

(1) Task 1

(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.

```
#include <stdio.h>
int main(int argc, char* argv[])
{
    char buf[1024] = { 0 };
    FILE* fp = fopen(argv[1], "r");
    if (argc < 2)
    {
        printf("please input source file!\n");
    }
    if (fp == NULL)
    {
        printf("open source %s failed\n", argv[1]);
        return -1;
    }
    while (fgets(buf, 1024, fp))
    {
        printf("%s\n", buf);
    }
    return 0;
}
```

```
huang@huang-virtual-machine:~/linux shiyan$ vi c1.c
huang@huang-virtual-machine:~/linux shiyan$ touch makefile
huang@huang-virtual-machine:~/linux shiyan$ make
makefile:2: *** 缺失分隔符。 停止。
huang@huang-virtual-machine:~/linux shiyan$ make
makefile:3: *** 缺失分隔符。 停止。
huang@huang-virtual-machine:~/linux shiyan$ make
makefile:2: *** 缺失分隔符。 停止。
huang@huang-virtual-machine:~/linux shiyan$ make
gcc -c c1.c
gcc -o hello1 c1.o
huang@huang-virtual-machine:~/linux shiyan$ vi hihi
huang@huang-virtual-machine:~/linux shiyan$ ./hello1 hihi
hello world
huang@huang-virtual-machine:~/linux shiyan$
```

实验 3-1

(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.

include <stdio.h>

include <dirent.h>

include <sys/types.h>

```
int main(int argc, char* argv[])
{
    DIR* dirp;
    struct dirent* direntp;
    if ((dirp = opendir(argv[1])) == NULL) {
        printf("error\n");
        // exit(1);
    }
    while ((direntp = readdir(dirp)) != NULL)
        printf("%s\n", direntp->d_name);
    closedir(dirp);
    // exit(0);
}
```

```
huang@huang-virtual-machine:~/linux shiyan$ vi c2.c
huang@huang-virtual-machine:~/linux shiyan$ vi makefile
huang@huang-virtual-machine:~/linux shiyan$ make
gcc -c c2.c
gcc -o hello1 c2.o
huang@huang-virtual-machine:~/linux shiyan$ ./hello1 ~/linux
makefile
..
hello1
c1.c
.
huang@huang-virtual-machine:~/linux shiyan$
```

实验 3-2