Task 1

```
(base) cino@cino-virtual-machine:~/桌面$ cd
(base) cino@cino-virtual-machine:~$ mkdir ~/linux_experiment3
(base) cino@cino-virtual-machine:~$ cd ~/linux_experiment3
(base) cino@cino-virtual-machine:~/linux_experiment3$ nano c1.c
(base) cino@cino-virtual-machine:~/linux_experiment3$ echo "Hello, this is line 1." > test.txt
(base) cino@cino-virtual-machine:~/linux_experiment3$ echo "This is line 2." >>test.txt
(base) cino@cino-virtual-machine:~/linux_experiment3$ echo "Line 3 of the test file." >> test.txt
```

```
(base) cino@cino-virtual-machine:~/linux_experiment3$ nano Makefile1
(base) cino@cino-virtual-machine:~/linux_experiment3$ make -f Makefile1 hello1
gcc -c c1.c
gcc -o hello1 c1.o
(base) cino@cino-virtual-machine:~/linux_experiment3$ ./hello1 test.txt
Hello, this is line 1.

This is line 2.

Line 3 of the test file.
```

```
(base) cino@cino-virtual-machine:~/linux_experiment3$ ls -la
总计 40
drwxrwxr-x  2 cino cino  4096 12月  12 10:00 .
drwxr-x--- 19 cino cino  4096 12月  12 09:54 ..
-rw-rw-r--  1 cino cino   419 12月  12 09:55 c1.c
-rw-rw-r--  1 cino cino  2160 12月  12 10:00 c1.o
-rwxrwxr-x  1 cino cino 16176 12月  12 10:00 hello1
-rw-rw-r--  1 cino cino    74 12月  12 10:00 Makefile1
-rw-rw-r--  1 cino cino    64 12月  12 09:57 test.txt
(base) cino@cino-virtual-machine:~/linux_experiment3$ make -f Makefile1 clean
rm -rf *.o
(base) cino@cino-virtual-machine:~/linux_experiment3$ ls -la
总计 36
drwxrwxr-x  2 cino cino  4096 12月  12 10:01 .
drwxr-x--- 19 cino cino  4096 12月  12 09:54 ..
-rw-rw-r--  1 cino cino   419 12月  12 09:55 c1.c
-rwxrwxr-x  1 cino cino 16176 12月  12 10:00 hello1
-rw-rw-r--  1 cino cino    74 12月  12 10:00 Makefile1
-rw-rw-r--  1 cino cino    64 12月  12 09:57 test.txt
```

Task 2

```
(base) cino@cino-virtual-machine:~/linux_experiment3$ nano c2.c
(base) cino@cino-virtual-machine:~/linux_experiment3$ nano Makefile2
(base) cino@cino-virtual-machine:~/linux_experiment3$ make -f Makefile2 hello2
gcc -c c2.c
gcc -o hello2 c2.o
(base) cino@cino-virtual-machine:~/linux_experiment3$ ./hello2 .
..
hello2
test.txt
c1.c
hello1
Makefile1
c2.c
.
c2.o
Makefile2
```

```
(base) cino@cino-virtual-machine:~/linux_experiment3$ ./hello2 ..
.java
音乐
.bashrc
视频
桌面
.cache
.condarc
.conda
模板
..
anaconda3
.sudo_as_admin_successful
文档
snap
.local
.bash_history
linux_experiment3
公共的
.profile
图片
.
.viminfo
.config
下载
os_lab2
.bash_logout
```

```
(base) cino@cino-virtual-machine:~/linux_experiment3$ sudo ./hello2 /
[sudo] cino 的密码：
libx32
opt
boot
usr
srv
run
..
root
snap
bin
var
.
swapfile
cdrom
media
lib
sys
home
tmp
mnt
lost+found
etc
proc
sbin
lib32
dev
lib64
```
```
lib32
dev
lib64
(base) cino@cino-virtual-machine:~/linux_experiment3$ make -f Makefile2 clean
rm -rf *.o
```

Task 3

```
(base) cino@cino-virtual-machine:~/linux_experiment3$ nano c3.c
(base) cino@cino-virtual-machine:~/linux_experiment3$ nano Makefile3
(base) cino@cino-virtual-machine:~/linux_experiment3$ make -f Makefile3 hello3
gcc -c c3.c
gcc -o hello3 c3.o
(base) cino@cino-virtual-machine:~/linux_experiment3$ ./hello3
Current directory: /home/cino/linux_experiment3
change directory success
Now directory: /home
(base) cino@cino-virtual-machine:~/linux_experiment3$ make -f Makefile3 clean
rm -rf *.o
(base) cino@cino-virtual-machine:~/linux_experiment3$ echo Q23010109GuoJinling
```