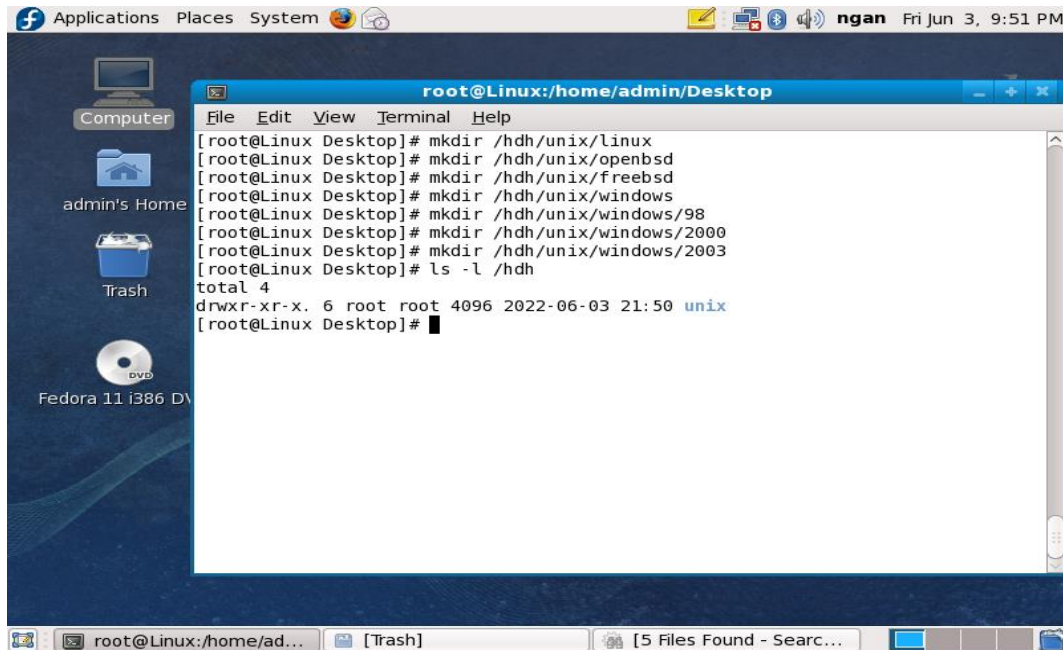


Name: Trần Thị Kim Ngân – SE161483

Class: SE1743

LAB 2 – OSG202

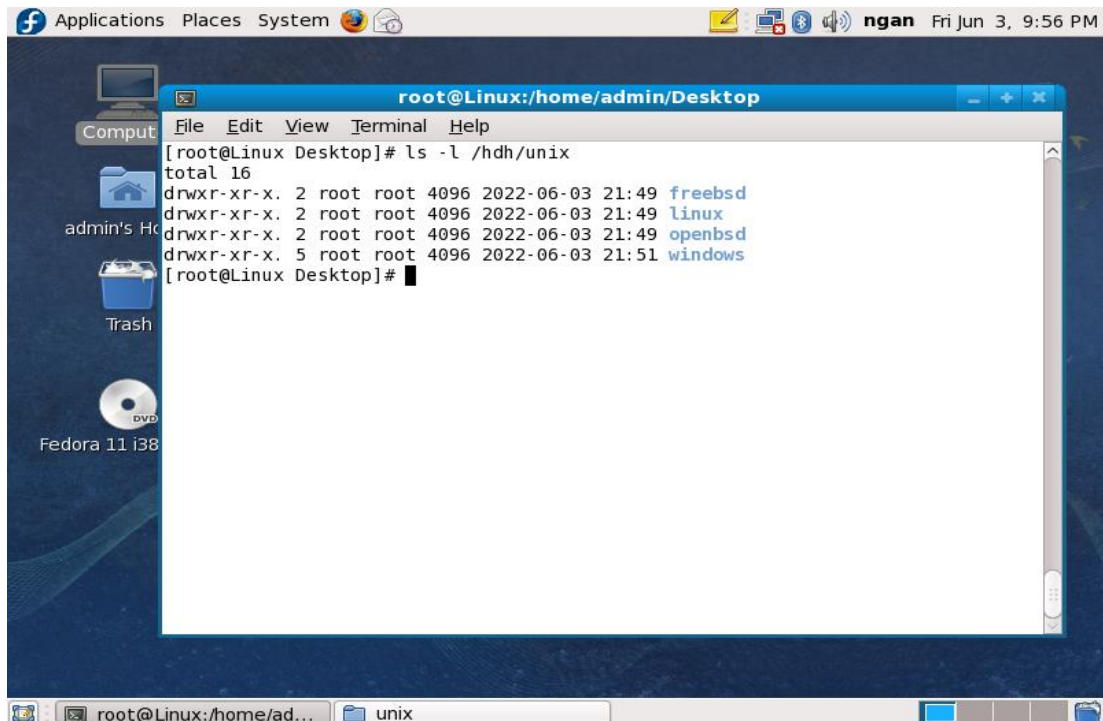
File management: create a directory: mkdir



The screenshot shows a Linux desktop with a terminal window titled "root@Linux:/home/admin/Desktop". The terminal displays a series of mkdir commands creating a directory structure under /hdh. The desktop background is Fedora 11 i386 DV. The terminal output is as follows:

```
root@Linux Desktop]# mkdir /hdh/unix/linux
root@Linux Desktop]# mkdir /hdh/unix/opensbd
root@Linux Desktop]# mkdir /hdh/unix/freebsd
root@Linux Desktop]# mkdir /hdh/unix/windows
root@Linux Desktop]# mkdir /hdh/unix/windows/98
root@Linux Desktop]# mkdir /hdh/unix/windows/2000
root@Linux Desktop]# mkdir /hdh/unix/windows/2003
root@Linux Desktop]# ls -l /hdh
total 4
drwxr-xr-x. 6 root root 4096 2022-06-03 21:50 unix
root@Linux Desktop]#
```

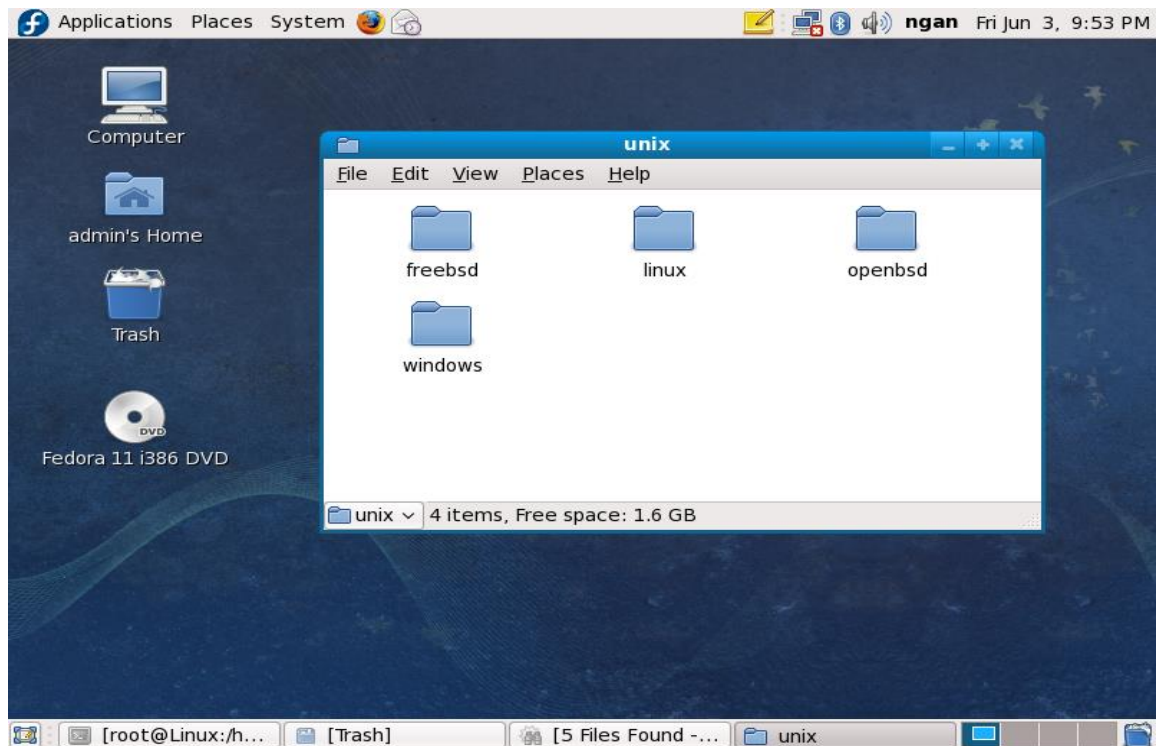
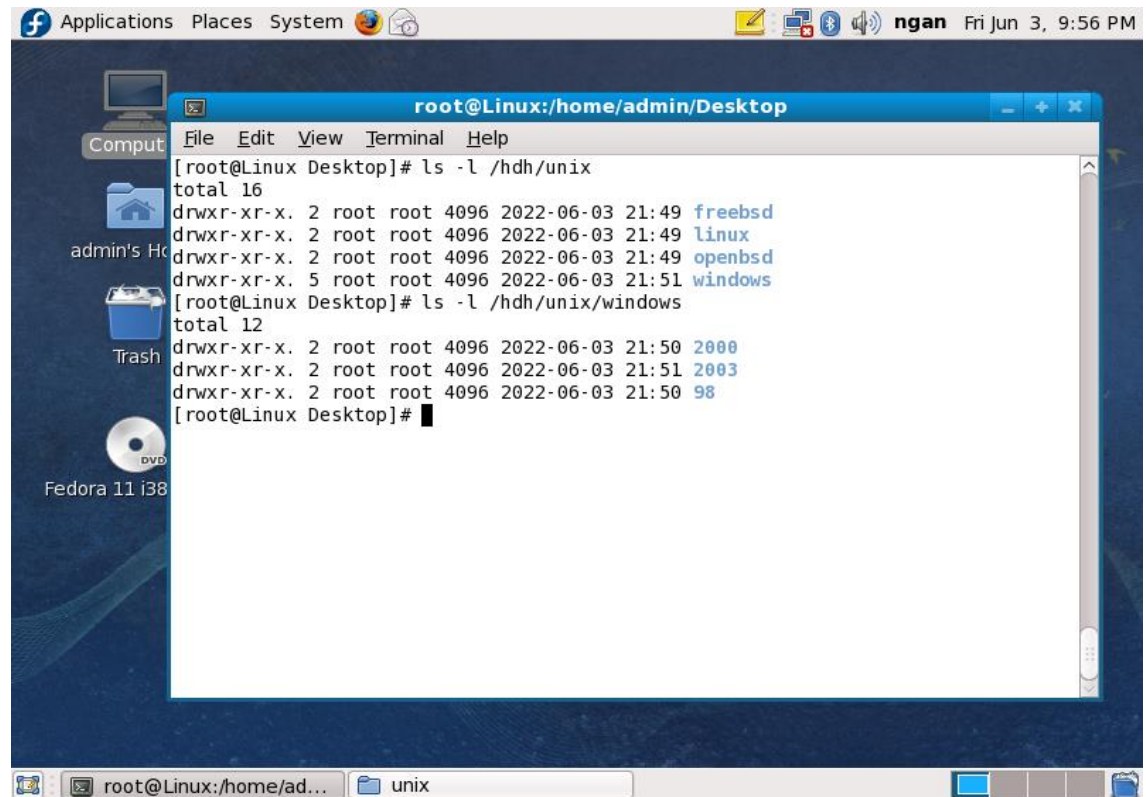
View the directory or file: View the hdh directory:



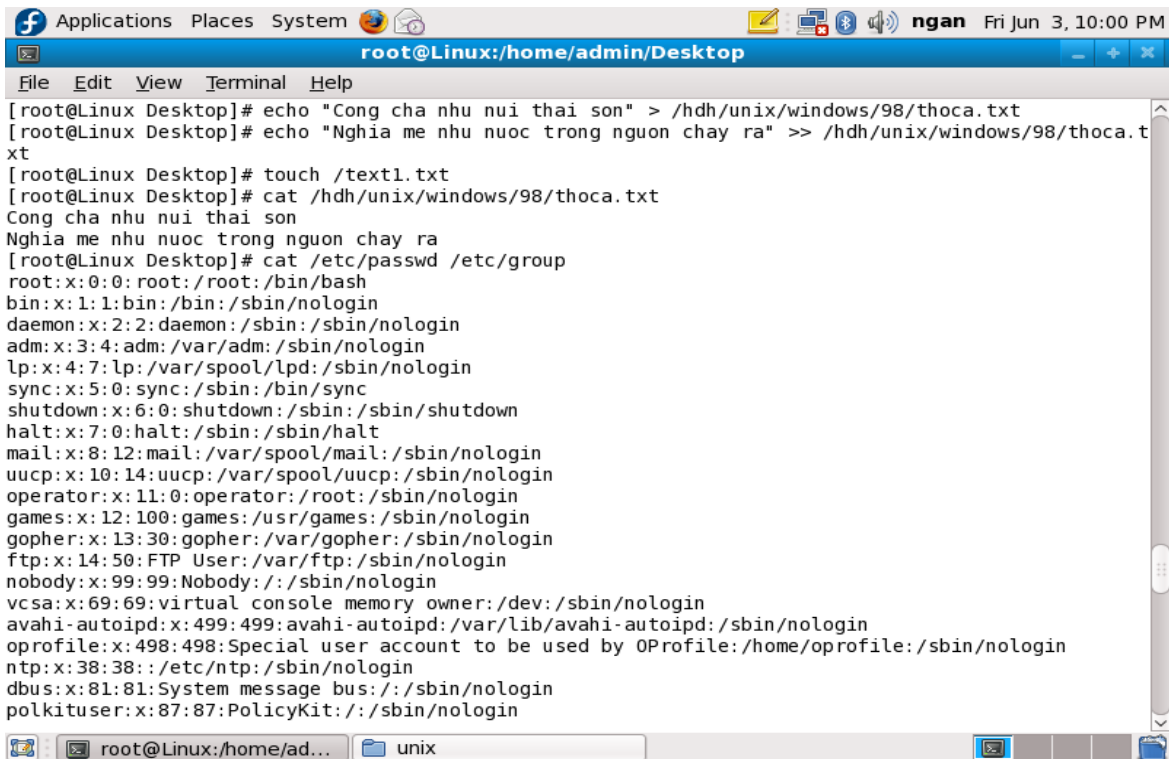
The screenshot shows the same Linux desktop environment, but the terminal window now displays the output of the ls command for the /hdh/unix directory. The desktop background is now Fedora 11 i386. The terminal output is as follows:

```
root@Linux Desktop]# ls -l /hdh/unix
total 16
drwxr-xr-x. 2 root root 4096 2022-06-03 21:49 freebsd
drwxr-xr-x. 2 root root 4096 2022-06-03 21:49 linux
drwxr-xr-x. 2 root root 4096 2022-06-03 21:49 opensbd
drwxr-xr-x. 5 root root 4096 2022-06-03 21:51 windows
root@Linux Desktop]#
```

View the unix directory:

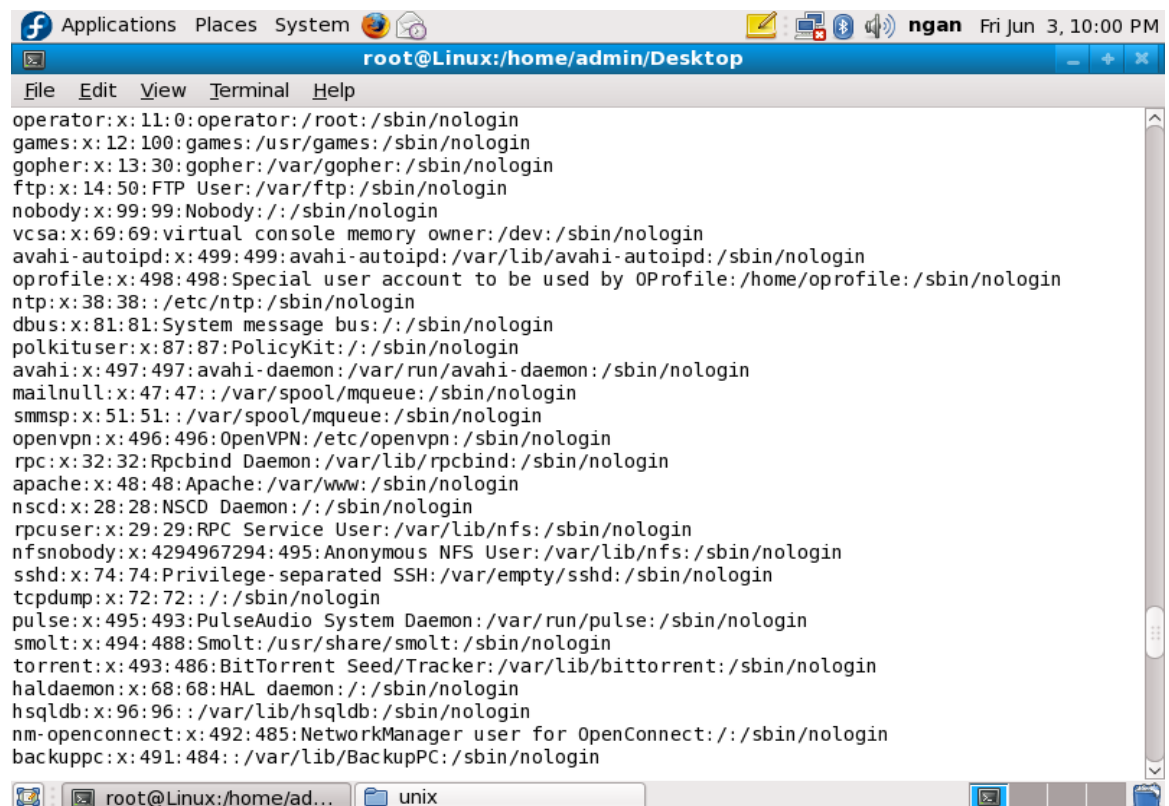


Create a file:



A terminal window titled 'root@Linux:/home/admin/Desktop' with a menu bar (File, Edit, View, Terminal, Help). The terminal shows the following commands and output:

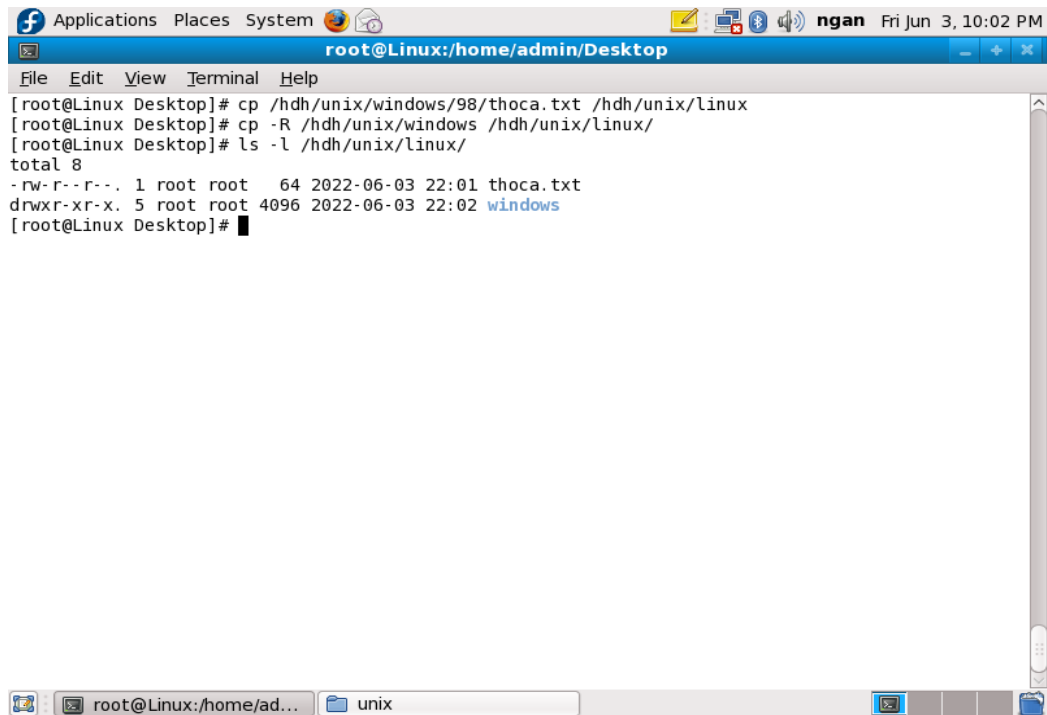
```
[root@Linux Desktop]# echo "Cong cha nhu nui thai son" > /hdh/unix/windows/98/thoca.txt
[root@Linux Desktop]# echo "Nghia me nhu nuoc trong nguon chay ra" >> /hdh/unix/windows/98/thoca.txt
[root@Linux Desktop]# touch /text1.txt
[root@Linux Desktop]# cat /hdh/unix/windows/98/thoca.txt
Cong cha nhu nui thai son
Nghia me nhu nuoc trong nguon chay ra
[root@Linux Desktop]# cat /etc/passwd /etc/group
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
uucp:x:10:14:uucp:/var/spool/uucp:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
gopher:x:13:30:gopher:/var/gopher:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:99:99:Nobody:/:/sbin/nologin
vcsa:x:69:69:virtual console memory owner:/dev:/sbin/nologin
avahi-autoipd:x:499:499:avahi-autoipd:/var/lib/avahi-autoipd:/sbin/nologin
oprofile:x:498:498:Special user account to be used by OProfile:/home/oprofile:/sbin/nologin
ntp:x:38:38:/:etc/ntp:/sbin/nologin
dbus:x:81:81:System message bus:/:/sbin/nologin
polkituser:x:87:87:PolicyKit:/:/sbin/nologin
```



A terminal window titled 'root@Linux:/home/admin/Desktop' with a menu bar (File, Edit, View, Terminal, Help). The terminal shows the continuation of the previous command's output:

```
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
gopher:x:13:30:gopher:/var/gopher:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:99:99:Nobody:/:/sbin/nologin
vcsa:x:69:69:virtual console memory owner:/dev:/sbin/nologin
avahi-autoipd:x:499:499:avahi-autoipd:/var/lib/avahi-autoipd:/sbin/nologin
oprofile:x:498:498:Special user account to be used by OProfile:/home/oprofile:/sbin/nologin
ntp:x:38:38:/:etc/ntp:/sbin/nologin
dbus:x:81:81:System message bus:/:/sbin/nologin
polkituser:x:87:87:PolicyKit:/:/sbin/nologin
avahi:x:497:497:avahi-daemon:/var/run/avahi-daemon:/sbin/nologin
mailnull:x:47:47:/:var/spool/mqueue:/sbin/nologin
smmsp:x:51:51:/:var/spool/mqueue:/sbin/nologin
openvpn:x:496:496:OpenVPN:/etc/openvpn:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
apache:x:48:48:Apache:/var/www:/sbin/nologin
nscd:x:28:28:NSCD Daemon:/:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
nfsnobody:x:4294967294:495:Anonymous NFS User:/var/lib/nfs:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
tcpdump:x:72:72:/:/sbin/nologin
pulse:x:495:493:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin
smolt:x:494:488:Smolt:/usr/share/smolt:/sbin/nologin
torrent:x:493:486:BitTorrent Seed/Tracker:/var/lib/bittorrent:/sbin/nologin
haldaemon:x:68:68:HAL daemon:/:/sbin/nologin
hsqldb:x:96:96:/:var/lib/hsqldb:/sbin/nologin
nm-openconnect:x:492:485:NetworkManager user for OpenConnect:/:/sbin/nologin
backuppc:x:491:484:/:var/lib/BackupPC:/sbin/nologin
```

Copy a file/ directory: cp

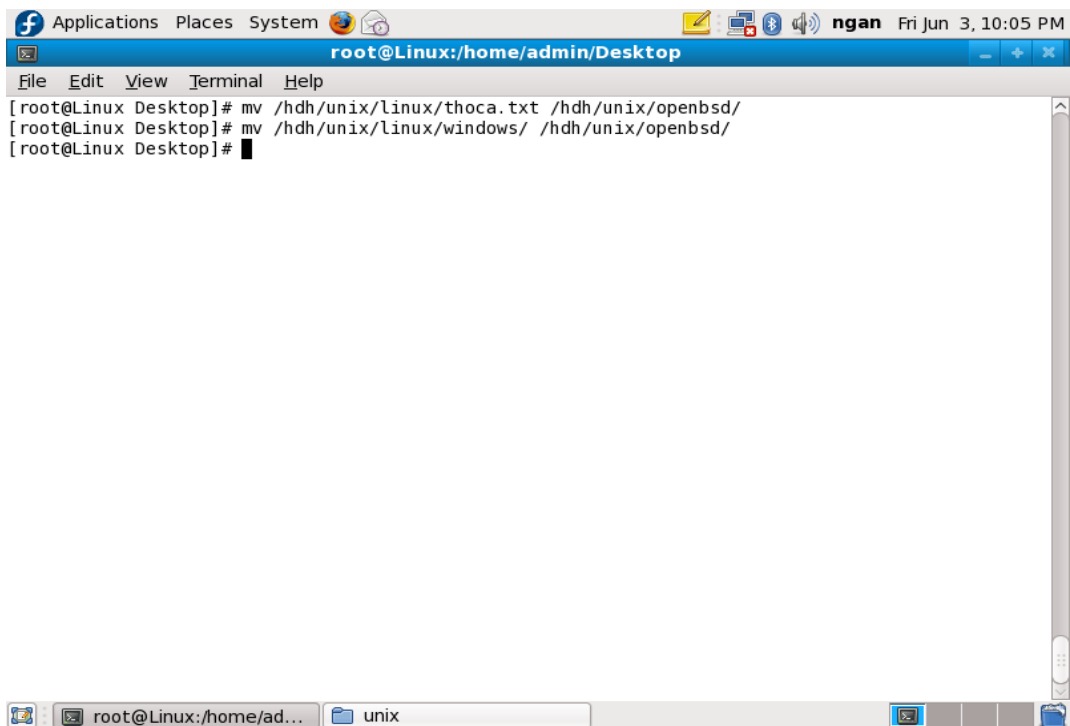


A terminal window titled "root@Linux:/home/admin/Desktop" with a menu bar (File, Edit, View, Terminal, Help) and a system status bar (Applications, Places, System, ngan, Fri Jun 3, 10:02 PM). The terminal shows the following commands and output:

```
[root@Linux Desktop]# cp /hdh/unix/windows/98/thoca.txt /hdh/unix/linux
[root@Linux Desktop]# cp -R /hdh/unix/windows /hdh/unix/linux/
[root@Linux Desktop]# ls -l /hdh/unix/linux/
total 8
-rw-r--r--. 1 root root 64 2022-06-03 22:01 thoca.txt
drwxr-xr-x. 5 root root 4096 2022-06-03 22:02 windows
[root@Linux Desktop]#
```

The window's taskbar at the bottom shows the terminal icon, the text "root@Linux:/home/ad...", a folder icon labeled "unix", and system icons for network, volume, and power.

Move object: mv

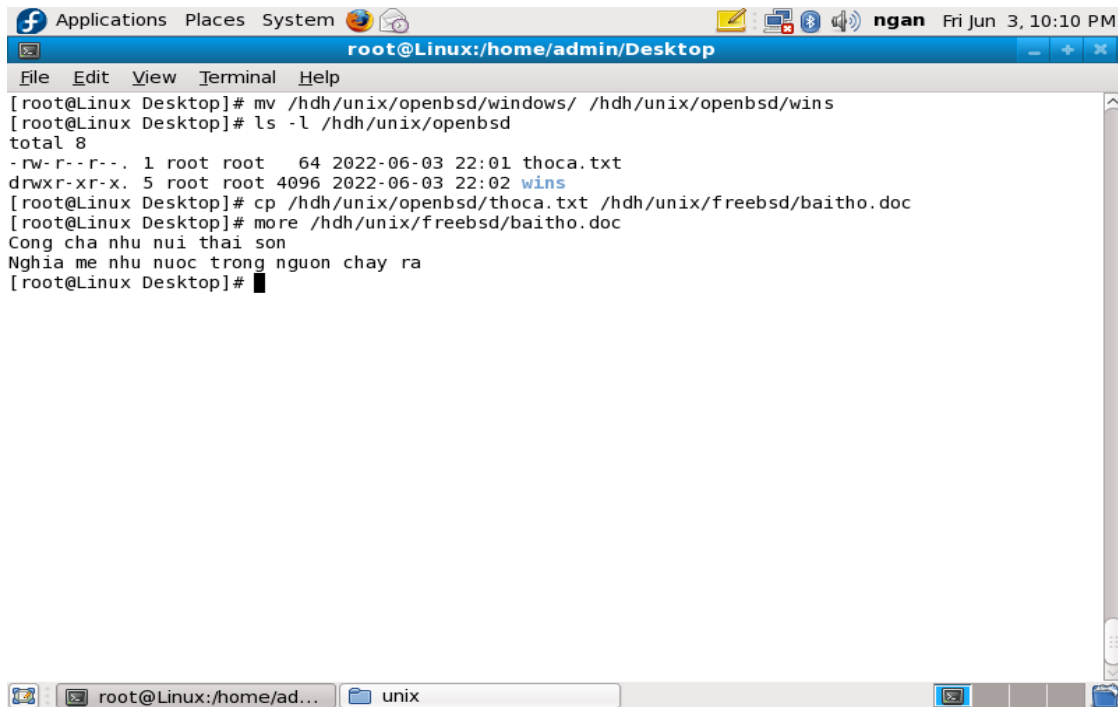


A terminal window titled "root@Linux:/home/admin/Desktop" with a menu bar (File, Edit, View, Terminal, Help) and a system status bar (Applications, Places, System, ngan, Fri Jun 3, 10:05 PM). The terminal shows the following commands:

```
[root@Linux Desktop]# mv /hdh/unix/linux/thoca.txt /hdh/unix/openbsd/
[root@Linux Desktop]# mv /hdh/unix/linux/windows/ /hdh/unix/openbsd/
[root@Linux Desktop]#
```

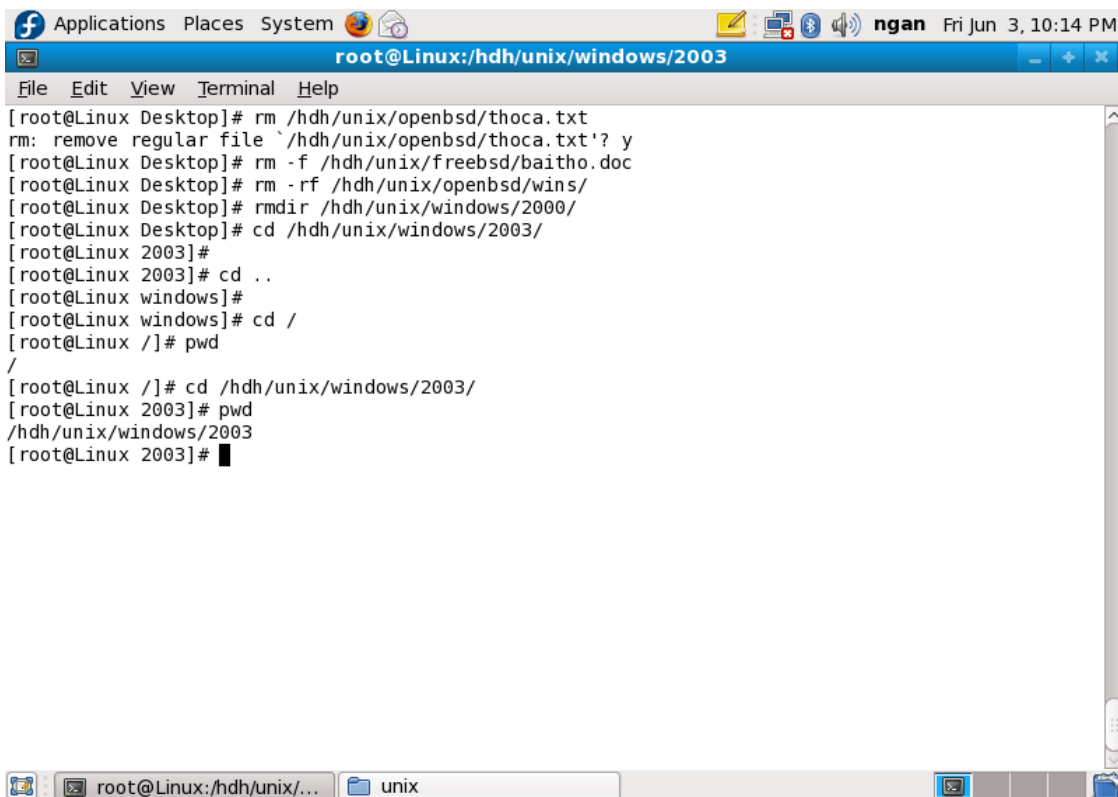
The window's taskbar at the bottom shows the terminal icon, the text "root@Linux:/home/ad...", a folder icon labeled "unix", and system icons for network, volume, and power.

Rename



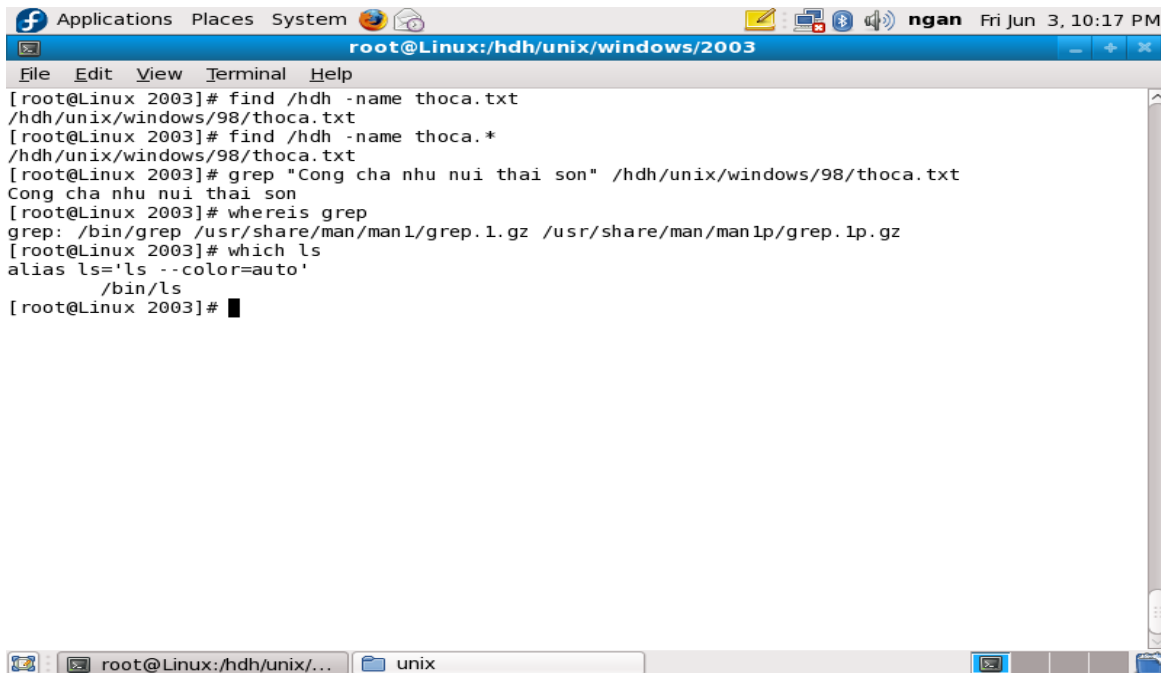
```
Applications Places System ngan Fri Jun 3, 10:10 PM
root@Linux:/home/admin/Desktop
File Edit View Terminal Help
[root@Linux Desktop]# mv /hdh/unix/openbsd/windows/ /hdh/unix/openbsd/wins
[root@Linux Desktop]# ls -l /hdh/unix/openbsd
total 8
-rw-r--r-- 1 root root 64 2022-06-03 22:01 thoca.txt
drwxr-xr-x 5 root root 4096 2022-06-03 22:02 wins
[root@Linux Desktop]# cp /hdh/unix/openbsd/thoca.txt /hdh/unix/freebsd/baitho.doc
[root@Linux Desktop]# more /hdh/unix/freebsd/baitho.doc
Cong cha nhu nui thai son
Nghia me nhu nuoc trong nguon chay ra
[root@Linux Desktop]#
```

Delete the empty directory: rmdir and Change to the directory: cd



```
Applications Places System ngan Fri Jun 3, 10:14 PM
root@Linux:/hdh/unix/windows/2003
File Edit View Terminal Help
[root@Linux Desktop]# rm /hdh/unix/openbsd/thoca.txt
rm: remove regular file `/hdh/unix/openbsd/thoca.txt'? y
[root@Linux Desktop]# rm -f /hdh/unix/freebsd/baitho.doc
[root@Linux Desktop]# rm -rf /hdh/unix/openbsd/wins/
[root@Linux Desktop]# rmdir /hdh/unix/windows/2000/
[root@Linux Desktop]# cd /hdh/unix/windows/2003/
[root@Linux 2003]#
[root@Linux 2003]# cd ..
[root@Linux windows]#
[root@Linux windows]# cd /
[root@Linux /]# pwd
/
[root@Linux /]# cd /hdh/unix/windows/2003/
[root@Linux 2003]# pwd
/hdh/unix/windows/2003
[root@Linux 2003]#
```


Searching

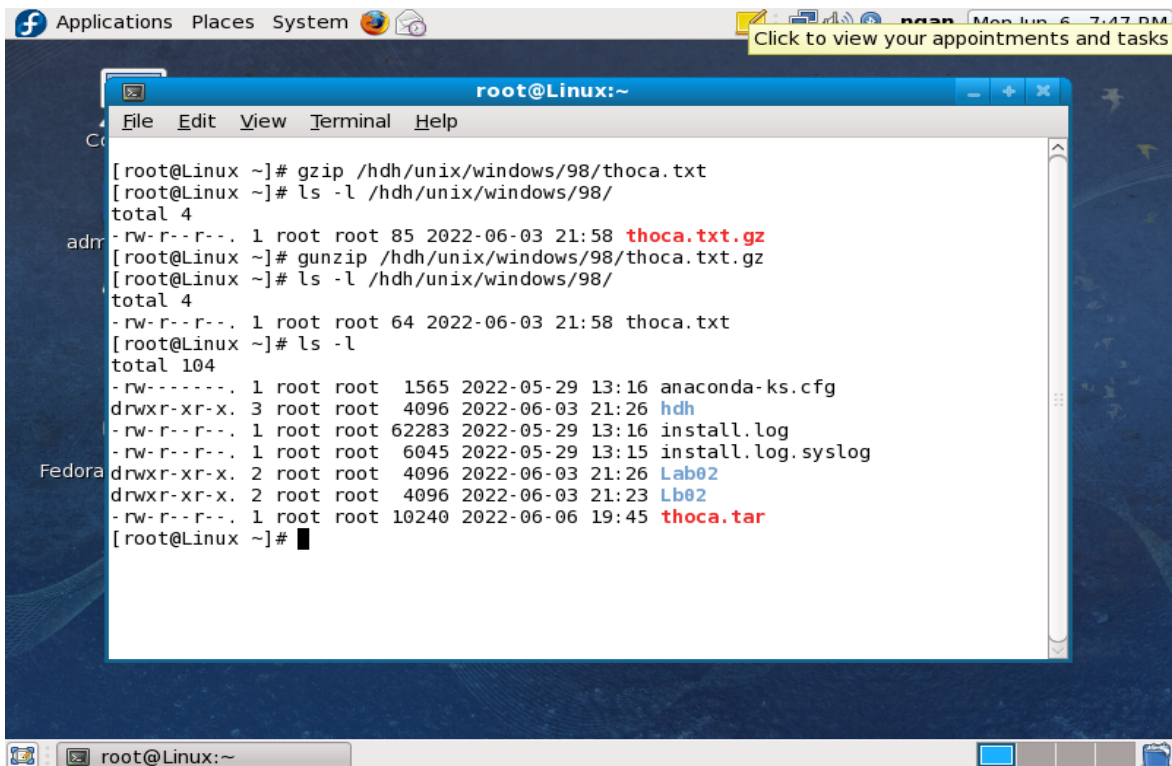


A terminal window titled 'root@Linux:/hdh/unix/windows/2003' with a menu bar (File, Edit, View, Terminal, Help). The terminal shows the following commands and output:

```
[root@Linux 2003]# find /hdh -name thoca.txt
/hdh/unix/windows/98/thoca.txt
[root@Linux 2003]# find /hdh -name thoca.*
/hdh/unix/windows/98/thoca.txt
[root@Linux 2003]# grep "Cong cha nhu nui thai son" /hdh/unix/windows/98/thoca.txt
Cong cha nhu nui thai son
[root@Linux 2003]# whereis grep
grep: /bin/grep /usr/share/man/man1/grep.1.gz /usr/share/man/man1p/grep.1p.gz
[root@Linux 2003]# which ls
alias ls='ls --color=auto'
/bin/ls
[root@Linux 2003]#
```

The window's title bar includes system icons and the text 'ngan Fri Jun 3, 10:17 PM'. The bottom status bar shows the current directory as 'root@Linux:/hdh/unix/...' and a file named 'unix'.

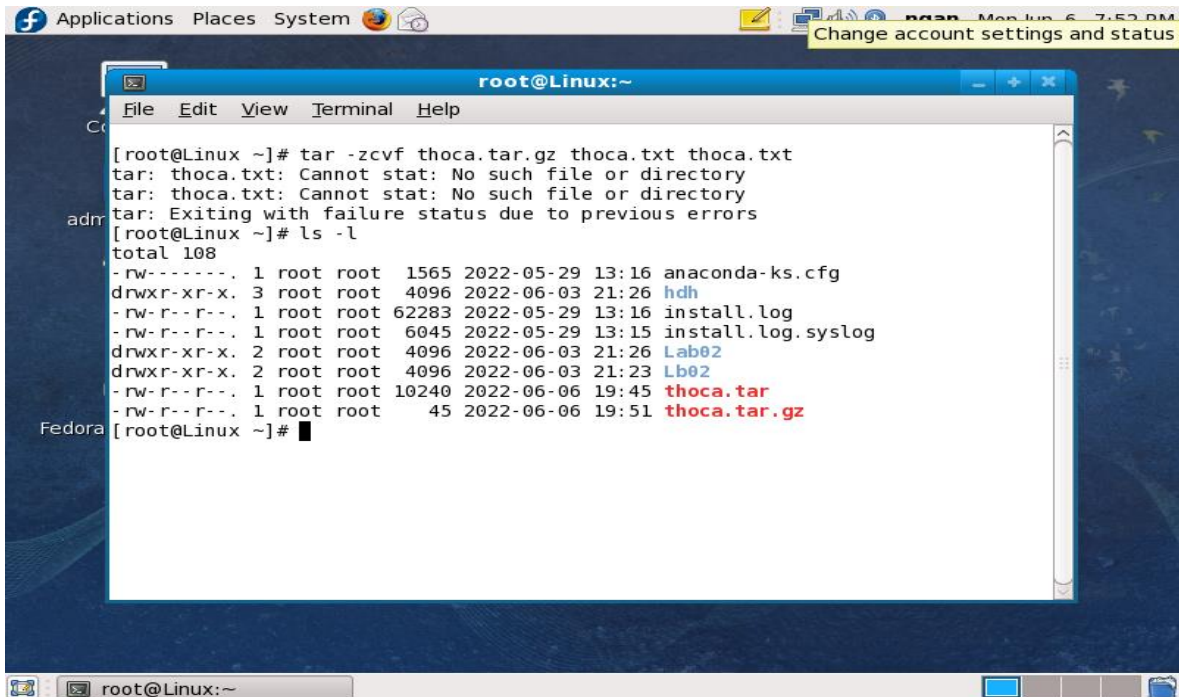
Zip or unzip:



A terminal window titled 'root@Linux:~' with a menu bar (File, Edit, View, Terminal, Help). The terminal shows the following commands and output:

```
[root@Linux ~]# gzip /hdh/unix/windows/98/thoca.txt
[root@Linux ~]# ls -l /hdh/unix/windows/98/
total 4
-rw-r--r--. 1 root root 85 2022-06-03 21:58 thoca.txt.gz
[root@Linux ~]# gunzip /hdh/unix/windows/98/thoca.txt.gz
[root@Linux ~]# ls -l /hdh/unix/windows/98/
total 4
-rw-r--r--. 1 root root 64 2022-06-03 21:58 thoca.txt
[root@Linux ~]# ls -l
total 104
-rw-r--r--. 1 root root 1565 2022-05-29 13:16 anaconda-ks.cfg
drwxr-xr-x. 3 root root 4096 2022-06-03 21:26 hdh
-rw-r--r--. 1 root root 62283 2022-05-29 13:16 install.log
-rw-r--r--. 1 root root 6045 2022-05-29 13:15 install.log.syslog
drwxr-xr-x. 2 root root 4096 2022-06-03 21:26 Lab02
drwxr-xr-x. 2 root root 4096 2022-06-03 21:23 Lb02
-rw-r--r--. 1 root root 10240 2022-06-06 19:45 thoca.tar
[root@Linux ~]#
```

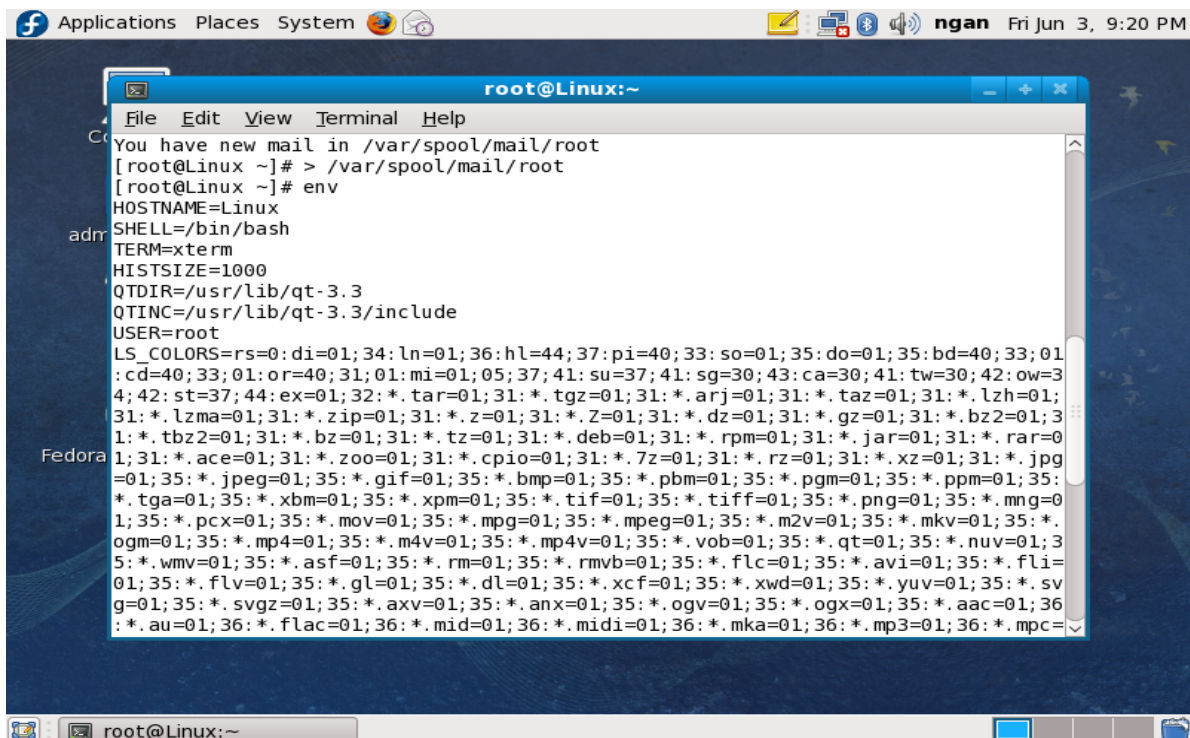
The window's title bar includes system icons and the text 'ngan Mon Jun 6 7:47 PM'. A yellow tooltip above the window says 'Click to view your appointments and tasks'. The bottom status bar shows the current directory as 'root@Linux:~'.



A terminal window titled 'root@Linux:~' with a menu bar (File, Edit, View, Terminal, Help). The user runs 'tar -zcvf thoca.tar.gz thoca.txt thoca.txt'. The output shows two 'Cannot stat' errors for 'thoca.txt' and a failure status. Then, the user runs 'ls -l', showing a directory listing with permissions, owner, size, date, time, and filename. The files 'thoca.tar' and 'thoca.tar.gz' are highlighted in red.

```
[root@Linux ~]# tar -zcvf thoca.tar.gz thoca.txt thoca.txt
tar: thoca.txt: Cannot stat: No such file or directory
tar: thoca.txt: Cannot stat: No such file or directory
tar: Exiting with failure status due to previous errors
[root@Linux ~]# ls -l
total 108
-rw----- 1 root root 1565 2022-05-29 13:16 anaconda-ks.cfg
drwxr-xr-x 3 root root 4096 2022-06-03 21:26 hdh
-rw-r--r-- 1 root root 62283 2022-05-29 13:16 install.log
-rw-r--r-- 1 root root 6045 2022-05-29 13:15 install.log.syslog
drwxr-xr-x 2 root root 4096 2022-06-03 21:26 Lab02
drwxr-xr-x 2 root root 4096 2022-06-03 21:23 Lb02
-rw-r--r-- 1 root root 10240 2022-06-06 19:45 thoca.tar
-rw-r--r-- 1 root root 45 2022-06-06 19:51 thoca.tar.gz
[root@Linux ~]#
```

env



A terminal window titled 'root@Linux:~' with a menu bar (File, Edit, View, Terminal, Help). The user runs 'env', displaying system environment variables. The output includes variables like HOSTNAME, SHELL, TERM, HISTSIZE, QTDIR, QTINC, USER, and a long LS_COLORS string.

```
You have new mail in /var/spool/mail/root
[root@Linux ~]# > /var/spool/mail/root
[root@Linux ~]# env
HOSTNAME=Linux
SHELL=/bin/bash
TERM=xterm
HISTSIZE=1000
QTDIR=/usr/lib/qt-3.3
QTINC=/usr/lib/qt-3.3/include
USER=root
LS_COLORS=rs=0:di=01;34:ln=01;36:hl=44;37:pi=40;33:so=01;35:do=01;35:bd=40;33:01
:cd=40;33:01:or=40;31:01:mi=01;05;37;41:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=3
4;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arj=01;31:*.taz=01;31:*.lzh=01;
31:*.lzm=01;31:*.zip=01;31:*.z=01;31:*.Z=01;31:*.dz=01;31:*.gz=01;31:*.bz2=01;3
1:*.tbz2=01;31:*.bz=01;31:*.tz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.rar=0
1;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.xz=01;31:*.jpg
=01;35:*.jpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:
*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.mng=0
1;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.
ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;3
5:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35:*.fli=
01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.sv
g=01;35:*.svgz=01;35:*.axv=01;35:*.anx=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=01;36
:*.au=01;36:*.flac=01;36:*.mid=01;36:*.midi=01;36:*.mka=01;36:*.mp3=01;36:*.mpc=
```

Ls - a

Applications Places System **ngan** Fri Jun 3, 8:39 PM

admin@Linux:/etc

File Edit View Terminal Help

```
[admin@Linux ~]$ sudo apt-get update
[sudo] password for admin:
admin is not in the sudoers file. This incident will be reported.
[admin@Linux ~]$ clear
[admin@Linux ~]$ su
Password:
[root@Linux admin]# /home/admin# cd
bash: /home/admin#: No such file or directory
[root@Linux admin]# -# cd
bash: -#: command not found
[root@Linux admin]# -# cd /etc
bash: -#: command not found
[root@Linux admin]# cd /etc
[root@Linux etc]# ls -la
```

.. idmapd.conf protocols
acpi init.d pulse
adjtime initlog.conf purple
aliases inittab .pwd.lock
aliases.db inputrc quotagrpadmins
alsa iproute2 quotatab
alternatives issue racoon
anacrontab java rc
ant.conf jetty rc0.d
rc1.d

admin@Linux:/etc

ps

Applications Places System **ngan** Fri Jun 3, 10:41 PM

root@Linux:/hdh/unix/windows/2003

File Edit View Terminal Help

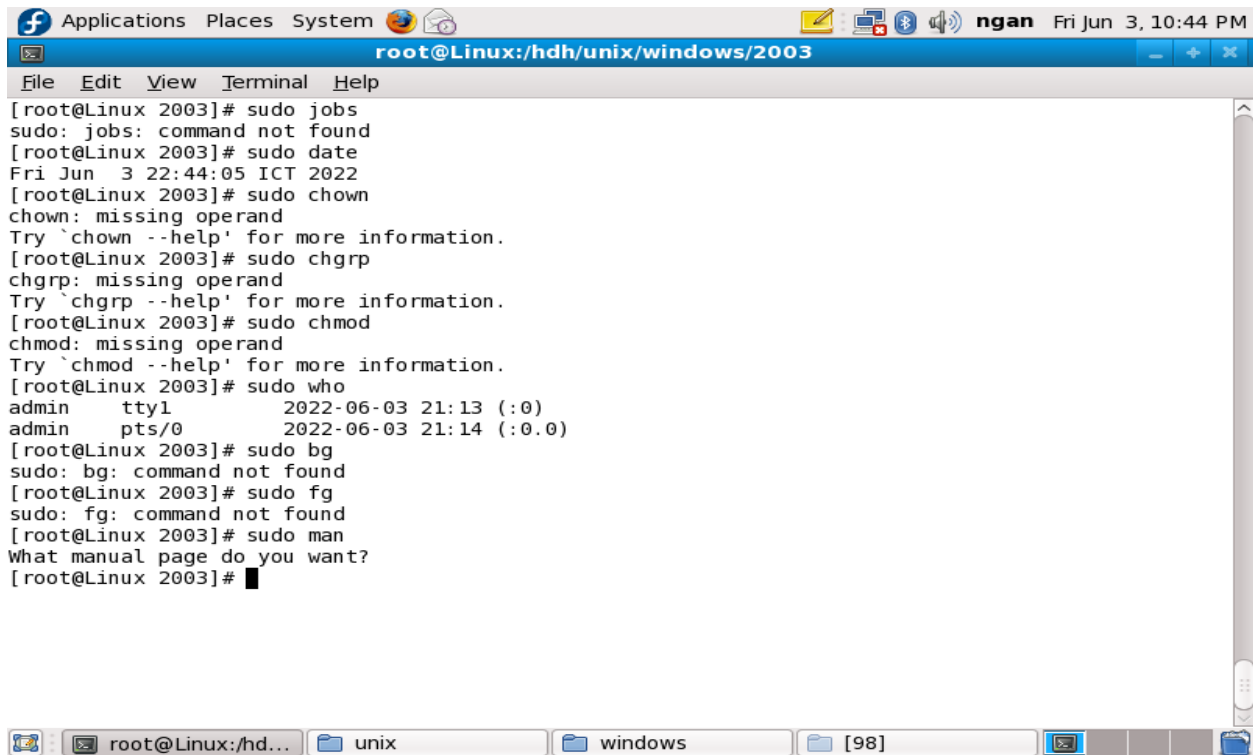
```
4
[root@Linux 2003]# sudo ps -ef
```

UID	PID	PPID	C	STIME	TTY	TIME	CMD
root	1	0	0	21:10	?	00:00:01	/sbin/init
root	2	0	0	21:10	?	00:00:00	[kthreadd]
root	3	2	0	21:10	?	00:00:00	[migration/0]
root	4	2	0	21:10	?	00:00:00	[ksoftirqd/0]
root	5	2	0	21:10	?	00:00:00	[watchdog/0]
root	6	2	0	21:10	?	00:00:00	[cpuset]
root	7	2	0	21:10	?	00:00:00	[events/0]
root	8	2	0	21:10	?	00:00:00	[work_on_cpu/0]
root	9	2	0	21:10	?	00:00:00	[khelper]
root	10	2	0	21:10	?	00:00:00	[netns]
root	11	2	0	21:10	?	00:00:00	[kintegrityd/0]
root	12	2	0	21:10	?	00:00:00	[kblockd/0]
root	13	2	0	21:10	?	00:00:00	[kacpid]
root	14	2	0	21:10	?	00:00:00	[kacpi_notify]
root	15	2	0	21:10	?	00:00:00	[cqueue]
root	16	2	0	21:10	?	00:00:03	[ata/0]
root	17	2	0	21:10	?	00:00:00	[ata_aux]
root	18	2	0	21:10	?	00:00:00	[ksuspend_usbd]
root	19	2	0	21:10	?	00:00:00	[khubd]
root	20	2	0	21:10	?	00:00:00	[kseriod]
root	21	2	0	21:10	?	00:00:00	[pdflush]
root	22	2	0	21:10	?	00:00:00	[pdflush]
root	23	2	0	21:10	?	00:00:00	[kswapd0]
root	24	2	0	21:10	?	00:00:00	[aio/0]
root	29	2	0	21:10	?	00:00:00	[pciehpd]
root	30	2	0	21:10	?	00:00:00	[scsi_eh_0]

root@Linux:/hdh/unix/windows/2003

unix windows [98]

Sudo, jobs, date, chown, chgrp, chmod, who, bg, fg, man

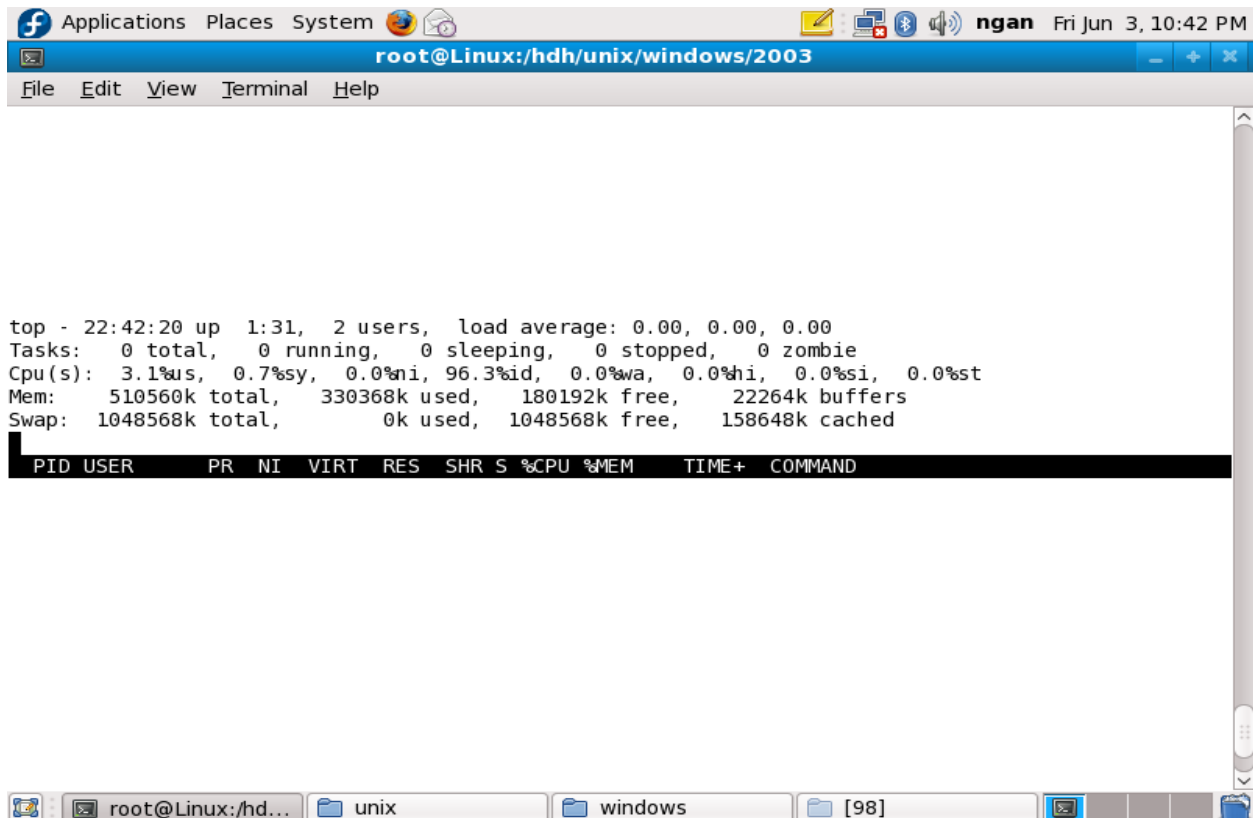


A terminal window titled 'root@Linux:/hdh/unix/windows/2003' with a menu bar (File, Edit, View, Terminal, Help) and a toolbar. The terminal shows the following commands and outputs:

```
[root@Linux 2003]# sudo jobs
sudo: jobs: command not found
[root@Linux 2003]# sudo date
Fri Jun 3 22:44:05 ICT 2022
[root@Linux 2003]# sudo chown
chown: missing operand
Try 'chown --help' for more information.
[root@Linux 2003]# sudo chgrp
chgrp: missing operand
Try 'chgrp --help' for more information.
[root@Linux 2003]# sudo chmod
chmod: missing operand
Try 'chmod --help' for more information.
[root@Linux 2003]# sudo who
admin    tty1      2022-06-03 21:13 (:0)
admin    pts/0    2022-06-03 21:14 (:0.0)
[root@Linux 2003]# sudo bg
sudo: bg: command not found
[root@Linux 2003]# sudo fg
sudo: fg: command not found
[root@Linux 2003]# sudo man
What manual page do you want?
[root@Linux 2003]#
```

The window's taskbar at the bottom shows icons for a file manager, terminal, and folders named 'unix', 'windows', and '[98]'.

top



A terminal window titled 'root@Linux:/hdh/unix/windows/2003' with a menu bar (File, Edit, View, Terminal, Help) and a toolbar. The terminal shows the output of the 'top' command:

```
top - 22:42:20 up 1:31, 2 users, load average: 0.00, 0.00, 0.00
Tasks: 0 total, 0 running, 0 sleeping, 0 stopped, 0 zombie
Cpu(s): 3.1%us, 0.7%sy, 0.0%ni, 96.3%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 510560k total, 330368k used, 180192k free, 22264k buffers
Swap: 1048568k total, 0k used, 1048568k free, 158648k cached
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
-----	------	----	----	------	-----	-----	---	------	------	-------	---------

The window's taskbar at the bottom shows icons for a file manager, terminal, and folders named 'unix', 'windows', and '[98]'.