

(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
```

```
wang@wang-virtual-machine:~/linux$ pwd
/home/wang/linux
wang@wang-virtual-machine:~/linux$ cd~
找不到命令“cd~”，您的意思是：
“cdb”命令来自 Debian 软件包 tinycdb (0.78build3)
“cdo”命令来自 Debian 软件包 cdo (2.0.4-1)
“cdp”命令来自 Debian 软件包 irpas (0.10-9)
“cdw”命令来自 Debian 软件包 cdw (0.8.1-2)
“cdi”命令来自 Debian 软件包 cdo (2.0.4-1)
“cde”命令来自 Debian 软件包 cde (0.1+git9-g551e54d-1.2)
“cd5”命令来自 Debian 软件包 cd5 (0.1-4)
尝试 sudo apt install <deb name>
wang@wang-virtual-machine:~/linux$ cd ~
wang@wang-virtual-machine:~$ mkdir B22040706~
wang@wang-virtual-machine:~$ mkdir B22040706
wang@wang-virtual-machine:~$ cd B22040706
wang@wang-virtual-machine:~/B22040706$ mkdir 王鼎昌
wang@wang-virtual-machine:~/B22040706$ ls
王鼎昌
wang@wang-virtual-machine:~/B22040706$ rmdir 王鼎昌
wang@wang-virtual-machine:~/B22040706$ ls
wang@wang-virtual-machine:~/B22040706$
```

(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
```

```
wang@wang-virtual-machine:~/linux$ cd ~
wang@wang-virtual-machine:~$ touch 王鼎昌.txt
wang@wang-virtual-machine:~$ ls
公共的      模板  图片      文档  音乐  B22040706  linux
函数调用路径 视频  王鼎昌.txt 下载 桌面  caozuoxitong snap
wang@wang-virtual-machine:~$ echo "hello world" > 王鼎昌.txt
wang@wang-virtual-machine:~$ cat 王鼎昌.txt
hello world
wang@wang-virtual-machine:~$ cp yourname.txt 王鼎昌2.txt
cp: 对 'yourname.txt' 调用 stat 失败: 没有那个文件或目录
wang@wang-virtual-machine:~$ cp 王鼎昌.txt 王鼎昌2.txt
wang@wang-virtual-machine:~$ mv 王鼎昌.txt B22040706.txt
wang@wang-virtual-machine:~$ ls
公共的      模板  图片      文档  音乐  B22040706  caozuoxitong snap
函数调用路径 视频  王鼎昌2.txt 下载 桌面  B22040706.txt linux
wang@wang-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
```

```
wang@wang-virtual-machine:~/linux$ whoami
wang
wang@wang-virtual-machine:~/linux$ sudo su root
[sudo] wang 的密码:
root@wang-virtual-machine:/home/wang/linux# groupadd student
groupadd: "student"组已存在
root@wang-virtual-machine:/home/wang/linux# whoami
root
root@wang-virtual-machine:/home/wang/linux# adduser b22040706
正在添加用户"b22040706"...
正在添加新组"b22040706" (1002)...
正在添加新用户"b22040706" (1001) 到组"b22040706"...
创建主目录"/home/b22040706"...
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 b22040706 的用户信息
请输入新值, 或直接敲回车键以使用默认值
```

```
正在添加用户"b22040706"...
正在添加新组"b22040706" (1002)...
正在添加新用户"b22040706" (1001) 到组"b22040706"...
创建主目录"/home/b22040706"...
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 b22040706 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@wang-virtual-machine:/home/wang/linux# usermod -g student b22040706
root@wang-virtual-machine:/home/wang/linux# su b22040706
b22040706@wang-virtual-machine:/home/wang/linux$ cd ~
b22040706@wang-virtual-machine:~$ touch 王鼎昌.txt
b22040706@wang-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 b22040706 student 0 12月  8 19:31 王鼎昌.txt
b22040706@wang-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
```

```
wang@wang-virtual-machine:~/linux$ touch demo
wang@wang-virtual-machine:~/linux$ chmod 777 demo
wang@wang-virtual-machine:~/linux$ chmod a-x demo # result is rw-rw-rw-
wang@wang-virtual-machine:~/linux$ chmod go-w demo # result is rw-r--r--
wang@wang-virtual-machine:~/linux$ chmod g+w demo # result is rw-rw-r--
wang@wang-virtual-machine:~/linux$ chmod a= demo # result is -----
wang@wang-virtual-machine:~/linux$ chmod +t demo # result is -----T
wang@wang-virtual-machine:~/linux$ chmod u+s demo # result is --S-----T
wang@wang-virtual-machine:~/linux$ chmod u+rx demo # result is r-s-----T
wang@wang-virtual-machine:~/linux$ chmod g+rws demo # result is r-srws--T
wang@wang-virtual-machine:~/linux$ ls -l
总计 0
-r-srws--T 1 wang wang 0 12月 8 19:42 demo
wang@wang-virtual-machine:~/linux$
```

(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
```

```
wang@wang-virtual-machine:~$ tar -czvf backup.tar.gz others
others/
others/2/
others/1/
wang@wang-virtual-machine:~$ ls -l
总计 68
drwxr-xr-x 2 wang wang 4096 4月 5 2024 公共的
drwxrwxr-x 2 wang wang 4096 11月 3 16:51 函数调用路径
drwxr-xr-x 2 wang wang 4096 4月 5 2024 模板
drwxr-xr-x 2 wang wang 4096 4月 5 2024 视频
drwxr-xr-x 3 wang wang 4096 5月 18 2024 图片
-rw-rw-r-- 1 wang wang 12 12月 8 19:22 王鼎昌2.txt
drwxr-xr-x 2 wang wang 4096 6月 21 01:44 文档
drwxr-xr-x 5 wang wang 4096 10月 30 20:38 下载
drwxr-xr-x 2 wang wang 4096 4月 5 2024 音乐
drwx----- 4 wang wang 4096 12月 2 10:35 桌面
drwxrwxr-x 2 wang wang 4096 12月 8 19:14 B22040706
-rw-rw-r-- 1 wang wang 12 12月 8 19:20 B22040706.txt
-rw-rw-r-- 1 wang wang 145 12月 8 19:48 backup.tar.gz
drwxrwxr-x 4 wang wang 4096 11月 23 16:01 caozuoxitong
drwxrwxr-x 2 wang wang 4096 12月 8 19:41 linux
drwxrwxr-x 4 wang wang 4096 12月 8 19:48 others
drwx----- 5 wang wang 4096 5月 14 2024 snap
wang@wang-virtual-machine:~$ tar -xzvf backup.tar.gz
```

```
wang@wang-virtual-machine:~$ tar -xzvf backup.tar.gz
others/
others/2/
others/1/
wang@wang-virtual-machine:~$ ls -l
总计 68
drwxr-xr-x 2 wang wang 4096 4月 5 2024 公共的
drwxrwxr-x 2 wang wang 4096 11月 3 16:51 函数调用路径
drwxr-xr-x 2 wang wang 4096 4月 5 2024 模板
drwxr-xr-x 2 wang wang 4096 4月 5 2024 视频
drwxr-xr-x 3 wang wang 4096 5月 18 2024 图片
-rw-rw-r-- 1 wang wang 12 12月 8 19:22 王鼎昌2.txt
drwxr-xr-x 2 wang wang 4096 6月 21 01:44 文档
drwxr-xr-x 5 wang wang 4096 10月 30 20:38 下载
drwxr-xr-x 2 wang wang 4096 4月 5 2024 音乐
drwx----- 4 wang wang 4096 12月 2 10:35 桌面
drwxrwxr-x 2 wang wang 4096 12月 8 19:14 822040706
-rw-rw-r-- 1 wang wang 12 12月 8 19:20 822040706.txt
-rw-rw-r-- 1 wang wang 145 12月 8 19:48 backup.tar.gz
drwxrwxr-x 4 wang wang 4096 11月 23 16:01 caozuoxitong
drwxrwxr-x 2 wang wang 4096 12月 8 19:41 linux
drwxrwxr-x 4 wang wang 4096 12月 8 19:48 others
drwx----- 5 wang wang 4096 5月 14 2024 snap
wang@wang-virtual-machine:~$
```

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
```

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