

OS lab1 report

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1. ubuntu 中 terminal 终端光标左侧 \$ 前面的文字是什么含义，如何更改 terminal 当前执行目录路径？

\$ 前面的文字是代表当前工作目录，即当前执行目录路径。

使用命令 `cd [path]` 能更改 terminal 当前执行目录路径（`cd ..` 回退到当前目录的上一层）

2. 如何通过 terminal 将文件重命名

使用命令 `mv [name1] [name2]` 将文件 `name1` 重命名为 `name2`（当 `name1` 和 `name2` 指定在同一目录下）。

3. 在当前文件夹查找所有.c文件可以使用哪个命令

`find *.c` 或者 `ls | grep .c`

4. "chmod 253 test.txt"命令是什么作用

设置文件 `test.txt` 的权限为：user 组不可读可写不可执行，group 组可读不可写可执行，other 组不可读可写可执行。

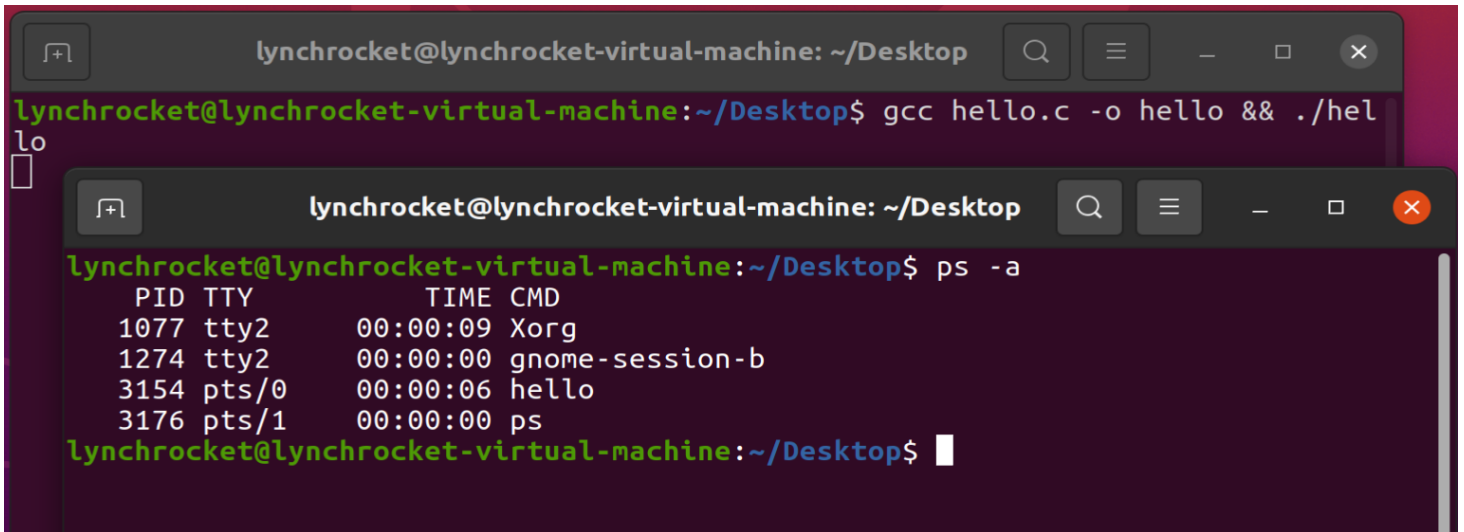
5. terminal中运行一个死循环c程序，截图它的pid号及R+状态，通过本次文档介绍的某条指令将其进入T(暂停)状态（截图），将其恢复运行（截图），再停止该进程（截图）

编写 `hello.c` 程序如下：

```
int main()
{
    while(1)
    {}

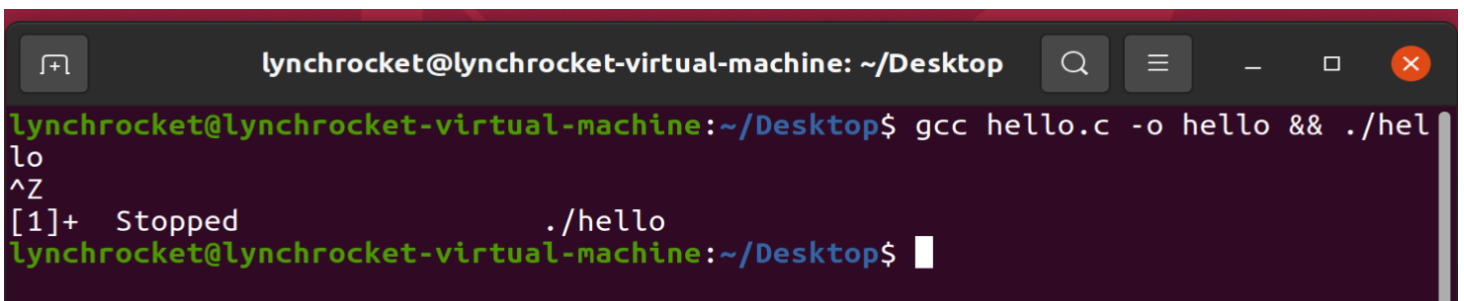
    return 0;
}
```

使用命令 `gcc hello.c -o hello && ./hello` 编译并运行。打开另一个命令窗口，输入命令 `ps -a` 查看 pid 号。



```
lynchrocket@lynchrocket-virtual-machine: ~/Desktop
lynchrocket@lynchrocket-virtual-machine:~/Desktop$ gcc hello.c -o hello && ./hel
lo
lynchrocket@lynchrocket-virtual-machine:~/Desktop$ ps -a
  PID TTY          TIME CMD
 1077 tty2      00:00:09 Xorg
 1274 tty2      00:00:00 gnome-session-b
 3154 pts/0      00:00:06 hello
 3176 pts/1      00:00:00 ps
lynchrocket@lynchrocket-virtual-machine:~/Desktop$
```

按 `ctrl+z` 暂停前台进程。可以看到进程的 job 号为 1。



```
lynchrocket@lynchrocket-virtual-machine: ~/Desktop
lynchrocket@lynchrocket-virtual-machine:~/Desktop$ gcc hello.c -o hello && ./hel
lo
^Z
[1]+  Stopped                  ./hello
lynchrocket@lynchrocket-virtual-machine:~/Desktop$
```

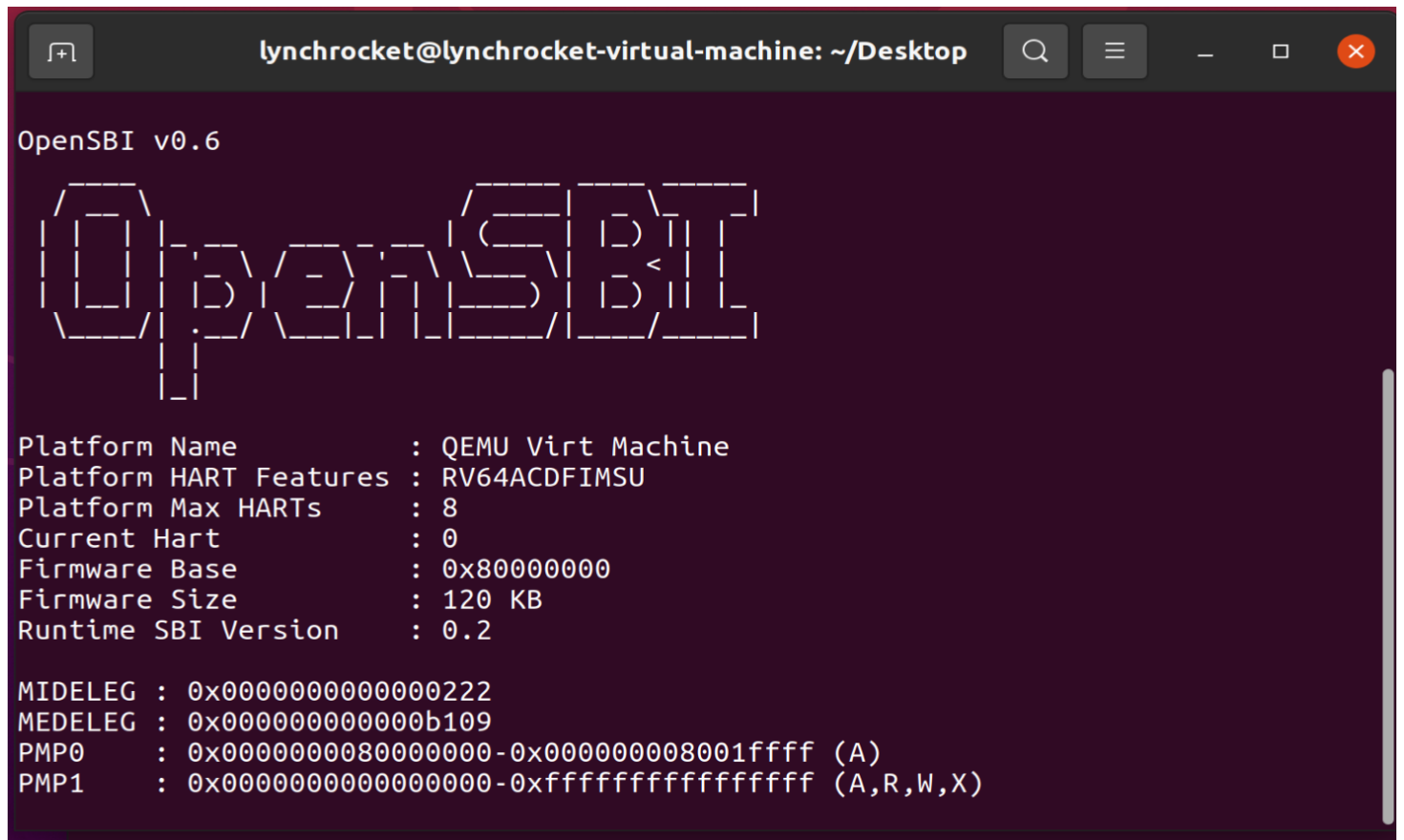
然后用命令 `ps -l` 查看进程状态。输入命令 `fg 1` 恢复运行。

```
lynchrocket@lynchrocket-virtual-machine: ~/Desktop
lynchrocket@lynchrocket-virtual-machine:~/Desktop$ gcc hello.c -o hello && ./hel
lo
^Z
[1]+  Stopped                  ./hello
lynchrocket@lynchrocket-virtual-machine:~/Desktop$ ps -l
F S    UID      PID      PPID    C  PRI   NI  ADDR  SZ  WCHAN  TTY          TIME CMD
0 S    1000      3136      3128    0   80    0   -    3490 do_wai pts/0        00:00:00 bash
0 T    1000      3154      3136   43   80    0   -     591 do_sig pts/0        00:00:54 hello
0 R    1000      3185      3136    0   80    0   -    3622 -      pts/0        00:00:00 ps
lynchrocket@lynchrocket-virtual-machine:~/Desktop$ fg 1
./hello
```

然后按 `ctrl+c` 停止该进程。

```
lynchrocket@lynchrocket-virtual-machine: ~/Desktop
lynchrocket@lynchrocket-virtual-machine:~/Desktop$ gcc hello.c -o hello && ./hel
lo
^Z
[1]+  Stopped                  ./hello
lynchrocket@lynchrocket-virtual-machine:~/Desktop$ ps -l
F S    UID      PID      PPID    C  PRI   NI  ADDR  SZ  WCHAN  TTY          TIME CMD
0 S    1000      3136      3128    0   80    0   -    3490 do_wai pts/0        00:00:00 bash
0 T    1000      3154      3136   43   80    0   -     591 do_sig pts/0        00:00:54 hello
0 R    1000      3185      3136    0   80    0   -    3622 -      pts/0        00:00:00 ps
lynchrocket@lynchrocket-virtual-machine:~/Desktop$ fg 1
./hello
^C
lynchrocket@lynchrocket-virtual-machine:~/Desktop$
```

6. 截图运行成功的qemu

A screenshot of a terminal window titled 'lynchrocket@lynchrocket-virtual-machine: ~/Desktop'. The terminal displays the OpenSBI v0.6 boot sequence. It starts with 'OpenSBI v0.6' and a large 'OpenSBI' logo made of dashed lines. Below the logo, it lists system information: Platform Name (QEMU Virt Machine), Platform HART Features (RV64ACDFIMSU), Platform Max HARTs (8), Current Hart (0), Firmware Base (0x80000000), Firmware Size (120 KB), and Runtime SBI Version (0.2). Further down, it shows memory regions: MIDELEG (0x00000000000000222), MEDELEG (0x0000000000000b109), PMP0 (0x0000000080000000-0x000000008001ffff (A)), and PMP1 (0x0000000000000000-0xffffffffffffffff (A,R,W,X)).

```
lynchrocket@lynchrocket-virtual-machine: ~/Desktop

OpenSBI v0.6

OpenSBI

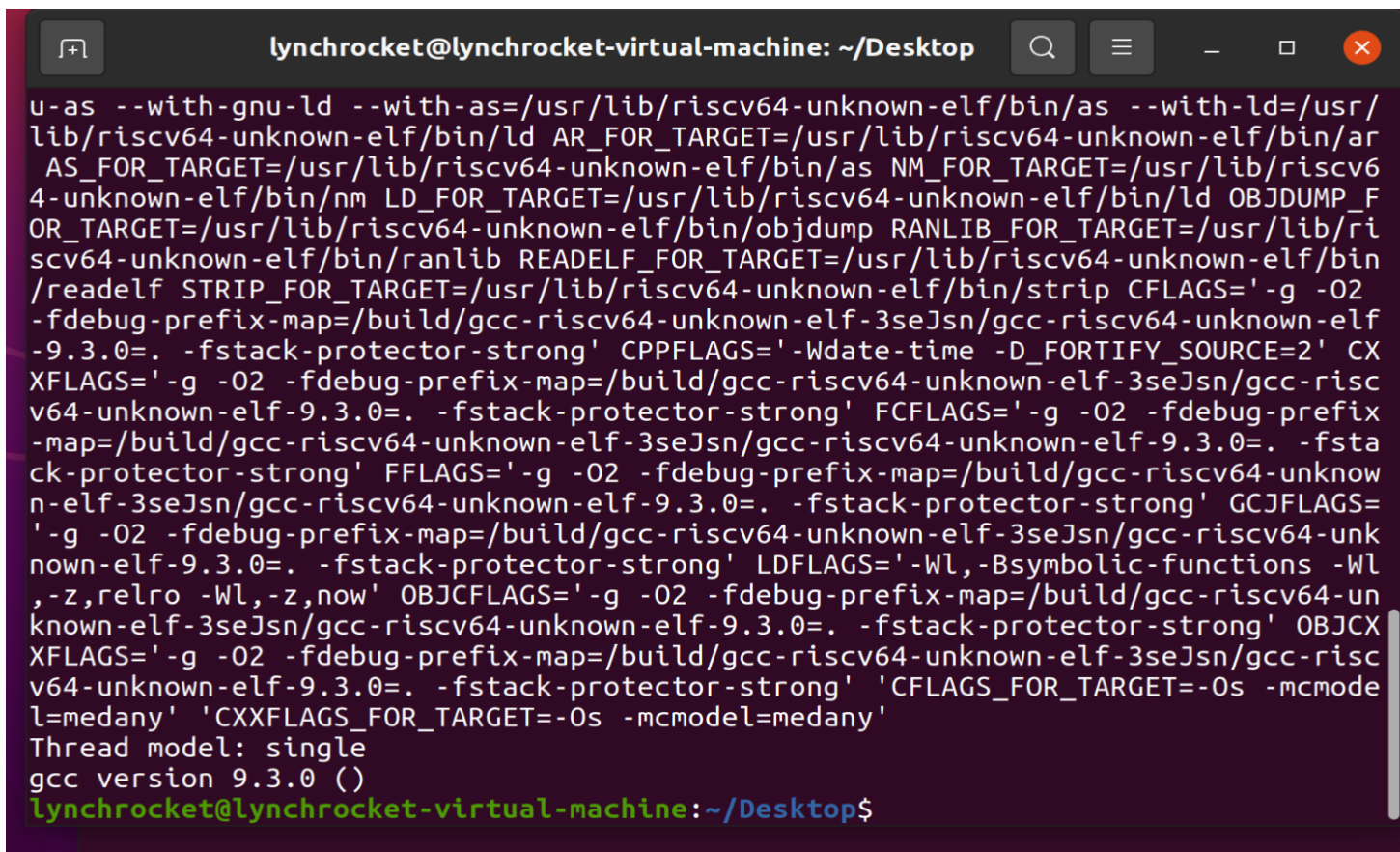
Platform Name       : QEMU Virt Machine
Platform HART Features : RV64ACDFIMSU
Platform Max HARTs   : 8
Current Hart        : 0
Firmware Base       : 0x80000000
Firmware Size       : 120 KB
Runtime SBI Version  : 0.2

MIDELEG : 0x00000000000000222
MEDELEG : 0x0000000000000b109
PMP0    : 0x0000000080000000-0x000000008001ffff (A)
PMP1    : 0x0000000000000000-0xffffffffffffffff (A,R,W,X)
```

7. 通过什么方式可以退出qemu

按 ctrl+a 然后按 x

8. 截图安装成功的riscv-gcc编译器的版本号



```
lynchrocket@lynchrocket-virtual-machine: ~/Desktop
u-as --with-gnu-ld --with-as=/usr/lib/riscv64-unknown-elf/bin/as --with-ld=/usr/
lib/riscv64-unknown-elf/bin/ld AR_FOR_TARGET=/usr/lib/riscv64-unknown-elf/bin/ar
AS_FOR_TARGET=/usr/lib/riscv64-unknown-elf/bin/as NM_FOR_TARGET=/usr/lib/riscv6
4-unknown-elf/bin/nm LD_FOR_TARGET=/usr/lib/riscv64-unknown-elf/bin/ld OBJDUMP_F
OR_TARGET=/usr/lib/riscv64-unknown-elf/bin/objdump RANLIB_FOR_TARGET=/usr/lib/ri
scv64-unknown-elf/bin/ranlib READELF_FOR_TARGET=/usr/lib/riscv64-unknown-elf/bi
n/readelf STRIP_FOR_TARGET=/usr/lib/riscv64-unknown-elf/bin/strip CFLAGS='-g -O2
-fdebug-prefix-map=/build/gcc-riscv64-unknown-elf-3seJsn/gcc-riscv64-unknown-elf
-9.3.0=. -fstack-protector-strong' CPPFLAGS='-Wdate-time -D_FORTIFY_SOURCE=2' CX
XFLAGS='-g -O2 -fdebug-prefix-map=/build/gcc-riscv64-unknown-elf-3seJsn/gcc-risc
v64-unknown-elf-9.3.0=. -fstack-protector-strong' FCFLAGS='-g -O2 -fdebug-prefix
-map=/build/gcc-riscv64-unknown-elf-3seJsn/gcc-riscv64-unknown-elf-9.3.0=. -fsta
ck-protector-strong' FFLAGS='-g -O2 -fdebug-prefix-map=/build/gcc-riscv64-unknow
n-elf-3seJsn/gcc-riscv64-unknown-elf-9.3.0=. -fstack-protector-strong' GCJFLAGS=
'-g -O2 -fdebug-prefix-map=/build/gcc-riscv64-unknown-elf-3seJsn/gcc-riscv64-unk
nown-elf-9.3.0=. -fstack-protector-strong' LDFLAGS='-Wl,-Bsymbolic-functions -Wl
,-z,relro -Wl,-z,now' OBJCFLAGS='-g -O2 -fdebug-prefix-map=/build/gcc-riscv64-un
known-elf-3seJsn/gcc-riscv64-unknown-elf-9.3.0=. -fstack-protector-strong' OBJCX
XFLAGS='-g -O2 -fdebug-prefix-map=/build/gcc-riscv64-unknown-elf-3seJsn/gcc-risc
v64-unknown-elf-9.3.0=. -fstack-protector-strong' CFLAGS_FOR_TARGET=-Os -mcmode
l=medany CXXFLAGS_FOR_TARGET=-Os -mcmodel=medany
Thread model: single
gcc version 9.3.0 ()
lynchrocket@lynchrocket-virtual-machine:~/Desktop$
```

9. 实验课课堂报告需要以什么文件格式提交？如未按照该格式提交会有什么后果？

以 pdf 的格式提交。格式错误得 0 分。

10. 本课程是否允许抄袭或作弊行为？如有该行为被抄袭者与抄袭者是否均会受到处罚？会受到什么样的处罚？

不允许抄袭或作弊行为。被抄袭者与抄袭者均会受到处罚。第一次本次作业计0分，第二次课程计0分，不能参与保研以及计系助教。