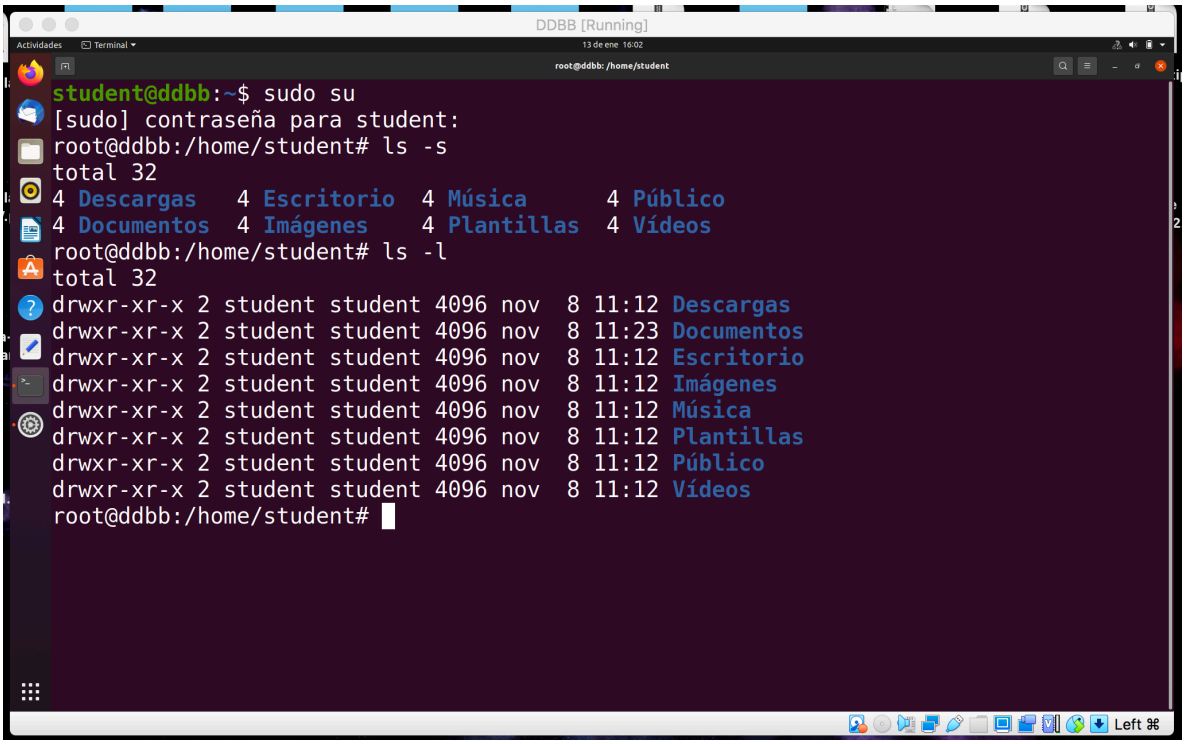
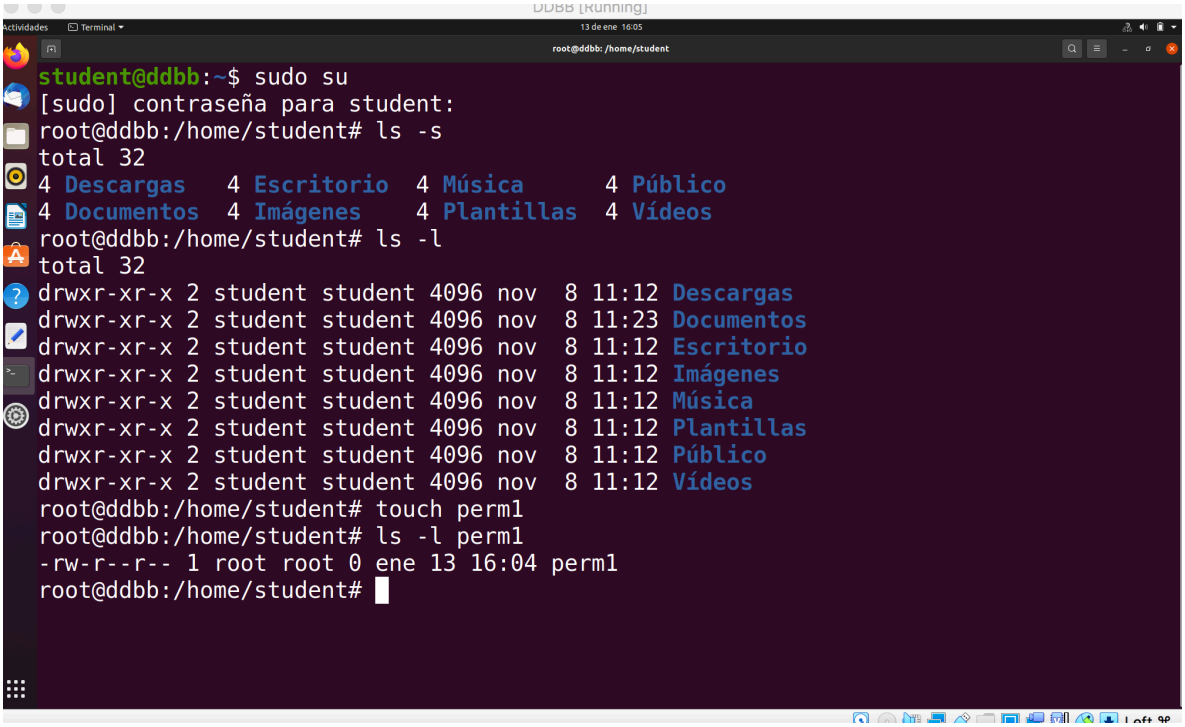
(3) Exercises -Permission

1List the permissions in your current directory, including hidden files.



2 Create a file called perm1. Now, check the default permissions and user and group ownership



3 Change permissions of perm1 so that everyone can read and only the owner user can write. Specify the command in all possible ways.

```
root@ddbb:/home/student# chmod a=r,u+w perm1
root@ddbb:/home/student# chmod u=rw,go=r perm1
```

```
root@ddbb:/home/student# chmod 644 perm1
```

4 Create a file called script1.sh, including the content below. List the default permissions

```
root@ddbb:/home/student# nano script1.sh
root@ddbb:/home/student#
```

```
root@ddbb:/home/student# chmod u-r script1.sh
root@ddbb:/home/student# ls -l script1.sh
--w-r--r-- 1 root root 22 ene 13 16:16 script1.sh
root@ddbb:/home/student#
```

5 Remove the read permission from the owner and try to open the file

```
student@ddbb:~$ cat script1.sh
#!/bin/bash
clear
who
```

6 Remove the write permission from the owner on the file script1.sh. Add the line below. Is it possible? Why? Not is possible because the user don't have permissions of execute.

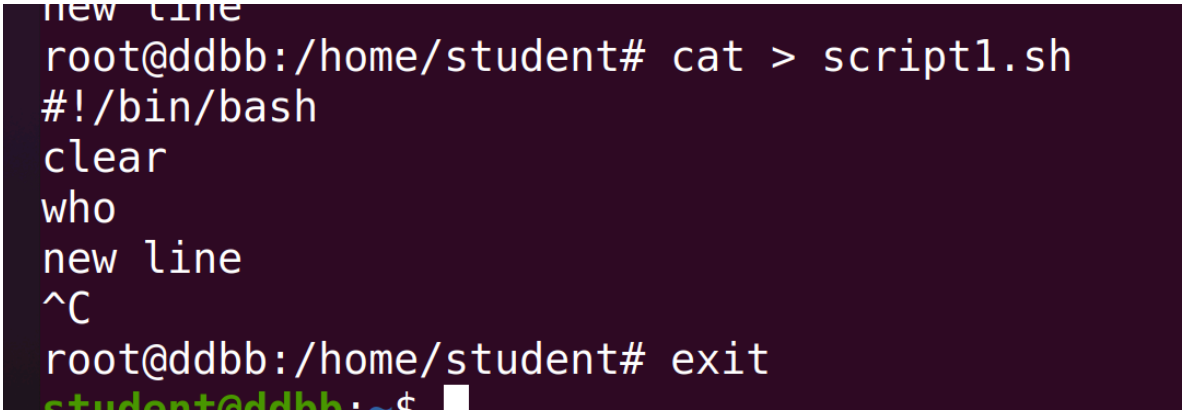
```
student@ddbb:~$ cat > script1.sh
bash: script1.sh: Permiso denegado
```

7 Change the permissions on the file script1.sh so that the owner can read, write and execute, but you deny all the permissions from the group and others.

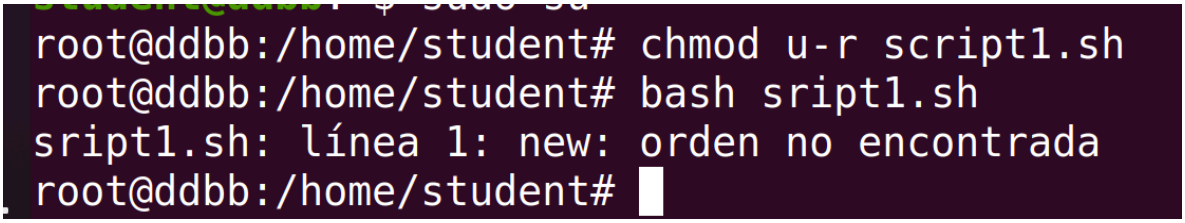
```
root@ddbb:/home/student# chmod u=rwx,go=- script1.sh
```

8 Add the line indicated in exercise 6, in case it was not possible. Try to run the

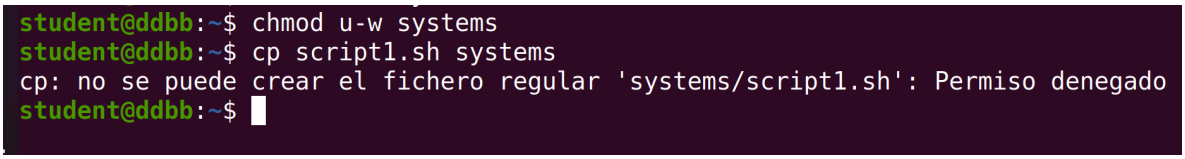
file like a command.



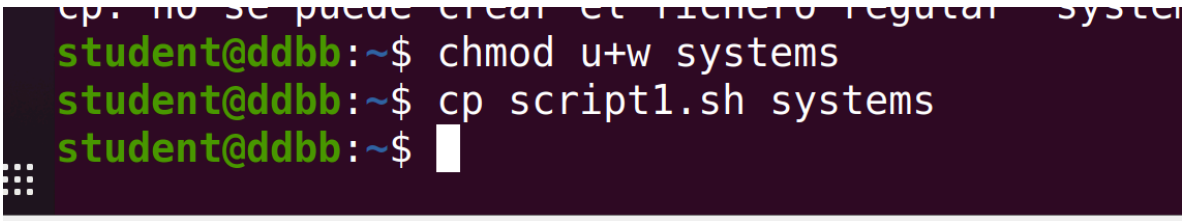
9 Remove the read permission from the owner on the file script1.sh. Try to run the file. Is it possible?



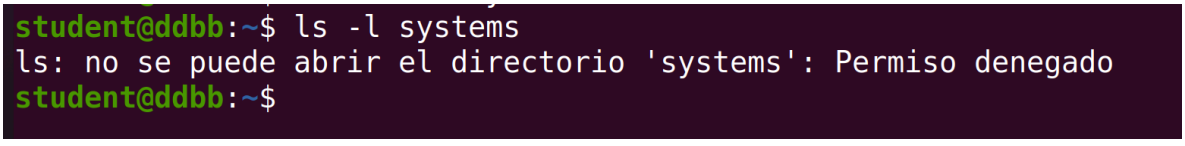
10 Create a directory called “systems”. Remove the write permission from it and try to copy script1.sh inside.



11 If you were not able to copy the file, add the write permission again and copy the file inside.

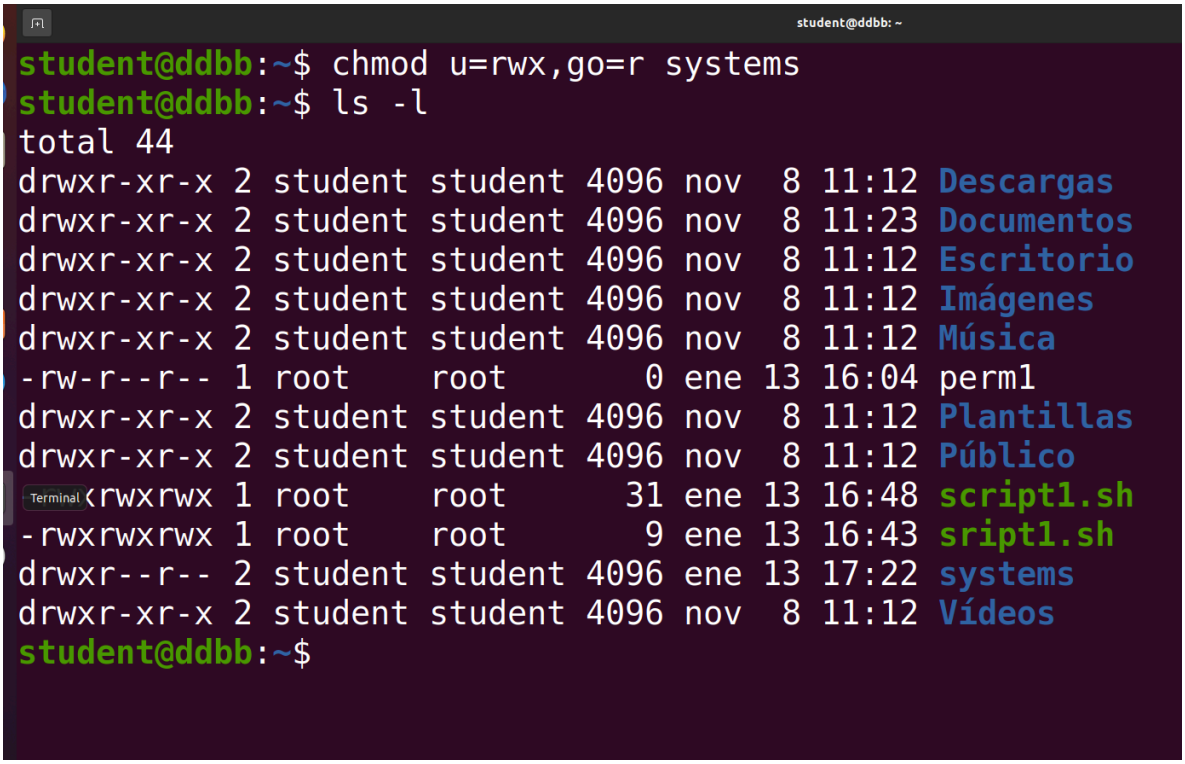


12 Remove the read permission from the user on the directory “systems” and try to list its contents.

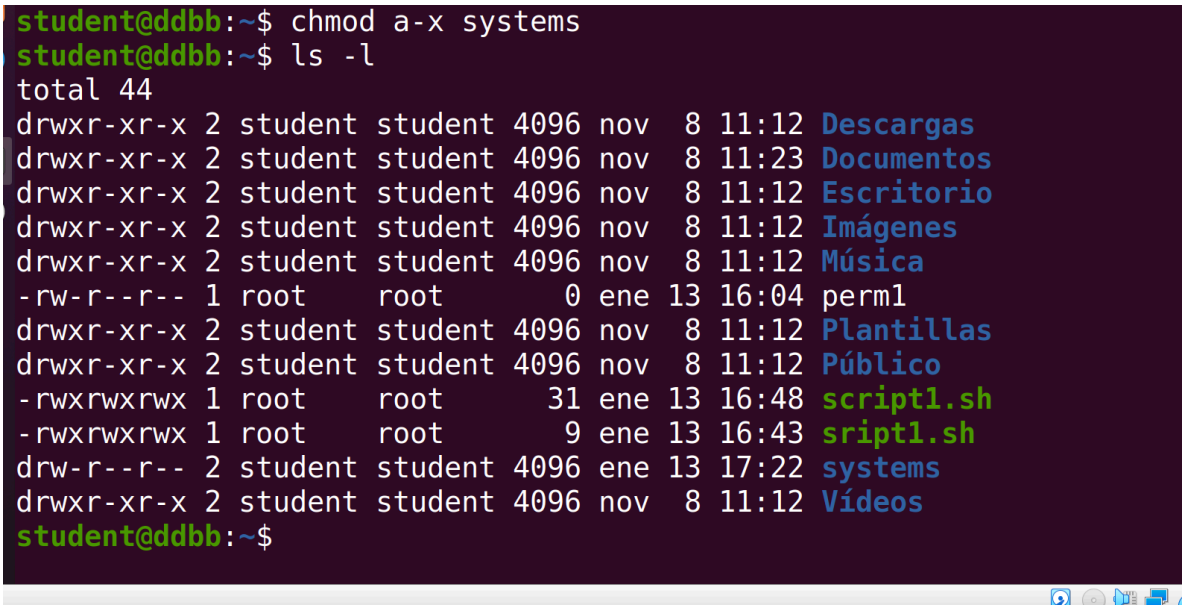


13 Change the permissions from “systems” so that the owner can read, write

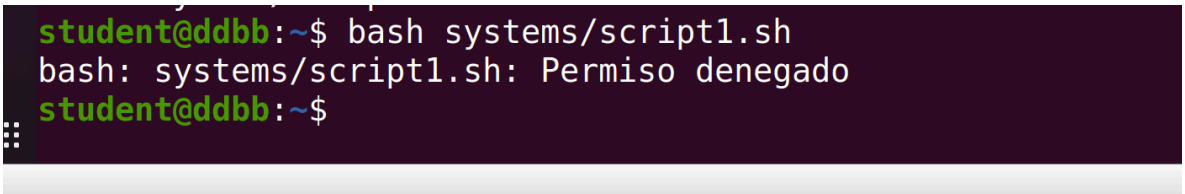
and execute, but the group and others can only read



14Remove the execute permission from “systems”. Can you execute systems/script1.sh? Is it possible to access the directory to execute the file?



15 Assign the execute permission to the directory again



16 Create two files called “lucy” and “charles” into “systems”. Change permissions of “charles”, so that others can write and execute.

```
student@ddbb:~$ touch systems/lucy
student@ddbb:~$ touch systems/charles
student@ddbb:~$ ls -l systems
total 4
-rw-rw-r-- 1 student student  0 ene 13 17:38 charles
-rw-rw-r-- 1 student student  0 ene 13 17:38 lucy
-rwxrwxr-x 1 student student 31 ene 13 17:22 script1.sh
```

```
student@ddbb:~$ chmod go+wx systems/charles
student@ddbb:~$ ls -l systems
total 4
-rw-rwxrwx 1 student student  0 ene 13 17:38 charles
-rw-rw-r-- 1 student student  0 ene 13 17:38 lucy
-rwxrwxr-x 1 student student 31 ene 13 17:22 script1.sh
student@ddbb:~$
```

17 Change permissions of “lucy” so that the owner can read and execute, the group can read and write and others can only write. Specify the command in all possible ways.

```
-rwxrwxr-x 1 student student 31 ene 13 17:22 script1.sh
student@ddbb:~$ chmod u=rx,g=rw,o=w systems/lucy
student@ddbb:~$ chmod 562 systems/lucy
student@ddbb:~$ chmod a=rwx,u-w,g-x,o-rx systems/lucy
student@ddbb:~$
```

18 Log in as root. Change the ownership of “charles” to “root”. Exit the root session. Now, try to change the permission so that others cannot read and execute. Is it possible? Why? Yes, because everyone have permissions to read.

```
root@ddbb:/home/student# cd systems
root@ddbb:/home/student/systems# ls -l
total 4
-rw-rwxrwx 1 student student  0 ene 13 17:38 charles
-r-xrw--w- 1 student student  0 ene 13 17:38 lucy
-rwxrwxr-x 1 student student 31 ene 13 17:22 script1.sh
root@ddbb:/home/student/systems# chown root charles
root@ddbb:/home/student/systems# ls -l
total 4
-rw-rwxrwx 1 root    student  0 ene 13 17:38 charles
-r-xrw--w- 1 student student  0 ene 13 17:38 lucy
-rwxrwxr-x 1 student student 31 ene 13 17:22 script1.sh
root@ddbb:/home/student/systems#
```

19 Change the permissions of “charles” so that everybody can do everything

```
root@ddbb:/home/student/systems# chmod a=rwx charles
root@ddbb:/home/student/systems# ls -l
total 4
-rwxrwxrwx 1 root    student  0 ene 13 17:38 charles
-r-xrw--w- 1 student student  0 ene 13 17:38 lucy
-rwxrwxr-x 1 student student 31 ene 13 17:22 script1.sh
```

20Change the permissions of “lucy” so that the group can read and write, but the owner and others cannot do anything. Can you open the file? No, because the user don’t have permissions only is possible open it when you at loading at root.

```
root@ddbb:/home/student/systems# chmod uo-rwx,g+rw lucy
root@ddbb:/home/student/systems# ls -l
total 4
-rwxrwxrwx 1 root    student  0 ene 13 17:38 charles
----rw---- 1 student student  0 ene 13 17:38 lucy
-rwxrwxr-x 1 student student 31 ene 13 17:22 script1.sh
root@ddbb:/home/student/systems#
```

```
student@ddbb:~$ cd systems
student@ddbb:~/systems$ cat lucy
cat: lucy: Permission denied
```

21 Create a group called “newgroup”. Set the group as the owner of the file “lucy” and “root” as the owner user.

```
root@ddbb:/home/student/systems# groupadd newgroup
root@ddbb:/home/student/systems# cat /etc/group
root:x:0:
daemon:x:1:
```

```
root@ddbb:/home/student/systems# chown root lucy
```

```
root@ddbb:/home/student/systems# chgrp newgroup lucy
```

```
-rwxrwxrwx 1 root    student   0 ene 13 17:38 charles
----rw---- 1 root    newgroup  0 ene 13 17:38 lucy
-rwxrwxr-x 1 student student  31 ene 13 17:22 script1.sh
```