（1）Directory Operation

```
ltlyl@ltlyl-virtual-machine:~/桌面$ cd ~
ltlyl@ltlyl-virtual-machine:~$ touch fzj.txt
ltlyl@ltlyl-virtual-machine:~$ ls
公共的  视频  文档  音乐  B22040707    fzj.txt
模板    图片  下载  桌面  execve_demo  snap
ltlyl@ltlyl-virtual-machine:~$ echo "hello world" > fzj.txt
ltlyl@ltlyl-virtual-machine:~$ cat fzj.txt
hello world
ltlyl@ltlyl-virtual-machine:~$ cp fzj.txt fzj2.txt
ltlyl@ltlyl-virtual-machine:~$ mv fzj.txt B22040707.txt
ltlyl@ltlyl-virtual-machine:~$ ls
公共的  视频  文档  音乐  B22040707        execve_demo  snap
模板    图片  下载  桌面  B22040707.txt   fzj2.txt
ltlyl@ltlyl-virtual-machine:~$
```

(2) File operation

```
ltlyl@ltlyl-virtual-machine:~/桌面$ whoami
ltlyl
ltlyl@ltlyl-virtual-machine:~/桌面$ sudo su root
[sudo] ltlyl 的密码:
root@ltlyl-virtual-machine:/home/ltlyl/桌面# groupadd student
root@ltlyl-virtual-machine:/home/ltlyl/桌面# whoami
root
root@ltlyl-virtual-machine:/home/ltlyl/桌面# adduser B22040707
adduser: Please enter a username matching the regular expression configured
via the NAME_REGEX[_SYSTEM] configuration variable.  Use the `--force-badname'
option to relax this check or reconfigure NAME_REGEX.
root@ltlyl-virtual-machine:/home/ltlyl/桌面# usermod -g student B22040707
usermod: user 'B22040707' does not exist
root@ltlyl-virtual-machine:/home/ltlyl/桌面# adduser b22040707
Adding user `b22040707' ...
Adding new group `b22040707' (1002) ...
Adding new user `b22040707' (1001) with group `b22040707' ...
Creating home directory `/home/b22040707' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for b22040707
Enter the new value, or press ENTER for the default
        Full Name []: fzj
        Room Number []: fzjj
        Work Phone []: fzjjj
        Home Phone []: fzjj
        Other []: fzjj
Is the information correct? [Y/n] y
root@ltlyl-virtual-machine:/home/ltlyl/桌面# usermod -g student b22040707
root@ltlyl-virtual-machine:/home/ltlyl/桌面# su b22040707
b22040707@ltlyl-virtual-machine:/home/ltlyl/桌面$ cd ~
b22040707@ltlyl-virtual-machine:~$ touch fzj.txt
b22040707@ltlyl-virtual-machine:~$ ls -l
total 0
-rw-r--r-- 1 b22040707 student 0 12月  9 10:21 fzj.txt
b22040707@ltlyl-virtual-machine:~$
```

(3)User Management

```
ltlyl@ltlyl-virtual-machine:~/桌面$ touch demo
ltlyl@ltlyl-virtual-machine:~/桌面$ chmod 777 demo
ltlyl@ltlyl-virtual-machine:~/桌面$ chmod a-x demo
ltlyl@ltlyl-virtual-machine:~/桌面$ chmod go-w demo
ltlyl@ltlyl-virtual-machine:~/桌面$ chmod g+w demo
ltlyl@ltlyl-virtual-machine:~/桌面$ chmod a= demo
ltlyl@ltlyl-virtual-machine:~/桌面$ chmod +t demo
ltlyl@ltlyl-virtual-machine:~/桌面$ chmod u+s demo
ltlyl@ltlyl-virtual-machine:~/桌面$ chmod u+rx demo
ltlyl@ltlyl-virtual-machine:~/桌面$ chmod g+rws demo
ltlyl@ltlyl-virtual-machine:~/桌面$ tar -czvf backup.tar.gz others
tar: others：无法 stat: 没有那个文件或目录
tar: 由于前次错误，将以上次的错误状态退出
ltlyl@ltlyl-virtual-machine:~/桌面$ touch others
ltlyl@ltlyl-virtual-machine:~/桌面$ tar -czvf backup.tar.gz others
others
ltlyl@ltlyl-virtual-machine:~/桌面$ ls -l
总计 656
-rw-r--r-- 1 ltlyl ltlyl      2 11月  2 19:48 1
drwxrwxr-x 2 ltlyl ltlyl   4096 11月 24 11:25 11
-rw-r--r-- 1 ltlyl ltlyl      2 11月  2 19:51 2
-rw-r--r-- 1 ltlyl ltlyl      0  5月 19  2024 文本文件
-rw------- 1 ltlyl ltlyl 278016  5月 19  2024 B22040707@10.160.106.190
-rw------- 1 ltlyl ltlyl 278016  5月 19  2024 B22040707方智杰lab2.docx
-rw-r--r-- 1 ltlyl ltlyl    101  5月 19  2024 B22040707.txt
-rw-rw-r-- 1 ltlyl ltlyl    114 12月  9 10:27 backup.tar.gz
-r-srwS--T 1 ltlyl ltlyl      0 12月  9 10:23 demo
-rwxrwxr-x 1 ltlyl ltlyl  16008 11月  2 19:57 example
-rw-rw-r-- 1 ltlyl ltlyl    144 11月  2 19:57 example1.c
-rw-rw-r-- 1 ltlyl ltlyl    127 11月  2 19:54 example.c
-rwxrwxr-x 1 ltlyl ltlyl  16296 11月 24 10:42 execve_demo
-rw-rw-r-- 1 ltlyl ltlyl    896 11月 24 10:42 execve_demo.c
-rwxrwxr-x 1 ltlyl ltlyl  16096 11月  2 20:01 fork_example
-rw-rw-r-- 1 ltlyl ltlyl    553 11月  2 20:01 fork_example.c
-rwxrwxr-x 1 ltlyl ltlyl  16264 11月  2 20:08 multi_fork
-rw-rw-r-- 1 ltlyl ltlyl   1643 11月  2 20:08 multi_fork.c
-rw-rw-r-- 1 ltlyl ltlyl      0 12月  9 10:26 others
drwxrwxr-x 2 ltlyl ltlyl   4096 11月 24 12:02 signal_demo_project
drwxrwxr-x 2 ltlyl ltlyl   4096  6月 23 22:04 target960
ltlyl@ltlyl-virtual-machine:~/桌面$ tar -xzvf backup.tar.gz
others
ltlyl@ltlyl-virtual-machine:~/桌面$ ls -l
总计 656
-rw-r--r-- 1 ltlyl ltlyl      2 11月  2 19:48 1
drwxrwxr-x 2 ltlyl ltlyl   4096 11月 24 11:25 11
-rw-r--r-- 1 ltlyl ltlyl      2 11月  2 19:51 2
-rw-r--r-- 1 ltlyl ltlyl      0  5月 19  2024 文本文件
-rw------- 1 ltlyl ltlyl 278016  5月 19  2024 B22040707@10.160.106.190
```

```
ltlyl@ltlyl-virtual-machine:~/桌面$ ls -l
总计 656
-rw-r--r-- 1 ltlyl ltlyl      2 11月  2 19:48 1
drwxrwxr-x 2 ltlyl ltlyl   4096 11月 24 11:25 11
-rw-r--r-- 1 ltlyl ltlyl      2 11月  2 19:51 2
-rw-r--r-- 1 ltlyl ltlyl      0  5月 19  2024 文本文件
-rw------- 1 ltlyl ltlyl 278016  5月 19  2024 B22040707@10.160.106.190
-rw------- 1 ltlyl ltlyl 278016  5月 19  2024 B22040707方智杰lab2.docx
-rw-r--r-- 1 ltlyl ltlyl    101  5月 19  2024 B22040707.txt
-rw-rw-r-- 1 ltlyl ltlyl    114 12月  9 10:27 backup.tar.gz
-r-srwS--T 1 ltlyl ltlyl      0 12月  9 10:23 demo
-rwxrwxr-x 1 ltlyl ltlyl  16008 11月  2 19:57 example
-rw-rw-r-- 1 ltlyl ltlyl    144 11月  2 19:57 example1.c
-rw-rw-r-- 1 ltlyl ltlyl    127 11月  2 19:54 example.c
-rwxrwxr-x 1 ltlyl ltlyl  16296 11月 24 10:42 execve_demo
-rw-rw-r-- 1 ltlyl ltlyl    896 11月 24 10:42 execve_demo.c
-rwxrwxr-x 1 ltlyl ltlyl  16096 11月  2 20:01 fork_example
-rw-rw-r-- 1 ltlyl ltlyl    553 11月  2 20:01 fork_example.c
-rwxrwxr-x 1 ltlyl ltlyl  16264 11月  2 20:08 multi_fork
-rw-rw-r-- 1 ltlyl ltlyl   1643 11月  2 20:08 multi_fork.c
-rw-rw-r-- 1 ltlyl ltlyl      0 12月  9 10:26 others
drwxrwxr-x 2 ltlyl ltlyl   4096 11月 24 12:02 signal_demo_project
drwxrwxr-x 2 ltlyl ltlyl   4096  6月 23 22:04 target960
ltlyl@ltlyl-virtual-machine:~/桌面$
```

```
ltlyl@ltlyl-virtual-machine:~/桌面$ tar -xzvf backup.tar.gz
others
ltlyl@ltlyl-virtual-machine:~/桌面$ ls -l
总计 656
-rw-r--r-- 1 ltlyl ltlyl      2 11月  2 19:48 1
drwxrwxr-x 2 ltlyl ltlyl   4096 11月 24 11:25 11
-rw-r--r-- 1 ltlyl ltlyl      2 11月  2 19:51 2
-rw-r--r-- 1 ltlyl ltlyl      0  5月 19  2024 文本文件
-rw------- 1 ltlyl ltlyl 278016  5月 19  2024 B22040707@10.160
-rw------- 1 ltlyl ltlyl 278016  5月 19  2024 B22040707方智杰l
-rw-r--r-- 1 ltlyl ltlyl    101  5月 19  2024 B22040707.txt
-rw-rw-r-- 1 ltlyl ltlyl    114 12月  9 10:27 backup.tar.gz
-r-srwS--T 1 ltlyl ltlyl      0 12月  9 10:23 demo
-rwxrwxr-x 1 ltlyl ltlyl  16008 11月  2 19:57 example
-rw-rw-r-- 1 ltlyl ltlyl    144 11月  2 19:57 example1.c
-rw-rw-r-- 1 ltlyl ltlyl    127 11月  2 19:54 example.c
-rwxrwxr-x 1 ltlyl ltlyl  16296 11月 24 10:42 execve_demo
-rw-rw-r-- 1 ltlyl ltlyl    896 11月 24 10:42 execve_demo.c
-rwxrwxr-x 1 ltlyl ltlyl  16096 11月  2 20:01 fork_example
-rw-rw-r-- 1 ltlyl ltlyl    553 11月  2 20:01 fork_example.c
-rwxrwxr-x 1 ltlyl ltlyl  16264 11月  2 20:08 multi_fork
-rw-rw-r-- 1 ltlyl ltlyl   1643 11月  2 20:08 multi_fork.c
-rw-rw-r-- 1 ltlyl ltlyl      0 12月  9 10:26 others
drwxrwxr-x 2 ltlyl ltlyl   4096 11月 24 12:02 signal_demo_proj
drwxrwxr-x 2 ltlyl ltlyl   4096  6月 23 22:04 target960
ltlyl@ltlyl-virtual-machine:~/桌面$ grep '^n' textfile
no, I study in njupt.
ltlyl@ltlyl-virtual-machine:~/桌面$ grep '\.00$' textfile
this line ends with .00
He is 15. It is 16.00
ltlyl@ltlyl-virtual-machine:~/桌面$ grep '5\..' textfile
He is 15. It is 16.00
ltlyl@ltlyl-virtual-machine:~/桌面$ grep '^[wy]'textfile
```

(4) Permission management(5) Other management