CSE344-System Programming HW1 Report

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First I parse command line arguments with getopt() and check whether they are valid. If one of them are not valid, program prints info about this situation and terminates. These are valid rules for arguments of search criterias that I check:

File Name: File name can not start with '-'. Because if not any argument are passed for file name and there is some other search criteria after file name criteria, getopt automatically set next search criteria as file name.

File Size: File size must be a number.

File Type: File type must be 'd', 's', 'b', 'c', 'f', 'p' or 'l'.

Permissions: Length of permissions argument must be 9.

Number of Links: Number of links must be a number.

If not any arguments are given to search criterias, program prints info about this situation and terminates.

If not any search criterias are given to the program, program prints info about this situation and terminates.

If '-w' criteria is not given, program prints info about this situation and terminates.

Then if everything is okay, 'traverse' function is called.

I pass pointer of char pointer, max size of it and number of found to this function (And file name, path, etc.). When the function found some suitable file, it adds the path of found one to the pointer of char pointer. The function uses pointer of char pointer like array list. It tracks current location with number of found.

Whenever no more location left on pointer of char pointer and another suitable file found, pointer of char pointer is reallocated with new size (2 times the previous max size).

After traverse function is ended, found ones are printed. Then pointer of char pointer is freed.

- I could not handle CTRL-C signal.
- I could not print found ones like formatted tree. I only prints path of found ones.
- The other parts of the program works well without any memory leaks.