

Exercises

7 – Input and Output

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Exercise 1

Write a C program that reads the `/etc/passwd` file and writes the system 'login name' list, one per line, to a text file. The name of the output text file is passed as the only argument to the program. The format of the `passwd` file is described in `man 5 passwd`: `"/etc/passwd contains one line for each user account, with seven fields delimited by colons (":")." The first field is the 'login name'.` Hint: use `fgets` to read the lines of the file; use `strchr` to find characters in a string.

Exercise 2

Write a program that implements a simplified version of the Unix `wc` command limited to the `-l` and `-w` options (`man 1 wc`). Use `getopt` for argument parsing (`man 3 getopt`). If no options are passed, the program prints both the number of lines and the number of words of the file (s) whose names are passed as arguments (`mywc [-l -w] file1 [file2 file3...]`). Hint: Write a function that counts words in a string using standard library utility functions like `isspace`, `isctr1` (`man 3 isspace`).