

# Week1 Report

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实验课时段：周五5-6节

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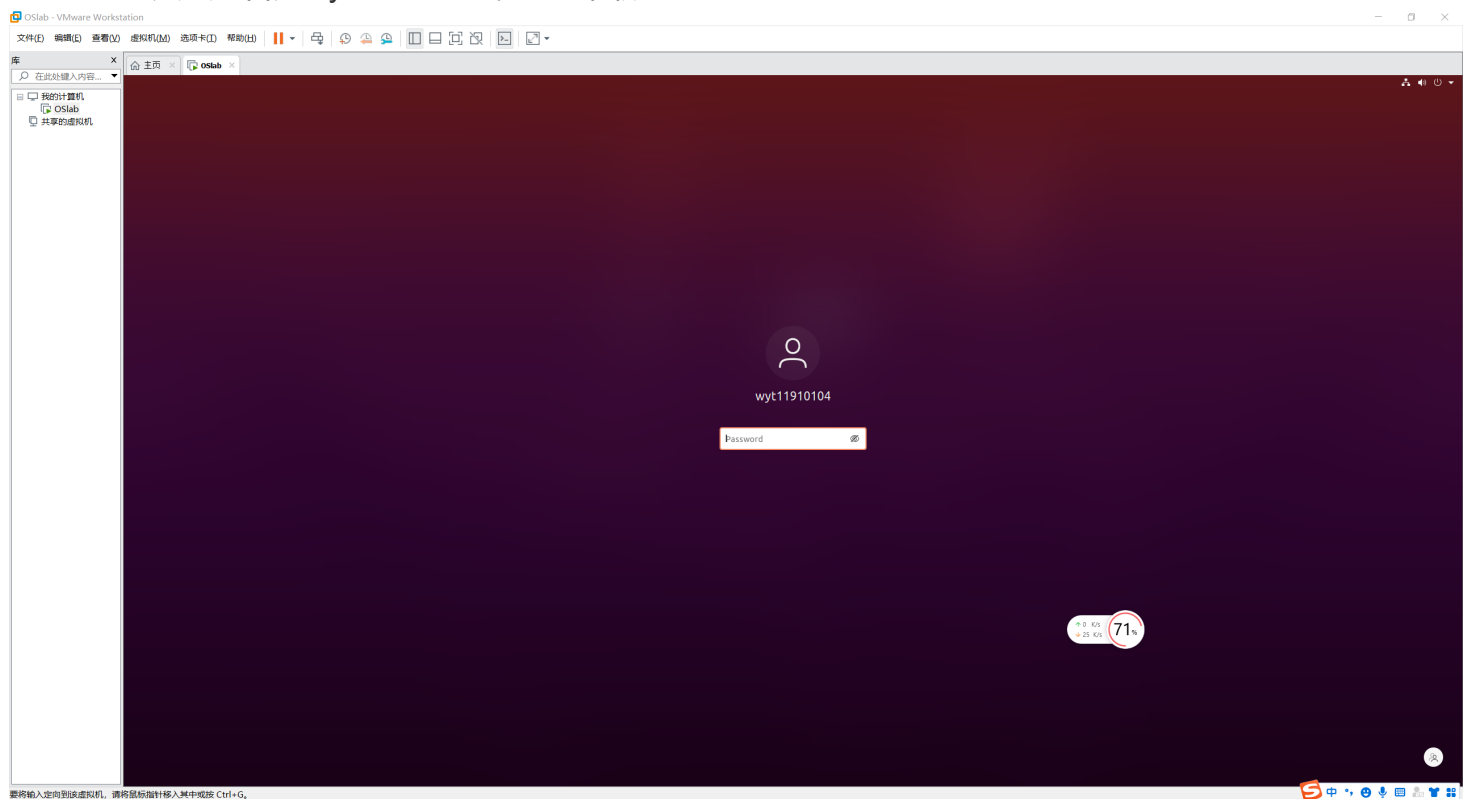
实验课SA:

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## Q1

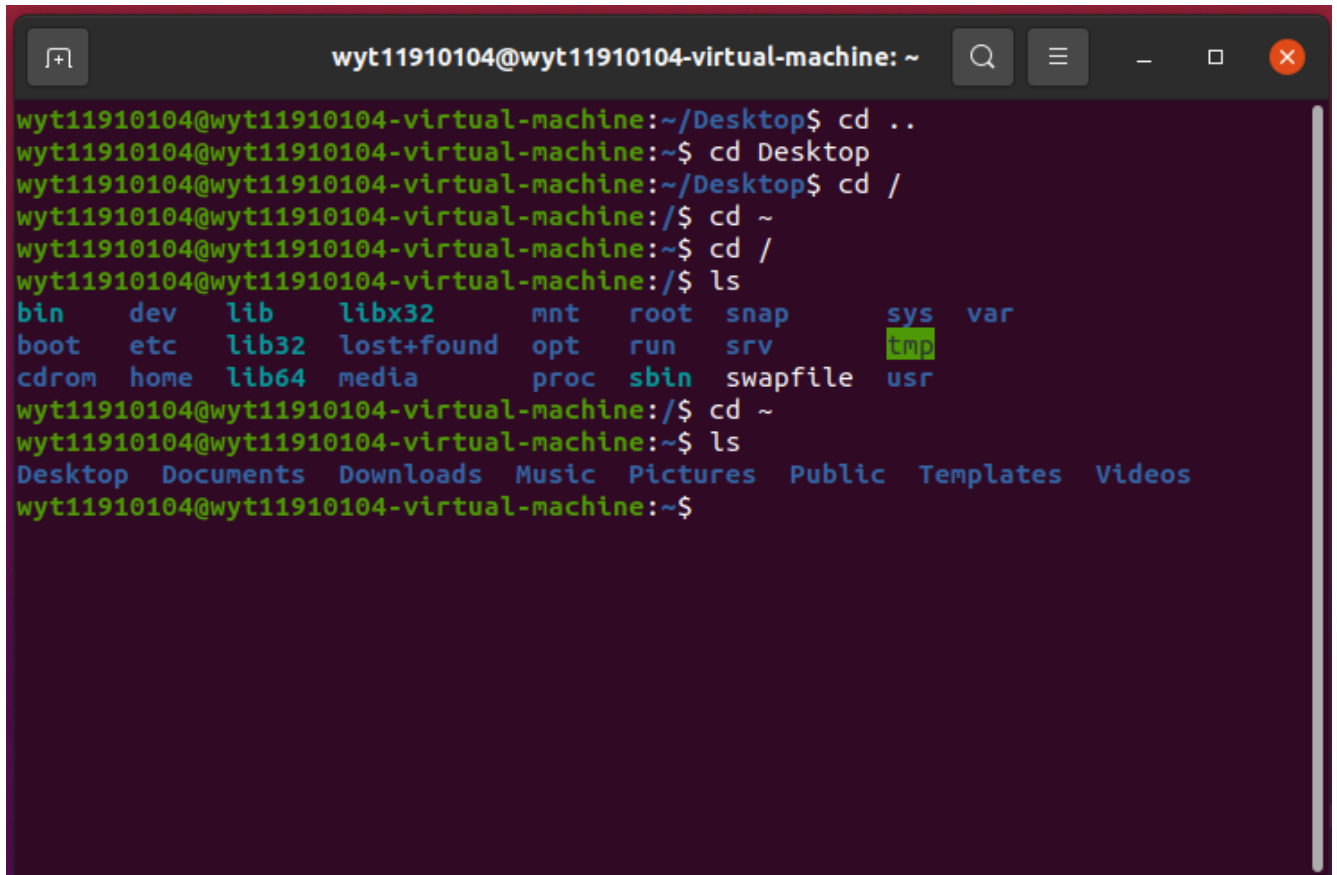
实验课环境要求ubuntu系统用户名包含学号。

Ubuntu系统用户名为wyt11910104，如下图所示



## Q2

- \$表示命令提示符，前面的文字表示当前工作路径。
- 更改terminal当前执行目录路径：使用cd命令
  - cd .. 表示跳转至上级目录
  - cd (path) 表示跳转至path所在位置的目录
  - cd / 表示跳转至系统根目录
  - cd ~ 表示跳转至当前用户目录

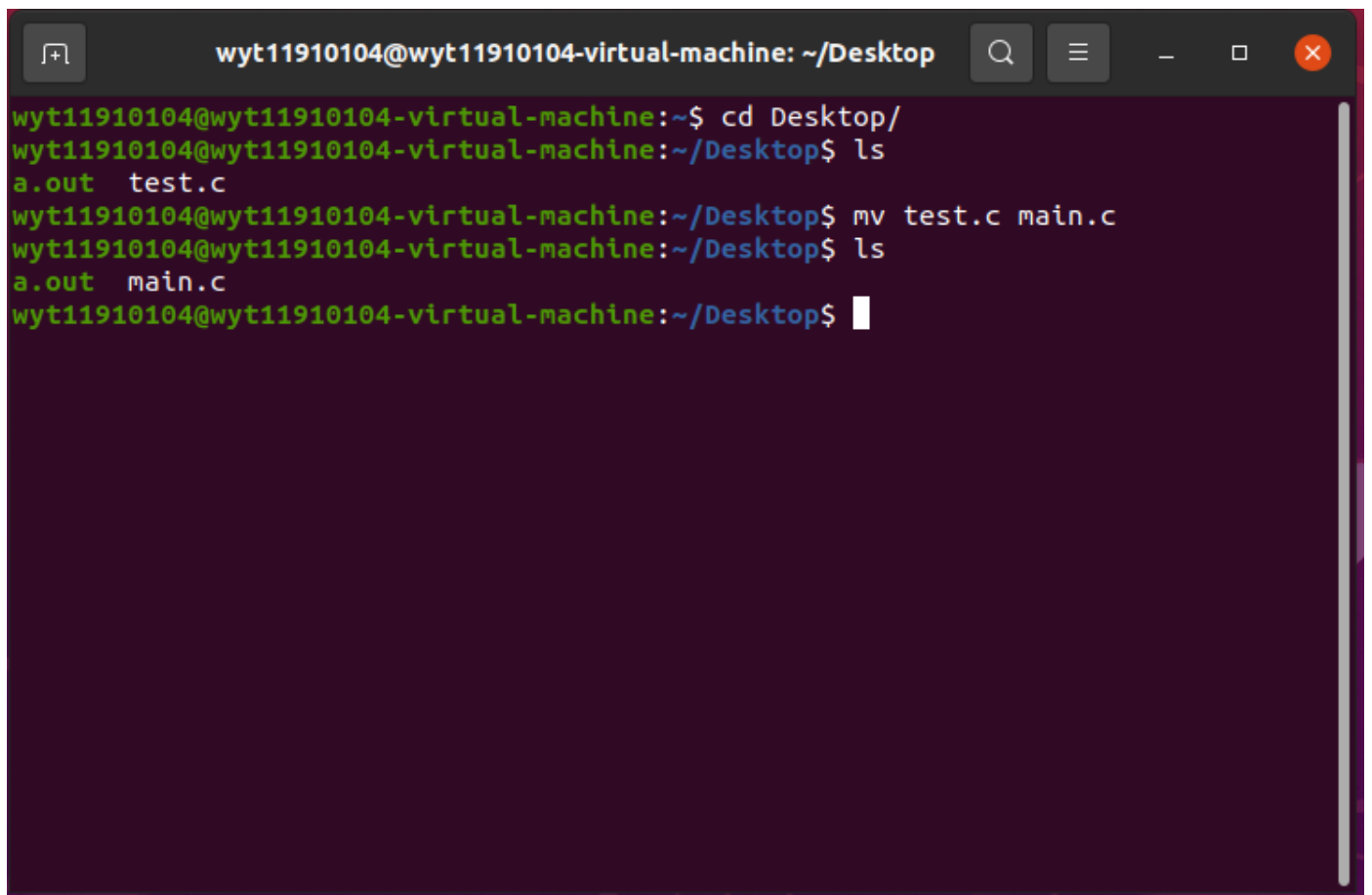


```
wyt11910104@wyt11910104-virtual-machine: ~  
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ cd ..  
wyt11910104@wyt11910104-virtual-machine:~$ cd Desktop  
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ cd /  
wyt11910104@wyt11910104-virtual-machine:/$ cd ~  
wyt11910104@wyt11910104-virtual-machine:~$ cd /  
wyt11910104@wyt11910104-virtual-machine:/$ ls  
bin      dev      lib      libx32   mnt      root     snap     sys      var  
boot     etc      lib32    lost+found  opt      run      srv      tmp  
cdrom    home     lib64    media     proc     sbin     swapfile  usr  
wyt11910104@wyt11910104-virtual-machine:/$ cd ~  
wyt11910104@wyt11910104-virtual-machine:~$ ls  
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos  
wyt11910104@wyt11910104-virtual-machine:~$
```

## Q3

通过terminal重命名文件的方法：

- 先使用cd命令寻求到对应路径
- 使用mv命令通过移动的方法来重命名，格式为"mv 原文件名 新文件名"，如下图所示

A terminal window with a dark background and light green text. The window title bar shows the user 'wyt11910104' and the host 'wyt11910104-virtual-machine' with the current directory '~/Desktop'. The terminal content shows a sequence of commands: 'cd Desktop/' to change to the desktop directory, 'ls' to list files (showing 'a.out' and 'test.c'), 'mv test.c main.c' to rename the file, and another 'ls' command (showing 'a.out' and 'main.c'). The prompt is currently at the end of the second 'ls' command.

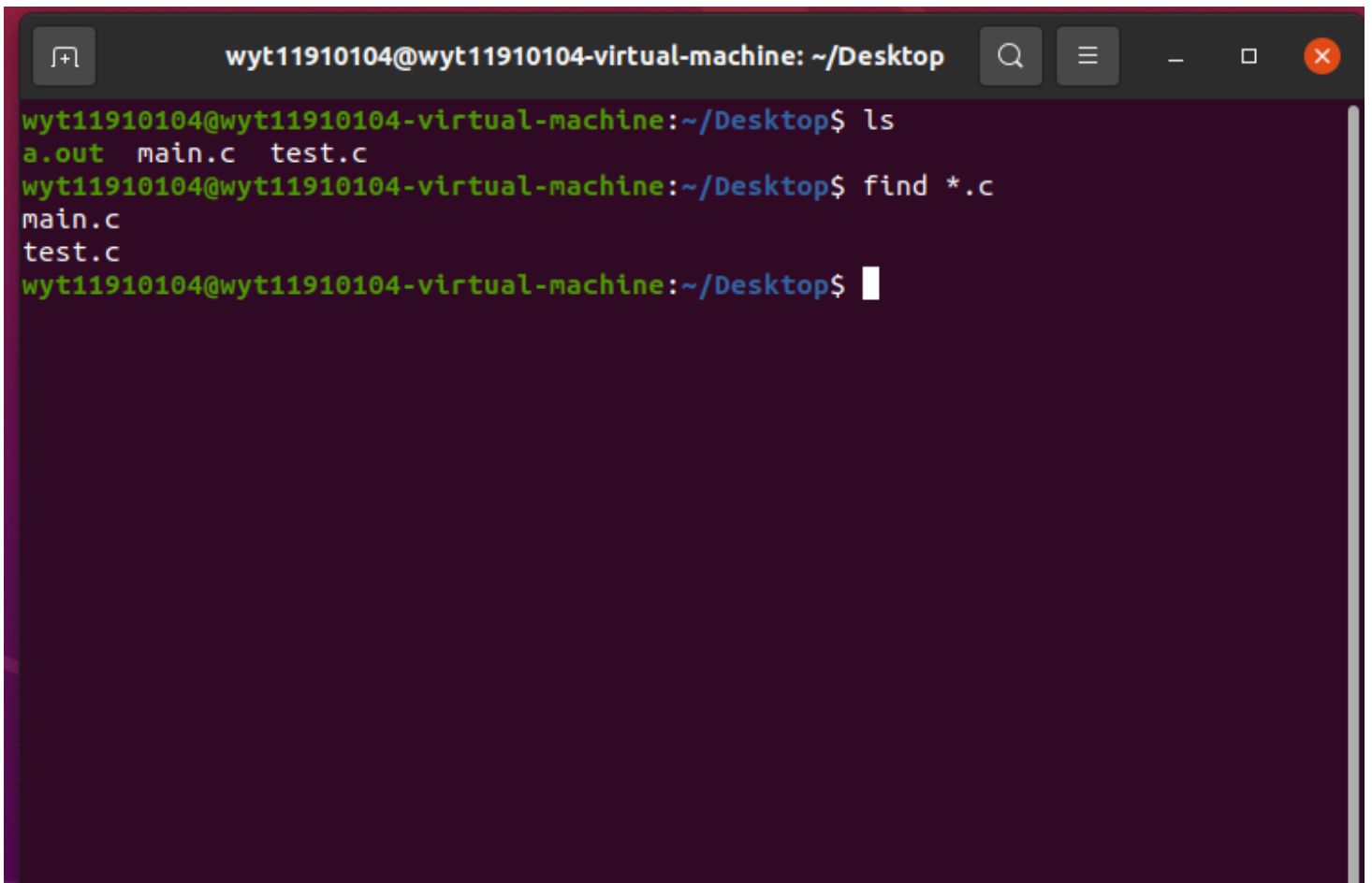
```
wyt11910104@wyt11910104-virtual-machine: ~/Desktop
wyt11910104@wyt11910104-virtual-machine:~$ cd Desktop/
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ls
a.out  test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ mv test.c main.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ls
a.out  main.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$
```

## Q4

搜索当前目录下所有.c文件的命令：

```
find *.c
```

如下图所示：

A terminal window with a dark background and light green text. The window title is 'wyt11910104@wyt11910104-virtual-machine: ~/Desktop'. The terminal shows the following commands and output:

```
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ls
a.out  main.c  test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ find *.c
main.c
test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$
```

## Q5

```
chmod 537 test.txt
```

考虑到537的三位二进制表示法：5 -> 101, 3 -> 011, 7 -> 111，即为r-x-wxrwX，这里表示当前目录下的test.txt文件的权限修改为：

- user：可读，不可写，可执行
- group：不可读，可写，可执行
- other：可读，可写，可执行

## Q6

- 死循环程序与PID，R+状态：

```
wyt11910104@wyt11910104-virtual-machine: ~/Desktop
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ls
a.out  main.c  test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ find *.c
main.c
test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ gcc main.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ./a.out
^X^X^Z
[1]+  Stopped                  ./a.out
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ fg 1
./a.out

```

```
wyt11910104@wyt11910104-virtual-machine: ~/Desktop
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ps -a -l
F S  UID      PID     PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
4 S  1000      2039    2033   0  80   0  - 74508 ep_pol tty2         00:00:18 Xorg
0 S  1000      2073    2033   0  80   0  - 49826 poll_s tty2         00:00:00 gnome-sess
0 R  1000      9869    9754  78  80   0  -   591 -      pts/0       00:05:29 a.out
0 R  1000     38987    9877   0  80   0  -   5013 -      pts/1       00:00:00 ps
wyt11910104@wyt11910104-virtual-machine:~/Desktop$

```

- 进入暂停状态指令：Ctrl+Z，此时a.out进程状态变为T

```
wyt11910104@wyt11910104-virtual-machine: ~/Desktop
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ls
a.out  main.c  test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ find *.c
main.c
test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ gcc main.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ./a.out
^X^X^Z
[1]+  Stopped                  ./a.out
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ fg 1
./a.out
^Z
[1]+  Stopped                  ./a.out
wyt11910104@wyt11910104-virtual-machine:~/Desktop$

wyt11910104@wyt11910104-virtual-machine: ~/Desktop
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ps -a -l
F S  UID      PID     PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
4 S   1000      2039    2033  0  80   0  - 74508 ep_pol tty2         00:00:18 Xorg
0 S   1000      2073    2033  0  80   0  - 49826 poll_s tty2         00:00:00 gnome-sess
0 R   1000      9869    9754 78  80   0  - 591 -      pts/0        00:05:29 a.out
0 R   1000     38987    9877  0  80   0  - 5013 -      pts/1        00:00:00 ps

wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ps -a -l
F S  UID      PID     PPID  C PRI  NI ADDR SZ WCHAN  TTY          TIME CMD
4 S   1000      2039    2033  0  80   0  - 74508 ep_pol tty2         00:00:19 Xorg
0 S   1000      2073    2033  0  80   0  - 49826 poll_s tty2         00:00:00 gnome-sess
0 T   1000      9869    9754 75  80   0  - 591 do_sig pts/0        00:05:51 a.out
0 S      0     40058    40041 0  80   0  - 654 -      pts/2        00:00:00 linux-imag
0 S      0     40059    40058 0  80   0  - 654 -      pts/2        00:00:00 sh
0 S      0     40060    40059 0  80   0  - 626 -      pts/2        00:00:00 run-parts
0 S      0     40110    40060 0  80   0  - 654 -      pts/2        00:00:00 initramfs-
0 S      0     40112    40110 0  80   0  - 654 -      pts/2        00:00:00 update-ini
0 S      0     40114    40112 0  80   0  - 719 -      pts/2        00:00:00 mkinitramf
1 S      0     40367    40114 0  80   0  - 719 -      pts/2        00:00:00 mkinitramf
0 R   1000     40378    9877  0  80   0  - 5013 -      pts/1        00:00:00 ps

wyt11910104@wyt11910104-virtual-machine:~/Desktop$
```

- 使用指令：fg 1，使得进程继续运行

```
wyt11910104@wyt11910104-virtual-machine: ~/Desktop
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ls
a.out  main.c  test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ find *.c
main.c
test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ gcc main.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ./a.out
^X^X^Z
[1]+  Stopped                  ./a.out
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ fg 1
./a.out
^Z
[1]+  Stopped                  ./a.out
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ fg 1
./a.out

18 Xorg
0 S 1000 2073 2033 0 80 0 - 49826 poll_s tty2 00:00:00 gnome-sess
0 R 1000 9869 9754 78 80 0 - 591 - pts/0 00:05:29 a.out
0 R 1000 38987 9877 0 80 0 - 5013 - pts/1 00:00:00 ps
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ps -a -l
F S UID PID PPID C PRI NI ADDR SZ WCHAN TTY TIME CMD
4 S 1000 2039 2033 0 80 0 - 74508 ep_pol tty2 00:00:19 Xorg
0 S 1000 2073 2033 0 80 0 - 49826 poll_s tty2 00:00:00 gnome-sess
0 T 1000 9869 9754 75 80 0 - 591 do_sig pts/0 00:05:51 a.out
0 S 0 40058 40041 0 80 0 - 654 - pts/2 00:00:00 linux-imag
0 S 0 40059 40058 0 80 0 - 654 - pts/2 00:00:00 sh
0 S 0 40060 40059 0 80 0 - 626 - pts/2 00:00:00 run-parts
0 S 0 40110 40060 0 80 0 - 654 - pts/2 00:00:00 initramfs-
0 S 0 40112 40110 0 80 0 - 654 - pts/2 00:00:00 update-ini
0 S 0 40114 40112 0 80 0 - 719 - pts/2 00:00:00 mkinitramf
1 S 0 40367 40114 0 80 0 - 719 - pts/2 00:00:00 mkinitramf
0 R 1000 40378 9877 0 80 0 - 5013 - pts/1 00:00:00 ps
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ps -a -l
F S UID PID PPID C PRI NI ADDR SZ WCHAN TTY TIME CMD
4 S 1000 2039 2033 0 80 0 - 74508 ep_pol tty2 00:00:20 Xorg
0 S 1000 2073 2033 0 80 0 - 49826 poll_s tty2 00:00:00 gnome-sess
0 R 1000 9869 9754 68 80 0 - 591 - pts/0 00:05:58 a.out
0 R 1000 49338 9877 0 80 0 - 5013 - pts/1 00:00:00 ps
wyt11910104@wyt11910104-virtual-machine:~/Desktop$
```

- 终止当前进程：Ctrl+C



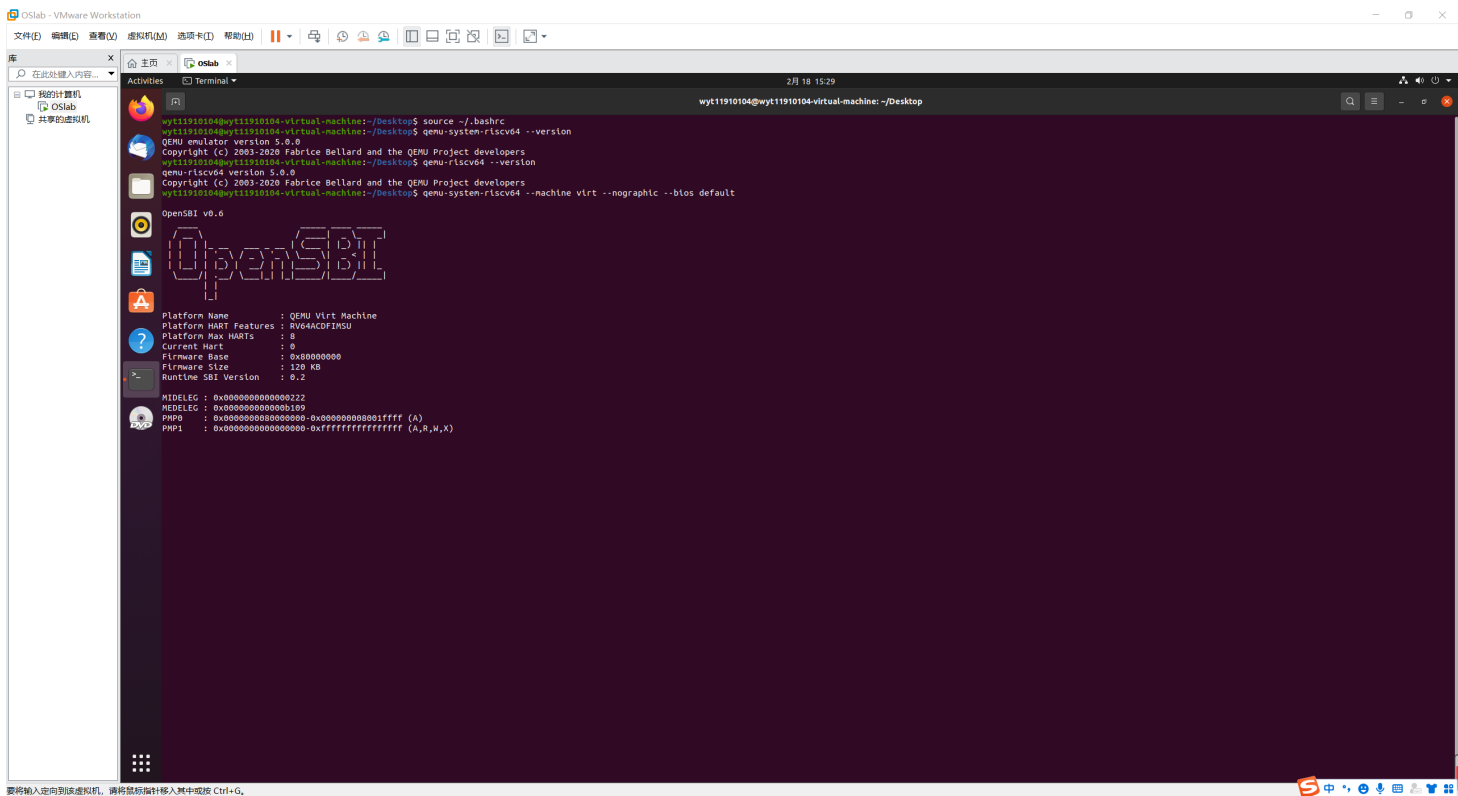
```
wyt11910104@wyt11910104-virtual-machine: ~/Desktop
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ls
a.out main.c test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ find *.c
main.c
test.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ gcc main.c
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ./a.out
^X^X^Z
[1]+  Stopped                  ./a.out
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ fg 1
./a.out
^Z
[1]+  Stopped                  ./a.out
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ fg 1
./a.out
^C
wyt11910104@wyt11910104-virtual-machine:~/Desktop$
```

```
wyt11910104@wyt11910104-virtual-machine: ~/Desktop
0 S 1000 2073 2033 0 80 0 - 49826 poll_s tty2 00:00:00 gnome-sess
0 T 1000 9869 9754 75 80 0 - 591 do_sig pts/0 00:05:51 a.out
0 S 0 40058 40041 0 80 0 - 654 - pts/2 00:00:00 linux-imag
0 S 0 40059 40058 0 80 0 - 654 - pts/2 00:00:00 sh
0 S 0 40060 40059 0 80 0 - 626 - pts/2 00:00:00 run-parts
0 S 0 40110 40060 0 80 0 - 654 - pts/2 00:00:00 initramfs-
0 S 0 40112 40110 0 80 0 - 654 - pts/2 00:00:00 update-ini
0 S 0 40114 40112 0 80 0 - 719 - pts/2 00:00:00 mkinitramf
1 S 0 40367 40114 0 80 0 - 719 - pts/2 00:00:00 mkinitramf
0 R 1000 40378 9877 0 80 0 - 5013 - pts/1 00:00:00 ps
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ps -a -l
F S UID PID PPID C PRI NI ADDR SZ WCHAN TTY TIME CMD
4 S 1000 2039 2033 0 80 0 - 74508 ep_pol tty2 00:00:20 Xorg
0 S 1000 2073 2033 0 80 0 - 49826 poll_s tty2 00:00:00 gnome-sess
0 R 1000 9869 9754 68 80 0 - 591 - pts/0 00:05:58 a.out
0 R 1000 49338 9877 0 80 0 - 5013 - pts/1 00:00:00 ps
wyt11910104@wyt11910104-virtual-machine:~/Desktop$ ps -a -l
F S UID PID PPID C PRI NI ADDR SZ WCHAN TTY TIME CMD
4 S 1000 2039 2033 0 80 0 - 74508 ep_pol tty2 00:00:20 Xorg
0 S 1000 2073 2033 0 80 0 - 49826 poll_s tty2 00:00:00 gnome-sess
0 S 0 51506 51361 0 80 0 - 654 - pts/2 00:00:00 man-db.pos
4 S 6 51507 51506 0 80 0 - 5120 - pts/2 00:00:00 mandb
0 R 1000 51541 9877 0 80 0 - 5013 - pts/1 00:00:00 ps
wyt11910104@wyt11910104-virtual-machine:~/Desktop$
```

## Q7

qemu成功运行的截图：

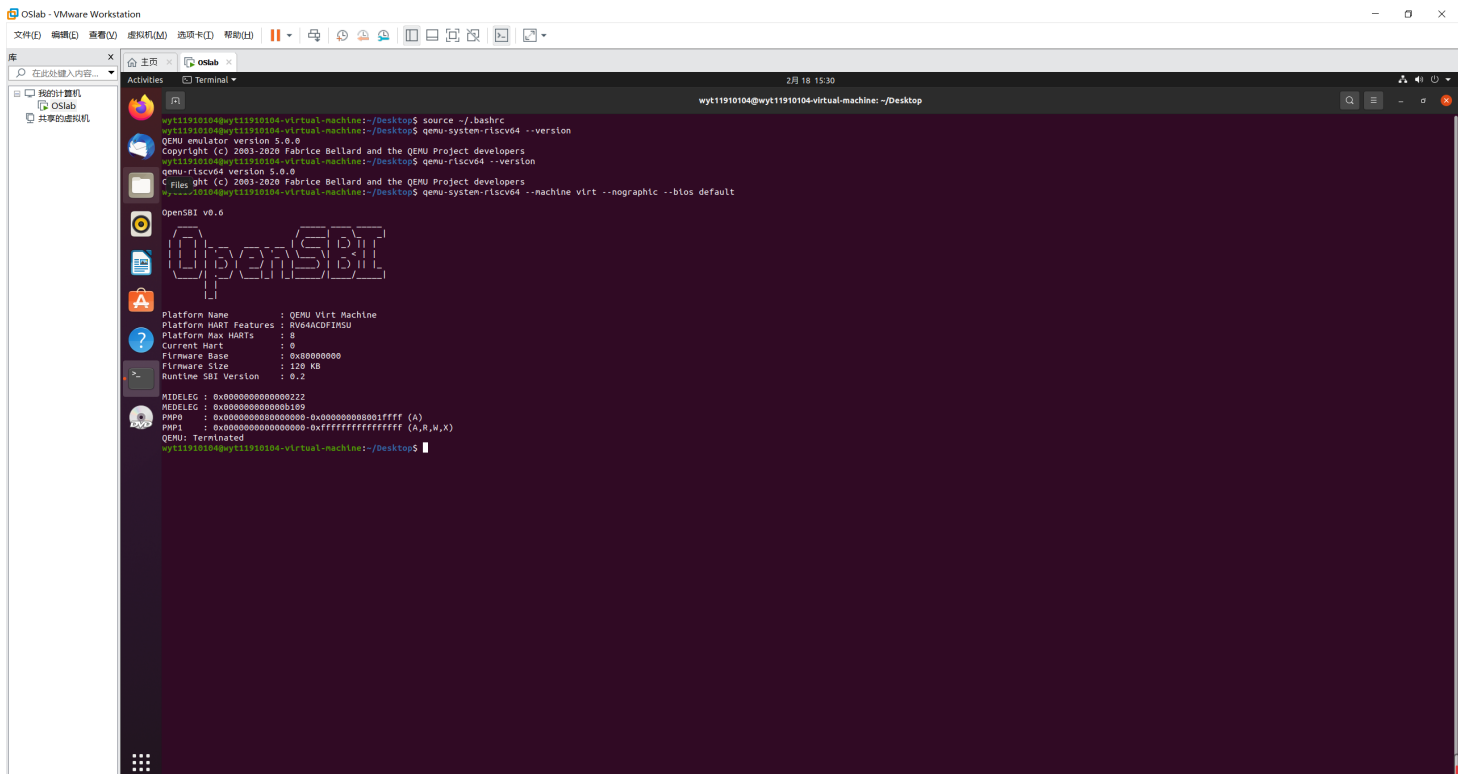




## Q8

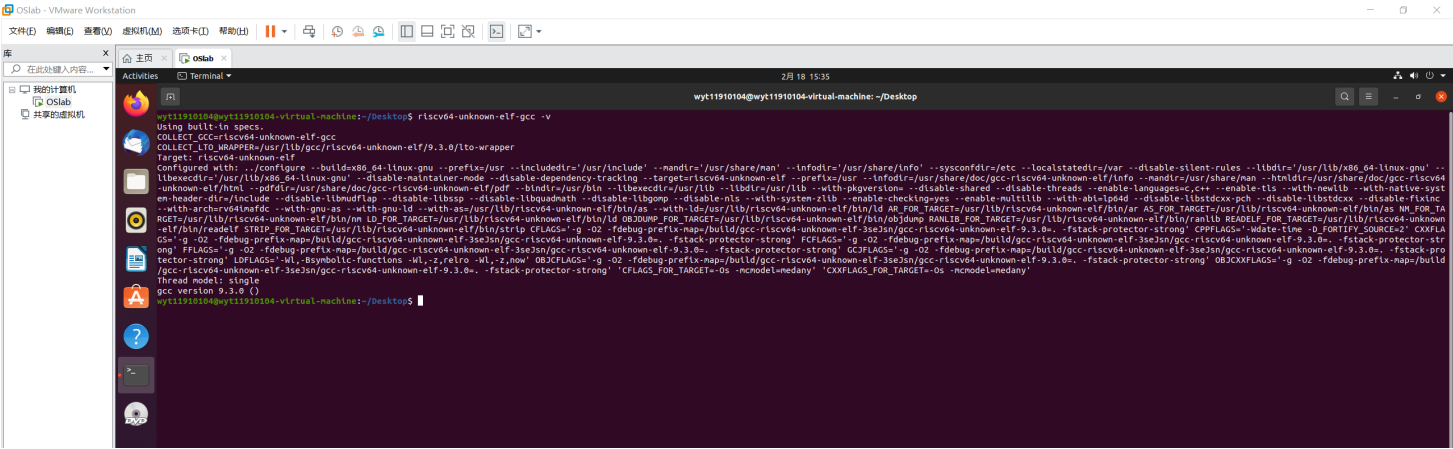
qemu的退出方法:

先按Ctrl+A, 然后按X退出



## Q9

截图安装成功的riscv-gcc编译器的版本号：9.3.0



Q10

实验课课堂报告需要以pdf文件格式提交。未按照该格式提交计0分（每个人有且仅有一次提交错误格式不扣分的机会）。

Instructions

按照实验文档完成练习，并完成课堂报告，请在报告中回答以下问题，请以pdf格式的文件提交报告。格式错误计0分（每个人有且仅有一次提交错误格式不扣分的机会）

Q11

- 本课程不允许抄袭行为。
- 如有该行为，被抄袭者与抄袭者一同受到处罚。
- 处罚：
  - 第一次抄袭，该项作业成绩为0分；第二次抄袭，该课程成绩为0分
  - 不能参加计算机系保研
  - 不能参加计算机系的各类评奖评优
  - 不能参与1+3进系