

(1) Directory Operation

Enter the following commands in sequence:

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

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

```
b22040517@b22040517-virtual-machine:~$ pwd
/home/b22040517
b22040517@b22040517-virtual-machine:~$ cd ~
b22040517@b22040517-virtual-machine:~$ mkdir B22040517
b22040517@b22040517-virtual-machine:~$ cd B22040517
b22040517@b22040517-virtual-machine:~/B22040517$ mkdir 周凯
b22040517@b22040517-virtual-machine:~/B22040517$ ls
周凯
b22040517@b22040517-virtual-machine:~/B22040517$ rmdir 周凯
b22040517@b22040517-virtual-machine:~/B22040517$ ls
b22040517@b22040517-virtual-machine:~/B22040517$
```

(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.

```
b22040517@b22040517-virtual-machine:~/B22040517$ cd ~  
b22040517@b22040517-virtual-machine:~$ touch 周凯.txt  
b22040517@b22040517-virtual-machine:~$ ls  
4-1      4-17.sh  4-6.sh  公共的  视频  文档  音乐      桌面  B22040517  snap  
4-13.sh  4-4      4-8.sh  模板   图片  下载  周凯.txt  ans   lab1  
b22040517@b22040517-virtual-machine:~$ echo "hello world">周凯.txt  
b22040517@b22040517-virtual-machine:~$ cat 周凯.txt  
hello world  
b22040517@b22040517-virtual-machine:~$ cp 周凯.txt 周凯2.txt  
b22040517@b22040517-virtual-machine:~$ mv 周凯.txt B22040517.txt  
b22040517@b22040517-virtual-machine:~$ ls  
4-1      4-4      公共的  图片  音乐      ans      lab1  
4-13.sh  4-6.sh  模板   文档  周凯2.txt B22040517 snap  
4-17.sh  4-8.sh  视频   下载  桌面      B22040517.txt  
b22040517@b22040517-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.

```
root@b22040517-virtual-machine: /home/b22040517/桌面
b22040517@b22040517-virtual-machine:~/桌面$ whoami
b22040517
b22040517@b22040517-virtual-machine:~/桌面$ sudo su root
[sudo] b22040517 的密码:
root@b22040517-virtual-machine:/home/b22040517/桌面# groupadd student
groupadd: "student"组已存在
root@b22040517-virtual-machine:/home/b22040517/桌面# adduser b22040517zk
正在添加用户 "b22040517zk"...
正在添加新组 "b22040517zk" (1004)...
正在添加新用户 "b22040517zk" (1003) 到组 "b22040517zk"...
创建主目录 "/home/b22040517zk"...
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:
无效的密码: 密码未通过字典检查 - ???????????/??????????
重新输入新的密码:
passwd: 已成功更新密码
正在改变 b22040517zk 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]
root@b22040517-virtual-machine:/home/b22040517/桌面# usermod -g student b22040517zk
root@b22040517-virtual-machine:/home/b22040517/桌面#
root@b22040517-virtual-machine:/home/b22040517/桌面# usermod -g student b22040517zk
root@b22040517-virtual-machine:/home/b22040517/桌面# su b22040517zk
b22040517zk@b22040517-virtual-machine:/home/b22040517/桌面$ cd ~
b22040517zk@b22040517-virtual-machine:~$ touch b22040517.txt
b22040517zk@b22040517-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040517zk student 0 12月 9 20:29 b22040517.txt
b22040517zk@b22040517-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.

###(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
```



```

b22040517@b22040517-virtual-machine:~$ tar -xzf backup.tar.gz
others/
others/backup.tar.gz
others/f1
b22040517@b22040517-virtual-machine:~$ ls -l
总计 64
drwxr-xr-x 2 b22040517 student 4096 4月 6 2024 公共的
drwxr-xr-x 2 b22040517 student 4096 4月 6 2024 模板
drwxr-xr-x 2 b22040517 student 4096 4月 6 2024 视频
drwxr-xr-x 2 b22040517 student 4096 4月 6 2024 图片
drwxr-xr-x 2 b22040517 student 4096 4月 6 2024 文档
drwxr-xr-x 4 b22040517 student 4096 6月 30 20:53 下载
drwxr-xr-x 2 b22040517 student 4096 4月 6 2024 音乐
-rw-rw-r-- 1 b22040517 student 12 10月 14 10:03 周凯2.txt
-rw-r--r-- 1 b22040517 student 0 10月 14 10:19 周凯.txt
drwxr-xr-x 5 b22040517 student 4096 10月 14 10:26 桌面
-rw-rw-r-- 1 b22040517 student 47 5月 18 12:10 ans
drwxrwxr-x 2 b22040517 student 4096 10月 14 10:00 b22040517
-rw-rw-r-- 1 b22040517 student 12 10月 14 10:03 B22040517.txt
-rw-rw-r-- 1 b22040517 b22040517 235 10月 14 10:37 backup.tar.gz
-rwxrwxrwx 1 b22040517 student 0 10月 14 10:20 demo
drwxrwxr-x 2 b22040517 student 4096 4月 6 2024 lab1
drwxrwxr-x 2 b22040517 b22040517 4096 10月 14 10:34 others
drwx----- 5 b22040517 student 4096 4月 6 2024 snap

```

```

b22040517@b22040517-virtual-machine: ~
b22040517@b22040517-virtual-machine:~$ grep '^n' lab.txt
no, I study in njupt.
b22040517@b22040517-virtual-machine:~$ grep '\.00$' lab.txt
this line ends with .00
He is 15. It is 16.00
b22040517@b22040517-virtual-machine:~$ grep '5\..' lab.txt
He is 15. It is 16.00
b22040517@b22040517-virtual-machine:~$ grep '^[wy]' lab.txt
wy is the short of my name.
b22040517@b22040517-virtual-machine:~$

```