

HW 5: I/O Redirection

Instructor: Prof. Seokin Hong (seokin@knu.ac.kr)

TAs: Hoseung Lee (astrohsy@gmail.com) and

Jeong woo Woo (dnwjddn52@gmail.com)

Assigned: November 8, 2018

Due: 11:59pm November 14, 2018

The goal of this assignment is to extend “psh2.c” so that it can redirect the output of a program to/from a file. The extended “psh2.c” need to get a program name, a redirection operator, a file name as its input arguments, and then run the program after redirecting the I/O. The extended “psh2.c” should support the following redirection operators.

- “>”: redirect the program output to a file
- “<”: redirect the program input from a file
- “>>”: redirect the program output to a file. If the file already exists, the program output will be appended to the file. If the file does not exist, the program creates the file.

<Precautions!!>

- Submit a source code (hw5_StudentID.c) to the LMS (lms.knu.ac.kr)
- If you use the wrong name, NO grade will be given. ex) If your student number is ‘2014123123’, your file name should be hw5_2014123123.c

[Run]

\$./hw5_2014123123

[We will test your program with the following sequence]

\$ gcc -o hw5_2014123123 hw5_2014123123.c

\$ls

```
[seokin@compasslab1:~/workspace/system_programming/hw5$ ls
hw5_2014123123  hw5_2014123123.c
```

\$/hw5_2014123123

```
[seokin@compasslab1:~/workspace/system_programming/hw5$ ./hw5_2014123123
Arg[0]? █
```

Type a program name, an operator (“>”), a file name, and then press the enter key.

```
[seokin@compasslab1:~/workspace/system_programming/hw5$ ./hw5_2014123123
Arg[0]? ls
Arg[1]? >
Arg[2]? f
Arg[3]?
child exited with status 0, 0
Arg[0]? ^C
```

\$cat f

```
[seokin@compasslab1:~/workspace/system_programming/hw5$ cat f
f
hw5_2014123123
hw5_2014123123.c
. . . . .
```

\$/hw5_2014123123

```
[seokin@compasslab1:~/workspace/system_programming/hw5$ ./hw5_2014123123  
Arg[0]? █
```

Type a program name, an operator (“<”), a file name, and then press the enter key.

```
[seokin@compasslab1:~/workspace/system_programming/hw5$ ./hw5_2014123123  
Arg[0]? sort  
Arg[1]? <  
Arg[2]? f  
Arg[3]?  
f  
hw5_2014123123  
hw5_2014123123.c  
child exited with status 0, 0  
Arg[0]? ^C
```

\$/hw5_2014123123

```
[seokin@compasslab1:~/workspace/system_programming/hw5$ ./hw5_2014123123  
Arg[0]? █
```

Type a program name, an operator (“>>”), a file name, and then press the enter key.

```
[seokin@compasslab1:~/workspace/system_programming/hw5$ ./hw5_2014123123  
Arg[0]? ls  
Arg[1]? >>  
Arg[2]? f  
Arg[3]?  
child exited with status 0, 0  
Arg[0]? ^C
```

\$cat f

```
[seokin@compasslab1:~/workspace/system_programming/hw5$ cat f  
f  
hw5_2014123123  
hw5_2014123123.c  
f  
hw5_2014123123  
hw5_2014123123.c
```

Late Day Policy

All homeworks are due at 11:59pm on the due date. A grading penalty will be applied to late assignments. Any assignment turned in late will be penalized 50% per late day.

Plagiarism

No plagiarism will be tolerated. If the assignment is to be worked on your own, please respect it. If the instructor determines that there are substantial similarities exceeding the likelihood of such an event, he will call the two (or more) students to explain them and possibly to take an immediate test (or assignment, at the discretion of the instructor) to determine the student's abilities related to the offending work.