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CS 3377.0W1

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**Programming Assignment 2 Documentation**

**Overview**

We developed two C++ programs: filecnt and filedsp. These programs are to practice standard I/O and the pipe functionality in the UNIX platform. **My submission does lack the implementation of the pipe functionality as my program was facing issues with that, please refer to the video here:** I have given both our professor and TA the permissions for the video.

<https://web.microsoftstream.com/video/b4b31bc6-df85-4eca-a92f-9e5c88aa66be>

Please let me know if you cannot access the video and I will make the necessary arrangements. **Please do watch the video.**

**Background**

IDE used: Clion

Resources: Class notes and videos, lectures, discussion board, online resources (linked at the end)

**Analysis**

### Summary

This project helped me understand how to work with directories, filesystem as well as how to direct standard input and output. I have used the directory or library filesystem that is from the C++17 version. I was able to compile it using the clang++ -std=c++1z /Users/apple/Desktop/PA2\_3377\_Part2/main.cpp -o filedsp on my Mac platform.

I will now explain each program:

**Filecnt**

It accepts input from the user in the format of a path, validates if there is a directory of that name on your system or working directory (the path is absolute). My program is well formatted and gives a title and then a proper prompt for the user to give the input. Once compiled, the program will direct you with the next steps.

For the working of the program, I have heavily used the file system library from the C++17 version that I mentioned before. Once the input path is validated, I start parsing through the location, updating my counter variables for all the files and directories I parse through and also keep gathering the size of the files that I count and store it in the variables.

Then I give the output as formatting in the question. I have also programmed for the case where the input is not path.

**Filedsp**

Programs takes in multiple lines of input in accordance to my formatting for filecnt and puts them in the respective variables. Then I prompt the user to chose from the options and the program functions as per the user’s request.

### Areas to Improve

This is something personal that I should have done better, start a bit early as I could have had more time to better my project, read a bit more and get the time to do the extra credit option. I had started a 4 days before but I guess my knowledge and understanding a bit more time.

I request to get partial credit as I know that I didn’t implement the pipe well but my programs as shown in the video and through the files provided confirm they work stand alone. That being said, thank you for reading through the documentation! I would love any feedback for the project and my performance.

### Sources Used

<https://docs.oracle.com/javase/1.5.0/docs/api/java/lang/String.html>

<https://www.geeksforgeeks.org/string-find-in-cpp/>

<https://www.radford.edu/~mhtay/CPSC120/VIM_Editor_Commands.htm>

<https://introcs.cs.princeton.edu/java/stdlib/javadoc/StdIn.html>

<http://www.cplusplus.com/forum/beginner/229382/>

<https://stackoverflow.com/questions/43116/how-can-i-run-an-external-program-from-c-and-parse-its-output>

Weekly Activities