

## (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.



```
pengyupeng@pengyupeng-virtual-machine:~$ pwd  
/home/pengyupeng  
pengyupeng@pengyupeng-virtual-machine:~$ cd ~  
pengyupeng@pengyupeng-virtual-machine:~$ mkdir B22040722  
pengyupeng@pengyupeng-virtual-machine:~$ cd B22040722  
pengyupeng@pengyupeng-virtual-machine:~/B22040722$ mkdir pengyupeng  
pengyupeng@pengyupeng-virtual-machine:~/B22040722$ ls  
pengyupeng  
pengyupeng@pengyupeng-virtual-machine:~/B22040722$ rmdir pengyupeng  
pengyupeng@pengyupeng-virtual-machine:~/B22040722$ ls  
pengyupeng@pengyupeng-virtual-machine:~/B22040722$
```

## (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.

```
pengyupeng@pengyupeng-virtual-machine:~/B22040722$ cd ~
pengyupeng@pengyupeng-virtual-machine:~$ touch pengyupeng.txt
pengyupeng@pengyupeng-virtual-machine:~$ ls
公共的  视频  文档  音乐  B22040722  snap
模板    图片  下载  桌面  pengyupeng.txt
pengyupeng@pengyupeng-virtual-machine:~$ echo "hello world" > pengyupeng.txt
pengyupeng@pengyupeng-virtual-machine:~$ cat pengyupeng.txt
hello world
pengyupeng@pengyupeng-virtual-machine:~$ cp pengyupeng.txt pengyupeng2.txt
pengyupeng@pengyupeng-virtual-machine:~$ mv pengyupeng.txt B22040722.txt
pengyupeng@pengyupeng-virtual-machine:~$ ls
公共的  视频  文档  音乐  B22040722  pengyupeng2.txt
模板    图片  下载  桌面  B22040722.txt  snap
```

### (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.

```

pengyupeng@pengyupeng-virtual-machine:~$ whoami
pengyupeng
pengyupeng@pengyupeng-virtual-machine:~$ sudo su root
[sudo] pengyupeng 的密码:
root@pengyupeng-virtual-machine:/home/pengyupeng# groupadd student
root@pengyupeng-virtual-machine:/home/pengyupeng# whoami
root
root@pengyupeng-virtual-machine:/home/pengyupeng# adduser B22040722
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@pengyupeng-virtual-machine:/home/pengyupeng# adduser b22040722
正在添加用户"b22040722"...
正在添加新组"b22040722" (1002)...
正在添加新用户"b22040722" (1001) 到组"b22040722"...
创建主目录"/home/b22040722"...
正在从"/etc/skel"复制文件...
新的密码:
无效的密码: 密码少于 8 个字符
重新输入新的密码:
抱歉, 密码不匹配。
新的密码:
重新输入新的密码:
passwd: 已成功更新密码
正在改变 b22040722 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@pengyupeng-virtual-machine:/home/pengyupeng# usermod -g student b22040722
root@pengyupeng-virtual-machine:/home/pengyupeng# su b22040722
b22040722@pengyupeng-virtual-machine:/home/pengyupeng$ cd ~
b22040722@pengyupeng-virtual-machine:~$ touch pengyupeng.txt
b22040722@pengyupeng-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040722 student 0 10月 14 10:09 pengyupeng.txt

```

#### (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.

```

b22040722@pengyupeng-virtual-machine:~$ touch demo
b22040722@pengyupeng-virtual-machine:~$ ls -l demo
-rw-r--r-- 1 b22040722 student 0 10月 14 10:13 demo
b22040722@pengyupeng-virtual-machine:~$ chmod 777 demo
b22040722@pengyupeng-virtual-machine:~$ ls -l demo
-rwxrwxrwx 1 b22040722 student 0 10月 14 10:13 demo
b22040722@pengyupeng-virtual-machine:~$ chmod a-x demo
b22040722@pengyupeng-virtual-machine:~$ ls -l demo
-rw-rw-rw- 1 b22040722 student 0 10月 14 10:13 demo
b22040722@pengyupeng-virtual-machine:~$ chmod go-w demo
b22040722@pengyupeng-virtual-machine:~$ ls -l demo
-rw-r--r-- 1 b22040722 student 0 10月 14 10:13 demo
b22040722@pengyupeng-virtual-machine:~$ chmod g+w demo
b22040722@pengyupeng-virtual-machine:~$ ls -l demo
-rw-rw-r-- 1 b22040722 student 0 10月 14 10:13 demo

```

```

b22040722@pengyupeng-virtual-machine:~$ chmod a= demo
b22040722@pengyupeng-virtual-machine:~$ ls -l demo
----- 1 b22040722 student 0 10月 14 10:13 demo
b22040722@pengyupeng-virtual-machine:~$ chmod +t demo
b22040722@pengyupeng-virtual-machine:~$ ls -l demo
-----T 1 b22040722 student 0 10月 14 10:13 demo
b22040722@pengyupeng-virtual-machine:~$ chmod u+s demo
b22040722@pengyupeng-virtual-machine:~$ ls -l demo
---S-----T 1 b22040722 student 0 10月 14 10:13 demo
b22040722@pengyupeng-virtual-machine:~$ chmod u+rx demo
b22040722@pengyupeng-virtual-machine:~$ ls -l demo
-r-s-----T 1 b22040722 student 0 10月 14 10:13 demo
b22040722@pengyupeng-virtual-machine:~$ chmod g+rws demo
b22040722@pengyupeng-virtual-machine:~$ ls -l demo
-r-srws--T 1 b22040722 student 0 10月 14 10:13 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.

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
```

```
b22040722@pengyupeng-virtual-machine:~$ cd ~
b22040722@pengyupeng-virtual-machine:~$ mkdir others
b22040722@pengyupeng-virtual-machine:~$ cd others
b22040722@pengyupeng-virtual-machine:~/others$ touch pf1
b22040722@pengyupeng-virtual-machine:~/others$ touch pf2
```

```
b22040722@pengyupeng-virtual-machine:~/others$ cd ..
b22040722@pengyupeng-virtual-machine:~$ tar -czvf backup.tar.gz others
others/
others/pf2
others/backup.tar.gz
others/pf1
b22040722@pengyupeng-virtual-machine:~$ ls -l
总计 8
-rw-r--r-- 1 b22040722 student 257 10月 14 10:22 backup.tar.gz
-r-srws--T 1 b22040722 student 0 10月 14 10:13 demo
drwxr-xr-x 2 b22040722 student 4096 10月 14 10:21 others
-rw-r--r-- 1 b22040722 student 0 10月 14 10:09 pengyupeng.txt
b22040722@pengyupeng-virtual-machine:~$ tar -xzvf backup.tar.gz
others/
others/pf2
others/backup.tar.gz
others/pf1
b22040722@pengyupeng-virtual-machine:~$ ls -l
总计 8
-rw-r--r-- 1 b22040722 student 257 10月 14 10:22 backup.tar.gz
-r-srws--T 1 b22040722 student 0 10月 14 10:13 demo
drwxr-xr-x 2 b22040722 student 4096 10月 14 10:21 others
-rw-r--r-- 1 b22040722 student 0 10月 14 10:09 pengyupeng.txt
```

```
b22040722@pengyupeng-virtual-machine:~$ touch tf1.txt
b22040722@pengyupeng-virtual-machine:~$ echo "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." > tf1.txt
b22040722@pengyupeng-virtual-machine:~$ grep '^n' tf1.txt
no, I study in njupt.
b22040722@pengyupeng-virtual-machine:~$ grep '\.00$' tf1.txt
this line ends with .00
He is 15. It is 16.00
b22040722@pengyupeng-virtual-machine:~$ grep '5\.. ' tf1.txt
He is 15. It is 16.00
b22040722@pengyupeng-virtual-machine:~$ grep '^[wy]' tf1.txt
wy is the short of my name.
```