

河南工业大学 操作系统原理 实验报告

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实验1 Linux 系统基本操作命令

1. 实验内容

- (1) 用vi编辑器建立一个文件, 用文件操作命令对该文件进行操作;
- (2) 使用目录操作命令进行创建目录、改变当前目录、删除目录、查看当前所在目录等操作;
- (3) 使用进程操作命令查看系统中的进程状态, 杀死进程等;
- (4) 使用man命令了解各个命令的使用方法及参数。

2. 实验要求

1. 将各个命令行使用规格写入实验报告;
2. 将各命令操作过程及结果写入实验报告。

3. 实验步骤

- (1) 这里我使用Vim而不是vi, 在终端中键入vim以启动:

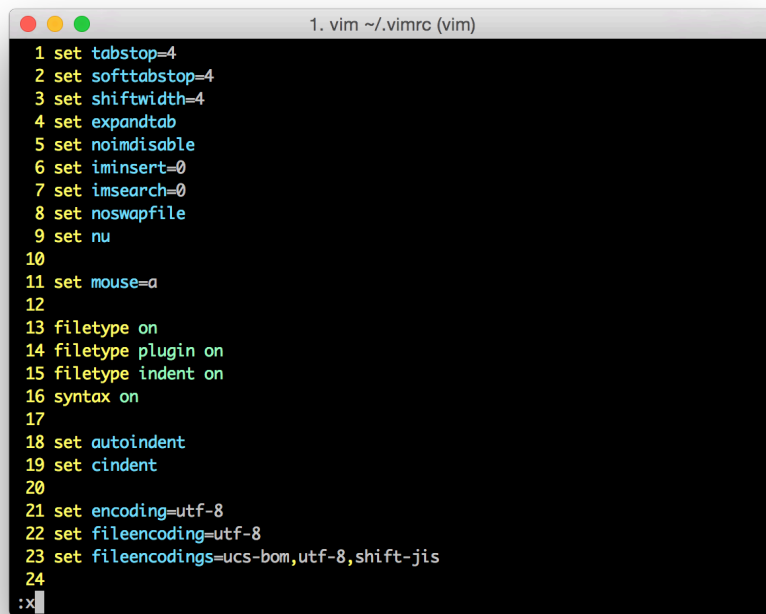
```
$ vim ~/.vimrc
```

如图1, 这里编辑的是Vim的配置文件。

关于Vim的用法, vimtutor教程是个不错的入门手册, 进阶也可参考Vim自带的文档(有中文版), 剩下的就是熟能生巧了。

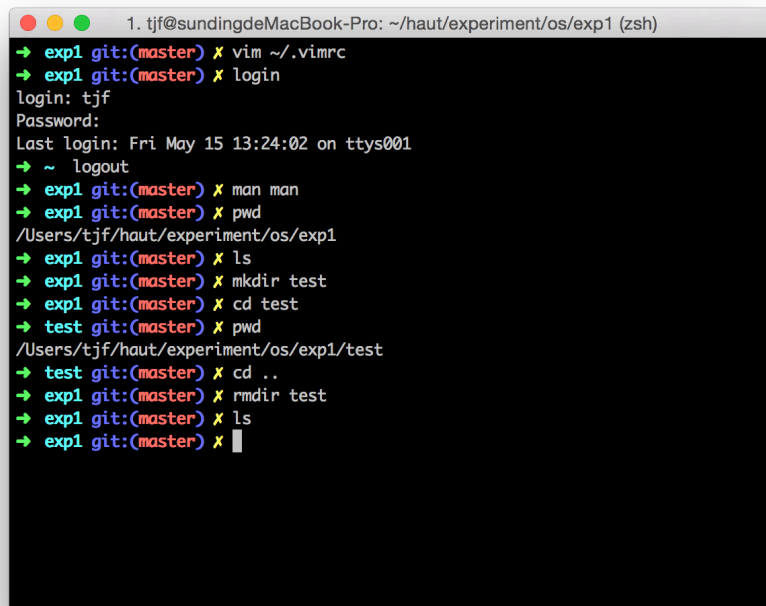
- (2) 如图2, 使用如下命令建立、进入、删除了一个名为test的目录:

```
$ ls
$ mkdir test
$ cd test
$ cd ..
$ rmdir test
$ ls
```



```
1. vim ~/.vimrc (vim)
1 set tabstop=4
2 set softtabstop=4
3 set shiftwidth=4
4 set expandtab
5 set noimdisable
6 set iminsert=0
7 set imsearch=0
8 set noswapfile
9 set nu
10
11 set mouse=a
12
13 filetype on
14 filetype plugin on
15 filetype indent on
16 syntax on
17
18 set autoindent
19 set cindent
20
21 set encoding=utf-8
22 set fileencoding=utf-8
23 set fileencodings=ucs-bom,utf-8,shift-jis
24
:~
```

图 1: Vim编辑器



```
1. tjf@sundingdeMacBook-Pro: ~/haut/experiment/os/exp1 (zsh)
→ exp1 git:(master) X vim ~/.vimrc
→ exp1 git:(master) X login
login: tjf
Password:
Last login: Fri May 15 13:24:02 on ttys001
→ ~ logout
→ exp1 git:(master) X man man
→ exp1 git:(master) X pwd
/Users/tjf/haut/experiment/os/exp1
→ exp1 git:(master) X ls
→ exp1 git:(master) X mkdir test
→ exp1 git:(master) X cd test
→ test git:(master) X pwd
/Users/tjf/haut/experiment/os/exp1/test
→ test git:(master) X cd ..
→ exp1 git:(master) X rmdir test
→ exp1 git:(master) X ls
→ exp1 git:(master) X
```

图 2: 目录操作

```
1. tjf@sundingdeMacBook-Pro: ~/haut/experiment/os/exp1 (zsh)
0 96276 1 4004 0 31 0 2460796 3028 - Ss
0 ?? 0:00.12 /usr/sbin/ocspd
0 96290 1 4004 0 31 0 2496648 3772 - Ss
0 ?? 0:00.04 /usr/libexec/neh
502 96319 1 84004 0 4 0 2500976 7764 - S
0 ?? 0:00.09 /System/Library/
0 90492 88515 4106 0 31 0 2469572 1708 - Us
0 ttys000 0:00.35 login -fp tjf
502 90494 90492 4006 0 31 0 2461668 3808 - S
0 ttys000 0:00.80 -zsh
0 96569 90494 4106 0 31 0 2432932 792 - R+
0 ttys000 0:00.00 ps -LA
→ expl git:(master) ✕ cat &
[1] 96582
[1] + 96582 suspended (tty input) cat
→ expl git:(master) ✕ ps
PID TTY TIME CMD
90494 ttys000 0:00.80 -zsh
96582 ttys000 0:00.00 cat
→ expl git:(master) ✕ kill 96582
[1] + 96582 terminated cat
→ expl git:(master) ✕ ps
PID TTY TIME CMD
90494 ttys000 0:00.81 -zsh
→ expl git:(master) ✕
```

图 3: 进程操作

```
1. man ps (sh)

PS(1) BSD General Commands Manual PS(1)

NAME
ps -- process status

SYNOPSIS
ps [-AaCcEefhjLMmrSTvwXx] [-O fmt | -o fmt] [-G gid[,gid...]]
  [-g grp[,grp...]] [-u uid[,uid...]] [-p pid[,pid...]]
  [-t tty[,tty...]] [-U user[,user...]]
ps [-L]

DESCRIPTION
The ps utility displays a header line, followed by lines containing
information about all of your processes that have controlling terminals.

A different set of processes can be selected for display by using any
combination of the -a, -G, -g, -p, -T, -t, -U, and -u options. If more
than one of these options are given, then ps will select all processes
which are matched by at least one of the given options.

For the processes which have been selected for display, ps will usually
display one line per process. The -M option may result in multiple out-
put lines (one line per thread) for some processes. By default all of
:
```

图 4: man 命令