

程序 1 的 makefile 和运行:

The screenshot shows a development environment with three main windows:

- Code Editor (Top Left):** Displays the C source code (c1.c) which reads input from a file specified on the command line.
- Terminal (Top Right):** Shows the Makefile content, which includes rules for building the program (hello1) and cleaning up (clean).
- File Browser (Bottom Left):** Shows the directory structure with files c1.c, c1.o, hello1, Makefile, and test.txt.
- Terminal (Bottom Right):** Shows the terminal output of running 'make' followed by './hello1 test.txt'.

清理.o 文件:

The screenshot shows the same development environment as before, but the terminal output has changed:

- The terminal now shows the execution of 'make clean'.
- The file browser shows that the file c1.o has been removed.

程序 2 的 makefile 和运行:

```

c2.c
#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);
}

Makefile
hello2: c2.o
    gcc -o hello2 c2.o
c2.o: c2.c
    gcc -c c2.c
clean:
    rm -rf *.o

soyo@soyo-VMware-Virtual-Platform:~/B22130811/exp3$ make
gcc -c c2.c
gcc -o hello2 c2.o
soyo@soyo-VMware-Virtual-Platform:~/B22130811/exp3$ ./hello2
段错误 (核心已转储)
soyo@soyo-VMware-Virtual-Platform:~/B22130811/exp3$ ./hello2 .
c2.o
Makefile
hello1
c1.c
.
..
test.txt
hello2
c2.c
soyo@soyo-VMware-Virtual-Platform:~/B22130811/exp3$ 

```

清理.o 文件:

```

soyo@soyo-VMware-Virtual-Platform:~/B22130811/exp3$ make
gcc -c c2.c
gcc -o hello2 c2.o
soyo@soyo-VMware-Virtual-Platform:~/B22130811/exp3$ ./hello2
段错误 (核心已转储)
soyo@soyo-VMware-Virtual-Platform:~/B22130811/exp3$ ./hello2 .
c2.o
Makefile
hello1
c1.c
.
..
test.txt
hello2
c2.c
soyo@soyo-VMware-Virtual-Platform:~/B22130811/exp3$ make clean
rm -rf *.o
soyo@soyo-VMware-Virtual-Platform:~/B22130811/exp3$ 

```

程序 3 的 makefile 和运行:

The screenshot shows a desktop environment with several windows open:

- Code Editor (c3.c):** Displays the C code for a program named 'hello3'. It includes includes for stdio.h, stdlib.h, and unistd.h, a main function that checks if it's running from /home, and prints success or error messages.
- Code Editor (Makefile):** Displays a Makefile with rules for building 'hello3' from 'c3.c' and cleaning up intermediate files.
- File Manager:** Shows a file tree with files c1.c, c2.c, c3.c, c3.o, hello1, hello2, hello3, Makefile, and test.txt.
- Terminal:** Shows the command 'make' being run, followed by the output of the program 'hello3' which prints 'success' and '/home'.

清理.o 文件:

The screenshot shows a desktop environment with several windows open:

- Code Editor (c3.c):** Displays the C code for a program named 'hello3' with a bug where it always prints '/home' regardless of the current directory.
- File Manager:** Shows a file tree with files c1.c, c2.c, c3.c, hello1, hello2, hello3, Makefile, and test.txt.
- Terminal:** Shows the command 'make' being run, followed by the output of the program 'hello3' which prints '/home'. It then shows the command 'make clean' being run, which removes the object file 'c3.o'.