

HW #2

Inter Process Communication

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Requirement

- Implement a multi-process based word search program
- Required programming skills
 - Command line argument
 - Multi-process programming
 - IPC via shared memory

Requirements

- Program should follow usage below

```
$ ./mpws SearchFile1 SearchFile2 ... SearchFileN SearchWord
```

- * Program name is 'mpws'
- * Search files are text file
- * Search word is case-insensitive

- Program creates child processes as many as the number of source files
- Each child process finds SearchWord from each SearchFile
- Each child process outputs the number of found word
- The number of found word is returned by shared memory which is shared with parent process
- Parent process aggregates all the number of found word shared by children processes and show the final result

Requirements

- Expected results

* Search word is case-insensitive

```
yunmin@mcn1-server:~/workspace/os/hw2$ ./mpws news1.txt news2.txt news3.txt kORea
Child Process: searching news1.txt...
Child Process: searching news2.txt...
Child Process: searching news3.txt...
news1.txt: 34
Result: 34 'kORea' found in news1.txt
news2.txt: 14
Result: 14 'kORea' found in news2.txt
news3.txt: 9
Result: 9 'kORea' found in news3.txt
Total count: 57
```

Requirements

- Use 'vi' to implement your program
 - There will be some problems about 'vi' in the midterm exam.
 - Check TA's guides
- Write clean source code
 - Add proper comment in your source code
 - Consider code indentation for enhancing readability
- Main source code name is mpws.c
- Upload ZIP file on LMS by compressing all your source codes
 - File name: hw02_student id.zip (ex: hw02_20400022.zip)
- Due date: 11:59pm, 4/16 (Sat)