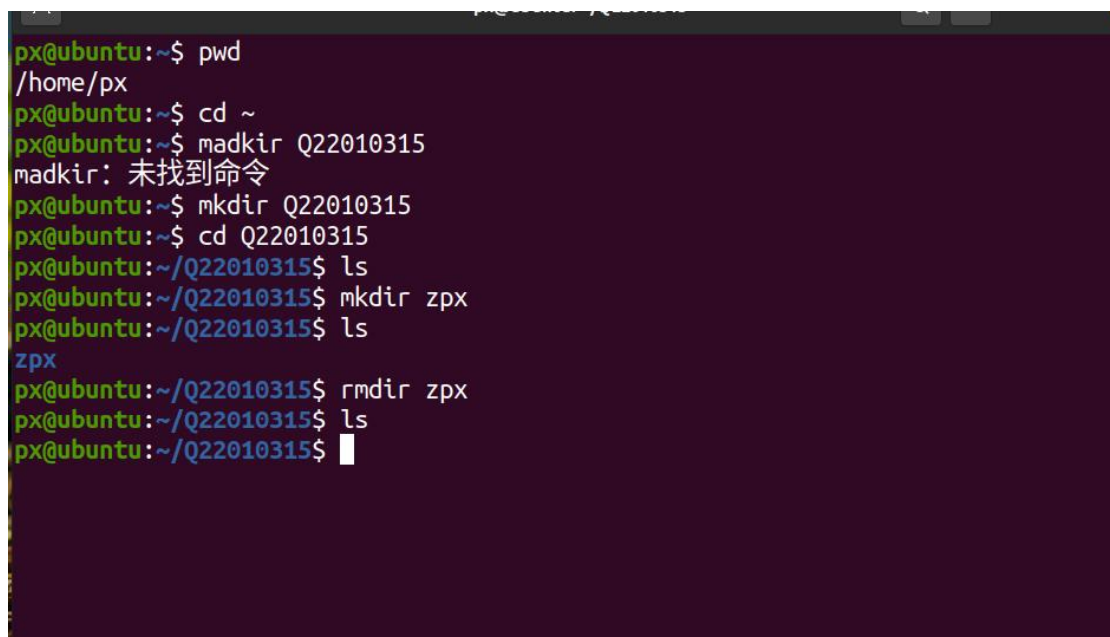


## (1) Directory Operation

Enter the following commands in sequence:

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

A terminal window with a dark purple background and green text. The user 'px' is at the 'ubuntu' machine. The commands and their outputs are: 'pwd' returns '/home/px'; 'cd ~' changes the directory to the home; 'mkdir Q22010315' results in an error 'mkdir: 未找到命令' (command not found); 'mkdir Q22010315' successfully creates the directory; 'cd Q22010315' changes into it; 'ls' shows the directory is empty; 'mkdir zpx' creates a subdirectory; 'ls' shows 'zpx'; 'rmdir zpx' removes the subdirectory; 'ls' shows the directory is empty again.

```
px@ubuntu:~$ pwd  
/home/px  
px@ubuntu:~$ cd ~  
px@ubuntu:~$ mkdir Q22010315  
mkdir: 未找到命令  
px@ubuntu:~$ mkdir Q22010315  
px@ubuntu:~$ cd Q22010315  
px@ubuntu:~/Q22010315$ ls  
px@ubuntu:~/Q22010315$ mkdir zpx  
px@ubuntu:~/Q22010315$ ls  
zpx  
px@ubuntu:~/Q22010315$ rmdir zpx  
px@ubuntu:~/Q22010315$ ls  
px@ubuntu:~/Q22010315$
```

## (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
```

\$lsDirectory Operation

Enter the following commands in sequence:

```

px@ubuntu:~/Q22010315$ cd ~
px@ubuntu:~$ touch zpx.txt
px@ubuntu:~$ ls
Desktop    Downloads  Pictures   Q22010315  Templates  zpx.txt
Documents  Music      Public     snap        Videos
px@ubuntu:~$ echo "hello world" > zpx.txt
px@ubuntu:~$ cat zpx.txt
hello world
px@ubuntu:~$ cp zpx.txt zpxx.txt
px@ubuntu:~$ mv zpx.txt Q22010315.txt
px@ubuntu:~$ ls
Desktop    Downloads  Pictures   Q22010315  snap        Videos
Documents  Music      Public     Q22010315.txt  Templates  zpxx.txt
px@ubuntu:~$

```

### (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@ubuntu:/home/px# groupadd student
groupadd: "student"组已存在
root@ubuntu:/home/px# whoami
root
root@ubuntu:/home/px# newgrp student
root@ubuntu:/home/px# whoami
root
root@ubuntu:/home/px# adduser Q22010315
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_R
EGEX。
root@ubuntu:/home/px# sudo adduser --force-badname Q2201031
5

```

```
root@ubuntu:/home/px# usermod -g student Q22010315
root@ubuntu:/home/px# su Q22010315
Q22010315@ubuntu:/home/px$ cd ~
Q22010315@ubuntu:~$ touch zpx.txt
Q22010315@ubuntu:~$ ls
zpx.txt
Q22010315@ubuntu:~$
```

#### (4) User Management

Permission management

Enter the following commands in sequence:

\$ touch demo

\$ chmod 777 demo

\$ chmod a-x demo

\$ chmod go-w demo

\$ chmod g+w demo

\$ chmod a=demo

\$ chmod +t demo

\$ chmod u+s demo

\$ chmod u+rx demo

# result is rw-rw-rw-

# result is rw-r--r--

# result is rw-rw-r--

# result is -----

# result is -----T

# result is --S-----T

# 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.

```

px@ubuntu:~$ touch demo
px@ubuntu:~$ chmod 777demo
chmod: "777demo" 后缺少操作数
请尝试执行 "chmod --help" 来获取更多信息。
px@ubuntu:~$ chmod 777 demo
px@ubuntu:~$ ls-l demo
ls-l: 未找到命令
px@ubuntu:~$ ls -l demo
-rwxrwxrwx 1 px px 0 10月 13 19:37 demo
px@ubuntu:~$ chmod a-x demo
px@ubuntu:~$ ls -l demo
-rw-rw-rw- 1 px px 0 10月 13 19:37 demo
px@ubuntu:~$ chmod go-w demo
px@ubuntu:~$ ls -l demo
-rw-r--r-- 1 px px 0 10月 13 19:37 demo
px@ubuntu:~$ chmod g+w demo
px@ubuntu:~$ ls -l demo
-rw-rw-r-- 1 px px 0 10月 13 19:37 demo
px@ubuntu:~$ chmod a= demo
px@ubuntu:~$ ls -l demo
----- 1 px px 0 10月 13 19:37 demo
px@ubuntu:~$ chmod +t demo
px@ubuntu:~$ ls -l demo
-----T 1 px px 0 10月 13 19:37 demo
px@ubuntu:~$ chmod u+s demo
px@ubuntu:~$ ls -l demo
---S-----T 1 px px 0 10月 13 19:37 demo
px@ubuntu:~$ chmod u+rx demo
px@ubuntu:~$ ls -l demo
-r-s-----T 1 px px 0 10月 13 19:37 demo
px@ubuntu:~$ chmod g+rws demo
px@ubuntu:~$ ls -l demo
-r-srwS--T 1 px px 0 10月 13 19:37 demo
px@ubuntu:~$ █

```

## (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
```

```
px@ubuntu:~$ tar -xzf backup.tar.gz
others/
others/ddn2
others/backup.tar.gz
others/ddn1
px@ubuntu:~$ ls -l
总用量 56
-rw-rw-r-- 1 px px 239 10月 13 19:43 backup.tar.gz
-r-srwS--T 1 px px 0 10月 13 19:37 demo
drwxr-xr-x 8 px px 4096 10月 11 19:21 Desktop
drwxr-xr-x 2 px px 4096 4月 16 04:31 Documents
drwxr-xr-x 2 px px 4096 4月 16 05:40 Downloads
drwxr-xr-x 2 px px 4096 4月 16 04:31 Music
drwxrwxr-x 2 px px 4096 10月 13 19:42 others
drwxr-xr-x 2 px px 4096 4月 16 04:31 Pictures
drwxr-xr-x 2 px px 4096 4月 16 04:31 Public
drwxrwxr-x 2 px px 4096 10月 13 19:06 Q22010315
-rw-rw-r-- 1 px px 12 10月 13 19:08 Q22010315.txt
drwx----- 5 px px 4096 4月 16 21:54 snap
drwxr-xr-x 2 px px 4096 4月 16 04:31 Templates
drwxr-xr-x 2 px px 4096 4月 16 04:31 Videos
-rw-rw-r-- 1 px px 12 10月 13 19:08 zpxx.txt
px@ubuntu:~$
```

```
px@ubuntu:~$ touch textfile
px@ubuntu:~$ vim textfile
px@ubuntu:~$ grep '^n' textfile
no, I study in niupt.
px@ubuntu:~$ grep '\.00$' textfile
this line ends with .00
He is 15. It is 16.00
px@ubuntu:~$ grep '5\..' textfile
He is 15. It is 16.00
px@ubuntu:~$ grep '^[wy]' textfile
wy is the short of my name.
px@ubuntu:~$
```