

Lab2 Nachos的MAKEFILES

在本节中学习了 Nachos 各文件夹的 Makefile 文件编写逻辑和组织逻辑，对一些常用的命令行有了初步的了解，对大型 C++ 文件编译和链接的逻辑有了初步的了解，以下是对实验指导书中实操部分的报告：

- 迁移后的 lab2 目录文件：

```
root@ecs-a3e0:~/OS/nachos-3.4-SDU/code/lab2# ll
total 92
drwxrwxr-x 3 gwp gwp 4096 Mar 18 22:25 ./
drwxrwxr-x 17 gwp gwp 4096 Mar 2 09:37 ../
drwxr-xr-x 3 root root 4096 Mar 18 22:09 arch/
-rw-r--r-- 1 root root 5335 Mar 18 22:20 main.cc
-rw-r--r-- 1 root root 496 Mar 18 22:20 Makefile
-rw-r--r-- 1 root root 514 Mar 18 22:20 Makefile.local
-rw-r--r-- 1 root root 5115 Mar 18 22:20 scheduler.cc
-rw-r--r-- 1 root root 1215 Mar 18 22:22 scheduler.h
-rw-r--r-- 1 root root 9275 Mar 18 22:20 synch.cc
-rw-r--r-- 1 root root 4286 Mar 18 22:20 synchtest.cc
-rw-r--r-- 1 root root 5661 Mar 18 22:20 system.cc
-rw-r--r-- 1 root root 1412 Mar 18 22:20 system.h
-rw-r--r-- 1 root root 14623 Mar 18 22:20 thread.cc
-rw-r--r-- 1 root root 1462 Mar 18 22:20 threadtest.cc
```

- make :

```
>>> Compiling ../machine/sysdep.cc <<<
g++ -m32 -g -Wall -Wshadow -I../lab2 -I../threads -I../machine -DTHREADS -DHOST_i386 -DHOST_LINUX -DCHANGED -c -o arch/unknown-i386-linux/objects/sysdep.o ../machine/sysdep.cc
>>> Compiling ../machine/stats.cc <<<
g++ -m32 -g -Wall -Wshadow -I../lab2 -I../threads -I../machine -DTHREADS -DHOST_i386 -DHOST_LINUX -DCHANGED -c -o arch/unknown-i386-linux/objects/stats.o ../machine/stats.cc
>>> Compiling ../machine/timer.cc <<<
g++ -m32 -g -Wall -Wshadow -I../lab2 -I../threads -I../machine -DTHREADS -DHOST_i386 -DHOST_LINUX -DCHANGED -c -o arch/unknown-i386-linux/objects/timer.o ../machine/timer.cc
>>> Assembling ../threads/switch-linux.s <<<
/lib/cpp -D HOST_i386 -D HOST_LINUX ../threads/switch-linux.s > arch/unknown-i386-linux/objects/tmp.s
as --32 -o arch/unknown-i386-linux/objects/switch-linux.o arch/unknown-i386-linux/objects/tmp.s
../threads/switch-linux.s: Assembler messages:
../threads/switch-linux.s:61: Warning: indirect call without '*'
../threads/switch-linux.s:62: Warning: indirect call without '*'
../threads/switch-linux.s:63: Warning: indirect call without '*'
rm arch/unknown-i386-linux/objects/tmp.s
>>> Linking arch/unknown-i386-linux/bin/nachos <<<
g++ -m32 arch/unknown-i386-linux/objects/main.o arch/unknown-i386-linux/objects/list.o arch/unknown-i386-linux/objects/scheduler.o arch/unknown-i386-linux/objects/synch.o arch/unknown-i386-linux/objects/synclist.o arch/unknown-i386-linux/objects/system.o arch/unknown-i386-linux/objects/thread.o arch/unknown-i386-linux/objects/utility.o arch/unknown-i386-linux/objects/threadtest.o arch/unknown-i386-linux/objects/synchtest.o arch/unknown-i386-linux/objects/interrupt.o arch/unknown-i386-linux/objects/sysdep.o arch/unknown-i386-linux/objects/stats.o arch/unknown-i386-linux/objects/timer.o arch/unknown-i386-linux/objects/switch-linux.o -o arch/unknown-i386-linux/bin/nachos
ln -sf arch/unknown-i386-linux/bin/nachos nachos
```

```
root@ecs-a3e0:~/OS/nachos-3.4-SDU/code/lab2# ll
total 92
drwxrwxr-x 3 gwp gwp 4096 Mar 18 22:26 ./
drwxrwxr-x 17 gwp gwp 4096 Mar 2 09:37 ../
drwxr-xr-x 3 root root 4096 Mar 18 22:09 arch/
-rw-r--r-- 1 root root 5335 Mar 18 22:20 main.cc
-rw-r--r-- 1 root root 496 Mar 18 22:20 Makefile
-rw-r--r-- 1 root root 514 Mar 18 22:20 Makefile.local
lrwxrwxrwx 1 root root 34 Mar 18 22:26 nachos -> arch/unknown-i386-linux/bin/nachos*
-rw-r--r-- 1 root root 5115 Mar 18 22:20 scheduler.cc
-rw-r--r-- 1 root root 1215 Mar 18 22:22 scheduler.h
-rw-r--r-- 1 root root 9275 Mar 18 22:20 synch.cc
-rw-r--r-- 1 root root 4286 Mar 18 22:20 synchtest.cc
-rw-r--r-- 1 root root 5661 Mar 18 22:20 system.cc
-rw-r--r-- 1 root root 1412 Mar 18 22:20 system.h
-rw-r--r-- 1 root root 14623 Mar 18 22:20 thread.cc
-rw-r--r-- 1 root root 1462 Mar 18 22:20 threadtest.cc
```

- `touch scheduler.h && make` :

```
>>> Compiling ../machine/sysdep.cc <<<
g++ -m32 -g -Wall -Wshadow -I../lab2 -I../threads -I../machine -DTHREADS -DHOST_i386 -DHOST_LINUX -DCHANGED -c -
o arch/unknown-i386-linux/objects/sysdep.o ../machine/sysdep.cc
>>> Compiling ../machine/timer.cc <<<
g++ -m32 -g -Wall -Wshadow -I../lab2 -I../threads -I../machine -DTHREADS -DHOST_i386 -DHOST_LINUX -DCHANGED -c -
o arch/unknown-i386-linux/objects/timer.o ../machine/timer.cc
>>> Linking arch/unknown-i386-linux/bin/nachos <<<
g++ -m32 arch/unknown-i386-linux/objects/main.o arch/unknown-i386-linux/objects/list.o arch/unknown-i386-linux/o
bjects/scheduler.o arch/unknown-i386-linux/objects/synch.o arch/unknown-i386-linux/objects/synchlist.o arch/unkn
own-i386-linux/objects/system.o arch/unknown-i386-linux/objects/thread.o arch/unknown-i386-linux/objects/utility
.o arch/unknown-i386-linux/objects/threadtest.o arch/unknown-i386-linux/objects/synctest.o arch/unknown-i386-li
nux/objects/interrupt.o arch/unknown-i386-linux/objects/sysdep.o arch/unknown-i386-linux/objects/stats.o arch/un
known-i386-linux/objects/timer.o arch/unknown-i386-linux/objects/switch-linux.o -o arch/unknown-i386-linux/bin/
nachos
ln -sf arch/unknown-i386-linux/bin/nachos nachos
```

- `touch ../threads/scheduler.h && make` :

```
root@ecs-a3e0:~/OS/nachos-3.4-SDU/code/lab2# touch ../threads/scheduler.h && make
make: 'arch/unknown-i386-linux/bin/nachos' is up to date.
```