南京邮电大学

实 验 报 告

（ 2024/ 2025 学年 第 一 学期）

课程名称	GNU/Linux 编程
实验名称	实验三
实验时间	2024 年 11 月 15 日
指导单位	计算机学院 网络空间安全系
指导教师	王磊

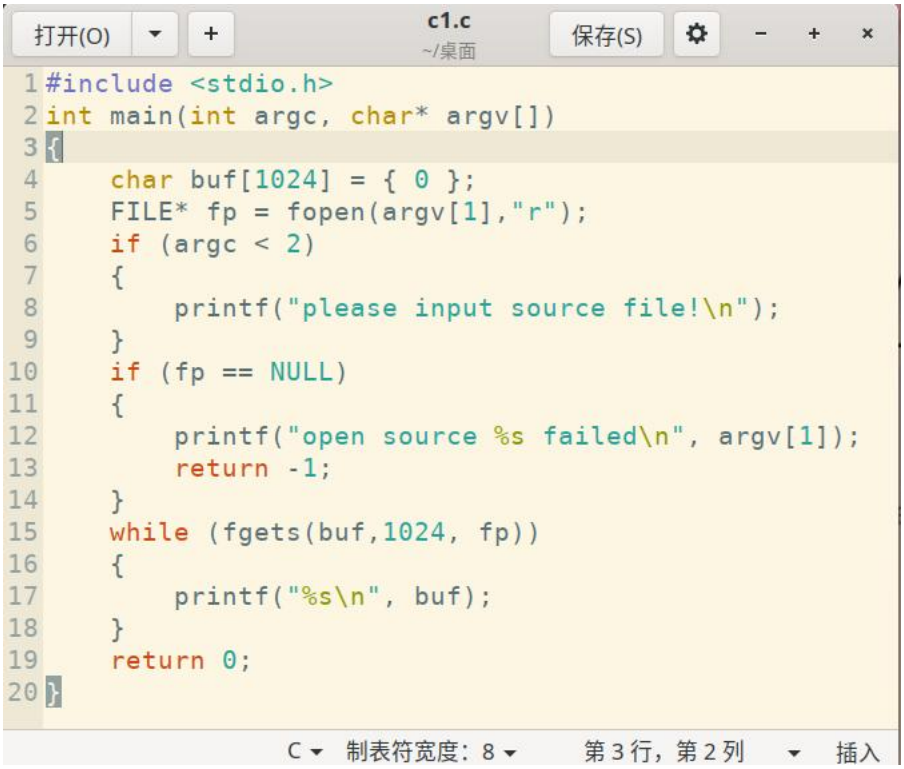
学生姓名	龙海阔	班级学号	B22041012
学院(系)	计算机学院	专 业	信息安全

Task 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

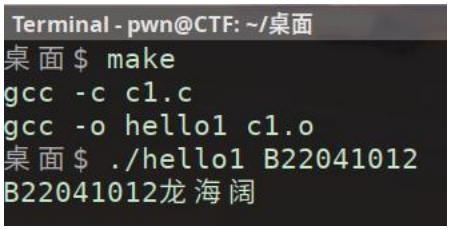
of the executable file, and the function of deleting the intermediate file (.o) in the makefile file.



Make sure your filename is c1.c

We can use the following makefile.

Run the results:

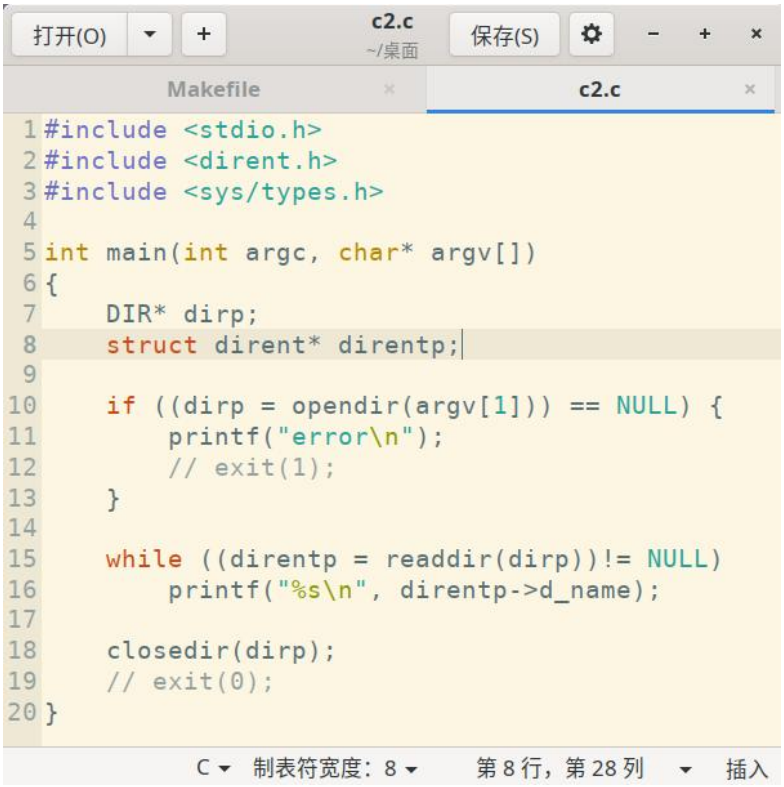


Task 2

Write a C program that displays all the file names in the current directory. The program is compiled and

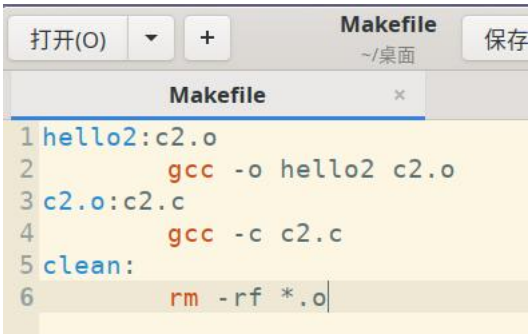
linked by the make tool, which requires the generation of the.o file first, and then the generation of the

executable file, and the function of deleting the intermediate file (.o) in the makefile file.

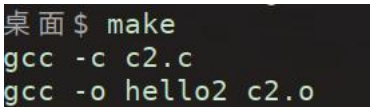


Make sure your filename is c2.c

We can use the following makefile.



Run the results:



Task 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.

打开(O) + c3.c ~/桌面 保存(S)

Makefile | c3.c

```c
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>

int main() {
    char buf[1024] = {0};

    char buf2[1024] = {0};
    getcwd(buf, 1024);
    printf("%s\n", buf);
    if (chdir("/home") < 0) {
        printf("error\n");
    } else {
        printf("success\n");
    }
    getcwd(buf2, 1024);
    printf("%s\n", buf2);
    return 0;
}
```

Make sure your filename is c3.c

We can use the following makefile.

Makefile

```
hello3:c3.o
	gcc -o hello1 c3.o
c3.o:c3.c
	gcc -c c3.c
clean:
	rm -rf *.o
```

Run the results:

```
桌面$ make
gcc -c c3.c
gcc -o hello1 c3.o
桌面$ ./hello1 ..
/home/pwn/桌面
success
/home
```