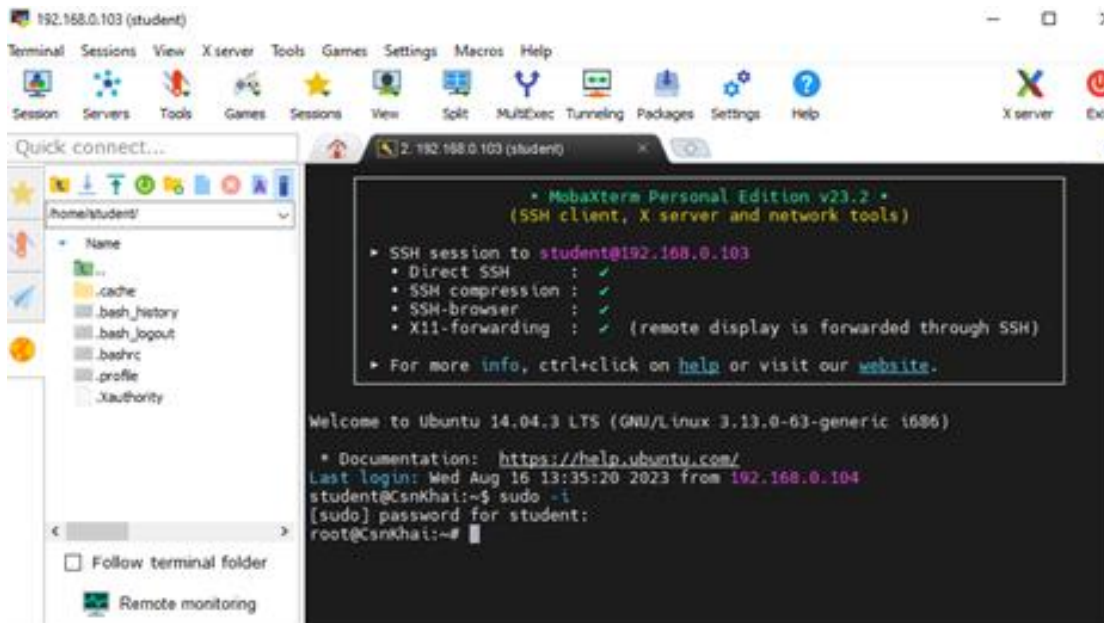
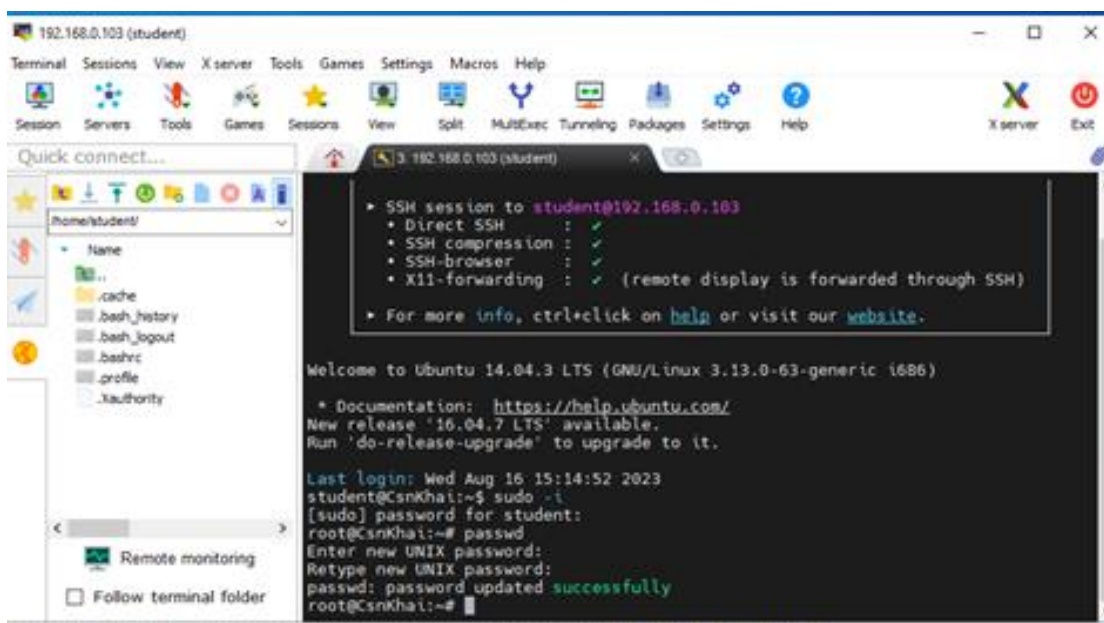


1) Log in to the system as root.



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

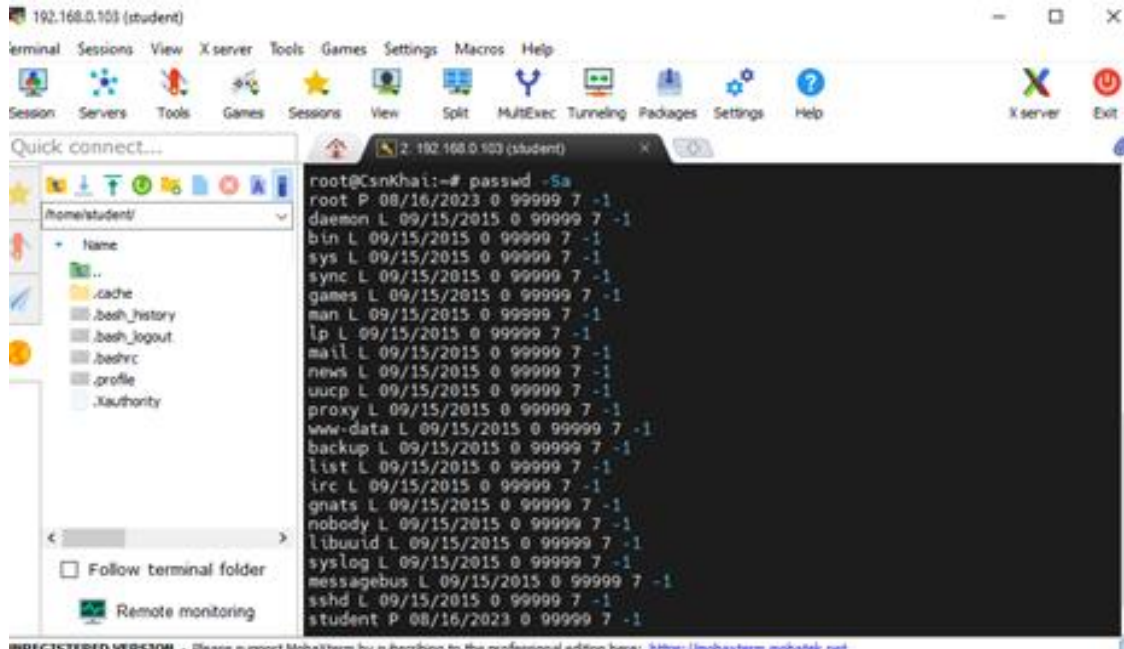


Passwd is a command for managing user passwords. It modifies the `/etc/passwd` file.

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?

Using *passwd* to display information about all users:

`:~# passwd -Sa`



```
root@CsnKhali:~# passwd -Sa
root P 08/16/2023 0 99999 7 -1
daemon L 09/15/2015 0 99999 7 -1
bin L 09/15/2015 0 99999 7 -1
sys L 09/15/2015 0 99999 7 -1
sync L 09/15/2015 0 99999 7 -1
games L 09/15/2015 0 99999 7 -1
man L 09/15/2015 0 99999 7 -1
lp L 09/15/2015 0 99999 7 -1
mail L 09/15/2015 0 99999 7 -1
news L 09/15/2015 0 99999 7 -1
uucp L 09/15/2015 0 99999 7 -1
proxy L 09/15/2015 0 99999 7 -1
www-data L 09/15/2015 0 99999 7 -1
backup L 09/15/2015 0 99999 7 -1
list L 09/15/2015 0 99999 7 -1
irc L 09/15/2015 0 99999 7 -1
gnats L 09/15/2015 0 99999 7 -1
nobody L 09/15/2015 0 99999 7 -1
libuid L 09/15/2015 0 99999 7 -1
syslog L 09/15/2015 0 99999 7 -1
messagebus L 09/15/2015 0 99999 7 -1
sshd L 09/15/2015 0 99999 7 -1
student P 08/16/2023 0 99999 7 -1
```

Use the **w** command to identify processes that users are running:



```
root@CsnKhali:~# w
16:14:57 up 1:00, 2 users, load average: 0.00, 0.01, 0.05
USER      TTY      FROM            LOGINQ   IDLE   JCPU   PCPU   WHAT
student   tty1     192.168.0.104    15:14    26:06  0.07s  0.04s  -bash
student   pts/0    192.168.0.104    15:40    1:00s  0.07s  0.03s  sshd: student [
```

WHAT - current processes and commands that the user under a specific account is running.

USER - is the name of the account.

TTY - is the name of the terminal.

FROM - is the hostname or IP address from which the user logged in with a particular account.

LOGIN - the time when this or that account was registered in the system for the first time since the machine was turned on.

IDLE - the time when the user was active from a specific account.

JCPU is the time used by all processes running in the tty terminal.

PCPU - the time used by the current process (which one - you can see in the WHAT column).

4) Change personal information about yourself.

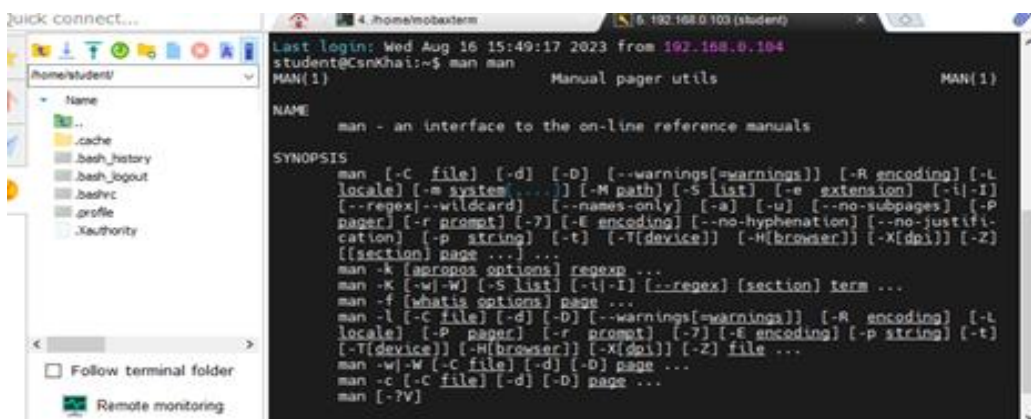
`:~# chfn -f "Anna Zalevska" student`



```
root@CsnKhai:/home/student# chfn -f "Anna Zalevska" student
root@CsnKhai:/home/student# finger student
Login: student                      Name: Anna Zalevska
Directory: /home/student           Shell: /bin/bash
On since Wed Aug 16 23:14 (UTC) on tty1 26 minutes 15 seconds idle
(messages off)
On since Wed Aug 16 20:43 (UTC) on pts/0 from 192.168.0.104
1 second idle
(messages off)
No mail.
```

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.

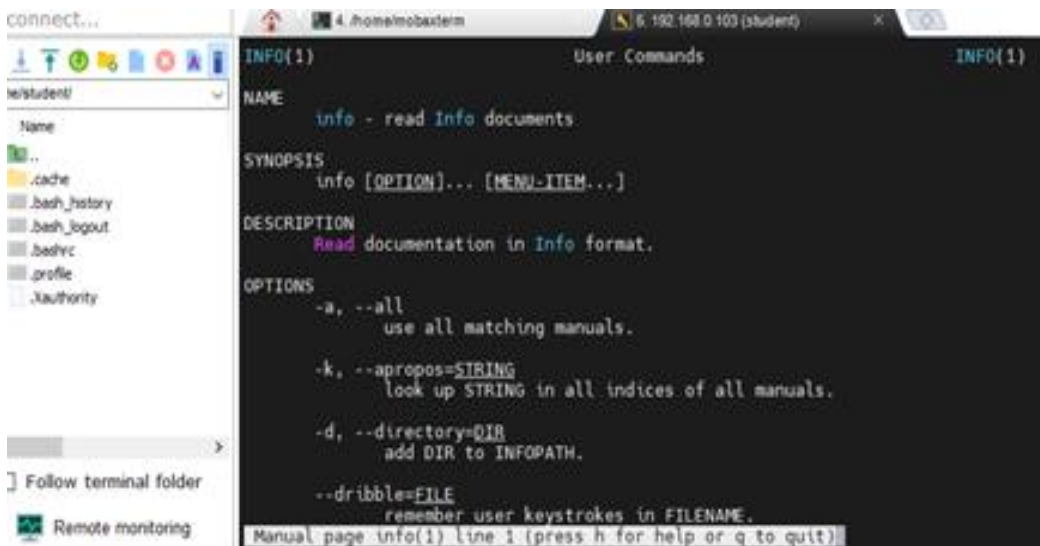
`:~# man man`



```
student@CsnKhai:~$ man man
MAN(1)                                Manual page 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] [-t|-I]
    [--regex|--wildcard] [--names-only] [-a] [-u] [--no-subpages] [-P
    pager] [-r prompt] [-?] [-E encoding] [--no-hyphenation] [--no-justifi-
    cation] [-p string] [-t] [-T[device]] [-H[browser]] [-X[dpi]] [-Z]
    [[section] page ...] ...
    man -k [apropos options] regexp ...
    man -K [-w|-W] [-S list] [-t|-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] [-?] [-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]
```



```
INFO(1)                                User Commands                                INFO(1)

NAME
    info - read info documents

SYNOPSIS
    info [OPTION]... [MENU-ITEM...]

DESCRIPTION
    Read documentation in Info format.

OPTIONS
    -a, --all
        use all matching manuals.

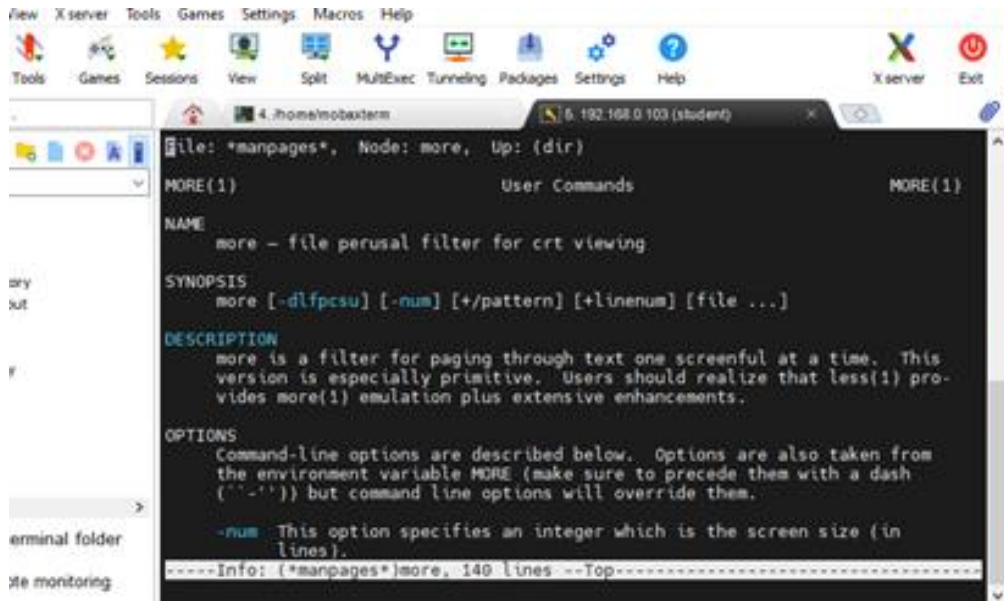
    -k, --apropos=STRING
        look up STRING in all indices of all manuals.

    -d, --directory=DIR
        add DIR to INFOPATH.

    --dribble=FILE
        remember user keystrokes in FILENAME.

Manual page info(1) line 1 (press h for help or q to quit)
```

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



The screenshot shows the MobaXterm interface with a terminal window displaying the help text for the 'more' command. The terminal title is '4. /home/mobaxterm' and the session is '5. 192.168.0.103 (student)'. The help text includes sections for NAME, SYNOPSIS, DESCRIPTION, and OPTIONS. The terminal output is as follows:

```
file: *manpages*, Node: more, Up: (dir)
MORE(1)                                User Commands                                MORE(1)

NAME
more - file perusal filter for crt viewing

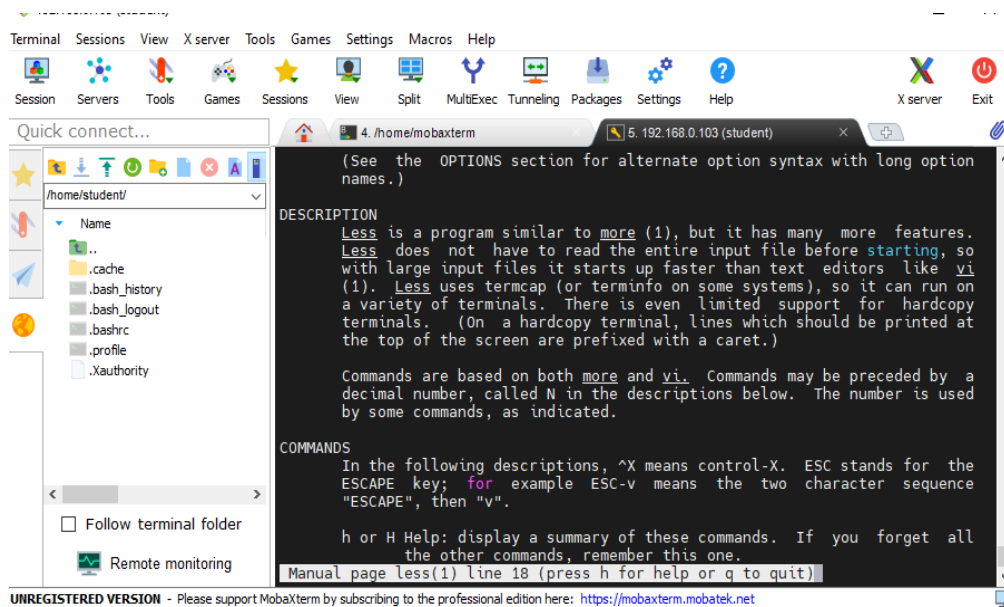
SYNOPSIS
more [-dlfpcsu] [-num] [+ /pattern] [+linenum] [file ...]

DESCRIPTION
more is a filter for paging through text one screenful at a time. This
version is especially primitive. Users should realize that less(1) pro-
vides more(1) emulation plus extensive enhancements.

OPTIONS
Command-line options are described below. Options are also taken from
the environment variable MORE (make sure to precede them with a dash
('-')) but command line options will override them.

-num This option specifies an integer which is the screen size (in
lines).

-----Info: (*manpages*)more, 140 lines --Top-----
```



The screenshot shows the MobaXterm interface with a terminal window displaying the help text for the 'less' command. The terminal title is '4. /home/mobaxterm' and the session is '5. 192.168.0.103 (student)'. The help text includes sections for DESCRIPTION and COMMANDS. The terminal output is as follows:

```
(See the OPTIONS section for alternate option syntax with long option
names.)

DESCRIPTION
Less is a program similar to more (1), but it has many more features.
Less does not have to read the entire input file before starting, so
with large input files it starts up faster than text editors like vi
(1). Less uses termcap (or terminfo on some systems), so it can run on
a variety of terminals. There is even limited support for hardcopy
terminals. (On a hardcopy terminal, lines which should be printed at
the top of the screen are prefixed with a caret.)

Commands are based on both more and vi. Commands may be preceded by a
decimal number, called N in the descriptions below. The number is used
by some commands, as indicated.

COMMANDS
In the following descriptions, ^X means control-X. ESC stands for the
ESCAPE key; for example ESC-v means the two character sequence
"ESCAPE", then "v".

h or H Help: display a summary of these commands. If you forget all
the other commands, remember this one.

Manual page less(1) line 18 (press h for help or q to quit)
```

Using the command **find** to search for files .bash*:

```
~# find / -name "*.bash" 2 > /dev/null
```



The screenshot shows a terminal window with the output of the 'find' command. The terminal title is 'student@CsnKhai:~\$'. The output lists two files:

```
student@CsnKhai:~$ find / -name "*.bash" 2>/dev/null
/usr/share/doc/xz-utils/extra/7z2lzma/7z2lzma.bash
/usr/share/doc/util-linux/examples/getopt-parse.bash
student@CsnKhai:~$
```

View the contents of files .bash* using commands **more** and **less**:


```

#!/bin/bash

if [ $# != 0 ] ; then echo "Terminating..." >&2 ; exit 1 ; fi

# Note the quotes around '$TEMP': they are essential!
eval set -- "$TEMP"

while true ; do
    case "$1" in
        -a|--a-long) echo "Option a" ; shift ;;
        -b|--b-long) echo "Option b, argument \"$2\" ; shift 2 ;;
        -c|--c-long)
            # c has an optional argument. As we are in quoted mode,
            # an empty parameter will be generated if its optional
            # argument is not found.
            case "$2" in
                "") echo "Option c, no argument" ; shift 2 ;;
                *) echo "Option c, argument \"$2\" ; shift 2 ;;
            esac ;;
        --) shift ; break ;;
        *) echo "Internal error!" ; exit 1 ;;
    esac
done
echo "Remaining arguments:"
for arg do echo "--> \"$arg\" ; done
END
  
```

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

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

```

No manual entry for finger
student@Csnkhai:~$ sudo apt-get install finger
[sudo] password for student:
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 (34.3 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) ...
student@Csnkhai:~$
  
```

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```

file: *manpages*, Node: finger, Up: (dir)
FINGER(1) BSD General Commands Manual FINGER(1)

NAME
  finger - user information lookup program

SYNOPSIS
  finger [-lmsp] [user ...] [user@host ...]

DESCRIPTION
  The finger displays information about the system users.

  Options are:

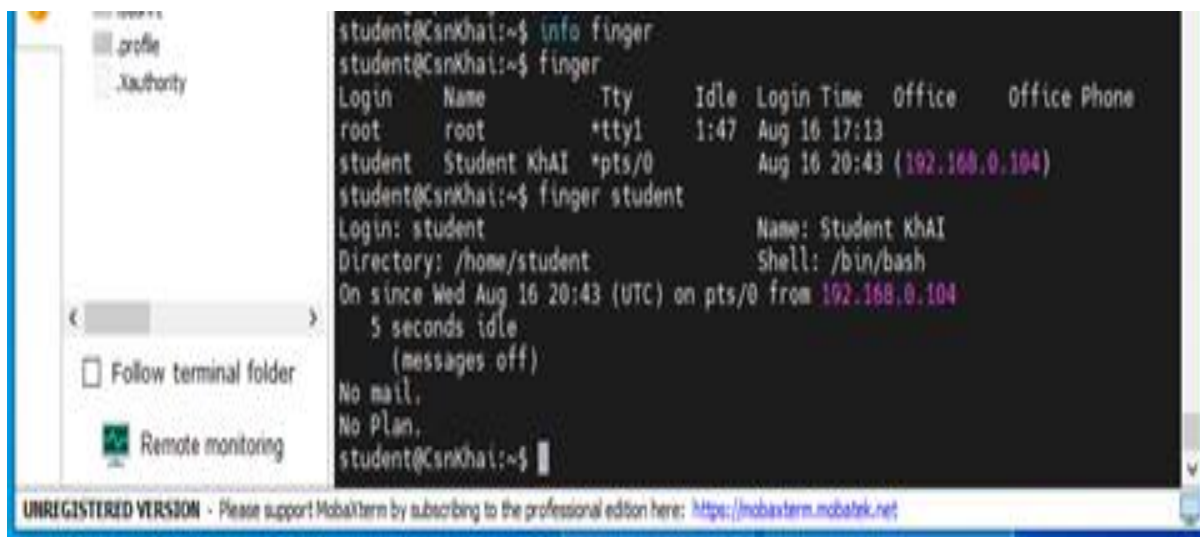
  -s    Finger displays the user's login name, real name, terminal name and
        write status (as a '*' after the terminal name if write permission
        is denied), idle time, login time, office location and office
        phone number.

        Login time is displayed as month, day, hours and minutes, unless
        more than six months ago, in which case the year is displayed

-----Info: (*manpages*)finger, 101 lines--Top-----
Welcome to Info version 5.2. Type h for help, m for menu item.
  
```

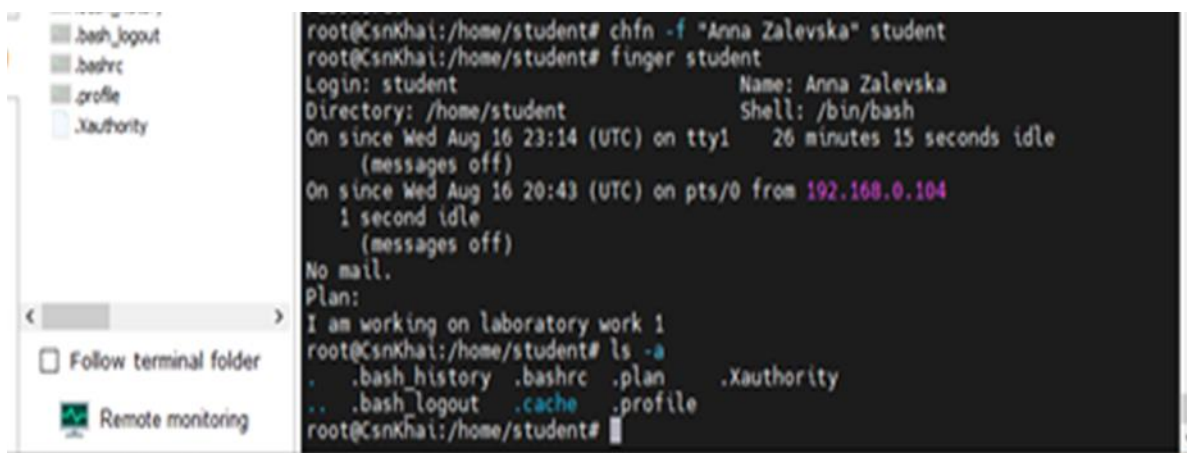
REGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>

:~# finger student



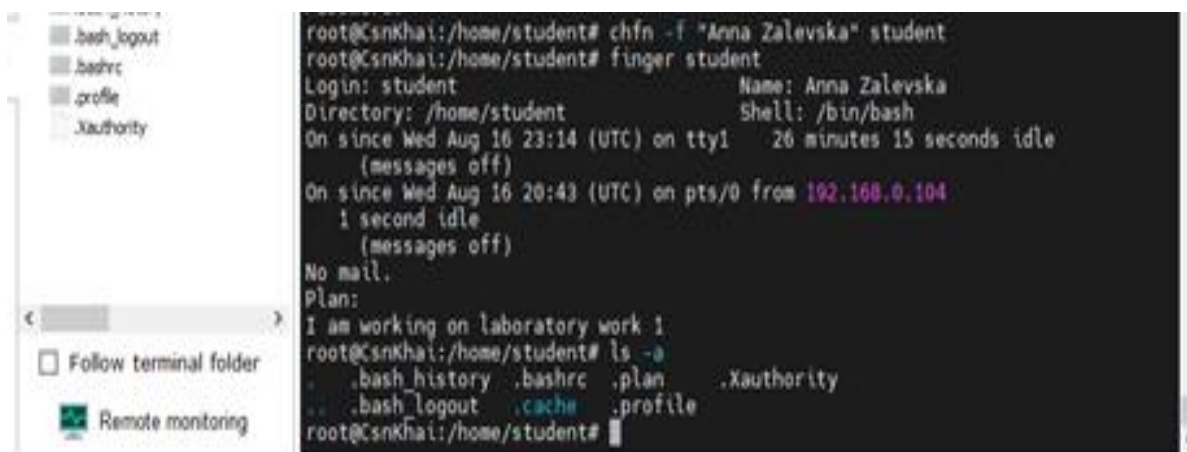
```
student@CsnKhai:~$ info finger
student@CsnKhai:~$ finger
Login      Name      Tty      Idle  Login Time  Office  Office Phone
root      root      *tty1    1:47  Aug 16 17:13
student   Student KhAI  *pts/0    Aug 16 20:43 (192.168.0.104)
student@CsnKhai:~$ finger student
Login: student                      Name: Student KhAI
Directory: /home/student            Shell: /bin/bash
On since Wed Aug 16 20:43 (UTC) on pts/0 from 192.168.0.104
      5 seconds idle
      (messages off)
No mail.
No Plan.
student@CsnKhai:~$
```

:~# echo "I am working on laboratory work 1" > .plan



```
root@CsnKhai:/home/student# chfn -f "Anna Zalevska" student
root@CsnKhai:/home/student# finger student
Login: student                      Name: Anna Zalevska
Directory: /home/student            Shell: /bin/bash
On since Wed Aug 16 23:14 (UTC) on tty1 26 minutes 15 seconds idle
      (messages off)
On since Wed Aug 16 20:43 (UTC) on pts/0 from 192.168.0.104
      1 second idle
      (messages off)
No mail.
Plan:
I am working on laboratory work 1
root@CsnKhai:/home/student# ls -a
.  .bash_history  .bashrc  .plan  .xauthority
.. .bash_logout  .cache   .profile
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# chfn -f "Anna Zalevska" student
root@CsnKhai:/home/student# finger student
Login: student                      Name: Anna Zalevska
Directory: /home/student            Shell: /bin/bash
On since Wed Aug 16 23:14 (UTC) on tty1 26 minutes 15 seconds idle
      (messages off)
On since Wed Aug 16 20:43 (UTC) on pts/0 from 192.168.0.104
      1 second idle
      (messages off)
No mail.
Plan:
I am working on laboratory work 1
root@CsnKhai:/home/student# ls -a
.  .bash_history  .bashrc  .plan  .xauthority
.. .bash_logout  .cache   .profile
root@CsnKhai:/home/student#
```