#Experiment 1

(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.

操作截图:

```
[omen@zhengbin01 ~]$ pwd
/home/omen
[omen@zhengbin01 ~]$ mkdir B22040821
[omen@zhengbin01 ~]$ cd B22040821
[omen@zhengbin01 B22040821]$ mkdir 郑斌
[omen@zhengbin01 B22040821]$ ls
郑斌
[omen@zhengbin01 B22040821]$ rmdir 郑斌
[omen@zhengbin01 B22040821]$ ls
[omen@zhengbin01 B22040821]$
```

(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.

操作截图：

```
[omen@zhengbin01 B22040821]$ cd ~
[omen@zhengbin01 ~]$ touch 郑斌.txt
[omen@zhengbin01 ~]$ ls
B22040821  demo.sh  公共  模板  视频  图片  文档  下载  音乐  郑斌.txt  桌面
[omen@zhengbin01 ~]$ echo "hello world" > 郑斌.txt
[omen@zhengbin01 ~]$ cat 郑斌.txt
hello world
[omen@zhengbin01 ~]$ cp 郑斌.txt 郑斌2.txt
[omen@zhengbin01 ~]$ cp 郑斌.txt B22040821.txt
cp: 无法获取"郑斌.txt" 的文件状态(stat): 没有那个文件或目录
[omen@zhengbin01 ~]$ cp 郑斌.txt B22040821.txt
[omen@zhengbin01 ~]$ ls
B22040821  B22040821.txt  demo.sh  公共  模板  视频  图片  文档  下载  音乐  郑斌2.txt  郑斌.txt  桌面
[omen@zhengbin01 ~]$ rm -r B22040821.txt
[omen@zhengbin01 ~]$ ls
B22040821  demo.sh  公共  模板  视频  图片  文档  下载  音乐  郑斌2.txt  郑斌.txt  桌面
[omen@zhengbin01 ~]$ mv 郑斌.txt B22040821.txt
[omen@zhengbin01 ~]$ ls
B22040821  B22040821.txt  demo.sh  公共  模板  视频  图片  文档  下载  音乐  郑斌2.txt  桌面
[omen@zhengbin01 ~]$
```

(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.

操作截图：

```
[root@zhengbin01 omen]# groupadd student
[root@zhengbin01 omen]# whoami
root
[root@zhengbin01 omen]# adduser B22040821
[root@zhengbin01 omen]# usermod -g student B22040821
[root@zhengbin01 omen]# su B22040821
[B22040821@zhengbin01 omen]$ cd ~
[B22040821@zhengbin01 ~]$ touch 郑斌.txt
[B22040821@zhengbin01 ~]$ ls -l
总用量 0
-rw-r--r--. 1 B22040821 student 0 10月  14 10:46 郑斌.txt
[B22040821@zhengbin01 ~]$
```

(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.

操作截图：

```
[omen@zhengbin01 ~]$ touch demo
[omen@zhengbin01 ~]$ chmod 777 demo
[omen@zhengbin01 ~]$ chmod a-x demo
[omen@zhengbin01 ~]$ chmod go-w demo
[omen@zhengbin01 ~]$ chmod g+w demo
[omen@zhengbin01 ~]$ chmod a= demo
[omen@zhengbin01 ~]$ chmod +t demo
[omen@zhengbin01 ~]$ chmod u+s demo
[omen@zhengbin01 ~]$ chmod u+rx demo
[omen@zhengbin01 ~]$ chmod g+rws demo
[omen@zhengbin01 ~]$ ls -l demo
-r-srwS--T. 1 omen omen 0 10月  14 10:08 demo
[omen@zhengbin01 ~]$
```

###(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.

操作截图:

```
[omen@zhengbin01 ~]$ tar -xzvf backup.tar.gz
others/
others/file1.txt
others/file2.txt
[omen@zhengbin01 ~]$ ls -l
总用量 56
drwxrwxr-x. 2 omen omen 4096 10月 14 09:55 B22040821
-rw-rw-r--. 1 omen omen   12 10月 14 09:58 B22040821.txt
-rw-rw-r--. 1 omen omen  163 10月 14 10:17 backup.tar.gz
-r-srwS--T. 1 omen omen    0 10月 14 10:08 demo
-rw-rw-r--. 1 omen omen    1 10月 12 11:21 demo.sh
drwxrwxr-x. 2 omen omen 4096 10月 14 10:16 others
drwxr-xr-x. 2 omen omen 4096 7月  28 22:22 公共
drwxr-xr-x. 2 omen omen 4096 7月  28 22:22 模板
drwxr-xr-x. 2 omen omen 4096 7月  28 22:22 视频
drwxr-xr-x. 2 omen omen 4096 7月  28 22:22 图片
drwxr-xr-x. 2 omen omen 4096 7月  28 22:22 文档
drwxr-xr-x. 2 omen omen 4096 7月  28 22:22 下载
drwxr-xr-x. 2 omen omen 4096 7月  28 22:22 音乐
-rw-rw-r--. 1 omen omen   12 10月 14 09:59 郑斌2.txt
drwxr-xr-x. 2 omen omen 4096 7月  28 22:22 桌面
[omen@zhengbin01 ~]$
```

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
```

操作截图: