Report 1
System Programming

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March 31, 2021

Problem Definition

The problem was implementing advanced find command similar to find command in Linux with POSIX standards(since you allowed the library functions I used some of them)

Design Decision

Firstly I get argument from user with getopt() then getopt() checks for missing arguments for us then I check the validity of given arguments then I implemented a recursive function which traverses all sub directories from given path and when it faces to a file it sends them to a check function to check whether it provides the given arguments. If it provides I send the current path which is in the sub directory to print function and then it prints the file with its parent directories as a tree structure. Also in case of sigint signal I implemented a signal handler and in case of errors because of users or system I print error definitions and return all resources which is allocated by program

The Requirements I have achieved
I tried the rules below and they worked properly on my computer

1. No compilation error

2. No compilation warning

3. *Makefile*

4. *ReportinLatexformat*

5. Printed usage information in case of missing or invalid argument

6. Program did not crashed

7. No memory leaks

8. No zombie process

9. No deadlock

10. No poor synchronization

11. Submitted on time

12. Informed user in case of system errors

13. SIGNINT signal handled

14. Traversed directories recursively

The Requirements I have failed

Only I can print them as separate trees for files in same directory but this was the hardest part for me even I spend days on creating a tree structure I can not show them on same structure