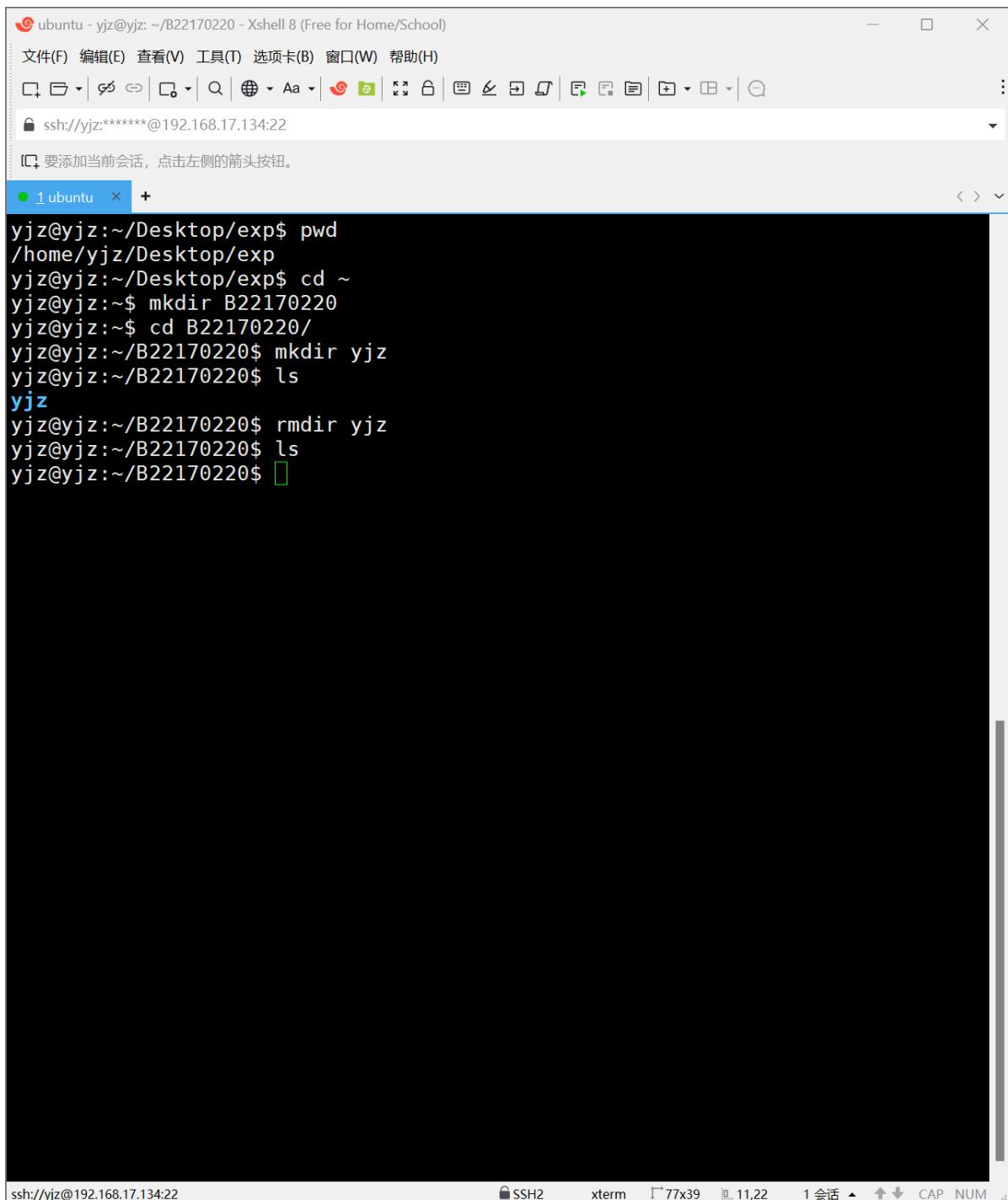


Experiment 1

(1) Directory Operation

```
$pwd  
$cd ~  
$mkdir B22170220  
$cd B22170220  
$mkdir yjz  
$ls  
$rmdir yjz  
$ls
```



The screenshot shows a terminal window titled "ubuntu - yjz@yjz: ~/B22170220 - Xshell 8 (Free for Home/School)". The window includes a toolbar with various icons, a status bar at the bottom, and a scroll bar on the right. The terminal history is displayed in the main pane:

```
ubuntu - yjz@yjz: ~/B22170220 - Xshell 8 (Free for Home/School)  
文件(F) 编辑(E) 查看(V) 工具(T) 选项卡(B) 窗口(W) 帮助(H)  
ssh://yjz*****@192.168.17.134:22  
要添加当前会话，点击左侧的箭头按钮。  
1 ubuntu +< > v  
yjz@yjz:~/Desktop/exp$ pwd  
/home/yjz/Desktop/exp  
yjz@yjz:~/Desktop/exp$ cd ~  
yjz@yjz:~$ mkdir B22170220  
yjz@yjz:~$ cd B22170220/  
yjz@yjz:~/B22170220$ mkdir yjz  
yjz@yjz:~/B22170220$ ls  
yjz  
yjz@yjz:~/B22170220$ rmdir yjz  
yjz@yjz:~/B22170220$ ls  
yjz@yjz:~/B22170220$
```

The status bar at the bottom shows the connection details: "SSH2", "xterm", "77x39", "11,22", "1 会话", and "CAP NUM".

(2)File operation

```
$cd ~  
$touch yjz.txt  
$ls  
$echo "hello world" > yjz.txt  
$cat yjz.txt  
$cp yjz.txt yjz2.txt  
$mv yjz.txt yjzB22170220.txt  
$ls
```

```
yjz@yjz:~/B22170220$ cd ~  
yjz@yjz:~$ touch yjz.txt  
yjz@yjz:~$ ls  
B22170220  Documents  examples.desktop  ngrok  Pictures  Templates  yjz.txt  
Desktop    Downloads  Music          notes  Public    Videos  
yjz@yjz:~$ echo "hello world" > yjz.txt  
yjz@yjz:~$ cat yjz.txt  
hello world  
yjz@yjz:~$ cp yjz.txt yjz2.txt  
yjz@yjz:~$ mv yjz.txt yjzB22170220.txt  
yjz@yjz:~$ ls  
B22170220  Downloads      ngrok      Public      yjz2.txt  
Desktop    examples.desktop  notes      Templates  yjzB22170220.txt  
Documents  Music          Pictures  Videos  
yjz@yjz:~$ █
```

(3)User Management

```
$whoami  
$sudo su root
```

```
#groupadd student  
#whoami  
#adduser yourstudentID  
#usermod -g student yourstudentID  
  
#su yourstudentID  
$cd ~  
$touch yourname.txt  
$ls -l
```

```
ubuntu - b22170220@yjz: ~ - Xshell 8 (Free for Home/School)
文件(F) 编辑(E) 查看(V) 工具(T) 选项卡(B) 窗口(W) 帮助(H)
ssh://yjz:*****@192.168.17.134:22
要添加当前会话，点击左侧的箭头按钮。
1 ubuntu + < > ▾
yjz@yjz:~$ whoami
yjz
yjz@yjz:~$ sudo su root
root@yjz:/home/yjz# groupadd student
groupadd: group 'student' already exists
root@yjz:/home/yjz# whoami
root
root@yjz:/home/yjz# adduser b22170220
Adding user `b22170220' ...
Adding new group `b22170220' (1002) ...
Adding new user `b22170220' (1001) with group `b22170220' ...
Creating home directory `/home/b22170220' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
Sorry, passwords do not match
passwd: Authentication token manipulation error
passwd: password unchanged
Try again? [y/N] y
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for b22170220
Enter the new value, or press ENTER for the default
  Full Name []:
  Room Number []:
  Work Phone []:
  Home Phone []:
  Other []
Is the information correct? [Y/n] y
root@yjz:/home/yjz# usermod -g student b22170220
root@yjz:/home/yjz# su b22170220
b22170220@yjz:/home/yjz$ cd ~
b22170220@yjz:~$ touch yjz.txt
b22170220@yjz:~$ ls
examples.desktop yjz.txt
b22170220@yjz:~$
```

ssh://yjz@192.168.17.134:22 SSH2 xterm 77x39 37,18 1 会话 ▲ ▼ CAP NUM .

(4)Permission management

```
$ 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
```

```
ubuntu - yjz@yjz: ~/B22170220 - Xshell 8 (Free for Home/School)
文件(F) 编辑(E) 查看(V) 工具(T) 选项卡(B) 窗口(W) 帮助(H)
ssh://yjz:*****@192.168.17.134:22
要添加当前会话，点击左侧的箭头按钮。
1 ubuntu + < > ^

yjz@yjz:~/B22170220$ touch demo
yjz@yjz:~/B22170220$ chmod 777 demo
yjz@yjz:~/B22170220$ ls -l
total 0
-rwxrwxrwx 1 yjz yjz 0 11月 21 10:18 demo
yjz@yjz:~/B22170220$ chmod a-x demo
yjz@yjz:~/B22170220$ ls -l
total 0
-rw-rw-rw- 1 yjz yjz 0 11月 21 10:18 demo
yjz@yjz:~/B22170220$ chmod go-w demo
yjz@yjz:~/B22170220$ ls -l
total 0
-rw-r--r-- 1 yjz yjz 0 11月 21 10:18 demo
yjz@yjz:~/B22170220$ chmod g+w demo
yjz@yjz:~/B22170220$ ls -l
total 0
-rw-rw-r-- 1 yjz yjz 0 11月 21 10:18 demo
yjz@yjz:~/B22170220$ chmod a= demo
yjz@yjz:~/B22170220$ ls -l
total 0
----- 1 yjz yjz 0 11月 21 10:18 demo
yjz@yjz:~/B22170220$ chmod +t demo
yjz@yjz:~/B22170220$ ls -l
total 0
-----T 1 yjz yjz 0 11月 21 10:18 demo
yjz@yjz:~/B22170220$ chmod u+s demo
yjz@yjz:~/B22170220$ ls -l
ls: command not found
yjz@yjz:~/B22170220$ ls -l
total 0
---S----T 1 yjz yjz 0 11月 21 10:18 demo
yjz@yjz:~/B22170220$ chmod u+rx demo
yjz@yjz:~/B22170220$ ls -l
total 0
-r-s----T 1 yjz yjz 0 11月 21 10:18 demo
yjz@yjz:~/B22170220$ chmod g+rws demo
yjz@yjz:~/B22170220$ ls -l
total 0
-r-srwS--T 1 yjz yjz 0 11月 21 10:18 demo
```

ssh://yjz@192.168.17.134:22 SSH2 xterm 77x39 39,22 1 会话 ▲ ▼ CAP NUM .

(5)Other management

```
ubuntu - yjz@yjz: ~/B22170220 - Xshell 8 (Free for Home/School)
文件(F) 编辑(E) 查看(V) 工具(T) 选项卡(B) 窗口(W) 帮助(H)
ssh://yjz:*****@192.168.17.134:22
要添加当前会话，点击左侧的箭头按钮。
1 ubuntu + < > ▾

yjz@yjz:~/B22170220$ mkdir others
yjz@yjz:~/B22170220$ tar -czvf backup.tar.gz others
others/
yjz@yjz:~/B22170220$ ls -l
total 8
-rw-rw-r-- 1 yjz yjz 114 11月 21 10:24 backup.tar.gz
-r-srwS-T 1 yjz yjz 0 11月 21 10:18 demo
drwxrwxr-x 2 yjz yjz 4096 11月 21 10:23 others
yjz@yjz:~/B22170220$ tar -xzvf backup.tar.gz
others/
yjz@yjz:~/B22170220$ ls -l
total 8
-rw-rw-r-- 1 yjz yjz 114 11月 21 10:24 backup.tar.gz
-r-srwS-T 1 yjz yjz 0 11月 21 10:18 demo
drwxrwxr-x 2 yjz yjz 4096 11月 21 10:23 others
yjz@yjz:~/B22170220$
```

ssh://yjz@192.168.17.134:22 SSH2 xterm 77x39 16,22 1 会话 CAP NUM

ubuntu - yjz@yjz: ~/B22170220 - Xshell 8 (Free for Home/School)

文件(F) 编辑(E) 查看(V) 工具(T) 选项卡(B) 窗口(W) 帮助(H)

SSH2 xterm 77x39 6.31 1 会话 CAP NUM

ssh://yjz*****@192.168.17.134:22

要添加当前会话，点击左侧的箭头按钮。

1 no, I study in njupt.
2 this line ends with 00
3 this line ends with .00
4 I am 25 years old.
5 He is 15. It is 16.00
6 why is the short of my name.

yjz.txt [+] 6,27 All

The screenshot shows a terminal window titled "ubuntu - yjz@yjz: ~/B22170220 - Xshell 8 (Free for Home/School)". The window has a menu bar with Chinese options: 文件(F) 编辑(E) 查看(V) 工具(T) 选项卡(B) 窗口(W) 帮助(H). Below the menu is a toolbar with various icons. The main area displays a terminal session:

```
yjz@yjz:~/B22170220$ vim yjz.txt
yjz@yjz:~/B22170220$ grep '^n' yjz.txt
no, I study in njupt.
yjz@yjz:~/B22170220$ grep '\.00$' yjz.txt
this line ends with .00
He is 15. It is 16.00
yjz@yjz:~/B22170220$ grep '5\..' yjz.txt
He is 15. It is 16.00
yjz@yjz:~/B22170220$ grep '^wy]' yjz.txt
wy is the short of my name.
yjz@yjz:~/B22170220$
```

The bottom status bar shows the connection information: ssh://yjz@192.168.17.134:22, SSH2, xterm, 77x39, 11,22, 1 会话, CAP NUM.