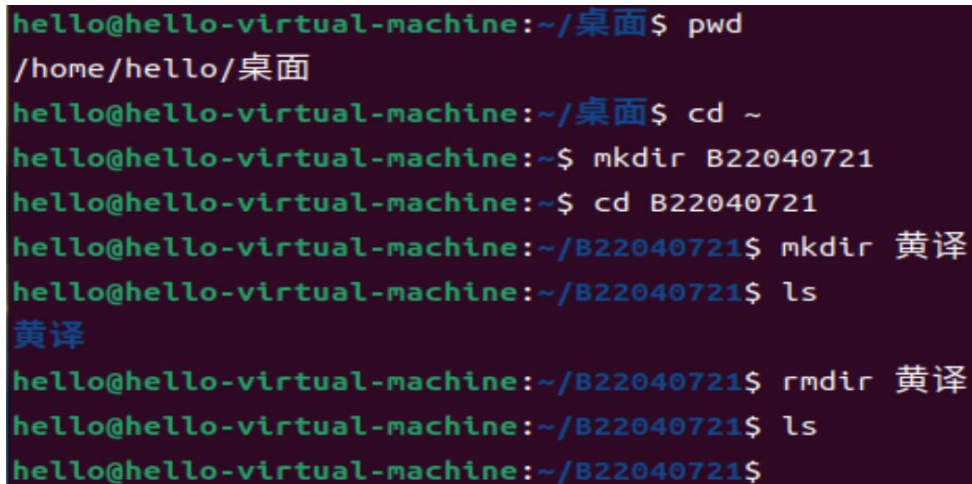


1、Directory Operation

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.



```
hello@hello-virtual-machine:~/桌面$ pwd  
/home/hello/桌面  
hello@hello-virtual-machine:~/桌面$ cd ~  
hello@hello-virtual-machine:~$ mkdir B22040721  
hello@hello-virtual-machine:~$ cd B22040721  
hello@hello-virtual-machine:~/B22040721$ mkdir 黄译  
hello@hello-virtual-machine:~/B22040721$ ls  
黄译  
hello@hello-virtual-machine:~/B22040721$ rmdir 黄译  
hello@hello-virtual-machine:~/B22040721$ ls  
hello@hello-virtual-machine:~/B22040721$
```

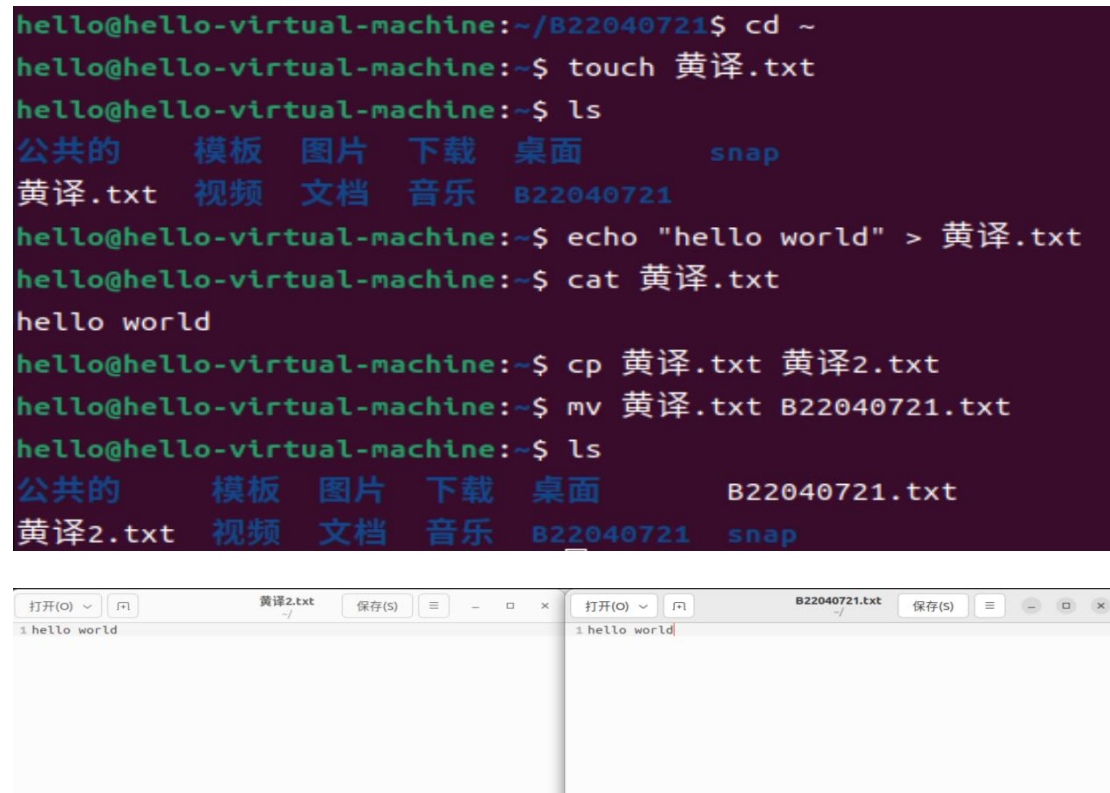
2、File operation

Enter the following commands in sequence:

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



The image shows a terminal window and two file editors. The terminal window displays the following commands and their outputs:

```
hello@hello-virtual-machine:~/B22040721$ cd ~
hello@hello-virtual-machine:~$ touch 黄译.txt
hello@hello-virtual-machine:~$ ls
公共的 模板 图片 下载 桌面 snap
黄译.txt 视频 文档 音乐 B22040721
hello@hello-virtual-machine:~$ echo "hello world" > 黄译.txt
hello@hello-virtual-machine:~$ cat 黄译.txt
hello world
hello@hello-virtual-machine:~$ cp 黄译.txt 黄译2.txt
hello@hello-virtual-machine:~$ mv 黄译.txt B22040721.txt
hello@hello-virtual-machine:~$ ls
公共的 模板 图片 下载 桌面 B22040721.txt
黄译2.txt 视频 文档 音乐 B22040721 snap
```

Below the terminal window, there are two file editors. The left editor is titled '黄译2.txt' and contains the text 'hello world'. The right editor is titled 'B22040721.txt' and also contains the text 'hello world'.

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.

```
hello@hello-virtual-machine:~$ whoami
hello
hello@hello-virtual-machine:~$ sudo su root
root@hello-virtual-machine:/home/hello# groupadd student
root@hello-virtual-machine:/home/hello# whoami
root
```

```
root@hello-virtual-machine:/home/hello# adduser b22040721
正在添加用户"b22040721"...
正在添加新组"b22040721" (1002)...
正在添加新用户"b22040721" (1002) 到组"b22040721"...
创建主目录"/home/b22040721"...
正在从"/etc/skel"复制文件...
新的密码:
```

```
重新输入新的密码:
passwd: 已成功更新密码
正在改变 b22040721 的用户信息
请输入新值，或直接敲回车键以使用默认值
    全名 []:
    房间号码 []:
    工作电话 []:
    家庭电话 []:
    其它 []:
这些信息是否正确? [Y/n] y
root@hello-virtual-machine:/home/hello# su b22040721
b22040721@hello-virtual-machine:/home/hello$ cd ~
b22040721@hello-virtual-machine:~$ touch 黄译.txt
b22040721@hello-virtual-machine:~$ ls -l
总计 4
-rw-rw-r-- 1 b22040721 b22040721    0 10月 14 10:38 黄译.txt
drwxr-xr-x 2 b22040721 b22040721 4096 10月 14 10:35 模板
```

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.

```
hello@hello-virtual-machine:~$ touch demo
hello@hello-virtual-machine:~$ chmod 777 demo
hello@hello-virtual-machine:~$ ls -l demo
-rwxrwxrwx 1 hello hello 0 10月 14 10:26 demo
hello@hello-virtual-machine:~$ chmod a-x demo
hello@hello-virtual-machine:~$ ls -l demo
-rw-rw-rw- 1 hello hello 0 10月 14 10:26 demo
hello@hello-virtual-machine:~$ chmod go-w demo
hello@hello-virtual-machine:~$ ls -l demo
-rw-r--r-- 1 hello hello 0 10月 14 10:26 demo
hello@hello-virtual-machine:~$ chmod g+w demo
hello@hello-virtual-machine:~$ ls -l demo
-rw-rw-r-- 1 hello hello 0 10月 14 10:26 demo
hello@hello-virtual-machine:~$ chmod a= demo
hello@hello-virtual-machine:~$ ls -l demo
----- 1 hello hello 0 10月 14 10:26 demo
hello@hello-virtual-machine:~$ chmod +t demo
hello@hello-virtual-machine:~$ ls -l demo
-----T 1 hello hello 0 10月 14 10:26 demo
```

```
hello@hello-virtual-machine:~$ chmod u+s demo
hello@hello-virtual-machine:~$ ls -l demo
---S-----T 1 hello hello 0 10月 14 10:26 demo
hello@hello-virtual-machine:~$ chmod u+rx demo
hello@hello-virtual-machine:~$ ls -l demo
-r-s-----T 1 hello hello 0 10月 14 10:26 demo
hello@hello-virtual-machine:~$ chmod g+rws demo
hello@hello-virtual-machine:~$ ls -l demo
-r-srwS--T 1 hello hello 0 10月 14 10:26 demo
```


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.
```

```
hello@hello-virtual-machine:~$ tar -xzvf backup.tar.gz
others/
others/2.txt
others/1.txt
hello@hello-virtual-machine:~$ ls -l
总计 60
-rw-rw-r-- 1 hello hello 138 10月 14 10:52 3.txt
drwxr-xr-x 2 hello hello 4096 3月 23 2024 公共的
-rw-rw-r-- 1 hello hello 12 10月 14 10:00 黄译2.txt
drwxr-xr-x 2 hello hello 4096 9月 14 17:51 模板
drwxr-xr-x 2 hello hello 4096 3月 23 2024 视频
drwxr-xr-x 3 hello hello 4096 4月 1 2024 图片
drwxr-xr-x 2 hello hello 4096 4月 3 2024 文档
drwxr-xr-x 2 hello hello 4096 10月 2 14:57 下载
drwxr-xr-x 2 hello hello 4096 3月 23 2024 音乐
drwxr-xr-x 7 hello hello 4096 10月 12 11:52 桌面
drwxrwxr-x 2 hello hello 4096 10月 14 09:57 B22040721
-rw-rw-r-- 1 hello hello 12 10月 14 10:00 B22040721.txt
-rw-rw-r-- 1 hello hello 161 10月 14 11:10 backup.tar.gz
-r-srws--T 1 hello hello 0 10月 14 10:26 demo
drwxrwxr-x 2 hello hello 4096 10月 14 11:00 others
drwx----- 5 hello hello 4096 3月 24 2024 snap
```

```
hello@hello-virtual-machine:~$ tar -czvf backup.tar.gz others
others/
others/2.txt
others/1.txt
hello@hello-virtual-machine:~$ ls -l
总计 60
-rw-rw-r-- 1 hello hello 138 10月 14 10:52 3.txt
drwxr-xr-x 2 hello hello 4096 3月 23 2024 公共的
-rw-rw-r-- 1 hello hello 12 10月 14 10:00 黄译2.txt
drwxr-xr-x 2 hello hello 4096 9月 14 17:51 模板
drwxr-xr-x 2 hello hello 4096 3月 23 2024 视频
drwxr-xr-x 3 hello hello 4096 4月 1 2024 图片
drwxr-xr-x 2 hello hello 4096 4月 3 2024 文档
drwxr-xr-x 2 hello hello 4096 10月 2 14:57 下载
drwxr-xr-x 2 hello hello 4096 3月 23 2024 音乐
drwxr-xr-x 7 hello hello 4096 10月 12 11:52 桌面
drwxrwxr-x 2 hello hello 4096 10月 14 09:57 B22040721
-rw-rw-r-- 1 hello hello 12 10月 14 10:00 B22040721.txt
-rw-rw-r-- 1 hello hello 161 10月 14 11:10 backup.tar.gz
-r-srws--T 1 hello hello 0 10月 14 10:26 demo
drwxrwxr-x 2 hello hello 4096 10月 14 11:00 others
drwx----- 5 hello hello 4096 3月 24 2024 snap
```

6、 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
```

```
hello@hello-virtual-machine:~$ touch 3.txt
hello@hello-virtual-machine:~$ grep '^n' 3.txt
no, I study in njupt.
hello@hello-virtual-machine:~$ grep '\.00$' 3.txt
this line ends with .00
He is 15. It is 16.00
hello@hello-virtual-machine:~$ grep '5\..' 3.txt
He is 15. It is 16.00
hello@hello-virtual-machine:~$ grep '^[wy]' 3.txt
wy is the short of my name.
```