

Connecting VM (Ubuntu 14.04) to MobaXterm

192.168.0.106

Terminal Sessions View X server Tools Games Settings Macros Help

Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...

6. 192.168.0.106

login as: student
student@192.168.0.106's password:

• MobaXterm Personal Edition v23.2 •
(SSH client, X server and network tools)

- ▶ SSH session to student@192.168.0.106
 - Direct SSH : ✓
 - SSH compression : ✓
 - SSH-browser : ✓
 - X11-forwarding : ✓ (remote display is forwarded through SSH)
- ▶ For more info, ctrl+click on [help](#) or visit our [website](#).

Welcome to Ubuntu 14.04.3 LTS (GNU/Linux 3.13.0-63-generic i686)

* Documentation: <https://help.ubuntu.com/>
Last login: Tue Aug 15 08:50:20 2023
/usr/bin/xauth: file /home/student/.Xauthority does not exist
student@CsnKhai:~\$
student@CsnKhai:~\$
student@CsnKhai:~\$ pwd
/home/student
student@CsnKhai:~\$
student@CsnKhai:~\$
student@CsnKhai:~\$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/student/.ssh/id_rsa):
Created directory '/home/student/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/student/.ssh/id_rsa.
Your public key has been saved in /home/student/.ssh/id_rsa.pub.
The key fingerprint is:
37:42:ae:9d:af:84:e0:12:72:64:4b:01:2f:7b:64:6f student@CsnKhai
The key's randomart image is:
+--[RSA 2048]-----+
|...
|. .
|. B .
| O o o
| o = E S o
| + + . + + .
| . . o +
| . . .
+-----+
student@CsnKhai:~\$
student@CsnKhai:~\$
student@CsnKhai:~\$ sudo ssh student@192.168.0.106
[sudo] password for student:
The authenticity of host '192.168.0.106 (192.168.0.106)' can't be established.
ECDSA key fingerprint is d6:eb:2b:a9:bd:63:86:af:31:2f:bb:01:b5:14:63:ab.
Are you sure you want to continue connecting (yes/no)?
Host key verification failed.
student@CsnKhai:~\$
student@CsnKhai:~\$ sudo ssh student@192.168.0.106

Remote monitoring
☐ Follow terminal folder

UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>

The key's randomart image is:

```
+--[ RSA 2048 ]-----+
|...
|..
|. B .
|0 o o
|o = E S o
|+ + . + + .
|. . o +
|. . .
|...
+-----+
```

student@CsnKhai:~\$

student@CsnKhai:~\$

student@CsnKhai:~\$ sudo ssh student@192.168.0.106

[sudo] password for student:

The authenticity of host '192.168.0.106 (192.168.0.106)' can't be established.
ECDSA key fingerprint is d6:eb:2b:a9:bd:63:86:af:31:2f:bb:01:b5:14:63:ab.

Are you sure you want to continue connecting (yes/no)?

Host key verification failed.

student@CsnKhai:~\$

student@CsnKhai:~\$ sudo ssh student@192.168.0.106

The authenticity of host '192.168.0.106 (192.168.0.106)' can't be established.
ECDSA key fingerprint is d6:eb:2b:a9:bd:63:86:af:31:2f:bb:01:b5:14:63:ab.

Are you sure you want to continue connecting (yes/no)? y

Please type 'yes' or 'no': yes

Warning: Permanently added '192.168.0.106' (ECDSA) to the list of known hosts.

student@192.168.0.106's password:

Welcome to Ubuntu 14.04.3 LTS (GNU/Linux 3.13.0-63-generic i686)

* Documentation: <https://help.ubuntu.com/>

Last login: Tue Aug 15 08:54:32 2023 from 192.168.0.103

student@CsnKhai:~\$

student@CsnKhai:~\$

student@CsnKhai:~\$ exit

logout

Connection to 192.168.0.106 closed.

student@CsnKhai:~\$

student@CsnKhai:~\$

student@CsnKhai:~\$ ssh-copy-id student@192.168.0.106

The authenticity of host '192.168.0.106 (192.168.0.106)' can't be established.
ECDSA key fingerprint is d6:eb:2b:a9:bd:63:86:af:31:2f:bb:01:b5:14:63:ab.

Are you sure you want to continue connecting (yes/no)? yes

/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out a
ny that are already installed

/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted no
w it is to install the new keys

student@192.168.0.106's password:

Number of key(s) added: 1

Now try logging into the machine, with: "ssh 'student@192.168.0.106'"
and check to make sure that only the key(s) you wanted were added.

student@CsnKhai:~\$ ssh student@192.168.0.106

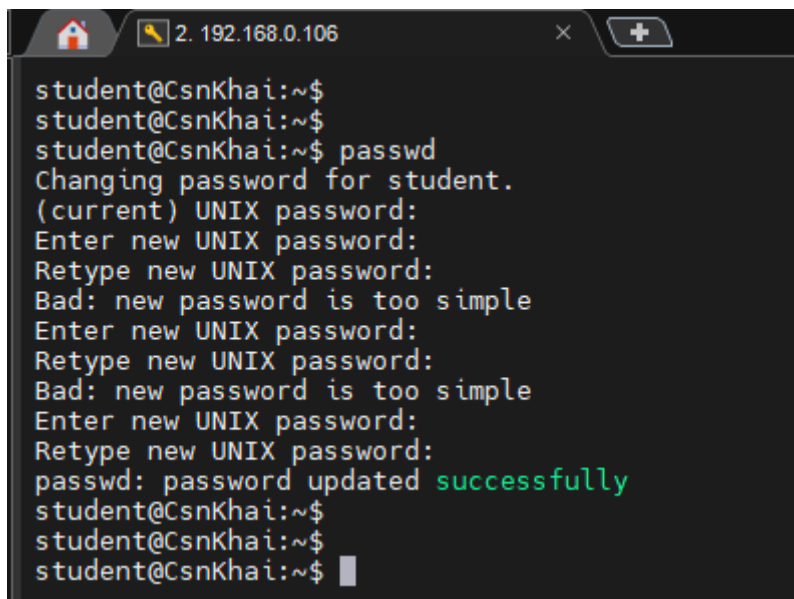
Task 1 Part 1

- 1) Log in to the system as root.

`sudo su` – command to change user to root

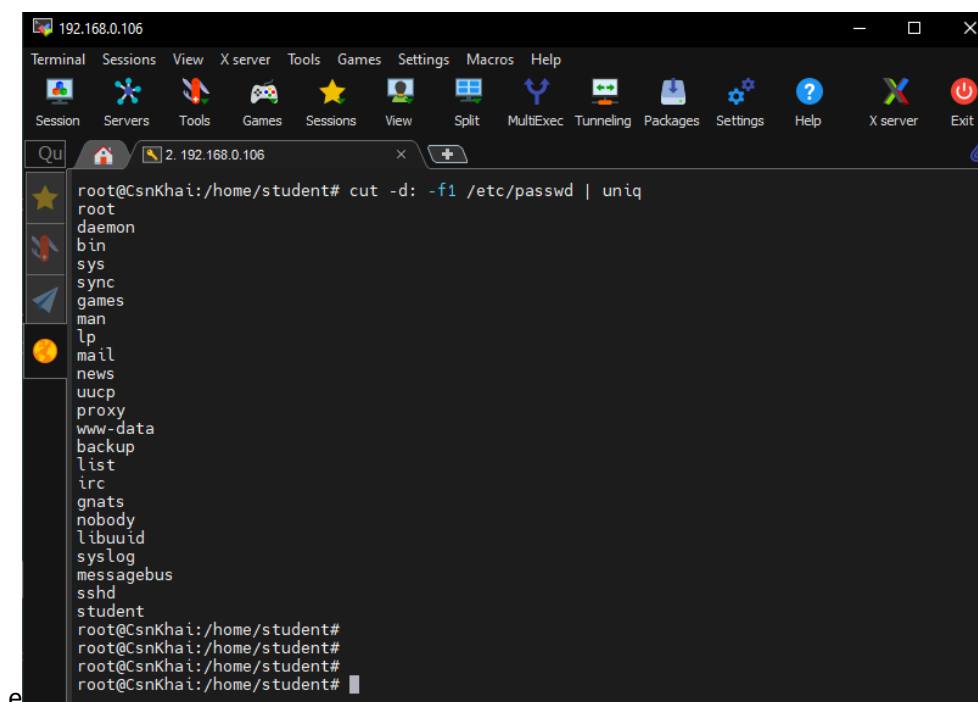
- 2) Use the `passwd` command to change the password. Examine the basic parameters of the command. What system file does it change *?

`etc/shadow`

A terminal window titled '2. 192.168.0.106' showing a user named 'student' at 'CsnKhai' with a tilde prompt. The user enters the 'passwd' command. The terminal displays the following sequence of prompts and responses: 'Changing password for student.', '(current) UNIX password:', 'Enter new UNIX password:', 'Retype new UNIX password:', 'Bad: new password is too simple', 'Enter new UNIX password:', 'Retype new UNIX password:', 'Bad: new password is too simple', 'Enter new UNIX password:', 'Retype new UNIX password:', and finally 'passwd: password updated successfully' in green text. The prompt returns to 'student@CsnKhai:~\$' three times.

```
student@CsnKhai:~$
student@CsnKhai:~$
student@CsnKhai:~$ passwd
Changing password for student.
(current) UNIX password:
Enter new UNIX password:
Retype new UNIX password:
Bad: new password is too simple
Enter new UNIX password:
Retype new UNIX password:
Bad: new password is too simple
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
student@CsnKhai:~$
student@CsnKhai:~$
student@CsnKhai:~$
```

- 3) Determine the users registered in the system, as well as what commands they execute. What additional information can be gleaned from the command execution?

A terminal window titled '192.168.0.106' with a menu bar (Terminal, Sessions, View, X server, Tools, Games, Settings, Macros, Help) and a toolbar. The user is 'root' at 'CsnKhai' with a tilde prompt. The user enters the command 'cut -d: -f1 /etc/passwd | uniq'. The terminal displays a list of system and regular users: root, daemon, bin, sys, sync, games, man, lp, mail, news, uucp, proxy, www-data, backup, list, irc, gnats, nobody, libuuid, syslog, messagebus, sshd, and student. The prompt returns to 'root@CsnKhai:/home/student#' four times.

```
root@CsnKhai:/home/student# cut -d: -f1 /etc/passwd | uniq
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
irc
gnats
nobody
libuuid
syslog
messagebus
sshd
student
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
```

4) Change personal information about yourself.

```
root@CsnKhai:/home/student# cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
libuuid:x:100:101::/var/lib/libuuid:
syslog:x:101:104::/home/syslog:/bin/false
messagebus:x:102:105::/var/run/dbus:/bin/false
sshd:x:103:65534::/var/run/sshd:/usr/sbin/nologin
student:x:1000:1000:Nazar,,,:/home/student:/bin/bash
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
```

5) Become familiar with the Linux help system and the man and info commands.

Get help on the previously discussed commands, define and describe any two keys for these commands. Give examples.

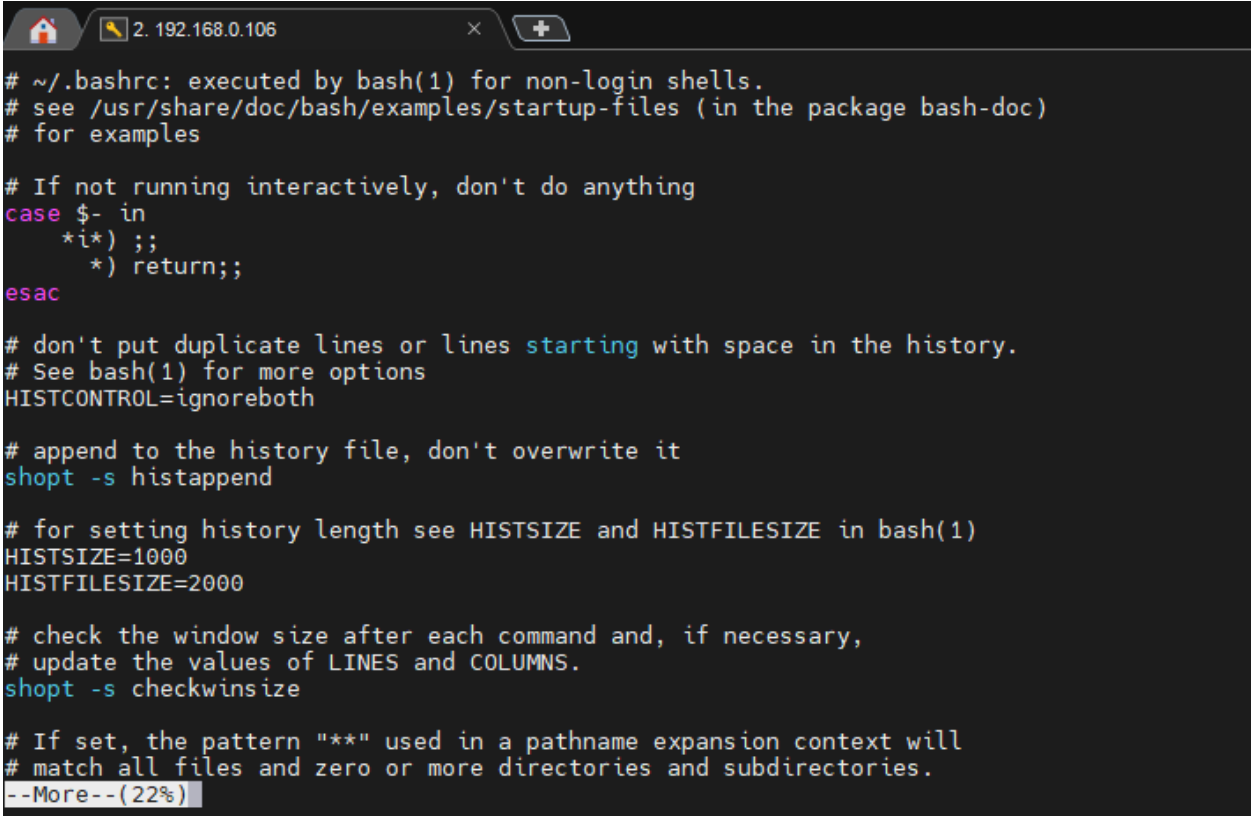
man top

DESCRIPTION

The top program provides a dynamic real-time view of a running system. It can display system summary information as well as a list of processes or threads currently being managed by the Linux kernel. The types of system summary information shown and the types, order and size of information displayed for processes are all user configurable and that configuration can be made persistent across restarts.

6) Explore the more and less commands using the help system. View the contents of files .bash* using commands.

more .bashrc



A terminal window with a dark background and light-colored text. The title bar shows a home icon, a network icon, the IP address '2. 192.168.0.106', and window control buttons. The terminal displays the contents of the ~/.bashrc file, which includes comments about non-login shells, history settings, and window size checks. The text is color-coded: '#' for comments, 'case' and 'esac' for control structures, and 'shopt' for shell options. The window is partially obscured by a terminal window showing the contents of ~/.bash_logout.

```
# ~/.bashrc: executed by bash(1) for non-login shells.
# see /usr/share/doc/bash/examples/startup-files (in the package bash-doc)
# for examples

# If not running interactively, don't do anything
case $- in
    *i*) ;;
    *) return;;
esac

# don't put duplicate lines or lines starting with space in the history.
# See bash(1) for more options
HISTCONTROL=ignoreboth

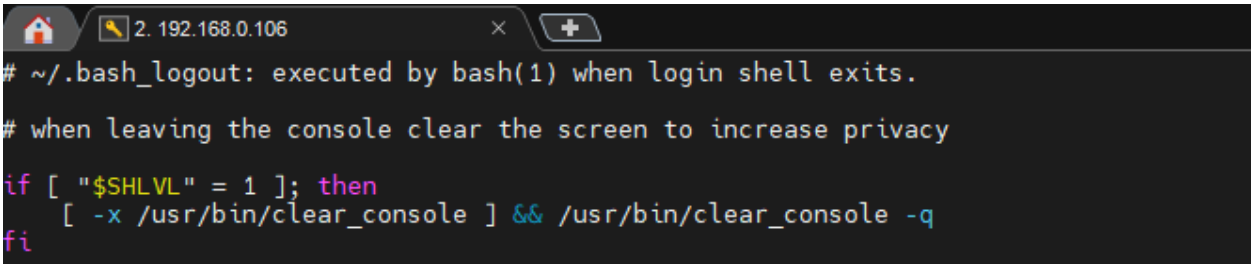
# append to the history file, don't overwrite it
shopt -s histappend

# for setting history length see HISTSIZE and HISTFILESIZE in bash(1)
HISTSIZE=1000
HISTFILESIZE=2000

# check the window size after each command and, if necessary,
# update the values of LINES and COLUMNS.
shopt -s checkwinsize

# If set, the pattern "*" used in a pathname expansion context will
# match all files and zero or more directories and subdirectories.
--More--(22%)
```

less bash_logout



A terminal window with a dark background and light-colored text. The title bar shows a home icon, a network icon, the IP address '2. 192.168.0.106', and window control buttons. The terminal displays the contents of the ~/.bash_logout file, which includes comments about login shell exits and clearing the screen. The text is color-coded: '#' for comments, 'if' and 'fi' for conditional statements, and 'then' for the conditional body. The window is partially obscured by a terminal window showing the contents of ~/.bashrc.

```
# ~/.bash_logout: executed by bash(1) when login shell exits.
# when leaving the console clear the screen to increase privacy

if [ "$SHLVL" = 1 ]; then
    [ -x /usr/bin/clear_console ] && /usr/bin/clear_console -q
fi
```

7) * Describe in plans that you are working on laboratory work 1. Tip: You should read the documentation for the finger command.

```
root@CsnKhai:/home/student# sudo apt-get install finger
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libpvm3 libreadline-dev libreadline6-dev libtinfo-dev pvm
Use 'apt-get autoremove' to remove them.
The following NEW packages will be installed:
  finger
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 17.0 kB of archives.
After this operation, 67.6 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu/trusty/universe finger i386 0.17-15 [17.0 kB]
Fetched 17.0 kB in 0s (37.8 kB/s)
Selecting previously unselected package finger.
(Reading database ... 54877 files and directories currently installed.)
Preparing to unpack ../finger_0.17-15_i386.deb ...
Unpacking finger (0.17-15) ...
Processing triggers for man-db (2.6.7.1-1ubuntu1) ...
Setting up finger (0.17-15) ...
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student# finger
Login      Name      Tty      Idle    Login Time   Office      Office Phone
student    Nazar     *tty1    18      Aug 16 15:28
student    Nazar     pts/0    Aug 16 15:28 (192.168.0.103)
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
```

8) * List the contents of the home directory using the ls command, define its files and directories. Hint: Use the help system to familiarize yourself with the ls command.

```
root@CsnKhai:/home/student#
root@CsnKhai:/home/student# ls -la
total 36
drwxr-xr-x 4 student student 4096 Aug 16 15:28 .
drwxr-xr-x 3 root    root    4096 Sep 15 2015 ..
-rw-r--r-- 1 student student 294 Aug 15 09:12 .bash_history
-rw-r--r-- 1 student student 220 Sep 15 2015 .bash_logout
-rw-r--r-- 1 student student 3637 Sep 15 2015 .bashrc
drwx----- 2 student student 4096 Sep 15 2015 .cache
-rw-r--r-- 1 student student 675 Sep 15 2015 .profile
drwx----- 2 student student 4096 Aug 15 09:00 .ssh
-rwsrw-rw- 1 student student 0 Aug 15 16:19 testown
-rw-r--r-- 1 student student 53 Aug 16 15:28 .Xauthority
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
```

Task 1 Part 2

1) Examine the tree command. Master the technique of applying a template, for example, display all files that contain a character c, or files that contain a specific sequence of characters. List subdirectories of the root directory up to and including the second nesting level.

```
root@CsnKhai: /home/student# cd /
root@CsnKhai: /# tree | grep -E 'a|c'
|
|-- bash
|-- b2cat
|-- bzcmp -> bzdiff
|-- bzip2recover
|-- cat
|-- chgrp
|-- chmod
|-- chown
|-- chvt
|-- cp
|-- cpio
|-- dash
|-- date
|-- dbus-cleanse-sockets
|-- dbus-daemon
|-- dnsdomainname -> hostname
|-- domainname -> hostname
|-- echo
|-- false
|-- fgconsole
|-- hostname
|-- lessecho
|-- loadkeys
|-- loginctl
|-- mt -> /etc/alternatives/mt
|-- nano
|-- nc -> /etc/alternatives/nc
```

2) What command can be used to determine the type of file (for example, text or binary)? Give an example.

```
root@CsnKhai: ~# nano second
root@CsnKhai: ~#
root@CsnKhai: ~# ls
second
root@CsnKhai: ~#
root@CsnKhai: ~# cat second
Hello SoftServe!
root@CsnKhai: ~#
root@CsnKhai: ~# file second
second: ASCII text
root@CsnKhai: ~#
root@CsnKhai: ~#
```

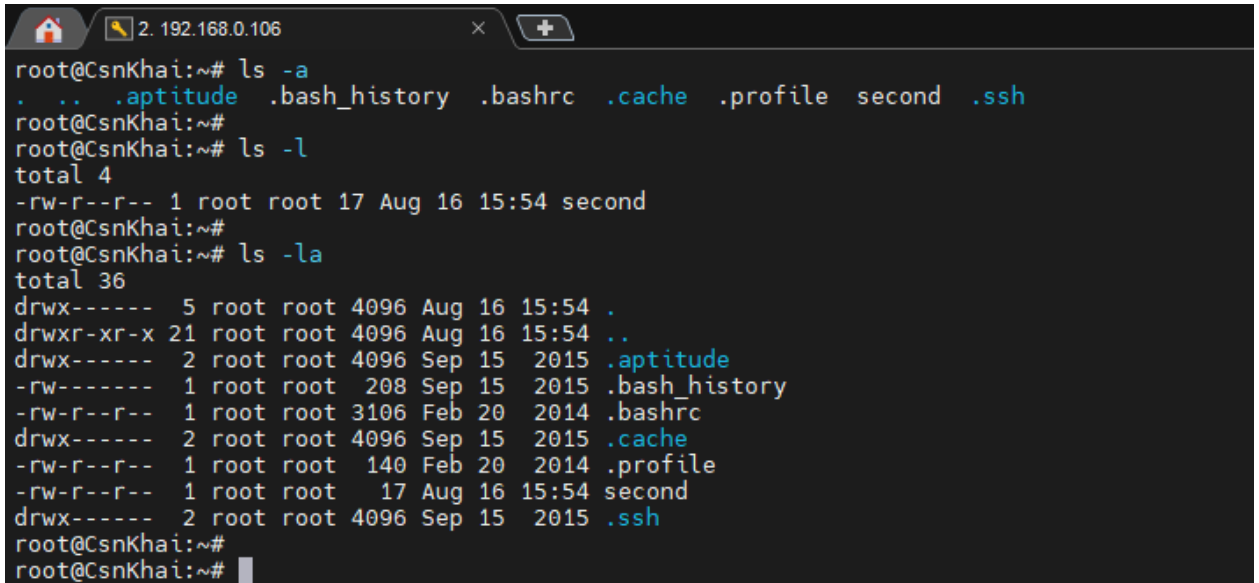
3) Master the skills of navigating the file system using relative and absolute paths.

How can you go back to your home directory from anywhere in the filesystem?

cd

cd ~

4) Become familiar with the various options for the ls command. Give examples of listing directories using different keys. Explain the information displayed on the terminal using the -l and -la switches.

A terminal window with a dark background and light text. The window title bar shows a home icon, a network icon, and the IP address 192.168.0.106. The terminal content shows a series of commands and their outputs. The first command is 'ls -a', which lists hidden files like .aptitude, .bash_history, .bashrc, .cache, .profile, second, and .ssh. The second command is 'ls -l', which shows the permissions, owner, group, size, and date for the 'second' file. The third command is 'ls -la', which provides a detailed listing of all files and directories, including their permissions, owner, group, size, date, and name. The prompt 'root@CsnKhai:~#' is visible at the start of each command line.

```
root@CsnKhai:~# ls -a
.  .. .aptitude .bash_history .bashrc .cache .profile second .ssh
root@CsnKhai:~#
root@CsnKhai:~# ls -l
total 4
-rw-r--r-- 1 root root 17 Aug 16 15:54 second
root@CsnKhai:~#
root@CsnKhai:~# ls -la
total 36
drwx----- 5 root root 4096 Aug 16 15:54 .
drwxr-xr-x 21 root root 4096 Aug 16 15:54 ..
drwx----- 2 root root 4096 Sep 15 2015 .aptitude
-rw----- 1 root root 208 Sep 15 2015 .bash_history
-rw-r--r-- 1 root root 3106 Feb 20 2014 .bashrc
drwx----- 2 root root 4096 Sep 15 2015 .cache
-rw-r--r-- 1 root root 140 Feb 20 2014 .profile
-rw-r--r-- 1 root root 17 Aug 16 15:54 second
drwx----- 2 root root 4096 Sep 15 2015 .ssh
root@CsnKhai:~#
root@CsnKhai:~#
```

ls -la show all files & directories with information about owner and mods, includes hidden files/d

5) Perform the following sequence of operations:

- create a subdirectory in the home directory;
- in this subdirectory create a file containing information about directories located in the root directory (using I/O redirection operations);
- view the created file;
- copy the created file to your home directory using relative and absolute addressing.
- delete the previously created subdirectory with the file requesting removal;
- delete the file copied to the home directory.


```
student@CsnKhai:~$ mkdir subdir
student@CsnKhai:~$
student@CsnKhai:~$ ls
subdir
student@CsnKhai:~$
student@CsnKhai:~$ touch subdir/file_info && ls -l /etc > subdir/file_info
student@CsnKhai:~$
student@CsnKhai:~$ cat subdir/file_info
total 732
-rw-r--r-- 1 root root 2981 Sep 15 2015 adduser.conf
drwxr-xr-x 2 root root 4096 Sep 15 2015 alternatives
drwxr-xr-x 3 root root 4096 Sep 15 2015 apm
drwxr-xr-x 3 root root 4096 Sep 15 2015 apparmor
drwxr-xr-x 8 root root 4096 Sep 15 2015 apparmor.d
drwxr-xr-x 6 root root 4096 Sep 15 2015 apt
-rw-r--r-- 1 root root 2177 Apr 9 2014 bash.bashrc
-rw-r--r-- 1 root root 45 Mar 22 2014 bash_completion
drwxr-xr-x 2 root root 4096 Sep 15 2015 bash_completion.d
-rw-r--r-- 1 root root 356 Jan 1 2012 bindresvport.blacklist
-rw-r--r-- 1 root root 321 Apr 16 2014 blkid.conf
lrwxrwxrwx 1 root root 15 Aug 5 2015 blkid.tab -> /dev/.blkid.tab
drwxr-xr-x 3 root root 4096 Sep 15 2015 ca-certificates
-rw-r--r-- 1 root root 7773 Sep 15 2015 ca-certificates.conf
drwxr-xr-x 2 root root 4096 Sep 15 2015 calendar
drwxr-s--- 2 root dip 4096 Sep 15 2015 chatscripts
drwxr-xr-x 2 root root 4096 Sep 15 2015 console-setup
drwxr-xr-x 2 root root 4096 Sep 15 2015 cron.d
drwxr-xr-x 2 root root 4096 Sep 15 2015 cron.daily
drwxr-xr-x 2 root root 4096 Sep 15 2015 cron.hourly
```

COPY

```
drwxr-xr-x 2 root root 4096 Sep 15 2015 sudoers.d
-rw-r--r-- 1 root root 2084 Apr 1 2013 sysctl.conf
drwxr-xr-x 2 root root 4096 Sep 15 2015 sysctl.d
drwxr-xr-x 3 root root 4096 Sep 15 2015 systemd
drwxr-xr-x 2 root root 4096 Sep 15 2015 terminfo
-rw-r--r-- 1 root root 8 Sep 15 2015 timezone
-rw-r--r-- 1 root root 1260 Jul 1 2013 ucf.conf
drwxr-xr-x 4 root root 4096 Sep 15 2015 udev
drwxr-xr-x 3 root root 4096 Sep 15 2015 ufw
-rw-r--r-- 1 root root 321 Jun 20 2013 updatedb.conf
drwxr-xr-x 3 root root 4096 Sep 15 2015 update-manager
drwxr-xr-x 2 root root 4096 Sep 15 2015 update-motd.d
-rw-r--r-- 1 root root 222 Apr 11 2014 upstart-xsessions
drwxr-xr-x 2 root root 4096 Sep 15 2015 vim
lrwxrwxrwx 1 root root 23 Sep 15 2015 vtrgb -> /etc/alternatives/vtrgb
-rw-r--r-- 1 root root 4812 Oct 30 2014 wgetrc
drwxr-xr-x 4 root root 4096 Sep 15 2015 X11
drwxr-xr-x 2 root root 4096 Sep 15 2015 xml
-rw-r--r-- 1 root root 349 Jun 26 2012 zsh_command_not_found
student@CsnKhai:~$
student@CsnKhai:~$
student@CsnKhai:~$ cp subdir/file_info ~/copy
student@CsnKhai:~$
student@CsnKhai:~$
student@CsnKhai:~$ ls
copy  subdir
student@CsnKhai:~$
student@CsnKhai:~$
student@CsnKhai:~$
```

DELETE

```
student@CsnKhai:~$  
student@CsnKhai:~$ ls  
copy  subdir  
student@CsnKhai:~$ rm -rf subdir/  
student@CsnKhai:~$  
student@CsnKhai:~$ rm copy  
student@CsnKhai:~$  
student@CsnKhai:~$ ls -a  
.  ..  .bash_history  .bash_logout  .bashrc  .cache  .profile  .ssh  .Xauthority  
student@CsnKhai:~$  
student@CsnKhai:~$  
student@CsnKhai:~$ ls  
student@CsnKhai:~$  
student@CsnKhai:~$
```

7) Using the locate utility, find all files that contain the squid and traceroute sequence.

```
student@CsnKhai:/$ sudo su  
[sudo] password for student:  
root@CsnKhai:/#  
root@CsnKhai:/#  
root@CsnKhai:/# locate squid  
root@CsnKhai:/#  
root@CsnKhai:/# locate traceroute  
/etc/alternatives/traceroute6  
/etc/alternatives/traceroute6.8.gz  
/lib/modules/3.13.0-63-generic/kernel/drivers/tty/n_tracerouter.ko  
/usr/bin/traceroute6  
/usr/bin/traceroute6.iputils  
/usr/share/man/man8/traceroute6.8.gz  
/usr/share/man/man8/traceroute6.iputils.8.gz  
/var/lib/dpkg/alternatives/traceroute6
```

8) Determine which partitions are mounted in the system, as well as the types of these partitions.

```
root@CsnKhai:~# mount | grep /dev/sda  
/dev/sda1 on / type ext4 (rw,errors=remount-ro)  
root@CsnKhai:~#  
root@CsnKhai:~#
```

9) Count the number of lines containing a given sequence of characters in a given file.

```
student@CsnKhai:/var/log$ cd
student@CsnKhai:~$
student@CsnKhai:~$
student@CsnKhai:~$ grep -c 'network' /var/lo
local/ lock/ log/
student@CsnKhai:~$ grep -c 'network' /var/log/boot.log
10
student@CsnKhai:~$
student@CsnKhai:~$
student@CsnKhai:~$
```

10) Using the find command, find all files in the /etc directory containing the host character sequence.

```
root@CsnKhai:/home/student# find /etc type f -name '*hosts*'
/etc/hosts
/etc/hosts.allow
/etc/hosts.deny
find: `type': No such file or directory
find: `f': No such file or directory
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
```

11) List all objects in /etc that contain the ss character sequence. How can I duplicate a similar command using a bunch of grep?

```
root@CsnKhai:/home/student# grep -rF 'ss'
.profile:# for ssh logins, install and configure the libpam-umask package.
.ssh/id_rsa.pub:ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCFa6lb6FtL9pm3WoxN72+1rckw9v7KZHav0ld
Fu1HiXm4rPT8I4xloo6jJlpf6y+kNW/oN4vkgN0F7rr4J4CZq/BnqTPXu5V4p0tRJJdHd7d/L8SEoskNPjjZk0yZtuh
ZmPb8q1GxjdESTtiuoef0u2pKFNNvSCuMxUz0W4BlnLpVRLPkbrPoV0dFhzUch1jq/gAhS8MtXhW/em3A6T0G280qrf
1guCf6HG0oYH4eEGGJb8Z6d3ziRgQCxhlH7l+FIG4INYvZLLv1qj+lH0cDPVMIqSrirdenCEb6qeZVt80jSgRcuofcx
JptE8ah7npXL student@CsnKhai
.ssh/authorized_keys:ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCFa6lb6FtL9pm3WoxN72+1rckw9v7KZH
Cz ifyFu1HiXm4rPT8I4xloo6jJlpf6y+kNW/oN4vkgN0F7rr4J4CZq/BnqTPXu5V4p0tRJJdHd7d/L8SEoskNPjjZk0
9JshJZmPb8q1GxjdESTtiuoef0u2pKFNNvSCuMxUz0W4BlnLpVRLPkbrPoV0dFhzUch1jq/gAhS8MtXhW/em3A6T0G2
Sxdbx1guCf6HG0oYH4eEGGJb8Z6d3ziRgQCxhlH7l+FIG4INYvZLLv1qj+lH0cDPVMIqSrirdenCEb6qeZVt80jSgRc
hdU9FJptE8ah7npXL student@CsnKhai
.bash_history:sudo update.rc ssh defaults
.bash_history:sudo update-rc.d ssh defaults
.bash_history:cd .ssh/
.bash_history:ssh-keygen
.bash_history:sudo ssh student@192.168.0.106
.bash_history:ssh-copy-id student@192.168.0.106
.bash_history:cd .ssh/
.bashrc:# check the window size after each command and, if necessary,
.bashrc:# make less more friendly for non-text input files, see lesspipe(1)
.bashrc:[ -x /usr/bin/lesspipe ] && eval "$(SHELL=/bin/sh lesspipe)"
.bashrc:# set a fancy prompt (non-color, unless we know we "want" color)
.bashrc: # We have color support; assume it's compliant with Ecma-48
```

13) What are the types of devices and how to determine the type of device? Give examples.

```
root@CsnKhai:/home/student# lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
sda   8:0    0  1.5G  0 disk
└─sda1 8:1    0  1.5G  0 part /
sr0   11:0   1 1024M  0 rom
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
```

14) How to determine the type of file in the system, what types of files are there?

```
root@CsnKhai:/home/student# lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
sda   8:0    0  1.5G  0 disk
└─sda1 8:1    0  1.5G  0 part /
sr0   11:0   1 1024M  0 rom
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
```

15) * List the first 5 directory files that were recently accessed in the /etc directory.

```
root@CsnKhai:/home/student# ls -la /etc | head -5
total 740
drwxr-xr-x 83 root root    4096 Aug 16 15:36 .
drwxr-xr-x 21 root root    4096 Aug 16 16:43 ..
-rw-r--r--  1 root root    2981 Sep 15  2015 adduser.conf
drwxr-xr-x  2 root root    4096 Sep 15  2015 alternatives
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student# ls -la /etc | head -6
total 740
drwxr-xr-x 83 root root    4096 Aug 16 15:36 .
drwxr-xr-x 21 root root    4096 Aug 16 16:43 ..
-rw-r--r--  1 root root    2981 Sep 15  2015 adduser.conf
drwxr-xr-x  2 root root    4096 Sep 15  2015 alternatives
drwxr-xr-x  3 root root    4096 Sep 15  2015 apm
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
root@CsnKhai:/home/student#
```