题目 1:

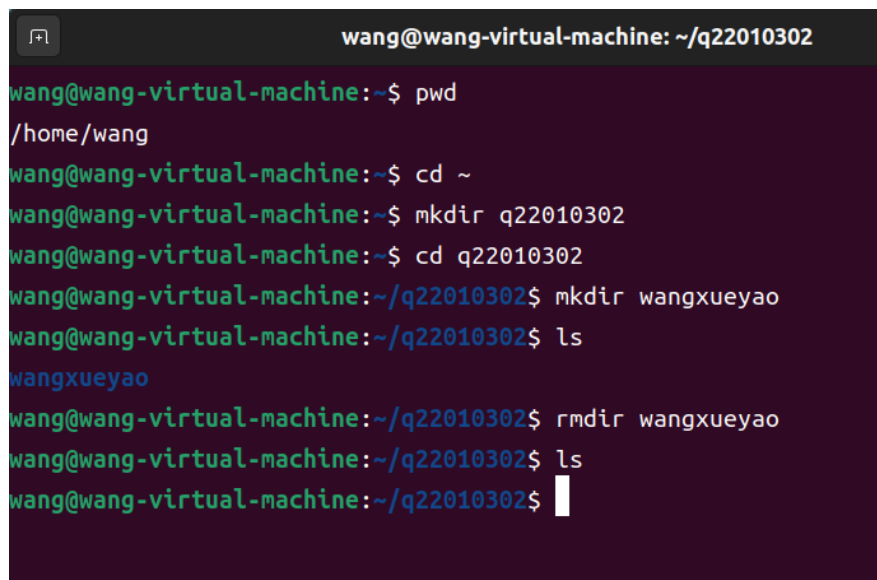## (1) Directory Operation

Enter the following commands in sequence:

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

Save a screenshot of the above command along with the corresponding results, you must have your student number and name.

截图：

题目 2:

(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.

截图

```
wang@wang-virtual-machine:~/q22010302$ cd ~
wang@wang-virtual-machine:~$ touch wangxueyao.txt
wang@wang-virtual-machine:~$ ls
公共的    文档    imageyyy                        Python-3.11.5.tgz
模板      下载    pycharm-community-2024.2.2.tar.gz  q22010302
视频      音乐    PycharmProjects                 snap
图片      桌面    Python-3.11.5                   wangxueyao.txt
wang@wang-virtual-machine:~$ echo "hello world" > wangxueyao.txt
wang@wang-virtual-machine:~$ cat wangxueyao.txt
hello world
wang@wang-virtual-machine:~$ cp wangxueyao.txt wangxueyao2.txt
wang@wang-virtual-machine:~$ mv wangxueyao.txt q22010302.txt
wang@wang-virtual-machine:~$ ls
公共的    下载                                 PycharmProjects       snap
模板      音乐                                 Python-3.11.5         wangxueyao2.txt
视频      桌面                                 Python-3.11.5.tgz
图片      imageyyy                             q22010302
文档      pycharm-community-2024.2.2.tar.gz    q22010302.txt
wang@wang-virtual-machine:~$
```

题目 3：

(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.

截图：

```
wang@wang-virtual-machine:~$ whoami
wang
wang@wang-virtual-machine:~$ sudo su root
[sudo] wang 的密码：
root@wang-virtual-machine:/home/wang# groupadd student
root@wang-virtual-machine:/home/wang# whoami
root
root@wang-virtual-machine:/home/wang# adduser q22010302
正在添加用户"q22010302"...
正在添加新组"q22010302" (1002)...
正在添加新用户"q22010302" (1001) 到组"q22010302"...
创建主目录"/home/q22010302"...
正在从"/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 q22010302 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# usermod -g student q22010302
root@wang-virtual-machine:/home/wang# su q22010302
q22010302@wang-virtual-machine:/home/wang$ cd ~
q22010302@wang-virtual-machine:~$ touch wangxueyao.txt
```

```
q22010302@wang-virtual-machine:~$ ls -l
总计 0
-rw-r--r-- 1 q22010302 student 0 10月 14 14:19 wangxueyao.txt
q22010302@wang-virtual-machine:~$
```

题目 4：

(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.

截图：

题目 5：

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"
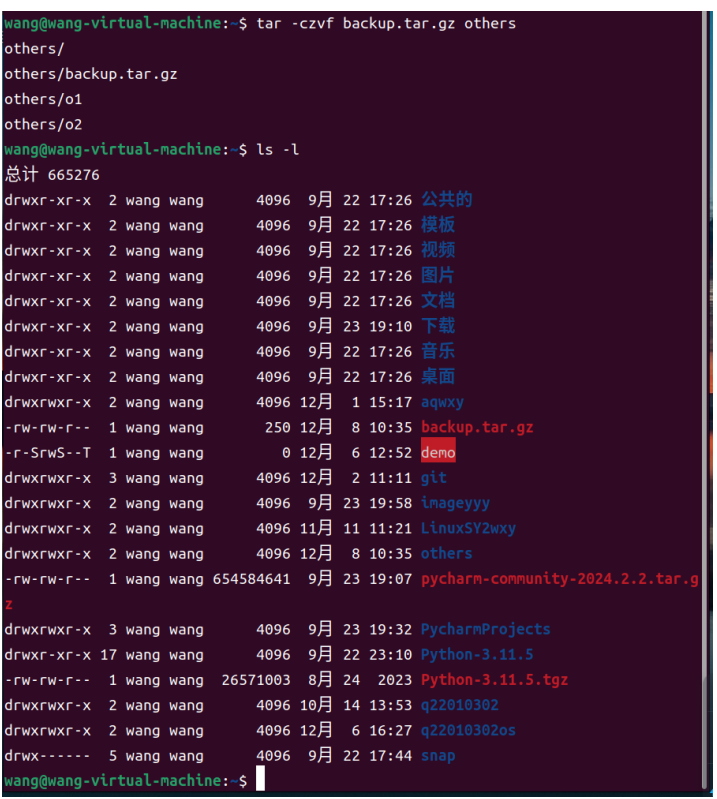
```
$ grep  '\.00$'  textfile
```

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
```

截图：

```
wang@wang-virtual-machine:~$ tar -czvf backup.tar.gz others
others/
others/backup.tar.gz
others/o1
others/o2
wang@wang-virtual-machine:~$ ls -l
总计 665276
drwxr-xr-x  2 wang wang       4096  9月 22 17:26 公共的
drwxr-xr-x  2 wang wang       4096  9月 22 17:26 模板
drwxr-xr-x  2 wang wang       4096  9月 22 17:26 视频
drwxr-xr-x  2 wang wang       4096  9月 22 17:26 图片
drwxr-xr-x  2 wang wang       4096  9月 22 17:26 文档
drwxr-xr-x  2 wang wang       4096  9月 23 19:10 下载
drwxr-xr-x  2 wang wang       4096  9月 22 17:26 音乐
drwxr-xr-x  2 wang wang       4096  9月 22 17:26 桌面
drwxrwxr-x  2 wang wang       4096 12月  1 15:17 aqwxy
-rw-rw-r--  1 wang wang        250 12月  8 10:35 backup.tar.gz
-r-SrwS--T  1 wang wang          0 12月  6 12:52 demo
drwxrwxr-x  3 wang wang       4096 12月  2 11:11 git
drwxrwxr-x  2 wang wang       4096  9月 23 19:58 imageyyy
drwxrwxr-x  2 wang wang       4096 11月 11 11:21 LinuxSY2wxy
drwxrwxr-x  2 wang wang       4096 12月  8 10:35 others
-rw-rw-r--  1 wang wang  654584641  9月 23 19:07 pycharm-community-2024.2.2.tar.g
z
drwxrwxr-x  3 wang wang       4096  9月 23 19:32 PycharmProjects
drwxr-xr-x 17 wang wang       4096  9月 22 23:10 Python-3.11.5
-rw-rw-r--  1 wang wang   26571003  8月 24  2023 Python-3.11.5.tgz
drwxrwxr-x  2 wang wang       4096 10月 14 13:53 q22010302
drwxrwxr-x  2 wang wang       4096 12月  6 16:27 q22010302os
drwx------  5 wang wang       4096  9月 22 17:44 snap
wang@wang-virtual-machine:~$
```

```
wang@wang-virtual-machine:~$ tar  -xzvf  backup.tar.gz
others/
others/backup.tar.gz
others/o1
others/o2
wang@wang-virtual-machine:~$ ls -l
总计 665276
drwxr-xr-x  2 wang wang      4096  9月 22 17:26 公共的
drwxr-xr-x  2 wang wang      4096  9月 22 17:26 模板
drwxr-xr-x  2 wang wang      4096  9月 22 17:26 视频
drwxr-xr-x  2 wang wang      4096  9月 22 17:26 图片
drwxr-xr-x  2 wang wang      4096  9月 22 17:26 文档
drwxr-xr-x  2 wang wang      4096  9月 23 19:10 下载
drwxr-xr-x  2 wang wang      4096  9月 22 17:26 音乐
drwxr-xr-x  2 wang wang      4096  9月 22 17:26 桌面
drwxrwxr-x  2 wang wang      4096 12月  1 15:17 aqwxy
-rw-rw-r--  1 wang wang       250 12月  8 10:35 backup.tar.gz
-r-SrwS--T  1 wang wang         0 12月  6 12:52 demo
drwxrwxr-x  3 wang wang      4096 12月  2 11:11 git
drwxrwxr-x  2 wang wang      4096  9月 23 19:58 imageyyy
drwxrwxr-x  2 wang wang      4096 11月 11 11:21 LinuxSY2wxy
drwxrwxr-x  2 wang wang      4096 12月  8 10:35 others
-rw-rw-r--  1 wang wang 654584641  9月 23 19:07 pycharm-community-2024.2.2.tar.g
z
drwxrwxr-x  3 wang wang      4096  9月 23 19:32 PycharmProjects
drwxr-xr-x 17 wang wang      4096  9月 22 23:10 Python-3.11.5
-rw-rw-r--  1 wang wang  26571003  8月 24  2023 Python-3.11.5.tgz
drwxrwxr-x  2 wang wang      4096 10月 14 13:53 q22010302
drwxrwxr-x  2 wang wang      4096 12月  6 16:27 q22010302os
drwx------  5 wang wang      4096  9月 22 17:44 snap
```

```
wang@wang-virtual-machine:~$ grep '^n' textfile
no, I study in njupt.
wang@wang-virtual-machine:~$ grep '\.00$' textfile
this line ends with .00
He is 15. It is 16.00
wang@wang-virtual-machine:~$ grep '5\..' textfile
He is 15. It is 16.00
```

```
wang@wang-virtual-machine:~$ grep '^[wy]' textfile
wy is the short of my name.
```