Operating System

UNIVERSITY OF MORATUWA

LAB SESSION 01 – BASIC LINUX COMMADS

BY

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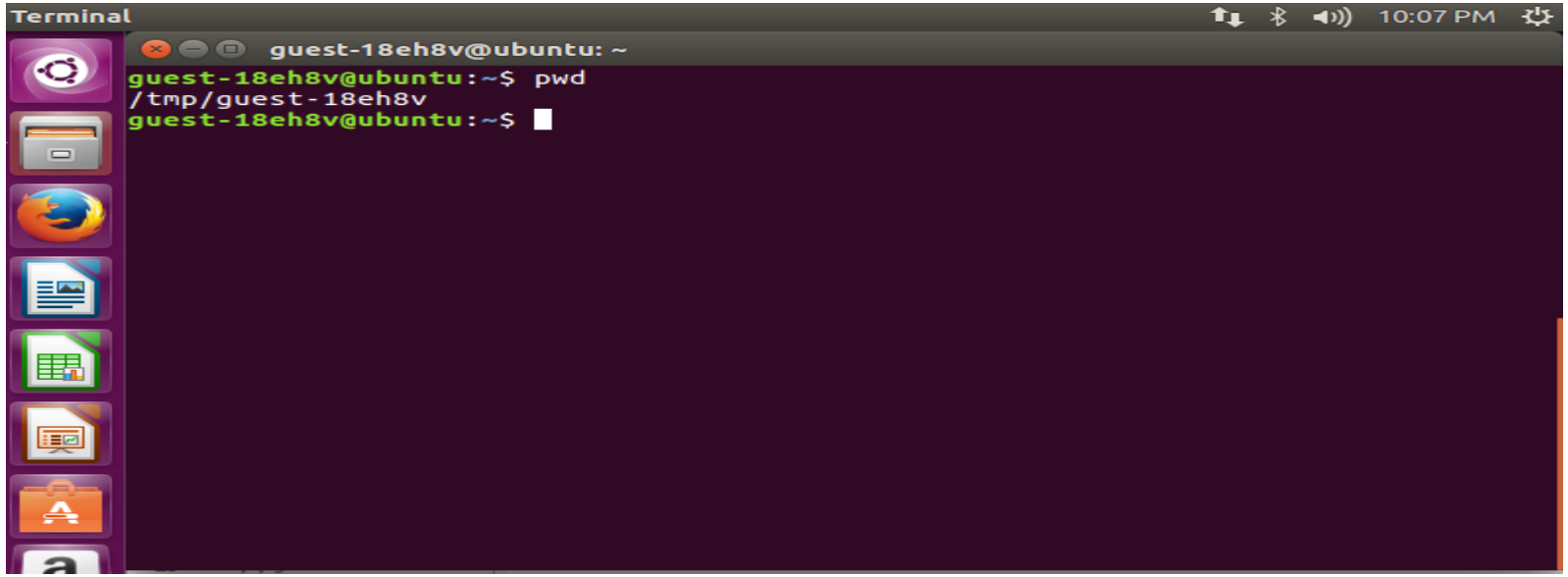
Objectives of lab session

- To study basic unix basic commands
- To learn basic unix shell commands

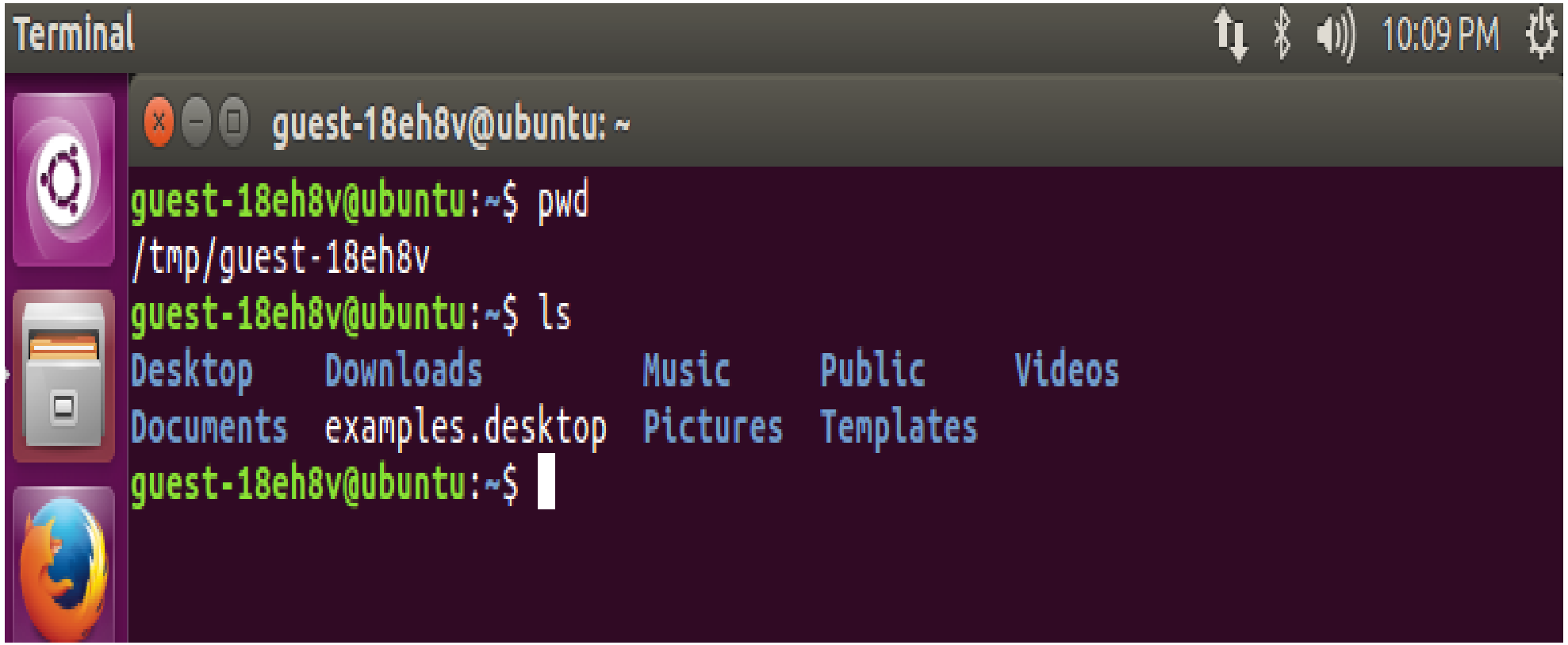
Basic Linux commands

1. pwd command :

You can see present working directory in your machine. The **pwd** command displays the full pathname of the current directory



2. ls command:
Show hidden files with directories of information



More **ls** commands

Example: **ls -l**

-a Displays all files.

-b Displays nonprinting characters in octal.

-c Displays files by file timestamp.

-C Displays files in a columnar format (default)

-d Displays only directories.

-l Displays the long format listing.

-L Displays the file or directory referenced by a symbolic link.

-m Displays the names as a comma-separated list.

-n Displays the long format listing, with GID and UID numbers.

More **ls** commands

-o Displays the long format listing, but excludes group name.

-p Displays directories with /

-q Displays all nonprinting characters as ?

-r Displays files in reverse order.

-R Displays subdirectories as well.

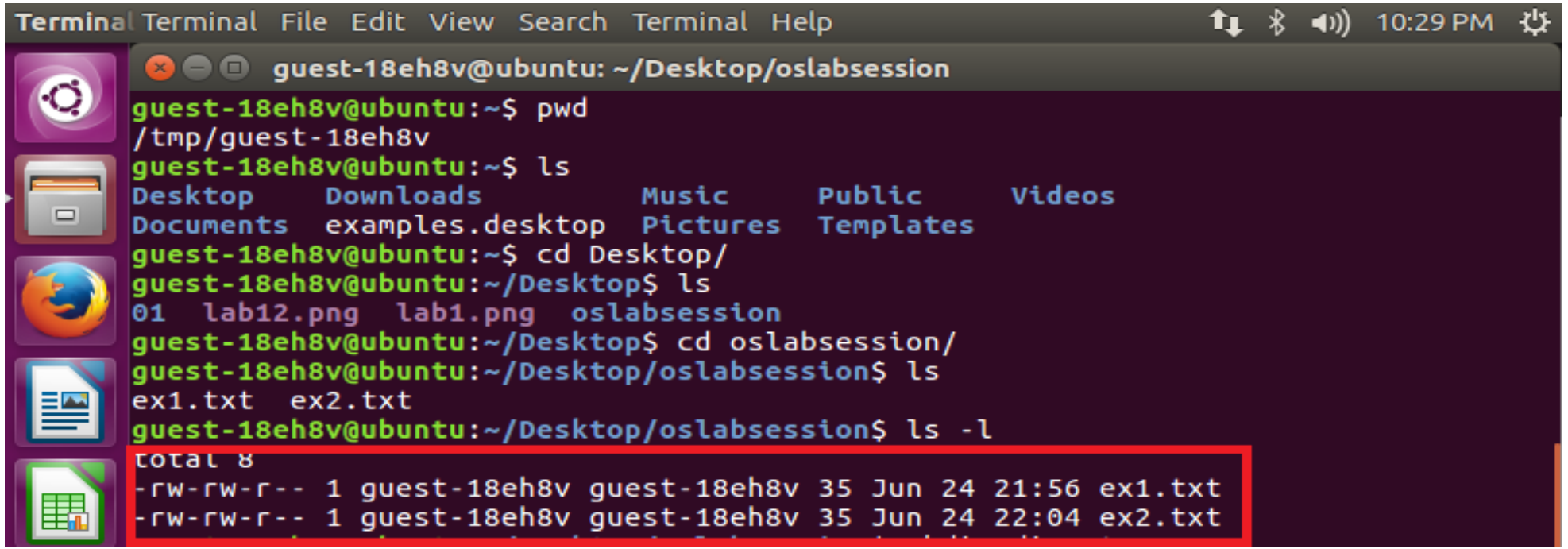
-t Displays newest files first. (based on timestamp)

-u Displays files by the file access time.

-x Displays files as rows across the screen.

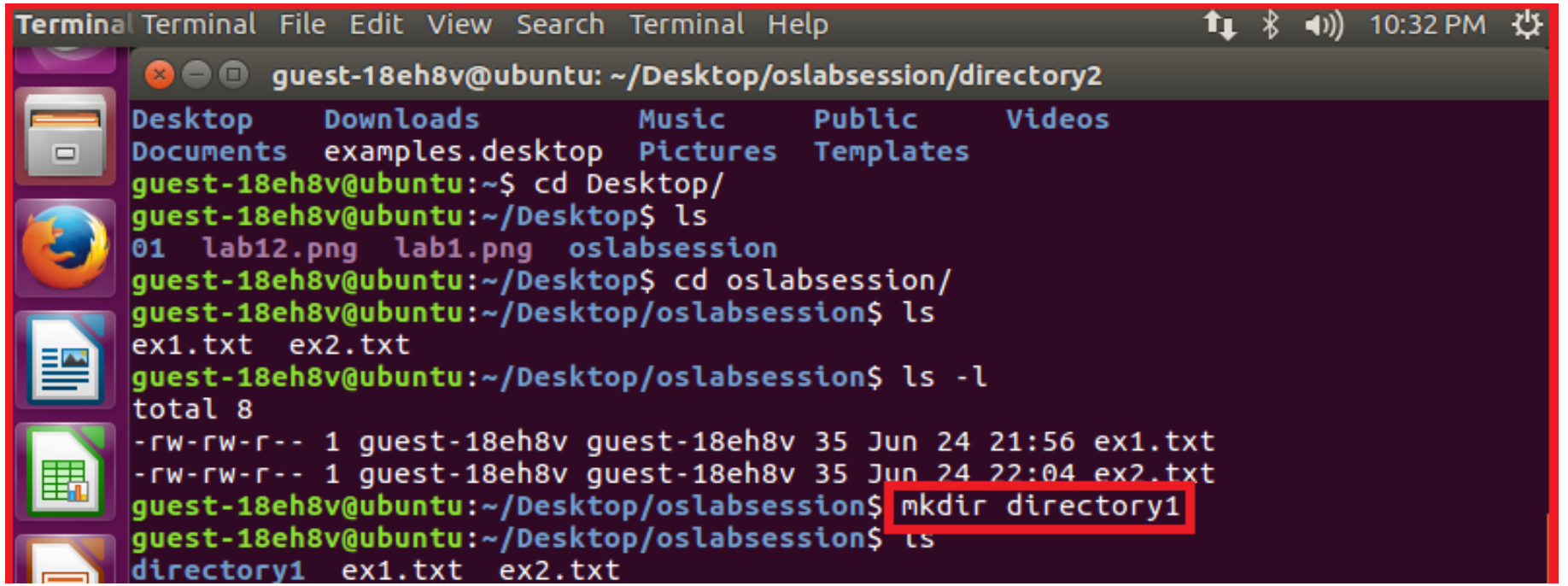
-1 Displays each entry on a line.

3. ls –l command
show some extra information



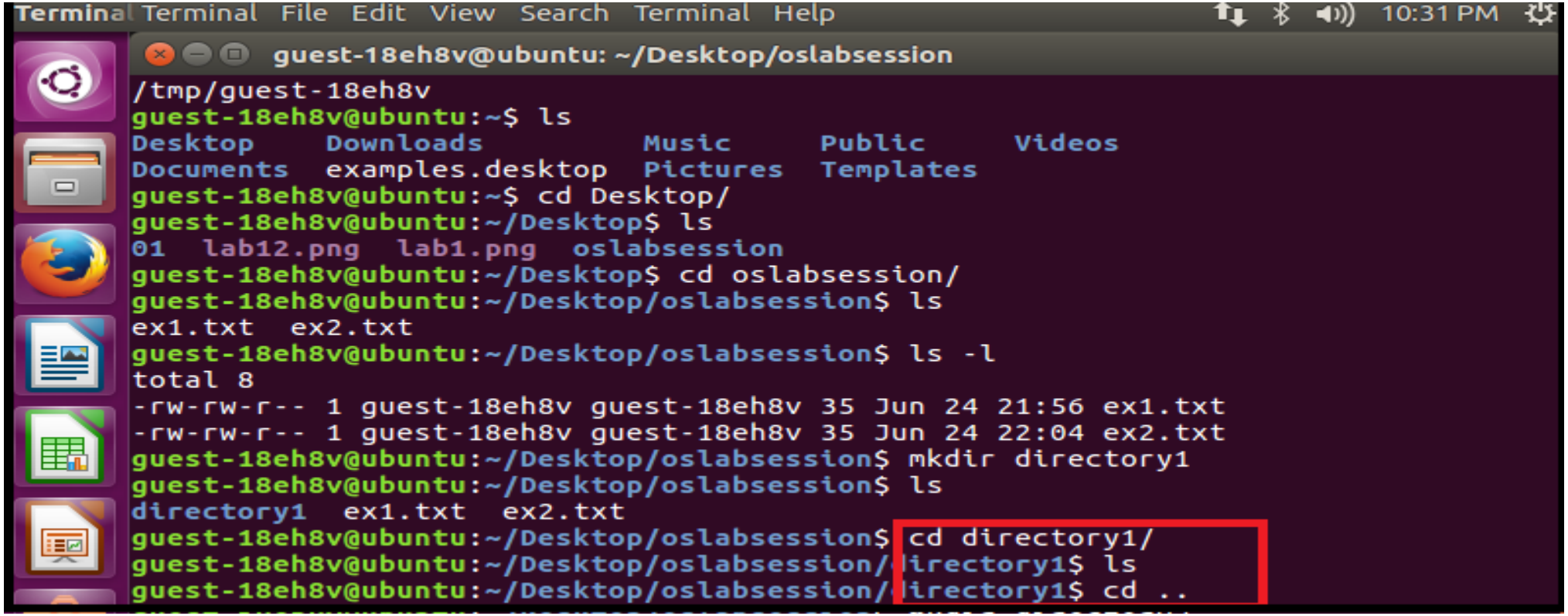
4. mkdir command:

This command is used for making or creating directories.

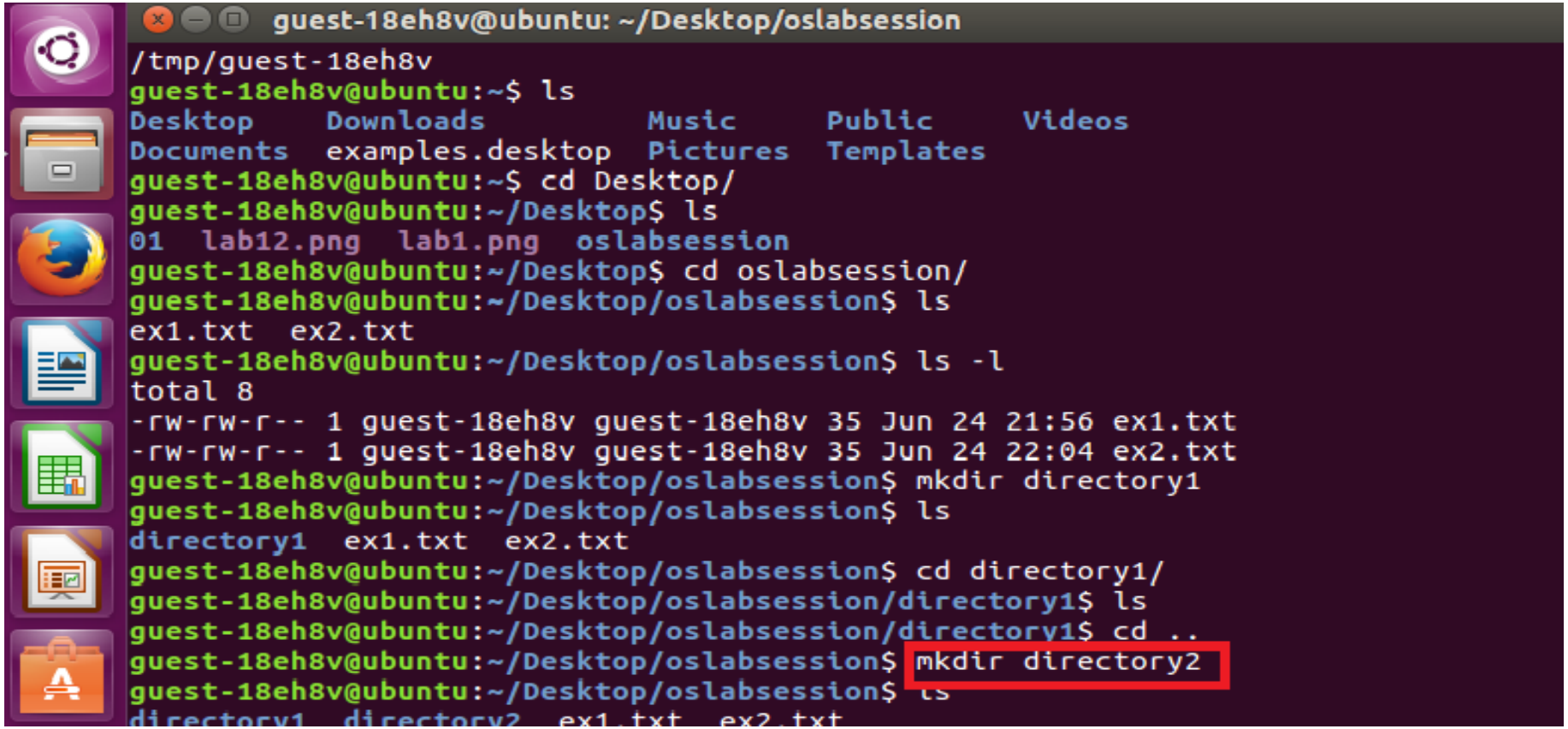


5. Change directory:

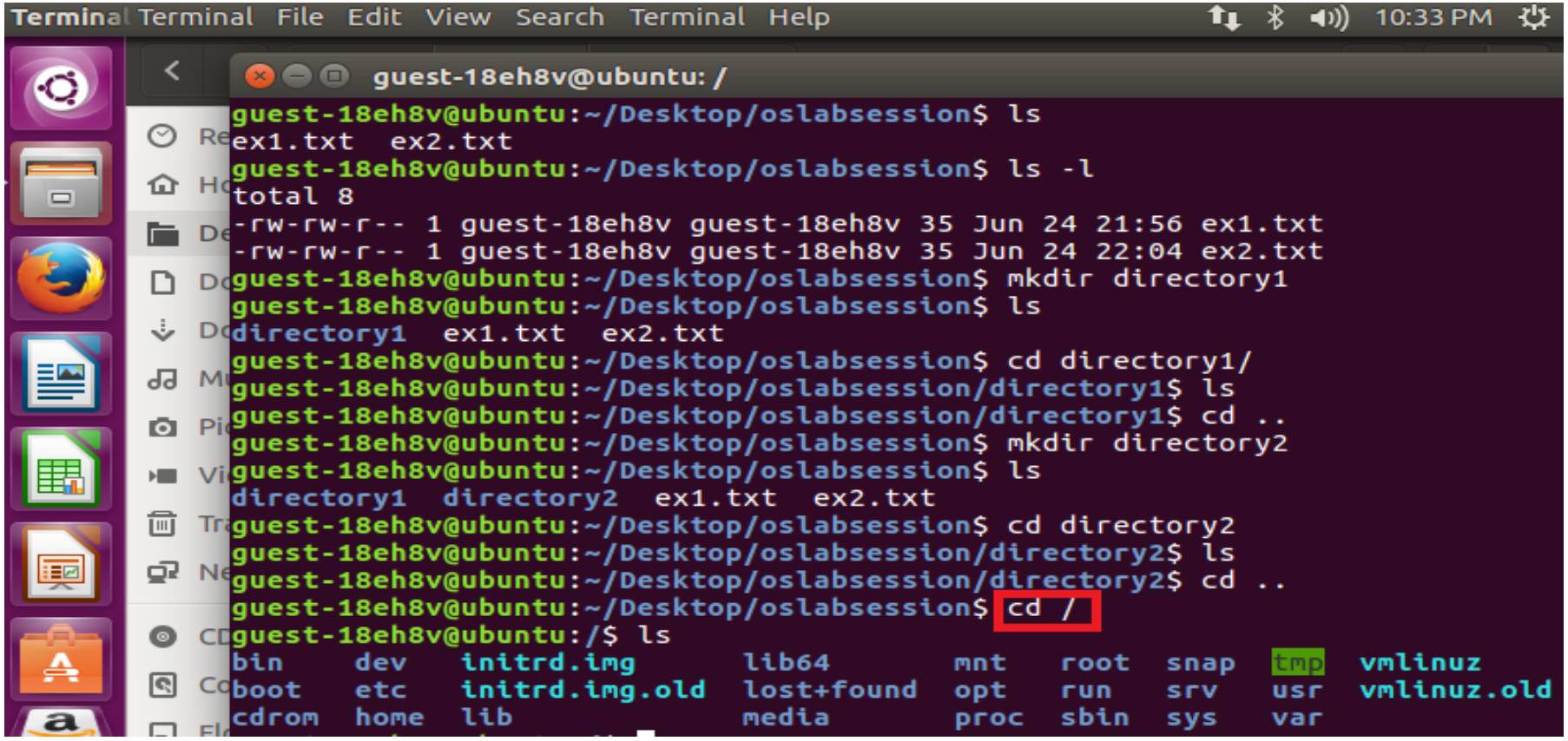
'cd' means 'change directory'.
Typing: cd /[directory name] will get us into one of the main directories.
Typing cd .. will get us out of it. (move to parent directory.)



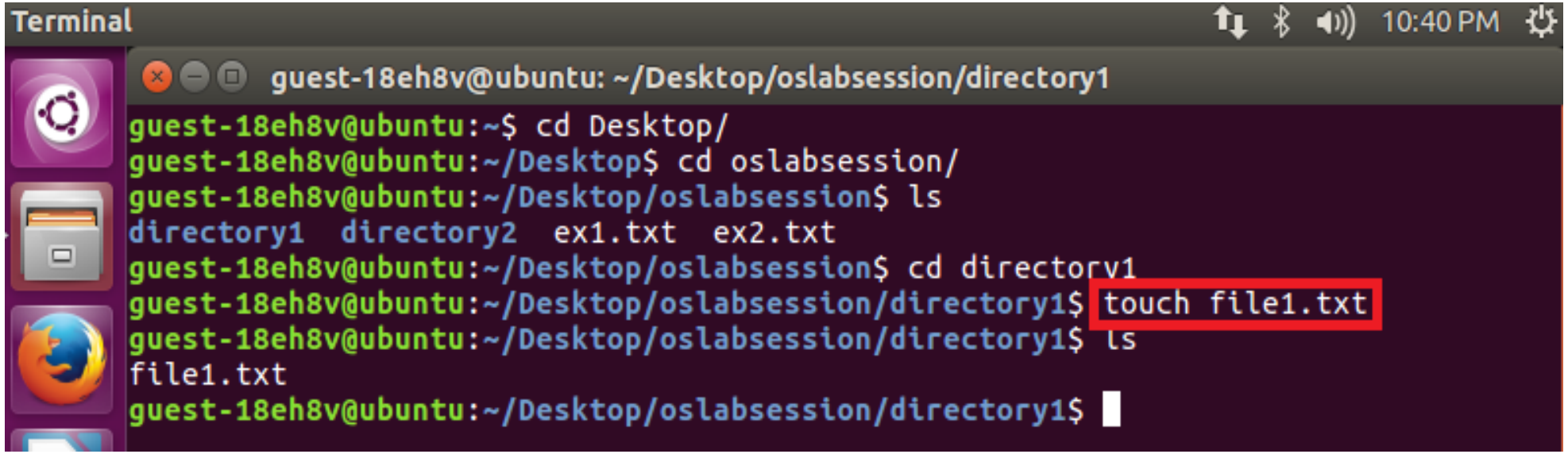
Create another directory name call **directory2**



Return back to home



6. touch command:
Create a text file



How to use “vi” editor to create a file and save

Let's make a text file. Type: **vi example1.txt**

We'll see a line of tildes down the left side and the name ‘**example1.txt’** at the bottom and [new file].

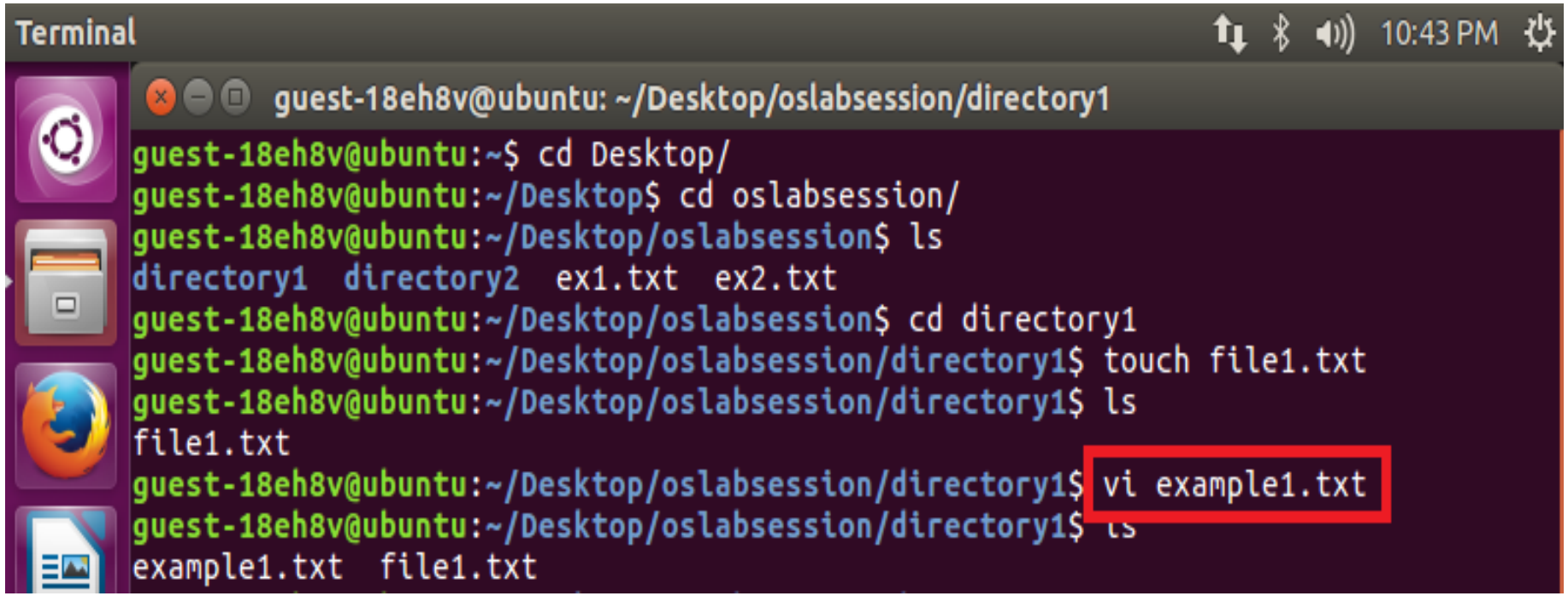
To write something, we have to press ESC and the 'i' key (i for insert). We can always erase our mistakes with the backspace key.

To save this file, we would press ESC then the colon key ':' then 'wq' (write)

To **save the file** and quit vi, you would press ESC, **ESC** the colon key '**:**' then **wq** (write)

To **quit without saving**, press ESC, ':' then 'q!'. vi may protest if we've written something and we don't want to save it. If we press **ESC** '**:**' '**q!**' with an exclamation point, vi will accept it and not save our changes.

Create file in command line editor

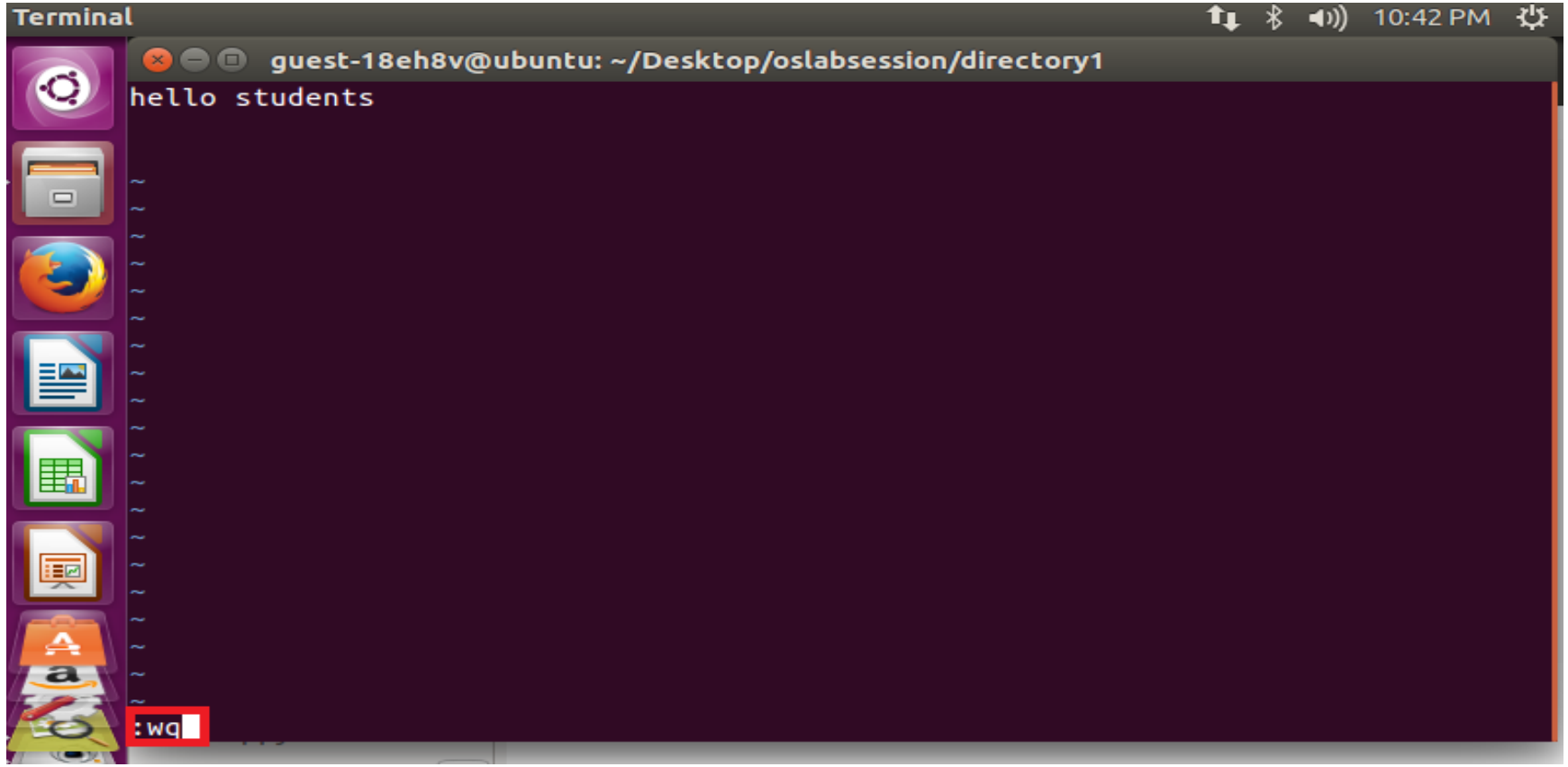


7. i)**Esc** and :**wq** command:

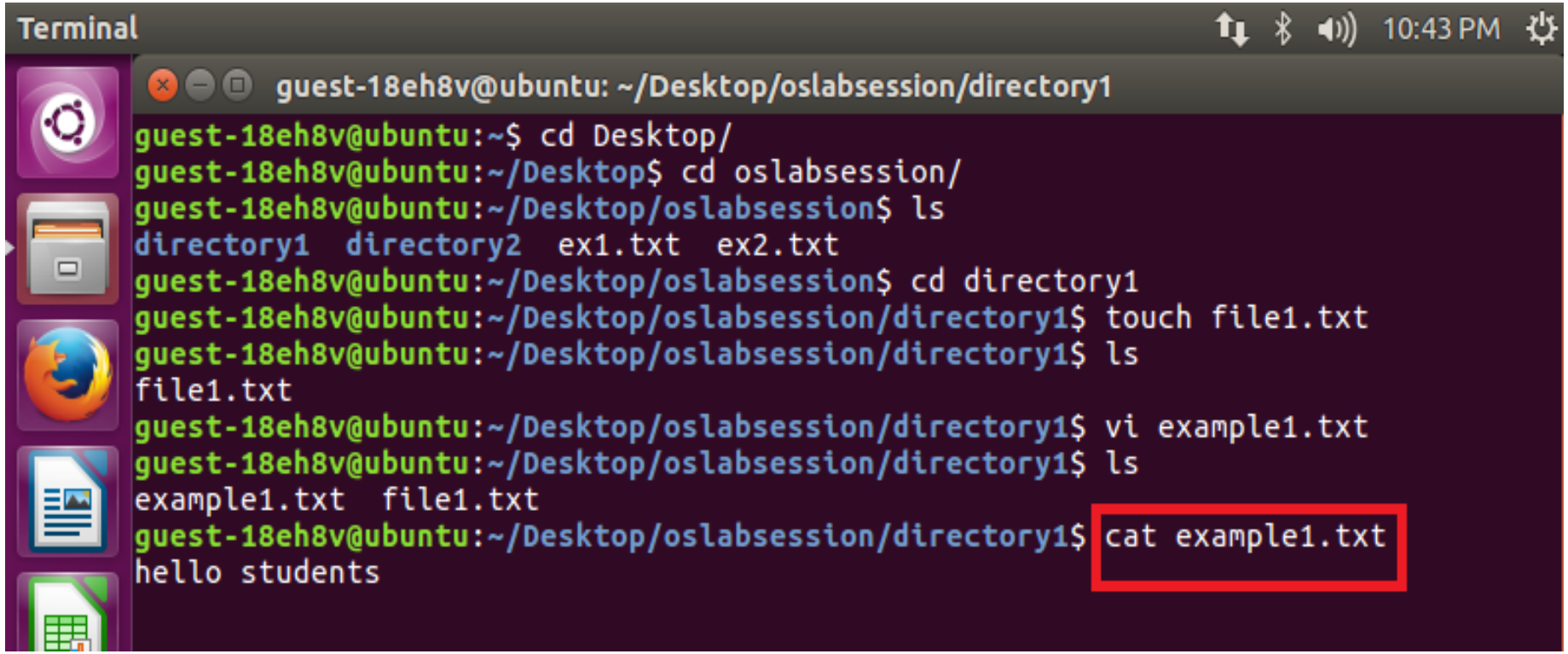
Include file contain(you have to press '**i**' to insert data to the file and save file using above command

ii) **Esc** and :**q!** command:

use to quit the file(you want to cancel the file)

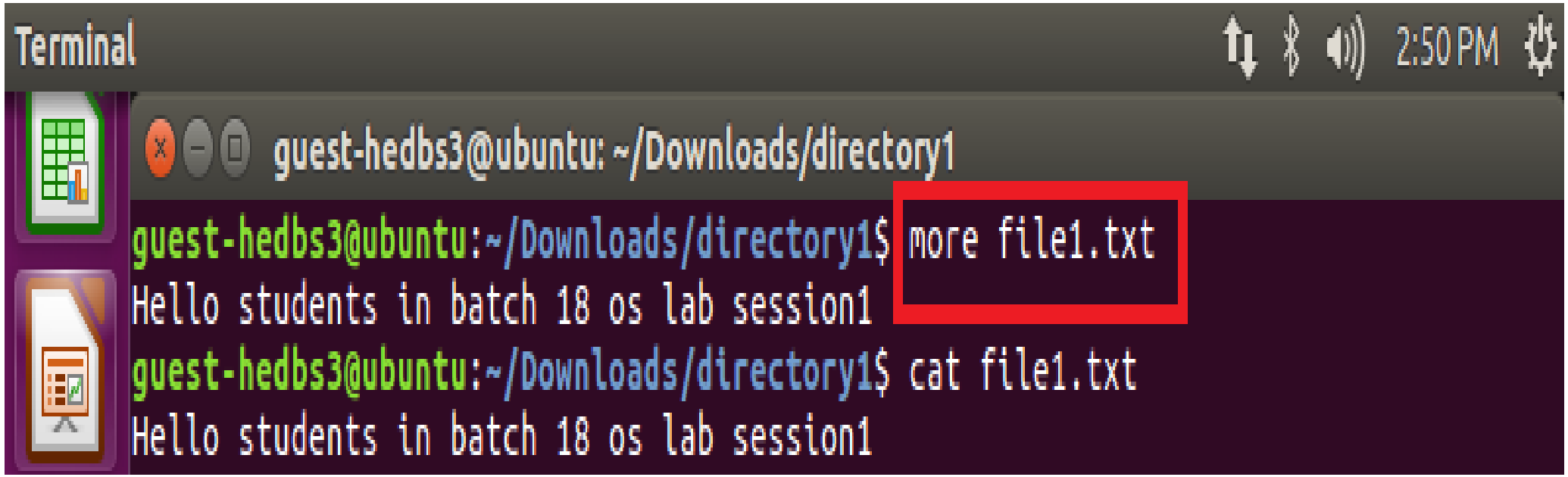


8. **cat** command: output file in window



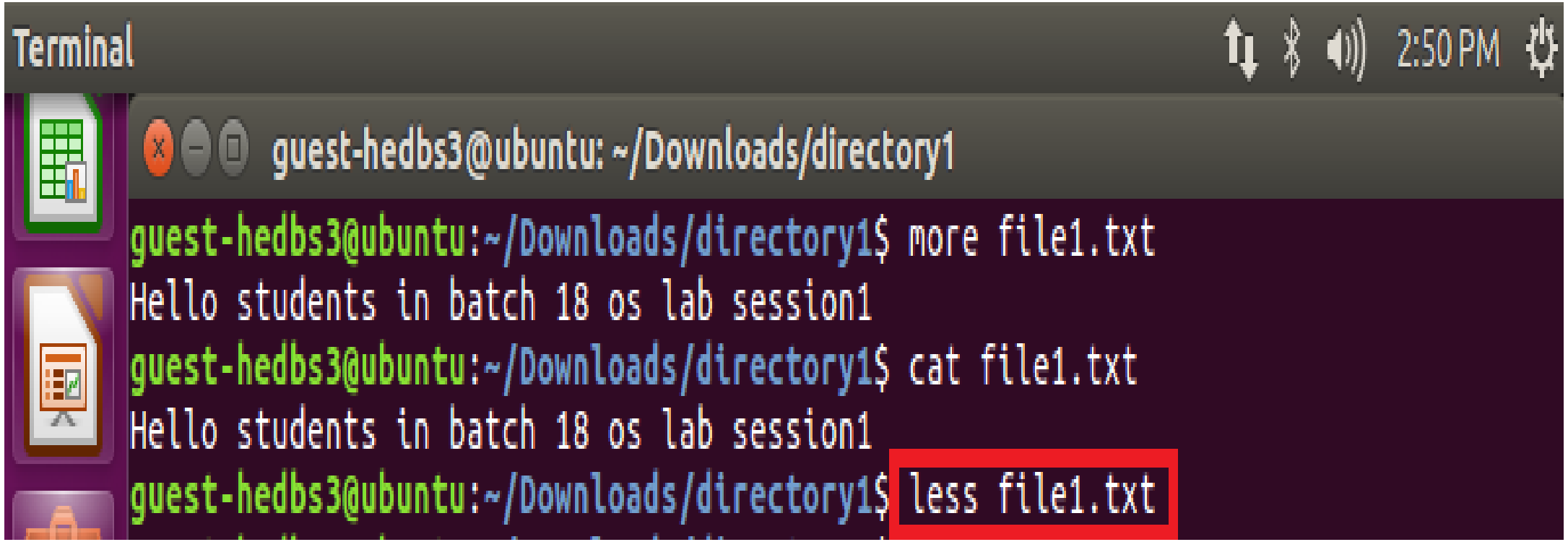
more command to output file

'more' is a command that we can use to read, for example, what's written in a file. We would type 'more file1.txt' to see the file completely.

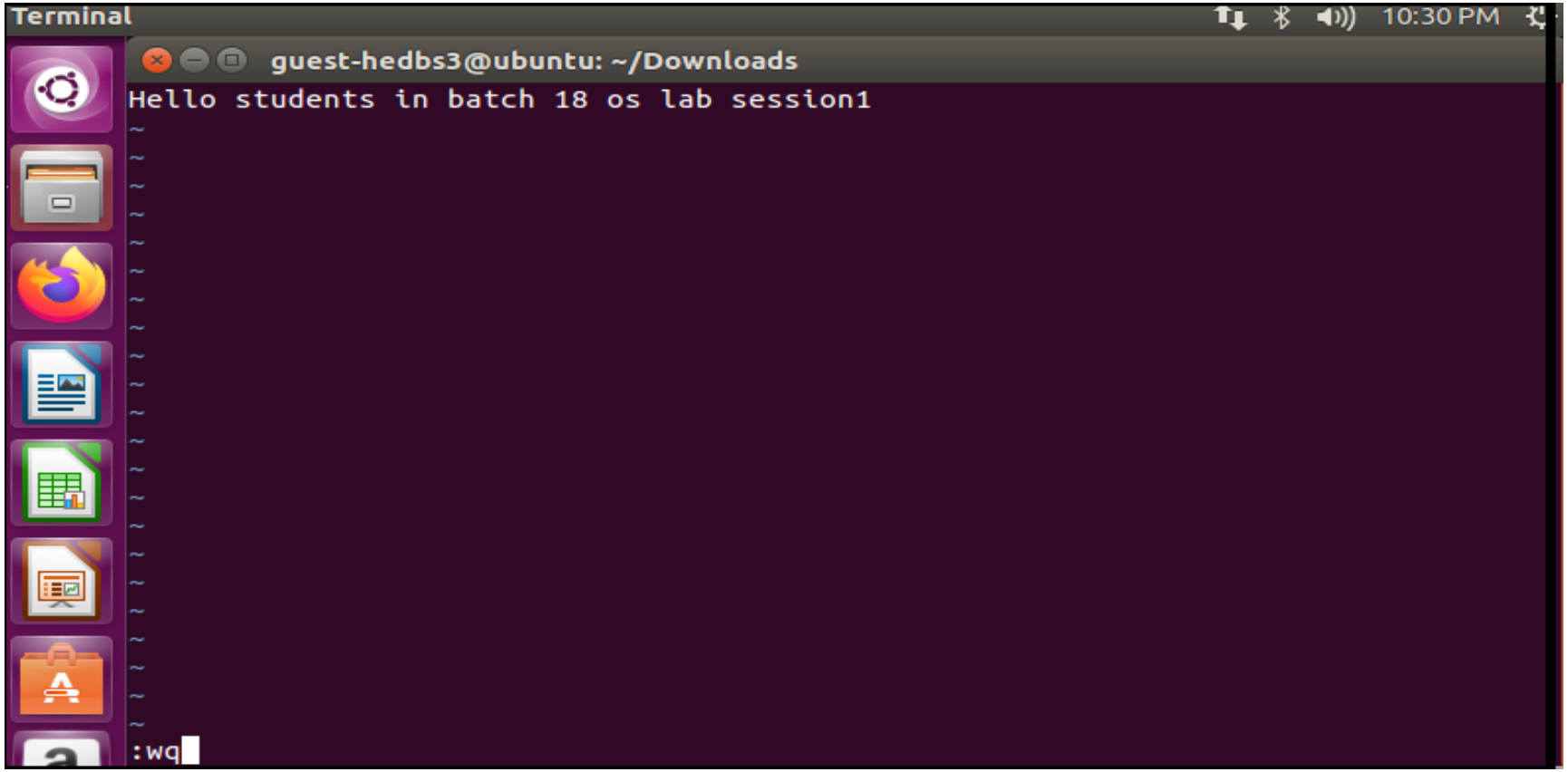


less command to output the file

Then, we can press the 'q' key to stop viewing the file.

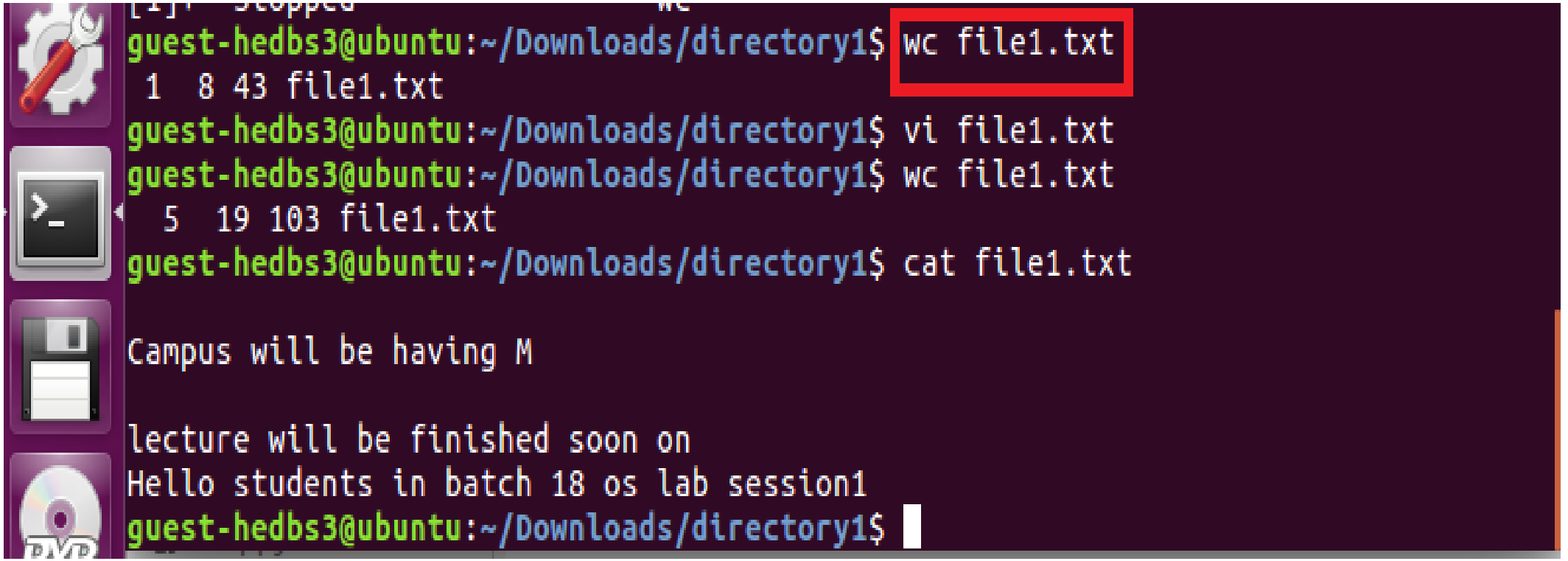


You can view file



9.wc command

This command will give us the number of lines, words and letters (characters) in a file and in that order.



Please attempt below command as well and try to understand

wc -l <filename> print the line count

wc -c <filename> print the byte count

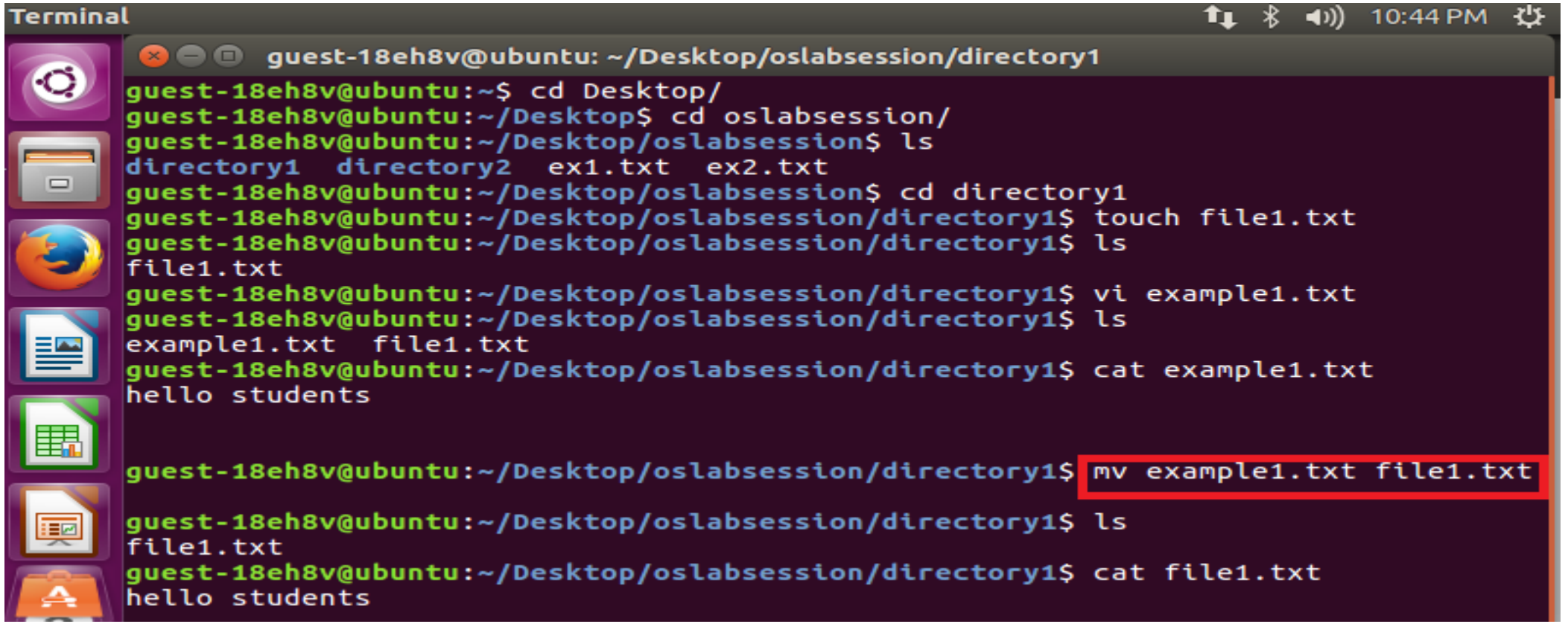
wc -m <filename> print the character count

wc -L <filename> print the length of longest line

wc -w <filename> print the word count

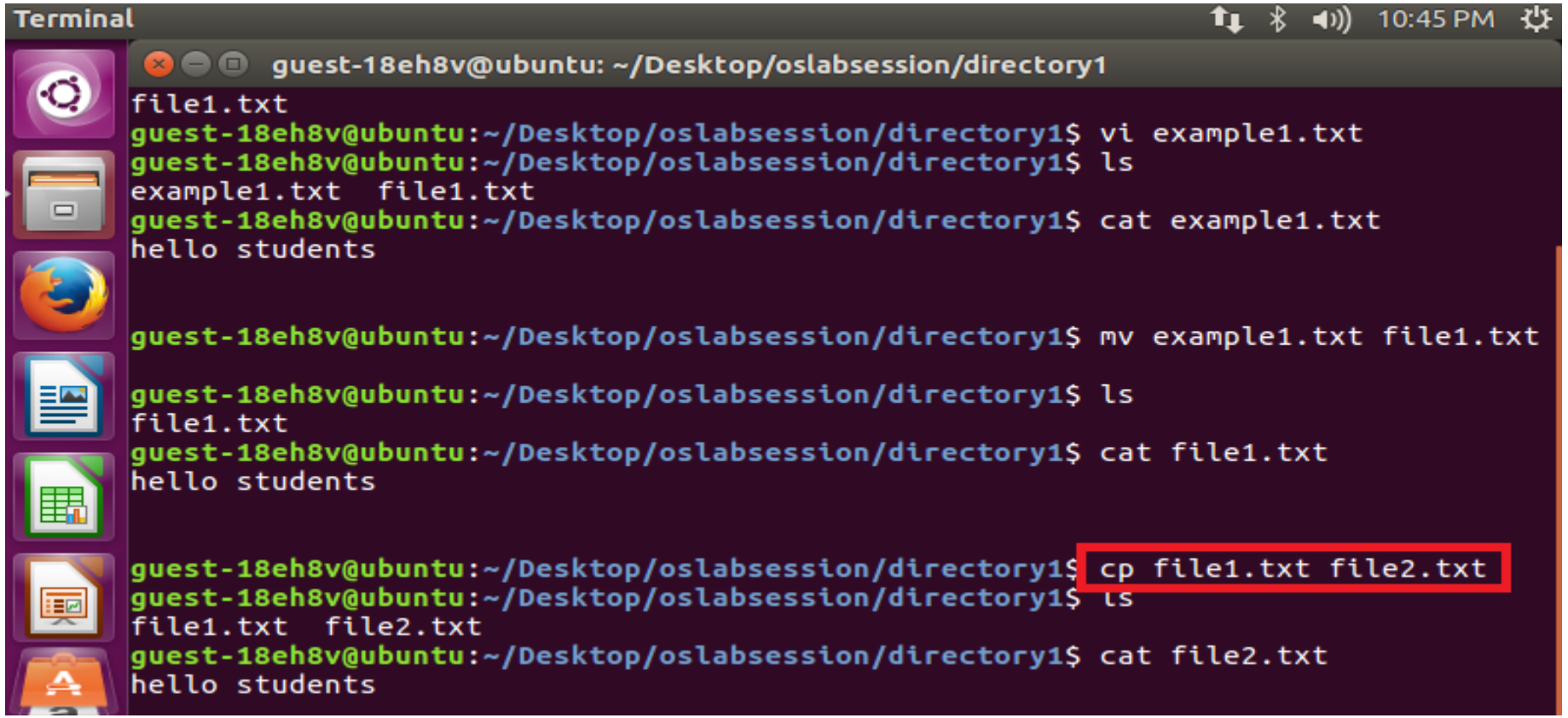
10. mv command

use mv command to send data from example1.txt file to file1.txt



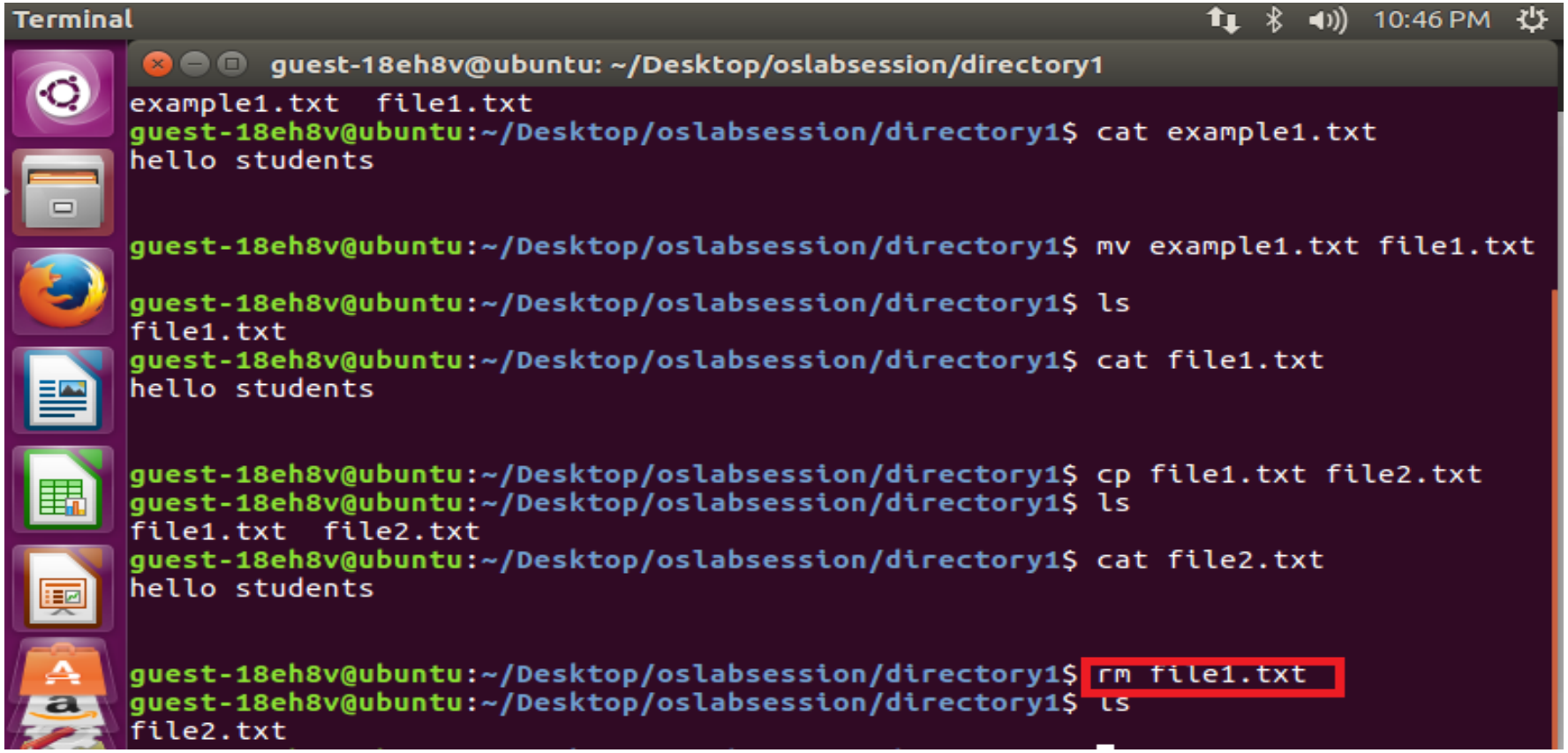
11. cp command

copy file1.txt data to file2.txt file



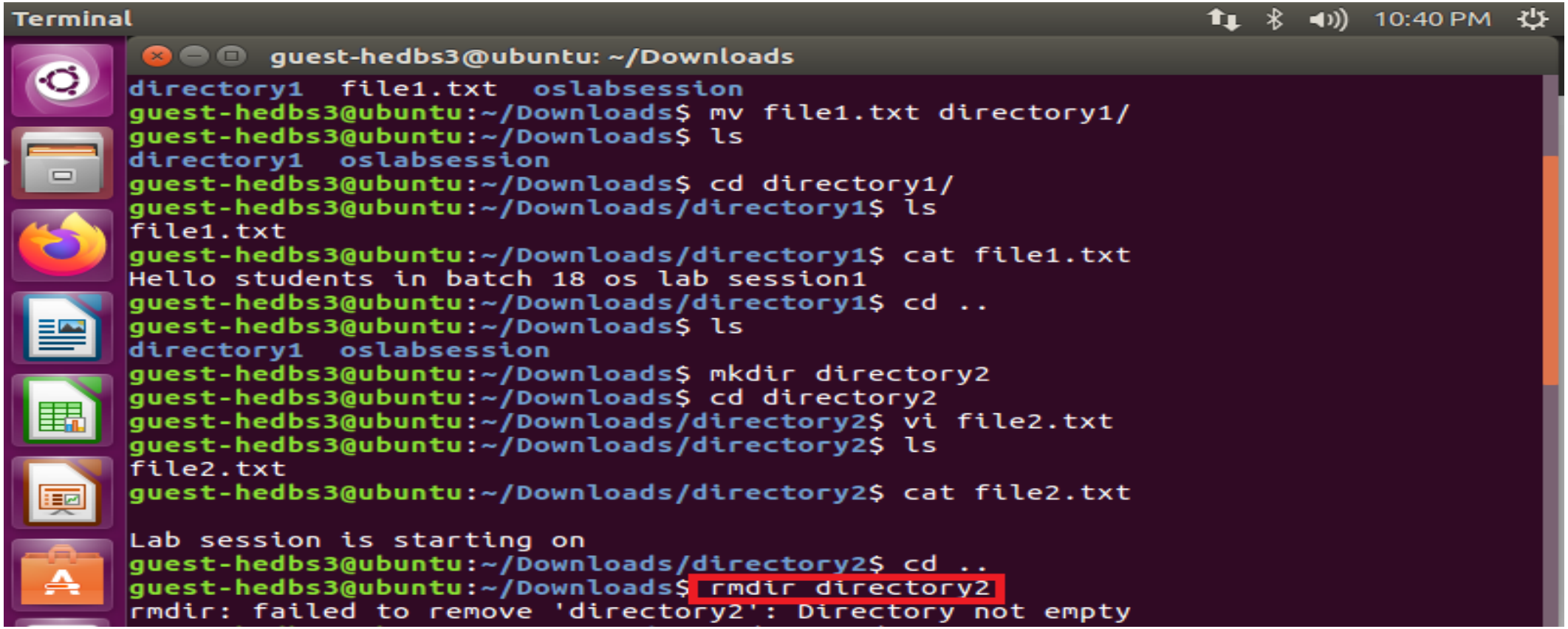
12. rm command

Remove or delete a file1.txt from director1



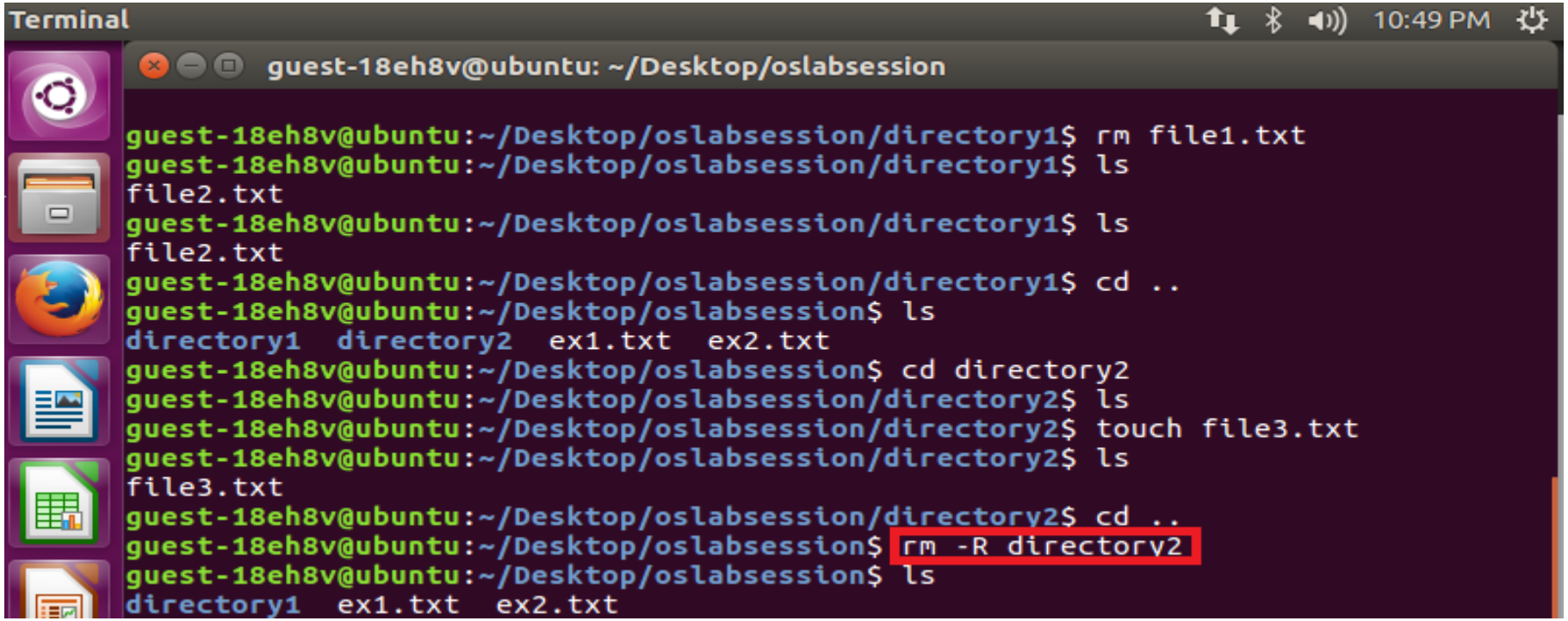
13. rmdir command

This is the opposite of 'mkdir'- which is used to delete the directories. It should be pointed out that in order to use it, the directory has to be empty.



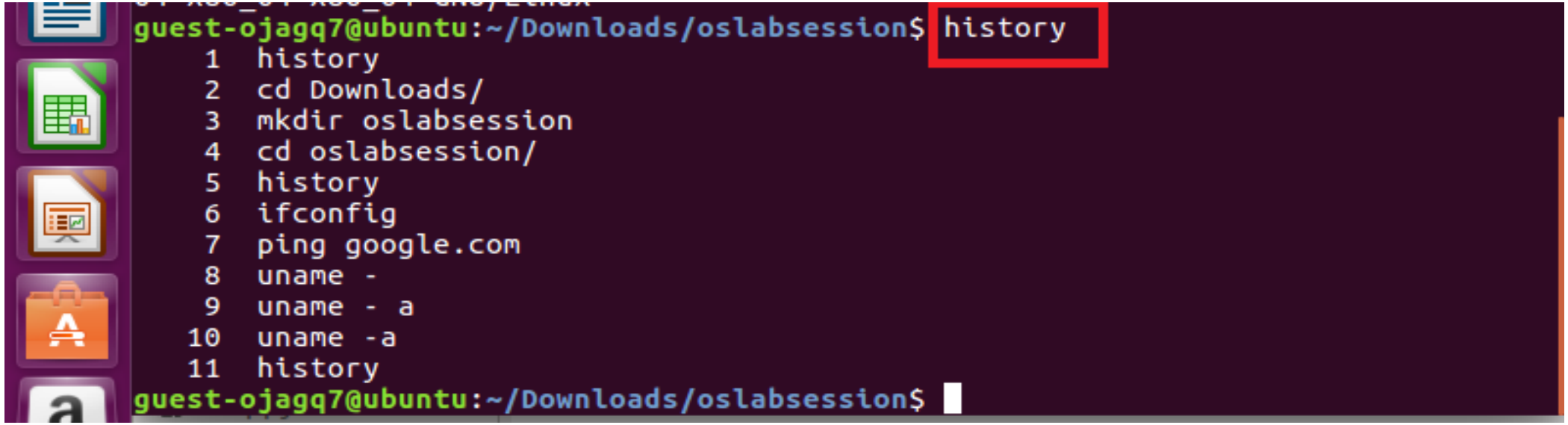
rm –R <directory name> command

Remove directory which can have inside files



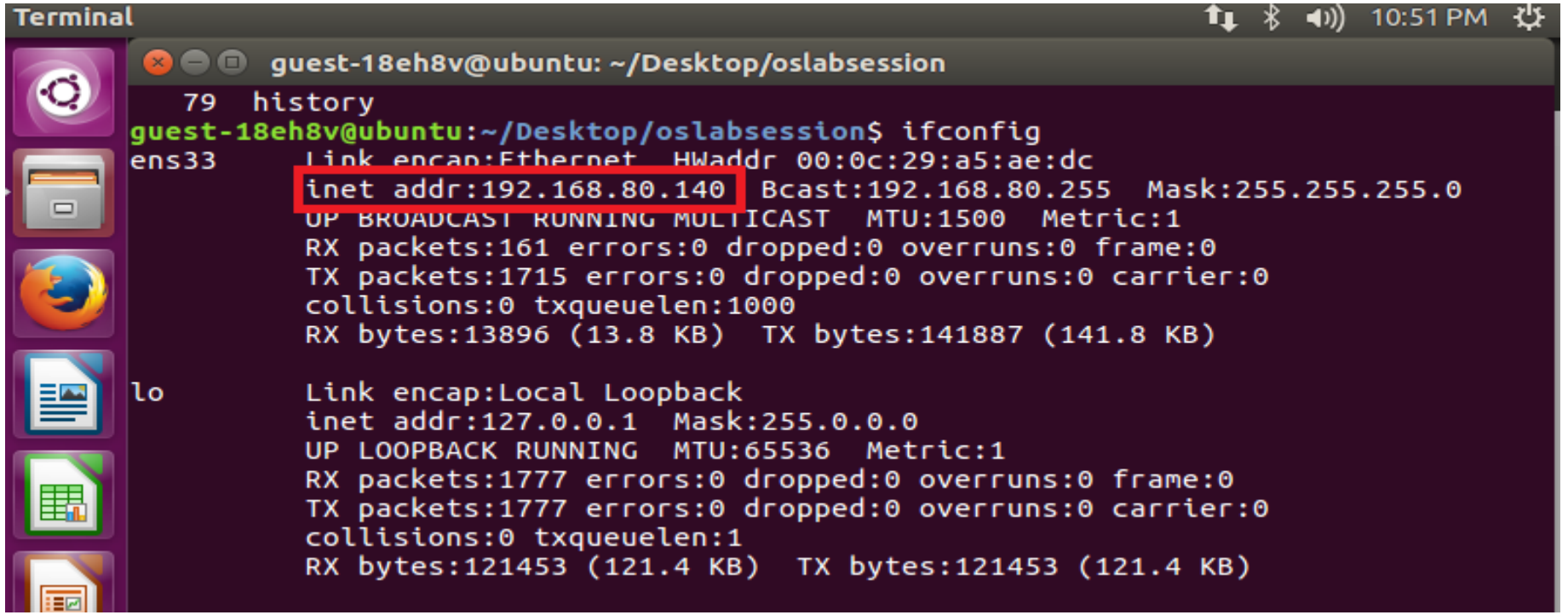
14. history command

show all commands



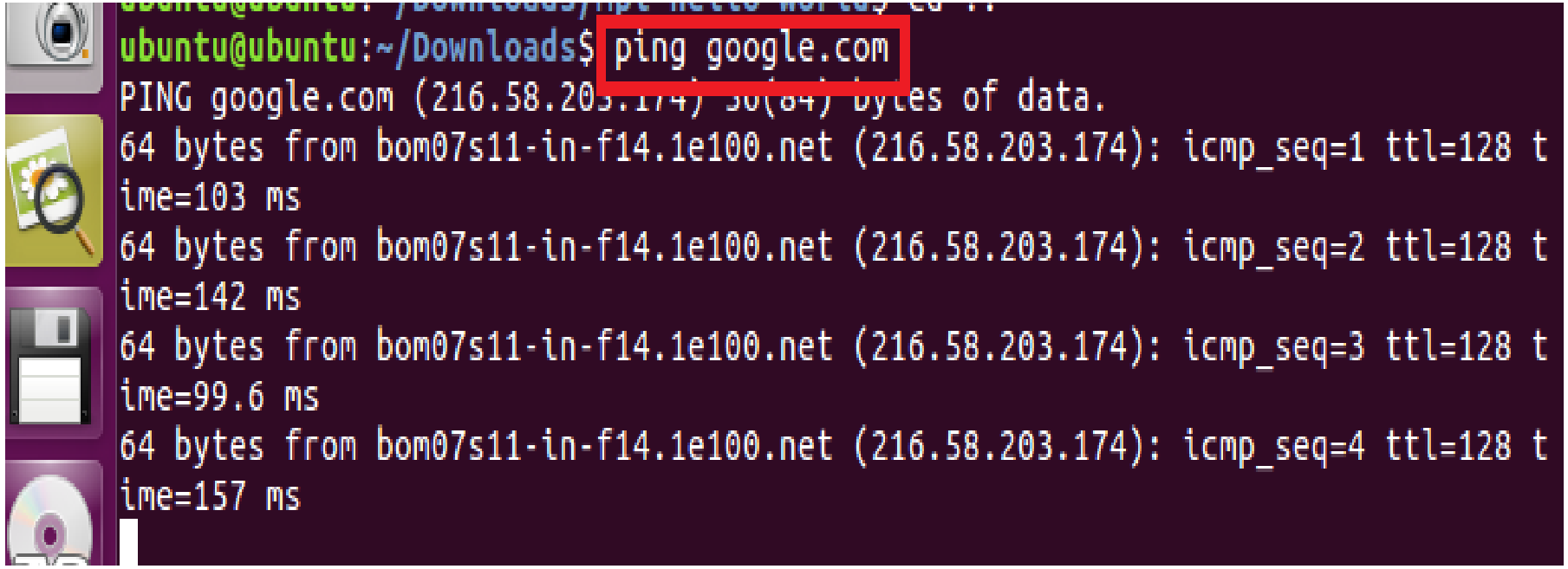
15. ifconfig command

check machine ip address



16. ping command

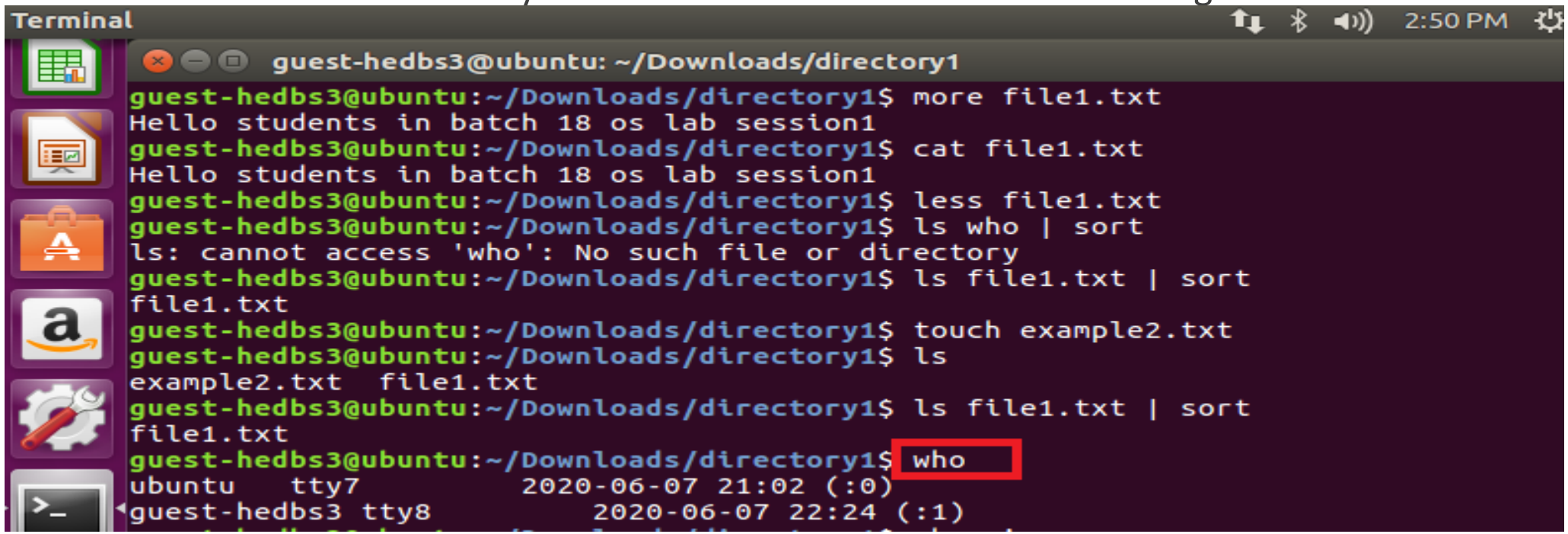
Try out ping to google.com , and to stop browser use Ctrl+c command



17.Who command

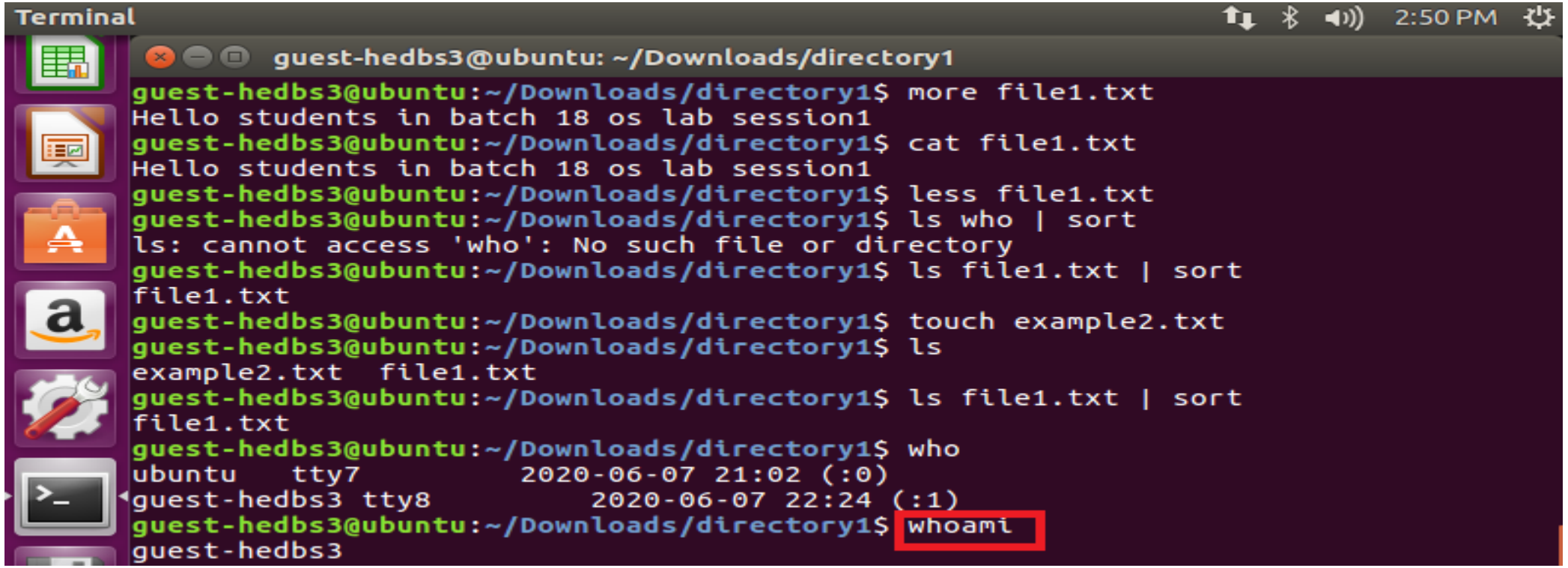
This is used to find out who's working on our system. As we now know, Linux is a multiuser system. Even if we're using one computer at our home, we may be working as more than one person. For example, if we logged in as 'root' but are working as ‘guest-hedbs3'. We may see something like this:

This is just Linux's way of saying that ‘ubuntu' started working on terminal 2020-06-07 at 21:02 in the afternoon and guest-hedbs3 started working on terminal 2 at 22:24. This is mainly used in networked situations so the system administrator knows who's working.



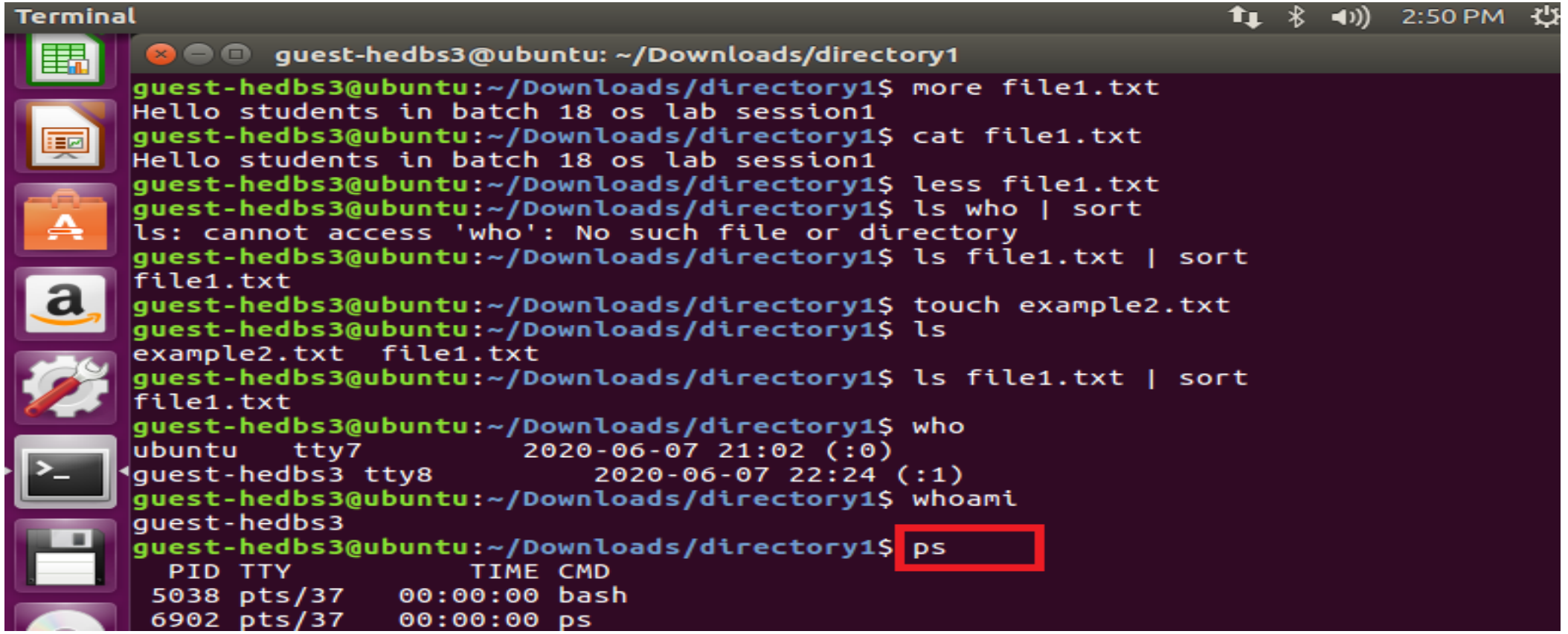
18.**whoami** command

It is a little program that tells us who we are, just in case we didn't know already. Actually it tells us who we are in terms of how Linux understands who you are, that is to say, our user name.



19.ps command

It gives us a list of the processes running on our system.Just typing ps will give us the processes we're running as a user.



20.**chmod** command

The chmod command changes the access mode of one file or multiple files. The syntax for the chmod command is:

---

mode:

Who u=user, g=group, o=other, a=all (default)

Opcode

+ means add permission

— means remove permission

= means assign permission and remove the permission of unspecified fields

Permission r=Read, w=write, x=Execute

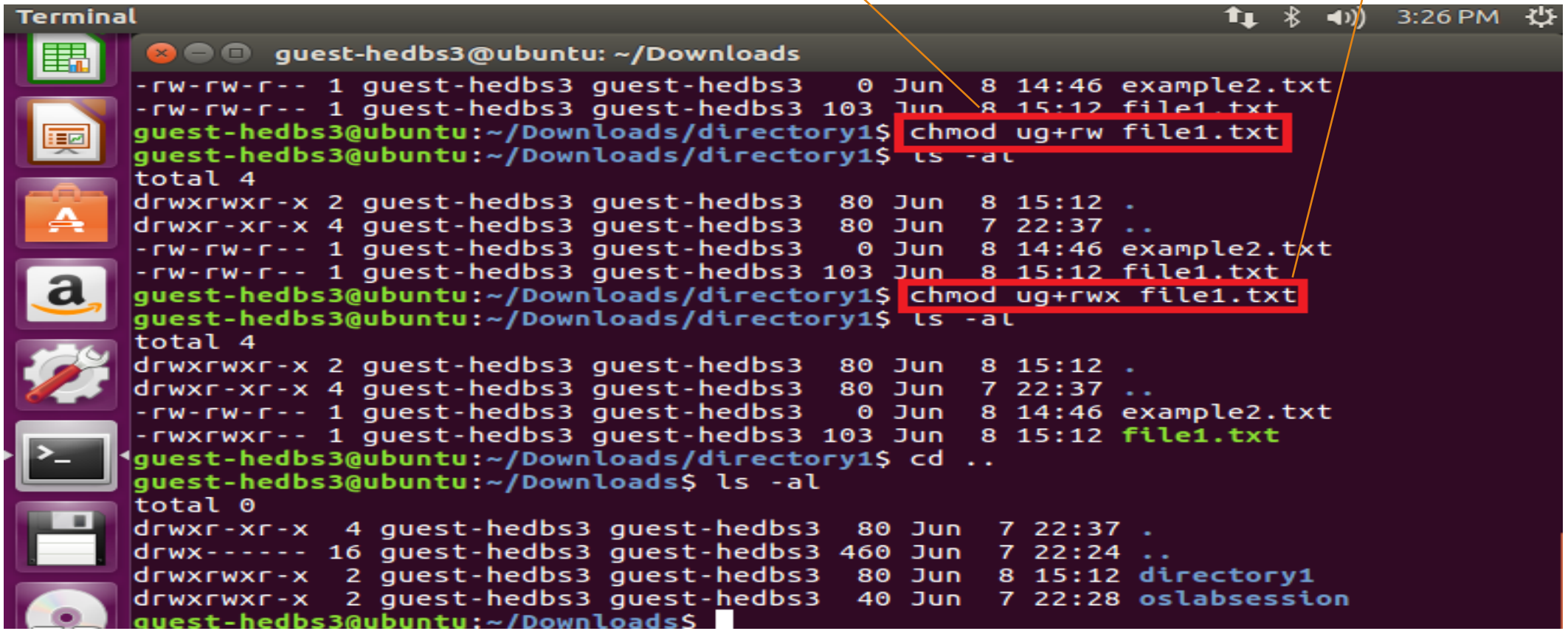
Examples:

chmod ug+rw mydir

chmod a-w myfile

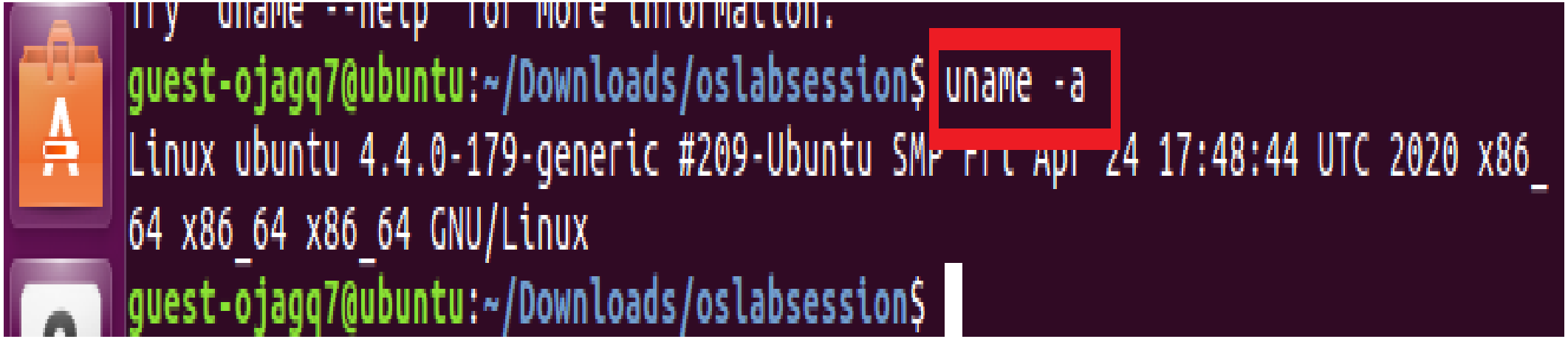
file1.txt has given user and group read and write permission and check with ls –al command

User and group has given read,write and execute permission and check with ls –al command



21. Uname -a command

summary about the system



End of lab session

Thank you