

## (1) Task 1

```
hcx@shenhen: ~/Linux_c
hcx@shenhen:~/Linux_c$ ls
c1.c  c1.o  hello1
hcx@shenhen:~/Linux_c$ ./hello1 c1.c
#include <stdio.h>

int main(int argc, char* argv[])
{
    char buf[1024] = { 0 };
    if (argc < 2)
    {
        printf("please input source file!\n");
        return -1;
    }

    FILE* fp = fopen(argv[1], "r");
    if (fp == NULL)
    {
        printf("open source %s failed\n", argv[1]);
        return -1;
    }

    while (fgets(buf, 1024, fp))
    {
        printf("%s", buf); // fgets already includes a newline if the line in the file has one
    }
}
```

## (2) Task 2

```
hcx@shenhen: ~/Linux_c
hcx@shenhen:~/Linux_c$ ./hello2 ./
.
c1.c
hello2
c2.o
c2.c
c1.o
..
hello1
hcx@shenhen:~/Linux_c$
```

### (3) Task 3

A terminal window titled 'hcx@shenhen: ~/Linux\_c' with standard window controls. The terminal shows a series of commands: 'touch c3.c', 'gcc -c c3.c', 'gcc -o hello3 c3.o', and 'ls'. The 'ls' command output lists files 'c1.c', 'c1.o', 'c2.c', 'c2.o', 'c3.c', 'c3.o', 'hello1', 'hello2', and 'hello3'. The user then runs './hello3', which outputs 'Current working directory: /home/hcx/Linux\_c' and 'Directory changed successfully.' followed by 'New working directory: /home'. The prompt returns to '~ /Linux\_c\$'.

```
hcx@shenhen:~/Linux_c$ touch c3.c
hcx@shenhen:~/Linux_c$ gcc -c c3.c
hcx@shenhen:~/Linux_c$ gcc -o hello3 c3.o
hcx@shenhen:~/Linux_c$ ls
c1.c  c1.o  c2.c  c2.o  c3.c  c3.o  hello1  hello2  hello3
hcx@shenhen:~/Linux_c$ ./hello3
Current working directory: /home/hcx/Linux_c
Directory changed successfully.
New working directory: /home
hcx@shenhen:~/Linux_c$
```