

## 1、目录操作

依次输入以下命令：

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

```
b23041310matao@b23041310matao-virtual-machine:~$ pwd  
/home/b23041310matao  
b23041310matao@b23041310matao-virtual-machine:~$ cd ~  
b23041310matao@b23041310matao-virtual-machine:~$ mkdir B23041310  
b23041310matao@b23041310matao-virtual-machine:~$ cd B23041310  
b23041310matao@b23041310matao-virtual-machine:~/B23041310$ mkdir matao  
b23041310matao@b23041310matao-virtual-machine:~/B23041310$ ls  
matao  
b23041310matao@b23041310matao-virtual-machine:~/B23041310$ rmdir matao  
b23041310matao@b23041310matao-virtual-machine:~/B23041310$ ls  
b23041310matao@b23041310matao-virtual-machine:~/B23041310$ █
```

## 2、文件操作

依次输入以下命令：

```
$cd ~  
$touch yourname.txt  
$ls  
$echo "hello world" > yourname.txt  
$cat yourname.txt  
$cp yourname.txt yourname2.txt  
$mv yourname.txt yourstudentid.txt  
$ls
```

```
b23041310matao@b23041310matao-virtual-machine:~/B23041310$ cd ~  
b23041310matao@b23041310matao-virtual-machine:~$ touch matao.txt  
b23041310matao@b23041310matao-virtual-machine:~$ ls  
B23041310 matao.txt 模板 图片 下载 桌面  
examples.desktop 公共的 视频 文档 音乐  
b23041310matao@b23041310matao-virtual-machine:~$ echo "hello world" > matao.txt  
b23041310matao@b23041310matao-virtual-machine:~$ cat matao.txt  
hello world  
b23041310matao@b23041310matao-virtual-machine:~$ cp matao.txt matao2.txt  
b23041310matao@b23041310matao-virtual-machine:~$ mv matao.txt B23041310.txt  
b23041310matao@b23041310matao-virtual-machine:~$ ls  
B23041310 examples.desktop 公共的 视频 文档 音乐  
B23041310.txt matao2.txt 模板 图片 下载 桌面  
b23041310matao@b23041310matao-virtual-machine:~$ █
```

## 3、用户管理

依次输入以下命令：

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

输入当前登录用户的密码（非 root 密码），然后输入：

```
b23041310matao@b23041310matao-virtual-machine:~$ whoami  
b23041310matao  
b23041310matao@b23041310matao-virtual-machine:~$ sudo su root  
[sudo] b23041310matao 的密码:  
root@b23041310matao-virtual-machine:/home/b23041310matao# groupadd student
```

按照提示创建用户，并将用户添加到学生组。切换到该用户。

```
root@b23041310matao-virtual-machine:/home/b23041310matao# groupadd student  
root@b23041310matao-virtual-machine:/home/b23041310matao# whoami  
root  
root@b23041310matao-virtual-machine:/home/b23041310matao# adduser B23041310  
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_REGEX。  
root@b23041310matao-virtual-machine:/home/b23041310matao# adduser --force B23041  
310  
允许使用可疑的用户名。  
正在添加用户"B23041310"...  
正在添加新组 "B23041310" (1002)...  
正在添加新用户 "B23041310" (1001) 到组 "B23041310" ...  
创建主目录 "/home/B23041310" ...  
正在从 "/etc/skel" 复制文件 ...  
输入新的 UNIX 密码：  
重新输入新的 UNIX 密码：  
passwd: 已成功更新密码  
正在改变 B23041310 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@b23041310matao-virtual-machine:/home/b23041310matao# usermod -g student B23  
041310  
root@b23041310matao-virtual-machine:/home/b23041310matao#
```

查看文件属性，包括所有者用户及其所属的用户组。

```
041510  
root@b23041310matao-virtual-machine:/home/b23041310matao# su B23041310  
B23041310@b23041310matao-virtual-machine:/home/b23041310matao$ cd ~  
B23041310@b23041310matao-virtual-machine:~$ touch matao.txt  
B23041310@b23041310matao-virtual-machine:~$ ls -l  
总用量 12  
-rwx-r--r-- 1 B23041310 student 8980 11月 21 10:24 examples.desktop  
-rwx-r--r-- 1 B23041310 student 0 11月 21 10:30 matao.txt  
B23041310@b23041310matao-virtual-machine:~$
```

## 4、权限管理

依次输入以下命令：

输入每行后，运行 ls -l demo 以查看结果。

```
B23041310@b23041310matao-virtual-machine:~$ touch demo
B23041310@b23041310matao-virtual-machine:~$ chmod 777 demo
B23041310@b23041310matao-virtual-machine:~$ ls -l demo
-rwxrwxrwx 1 B23041310 student 0 11月 21 10:31 demo
B23041310@b23041310matao-virtual-machine:~$ chmod a-x demo
B23041310@b23041310matao-virtual-machine:~$ ls -l demo
-rw-rw-rw- 1 B23041310 student 0 11月 21 10:31 demo
B23041310@b23041310matao-virtual-machine:~$ chmod go-w demo
B23041310@b23041310matao-virtual-machine:~$ ls -l demo
-rw-r--r-- 1 B23041310 student 0 11月 21 10:31 demo
B23041310@b23041310matao-virtual-machine:~$ chmod g+w demo
B23041310@b23041310matao-virtual-machine:~$ ls -l demo
-rw-rw-r-- 1 B23041310 student 0 11月 21 10:31 demo
B23041310@b23041310matao-virtual-machine:~$ chmod a= demo
B23041310@b23041310matao-virtual-machine:~$ ls -l demo
----- 1 B23041310 student 0 11月 21 10:31 demo
B23041310@b23041310matao-virtual-machine:~$ chmod t demo
B23041310@b23041310matao-virtual-machine:~$ ls -l demo
-----T 1 B23041310 student 0 11月 21 10:31 demo
B23041310@b23041310matao-virtual-machine:~$ chmod u+s demo
B23041310@b23041310matao-virtual-machine:~$ ls -l demo
---S---T 1 B23041310 student 0 11月 21 10:31 demo
B23041310@b23041310matao-virtual-machine:~$ chmod u+rx demo
B23041310@b23041310matao-virtual-machine:~$ ls -l demo
-r-s----T 1 B23041310 student 0 11月 21 10:31 demo
B23041310@b23041310matao-virtual-machine:~$ chmod g+rws demo
B23041310@b23041310matao-virtual-machine:~$ ls -l demo
-r-srwS--T 1 B23041310 student 0 11月 21 10:31 demo
B23041310@b23041310matao-virtual-machine:~$ █
```

## 5、其他管理

在用户主目录下创建名为“others”的文件夹，进入该文件夹后，创建两个任意命名的文件。随后依次执行以下命令，观察过程中的变化。

```
B23041310@b23041310matao-virtual-machine:~$ 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
B23041310@b23041310matao-virtual-machine:~$ mkdir others
B23041310@b23041310matao-virtual-machine:~$ cd others
B23041310@b23041310matao-virtual-machine:~/others$ touch file1.txt file2.doc
B23041310@b23041310matao-virtual-machine:~/others$ cd ~
B23041310@b23041310matao-virtual-machine:~$ tar -czvf backup.tar.gz others
others/
others/file1.txt
others/file2.doc
B23041310@b23041310matao-virtual-machine:~$ ls -l
总用量 20
-rw-r--r-- 1 B23041310 student 168 11月 21 10:45 backup.tar.gz
-rw-rwS--T 1 B23041310 student 0 11月 21 10:31 demo
-rw-r--r-- 1 B23041310 student 8980 11月 21 10:24 examples.desktop
-rw-r--r-- 1 B23041310 student 0 11月 21 10:30 matao.txt
drwxr-xr-x 2 B23041310 student 4096 11月 21 10:44 others
B23041310@b23041310matao-virtual-machine:~$ tar -xzvf backup.tar.gz
others/
others/file1.txt
others/file2.doc
B23041310@b23041310matao-virtual-machine:~$ ls -l
总用量 20
-rw-r--r-- 1 B23041310 student 168 11月 21 10:45 backup.tar.gz
-rw-rwS--T 1 B23041310 student 0 11月 21 10:31 demo
-rw-r--r-- 1 B23041310 student 8980 11月 21 10:24 examples.desktop
-rw-r--r-- 1 B23041310 student 0 11月 21 10:30 matao.txt
drwxr-xr-x 2 B23041310 student 4096 11月 21 10:44 others
B23041310@b23041310matao-virtual-machine:~$ █
```

创建一个文本文件，并按以下方式设置

```
B23041310@b23041310matao-virtual-machine:~$ touch textfile
B23041310@b23041310matao-virtual-machine:~$ nano textfile
B23041310@b23041310matao-virtual-machine:~$ █
```

```
GNU nano 2.9.3                               textfile                                已更改
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.

^G 求助      ^O 写入      ^W 搜索      ^K 剪切文字      ^J 对齐      ^C 游标位置
^X 离开      ^R 读档      ^\ 替换      ^U 还原剪切      ^T 拼写检查      ^^ 跳行
```

在文件 textfile 中搜索所有以字符 “n” 开头的行

```
B23041310@b23041310matao-virtual-machine:~$ grep '^n' textfile
no, I study in njupt.
```

在文本文件中搜索所有以 “.00” 结尾的行

```
B23041310@b23041310matao-virtual-machine:~$ grep '\.00$' textfile
this line ends with .00
He is 15. It is 16.00
```

在文本文件中搜索所有包含数字 5、后跟字符 “、” 以及任意字符的行

```
B23041310@b23041310matao-virtual-machine:~$ grep '5\.+' textfile
He is 15. It is 16.00
```

在文件 textfile 中搜索所有以字符 “w” 和 “y” 开头的行

```
B23041310@b23041310matao-virtual-machine:~$ grep '^[wy]' textfile
wy is the short of my name.
```