(1) Write a C program that uses standard I/O libraries to display the contents of text files. The program is compiled and linked by the make tool, which requires the generation of the.o file first, and then the generation of the executable file, and the function of deleting the intermediate file (.o) in the makefile file.

```
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ nano Makefile
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ make
gcc -c c1.c
gcc -o hello1 c1.o
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ ./hello1 test.txt
open source test.txt failed
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ make clean
rm -rf *.o hello1
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ █
```

(2) Write a C program that displays all the file names in the current directory. The program is compiled and linked by the make tool, which requires the generation of the.o file first, and then the generation of the executable file, and the function of deleting the intermediate file (.o) in the makefile file.

```
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ nano c2.c
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ nano Makefile
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ make
gcc -c c2.c
gcc -o hello2 c2.o
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ ./hello2
Please input the directory name!
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ ./hello2 others/3
.
..
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ ./hello2 3
Error opening directory: 3
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ ./hello2 others
2
3
.
..
1
backup.tar.gz
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ make clean
rm -rf *.o hello2
```

(3) Write a C program that changes the working directory of the current process. The program is compiled and linked by the make tool, which requires the generation of the.o file first, and then the generation of the executable file, and the function of deleting the intermediate file (.o) in the makefile file.

```
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ nano c3.c
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ nano Makefile
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ make
gcc -c c3.c
gcc -o hello3 c3.o
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ ./hello3
Current working directory: /home/shenxi/桌面
Changed working directory to /home successfully.
New working directory: /home
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$ make clean
rm -rf *.o hello3
shenxi@shenxi-VMware-Virtual-Platform:~/桌面$
```