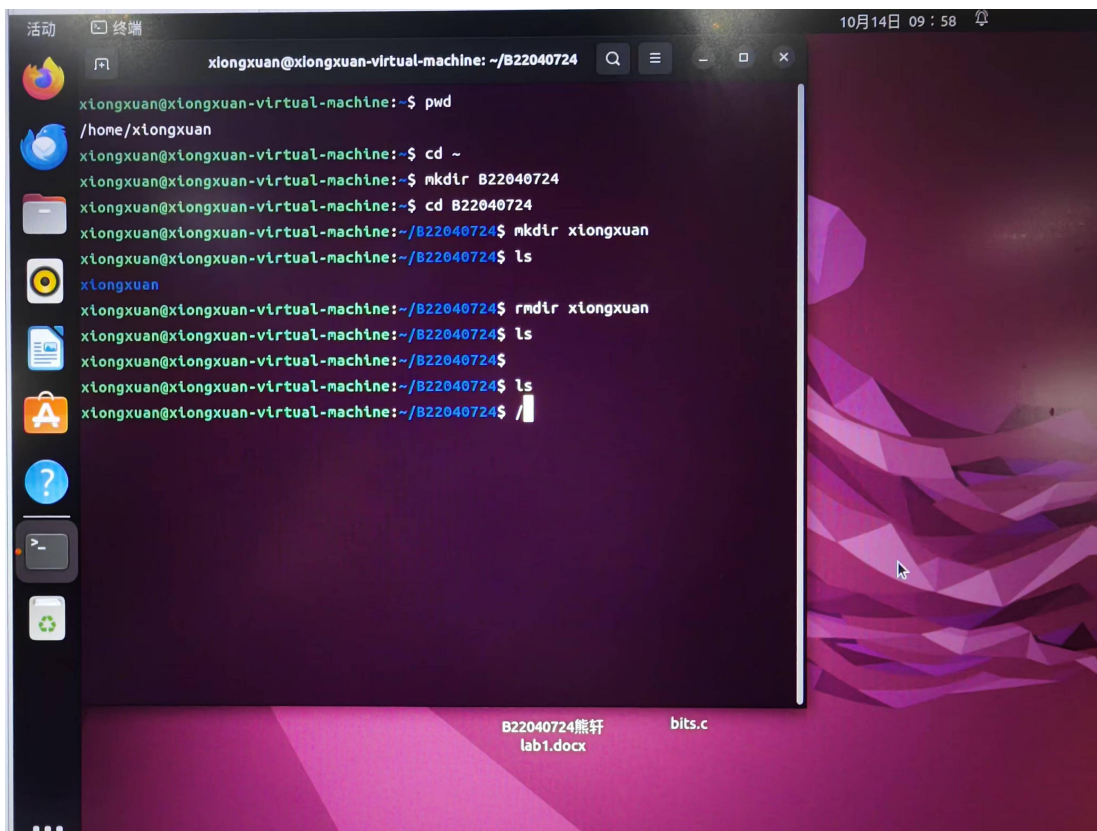


(1) Directory Operation

Enter the following commands in sequence:

```
$pwd
$cd ~
$mkdir your_studentID
$cd your_studentID
$mkdir your_name
$ls
$rmdir your_name
$ls
```

Save a screenshot of the above command along with the corresponding results, you must have your student number and name.

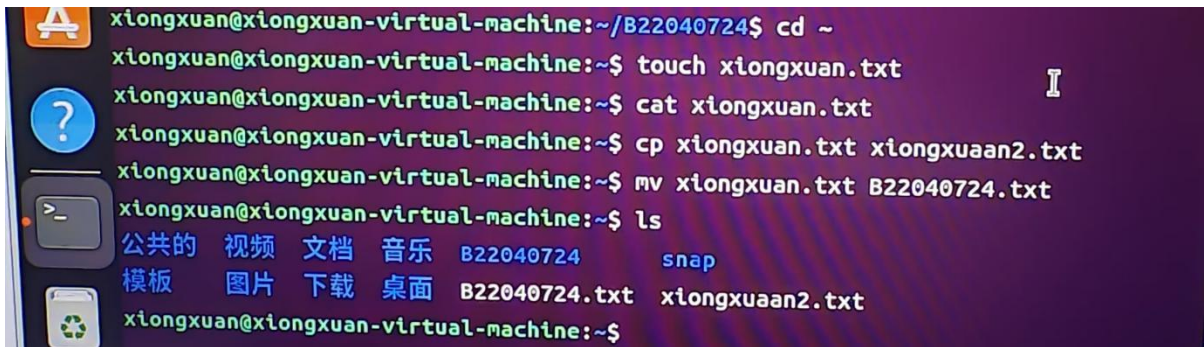


(2) File operation

Enter the following commands in sequence:

```
$cd ~
$touch yourname.txt
$ls
$echo "hello world" > yourname.txt
$cat yourname.txt
$cp yourname.txt yourname2.txt
$mv yourname.txt yourstudentid.txt
$ls
```

Save a screenshot of the above command along with the corresponding results, you must have your student number and name.

A terminal window from a virtual machine named 'xiongxuan-virtual-machine'. The prompt is 'xiongxuan@xiongxuan-virtual-machine:~/B22040724\$'. The user enters 'cd ~'. The prompt changes to 'xiongxuan@xiongxuan-virtual-machine:~\$'. The user enters 'touch xiongxuan.txt'. The prompt changes to 'xiongxuan@xiongxuan-virtual-machine:~\$'. The user enters 'cat xiongxuan.txt'. The prompt changes to 'xiongxuan@xiongxuan-virtual-machine:~\$'. The user enters 'cp xiongxuan.txt xiongxaan2.txt'. The prompt changes to 'xiongxuan@xiongxuan-virtual-machine:~\$'. The user enters 'mv xiongxuan.txt B22040724.txt'. The prompt changes to 'xiongxuan@xiongxuan-virtual-machine:~\$'. The user enters 'ls'. The output shows a directory listing with files: '公共的', '视频', '文档', '音乐', 'B22040724', 'snap', '模板', '图片', '下载', '桌面', 'B22040724.txt', and 'xiongxaan2.txt'. The prompt changes to 'xiongxuan@xiongxuan-virtual-machine:~\$'.

(3)User Management

Enter the following commands in sequence:

```
$whoami  
$sudo su root
```

Enter the password of the current logged-in user, not the root password, and then enter:

```
#groupadd student  
#whoami  
#adduser yourstudentID  
#usermod -g student yourstudentID
```

Follow the prompts to create the user and add the user to the student group.

Switch to the user.

```
#su yourstudentID  
$cd ~  
$touch yourname.txt  
$ls -l
```

View the properties of the file, including the owner user and the group to which the owner user belongs.

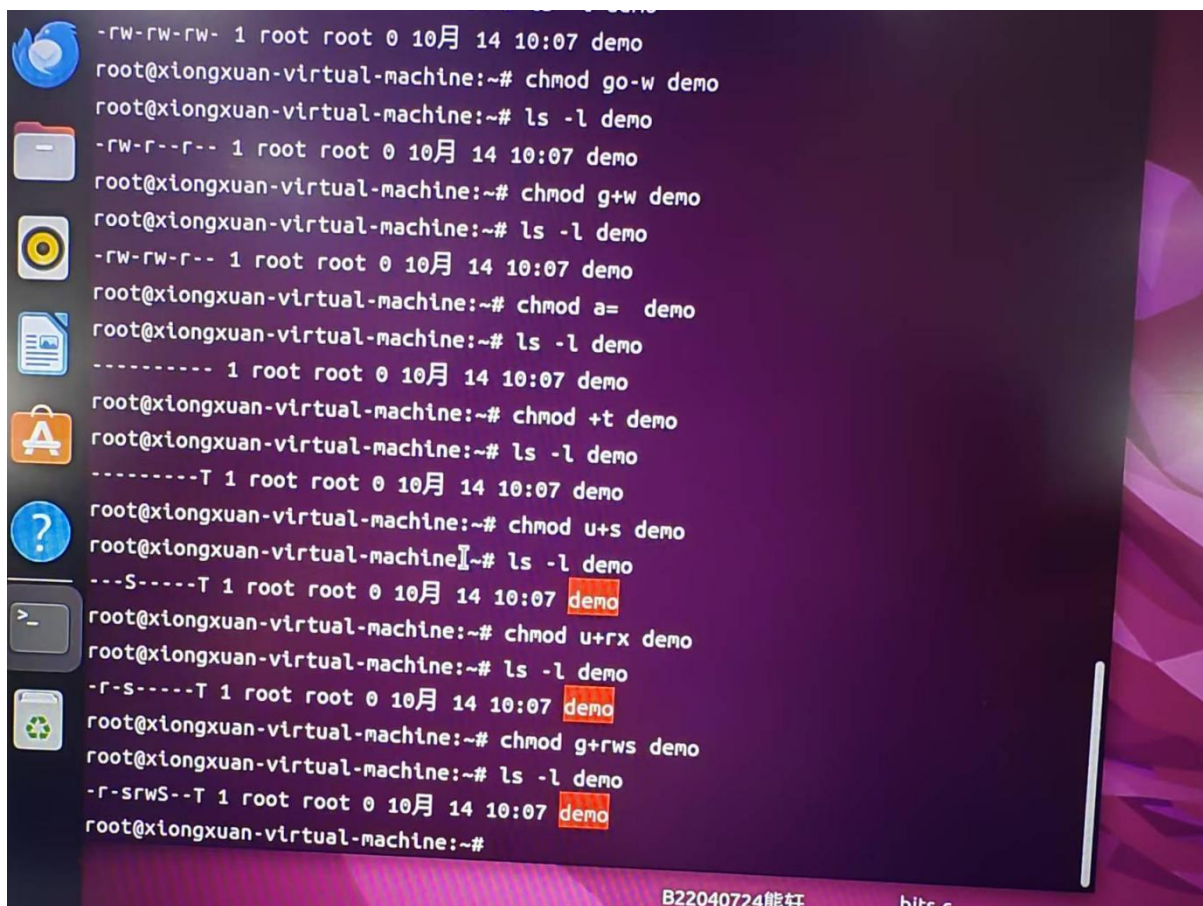
```
[sudo] xiongguan 的密码:
root@xiongguan-virtual-machine:/home/xiongguan# groupadd student
root@xiongguan-virtual-machine:/home/xiongguan# whoami
root
root@xiongguan-virtual-machine:/home/xiongguan# adduser B22040724
adduser: 请输入匹配 NAME_REGEX[_SYSTEM] 配置选项配置的正则表达式的用户名。
使用 '--force-badname' 选项可以放松检查或者重新配置 NAME_REGEX。
root@xiongguan-virtual-machine:/home/xiongguan# usermod -g student B22040724
usermod: 用户"B22040724"不存在
root@xiongguan-virtual-machine:/home/xiongguan# su B22040724
su: user B22040724 does not exist or the user entry does not contain all the req
uired fields
root@xiongguan-virtual-machine:/home/xiongguan# cd ~
root@xiongguan-virtual-machine:~# touch xiongguan.txt
root@xiongguan-virtual-machine:~# ls -l.
ls: 无效的选项 --.
请尝试执行 "ls --help" 来获取更多信息。
root@xiongguan-virtual-machine:~# ls -l
ls-l: 未找到命令
root@xiongguan-virtual-machine:~# ls -l
总计 4
drwx----- 5 root root 4096 4月 1 2024 snap
-rw-r--r-- 1 root root 0 10月 14 10:05 xiongguan.txt
root@xiongguan-virtual-machine:~#
```

(4) Permission management

Enter the following commands in sequence:

```
$ touch demo
$ chmod 777 demo
$ chmod a-x demo          # result is rw-rw-rw-
$ chmod go-w demo         # result is rw-r--r--
$ chmod g+w demo          # result is rw-rw-r--
$ chmod a= demo           # result is -----
$ chmod +t demo           # result is -----T
$ chmod u+s demo          # result is --S-----T
$ chmod u+rx demo         # result is r-s-----T
$ chmod g+rws demo        # result is r-srws--T
```

After entering each line, run `ls -l demo` to view the result.



```
-rw-rw-rw- 1 root root 0 10月 14 10:07 demo
root@xiongquan-virtual-machine:~# chmod go-w demo
root@xiongquan-virtual-machine:~# ls -l demo
-rw-r--r-- 1 root root 0 10月 14 10:07 demo
root@xiongquan-virtual-machine:~# chmod g+w demo
root@xiongquan-virtual-machine:~# ls -l demo
-rw-rw-r-- 1 root root 0 10月 14 10:07 demo
root@xiongquan-virtual-machine:~# chmod a= demo
root@xiongquan-virtual-machine:~# ls -l demo
----- 1 root root 0 10月 14 10:07 demo
root@xiongquan-virtual-machine:~# chmod +t demo
root@xiongquan-virtual-machine:~# ls -l demo
-----T 1 root root 0 10月 14 10:07 demo
root@xiongquan-virtual-machine:~# chmod u+s demo
root@xiongquan-virtual-machine:~# ls -l demo
--S-----T 1 root root 0 10月 14 10:07 demo
root@xiongquan-virtual-machine:~# chmod u+rx demo
root@xiongquan-virtual-machine:~# ls -l demo
-r-s-----T 1 root root 0 10月 14 10:07 demo
root@xiongquan-virtual-machine:~# chmod g+rws demo
root@xiongquan-virtual-machine:~# ls -l demo
-r-srws--T 1 root root 0 10月 14 10:07 demo
root@xiongquan-virtual-machine:~#
```

(5) Other management

Create folder "others" in the main directory of the user, go to the folder, and create two files with the name of any file. Then run the following commands in sequence.

```
$tar -czvf backup.tar.gz others
$ls -l
$tar -xzvf backup.tar.gz
$ls -l
```


Observe changes in the process.

Create a textfile file and make it as follows:

```
no, I study in njupt.  
this line ends with 00  
this line ends with .00  
I am 25 years old.  
He is 15. It is 16.00  
wy is the short of my name.
```

Search for all lines beginning with the character "n" in the file textfile

```
$ grep '^n' textfile
```

Search the textfile for all lines ending in ".00"

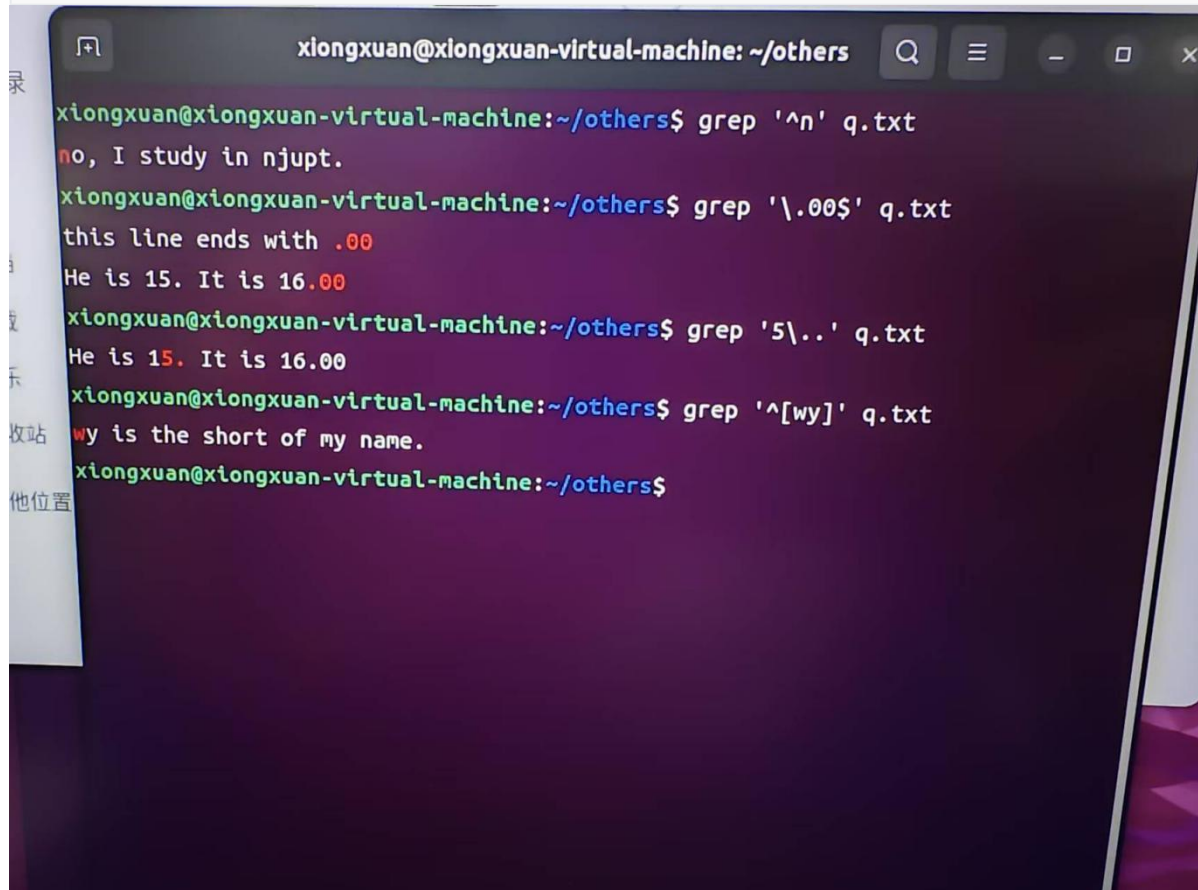
```
$ grep '\.00$' textfile
```

Search for all lines in the textfile that contain the number 5, followed by the character ".", followed by any character

```
$ grep '5\..' textfile
```

Search for all lines starting with the characters "w" and "y" in the file textfile

```
$ grep '^[wy]' textfile
```



```
xiongxuan@xiongxuan-virtual-machine: ~/others
xiongxuan@xiongxuan-virtual-machine:~/others$ grep '^n' q.txt
no, I study in njupt.
xiongxuan@xiongxuan-virtual-machine:~/others$ grep '\.00$' q.txt
this line ends with .00
He is 15. It is 16.00
xiongxuan@xiongxuan-virtual-machine:~/others$ grep '5\..' q.txt
He is 15. It is 16.00
xiongxuan@xiongxuan-virtual-machine:~/others$ grep '^[wy]' q.txt
wy is the short of my name.
xiongxuan@xiongxuan-virtual-machine:~/others$
```