

实验1:  
task1:  
要求:

## (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.

结果:

A terminal window titled 'scsym@scsym-virtual-machine: ~/B22040620'. The terminal shows the following commands and output:

```
scsym@scsym-virtual-machine:~$ cd B22040620
scsym@scsym-virtual-machine:~/B22040620$ mkdir 徐策铭
scsym@scsym-virtual-machine:~/B22040620$ ls
徐策铭
scsym@scsym-virtual-machine:~/B22040620$ rmdir 徐策铭
scsym@scsym-virtual-machine:~/B22040620$ ls
scsym@scsym-virtual-machine:~/B22040620$
```

task2:

## (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.

结果:

```
scsym@scsym-virtual-machine:~/B22040620$ cd ~
scsym@scsym-virtual-machine:~$ touch 徐策铭.txt
scsym@scsym-virtual-machine:~$ ls
公共的 模板 视频 图片 文档 下载 徐策铭.txt 音乐 桌面 B22040620 snap
scsym@scsym-virtual-machine:~$ echo "hello world" > 徐策铭.txt
scsym@scsym-virtual-machine:~$ car 徐策铭.txt
找不到命令“car”，但可以通过以下软件包安装它：
sudo apt install ucommon-utils
scsym@scsym-virtual-machine:~$ cat 徐策铭.txt
hello world
scsym@scsym-virtual-machine:~$ cp 徐策铭.txt 徐策铭2.txt
scsym@scsym-virtual-machine:~$ mv 徐策铭.txt B22040620.txt
scsym@scsym-virtual-machine:~$ ls
公共的 视频 文档 徐策铭2.txt 桌面 B22040620.txt
模板 图片 下载 音乐 B22040620 snap
scsym@scsym-virtual-machine:~$
```

task3:

### (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.

结果:

```
主目录"/home/b22040620"已经存在。没有从"/etc/skel"复制文件。
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:
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 b22040620 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@scsym-virtual-machine:/home/scsym# usermod -g student b22040620
root@scsym-virtual-machine:/home/scsym# su b22040620
b22040620@scsym-virtual-machine:/home/scsym$ cd ~
b22040620@scsym-virtual-machine:~$ touch 徐策铭.txt
b22040620@scsym-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040620 student 0 10月 14 10:20 徐策铭.txt
b22040620@scsym-virtual-machine:~$
```

tsak4:

## (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
```

结果：

```

b22040620@scsym-virtual-machine:~$ chmod 777 demo
b22040620@scsym-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040620 student 0 10月 14 10:20 徐策铭.txt
-rwxrwxrwx 1 b22040620 student 0 10月 14 10:25 demo
b22040620@scsym-virtual-machine:~$ chmod a-x demo
b22040620@scsym-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040620 student 0 10月 14 10:20 徐策铭.txt
-rw-rw-rw- 1 b22040620 student 0 10月 14 10:25 demo
b22040620@scsym-virtual-machine:~$ chmod go-w demo
b22040620@scsym-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040620 student 0 10月 14 10:20 徐策铭.txt
-rw-rw-r-- 1 b22040620 student 0 10月 14 10:25 demo
b22040620@scsym-virtual-machine:~$ chmod g+w demo
b22040620@scsym-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040620 student 0 10月 14 10:20 徐策铭.txt
-rw-rw-r-- 1 b22040620 student 0 10月 14 10:25 demo
b22040620@scsym-virtual-machine:~$ chmod a= demo
b22040620@scsym-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040620 student 0 10月 14 10:20 徐策铭.txt
-----T 1 b22040620 student 0 10月 14 10:25 demo
b22040620@scsym-virtual-machine:~$ chmod +t demo
b22040620@scsym-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040620 student 0 10月 14 10:20 徐策铭.txt
-----T 1 b22040620 student 0 10月 14 10:25 demo
b22040620@scsym-virtual-machine:~$ chmod u+s demo
b22040620@scsym-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040620 student 0 10月 14 10:20 徐策铭.txt
---S-----T 1 b22040620 student 0 10月 14 10:25 demo
b22040620@scsym-virtual-machine:~$ chmod u+rx demo
b22040620@scsym-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040620 student 0 10月 14 10:20 徐策铭.txt
-r-s-----T 1 b22040620 student 0 10月 14 10:25 demo
b22040620@scsym-virtual-machine:~$ chmod g+rws demo
b22040620@scsym-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040620 student 0 10月 14 10:20 徐策铭.txt
-r-srws---T 1 b22040620 student 0 10月 14 10:25 demo
scsym@scsym-virtual-machine:~/others$ grep '^n' 1.txt
no, I study in njupt.
scsym@scsym-virtual-machine:~/others$
scsym@scsym-virtual-machine:~/others$ grep '\.00$' 1.txt
this line ends with .00
He is 15. It is 16.00
scsym@scsym-virtual-machine:~/others$ grep '\..$' 1.txt
scsym@scsym-virtual-machine:~/others$ grep '5\..' 1.txt
He is 15. It is 16.00
scsym@scsym-virtual-machine:~/others$ grep '^[wy]' 1.txt
wy is the short of my name.
scsym@scsym-virtual-machine:~/others$

```