

# Lab #4

陈威宇

2000013052

## Part1

见图 1.

```
(base) cwy@ubuntu:~/gem5$ build/ARM/gem5.opt configs/example/se.py -c tests/test-progs/hello/bin/arm/linux/hello
gem5 Simulator System.  https://www.gem5.org
gem5 is copyrighted software; use the --copyright option for details.

gem5 version 22.0.0.2
gem5 compiled Nov 12 2022 02:17:33
gem5 started Nov 12 2022 04:52:42
gem5 executing on ubuntu, pid 14200
command line: build/ARM/gem5.opt configs/example/se.py -c tests/test-progs/hello/bin/arm/linux/hello

Global frequency set at 1000000000000 ticks per second
warn: No dot file generated. Please install pydot to generate the dot file and pdf.
build/ARM/mem/dram_interface.cc:690: warn: DRAM device capacity (8192 Mbytes) does not match the address range assigned (512 Mbytes)
0: system.remote_gdb: listening for remote gdb on port 7000
**** REAL SIMULATION ****
build/ARM/sim/simulate.cc:194: info: Entering event queue @ 0. Starting simulation...
Hello world!
Exiting @ tick 2916500 because exiting with last active thread context
Simulated exit code not 0! Exit code is 13
```

图 1: Part1

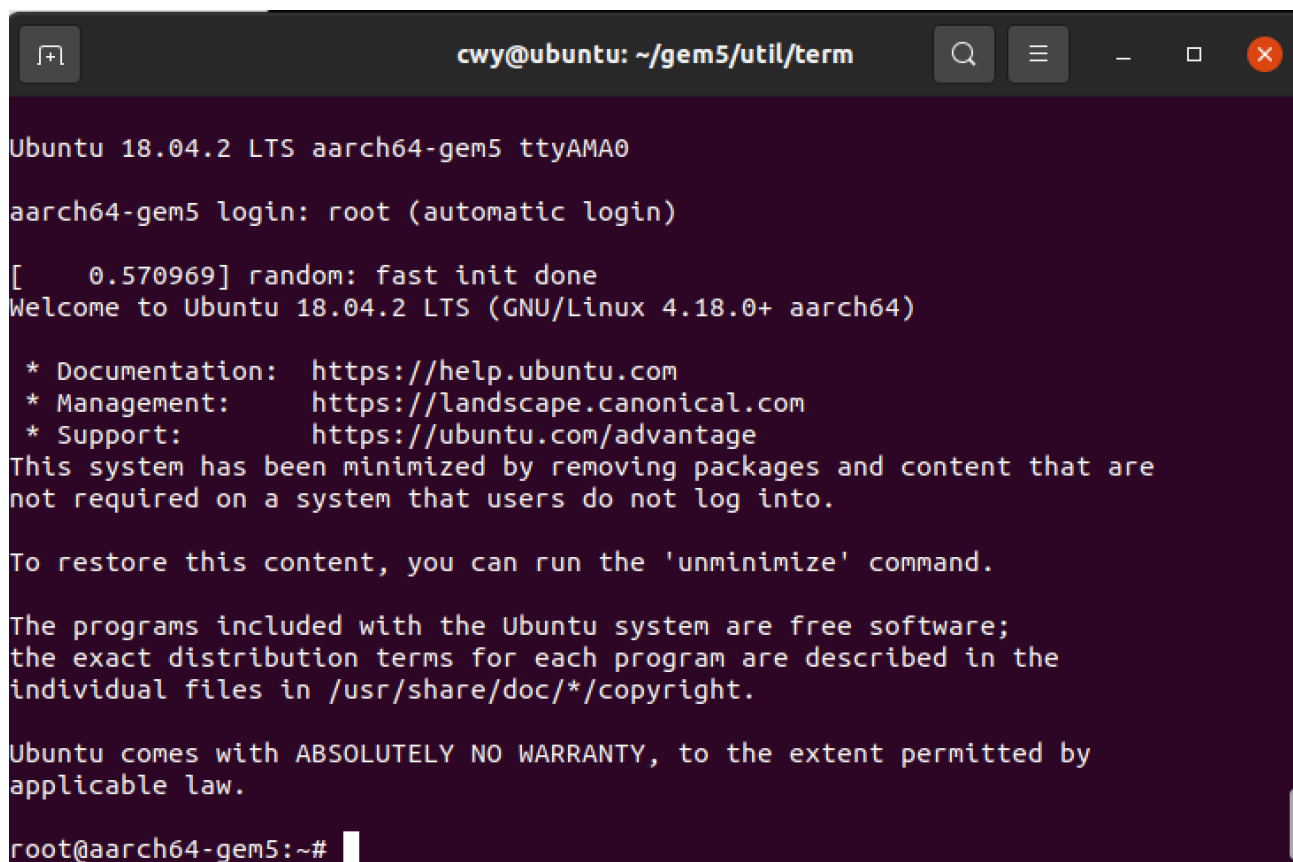
## Part2

1

见图 2.

2

见图 3.



A terminal window titled 'cwy@ubuntu: ~/gem5/util/term' with standard window controls. The terminal output shows the Ubuntu 18.04.2 LTS aarch64-gem5 login sequence. It includes the system boot message, login prompt, random number generation status, and various system notices and disclaimers. The prompt ends at 'root@aarch64-gem5:~#'.

```
cwy@ubuntu: ~/gem5/util/term

Ubuntu 18.04.2 LTS aarch64-gem5 ttyAMA0
aarch64-gem5 login: root (automatic login)

[ 0.570969] random: fast init done
Welcome to Ubuntu 18.04.2 LTS (GNU/Linux 4.18.0+ aarch64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage
This system has been minimized by removing packages and content that are
not required on a system that users do not log into.

To restore this content, you can run the 'unminimize' command.

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

root@aarch64-gem5:~#
```

图 2: Part2-1

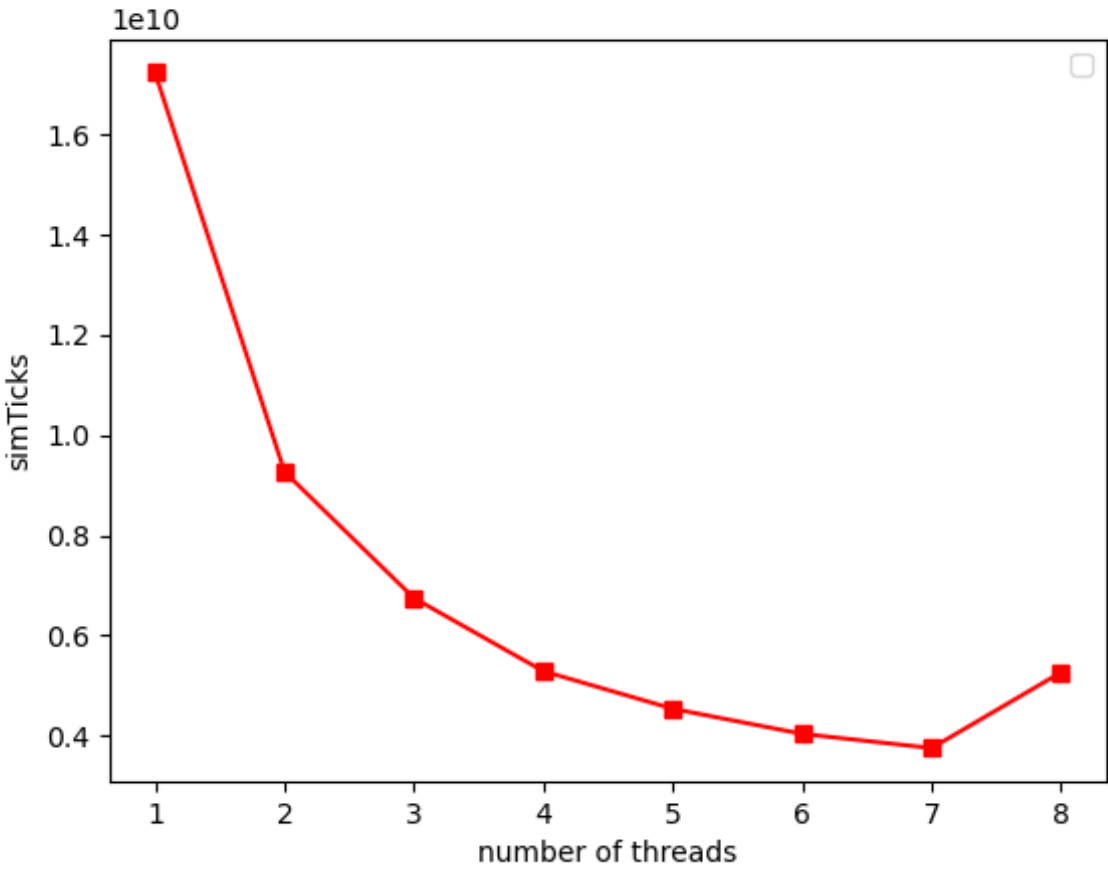


图 3: Part2-2