Assignment 02: filesorter

Work alone or with a partner. If you work with a partner, then indicate their name below AND make sure that your partner also submits this form so that they get credit.

The name, username and photo associated with your Google account will be recorded when you upload files and submit this form. Not **hermann@pdx.edu**? Switch account

* Required

Your Name *

Hermann Yepdjio

Partner's Name (if you worked with a partner).

N/A

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filesorter -- create a C language program that sorts the unsorted binary files

filesorter.c should accept two command line parameters (D = location of directory, T = number of sets of threads).
the program should create 3xt threads. T "reader" threads to read files, T "sorter" threads to sort the file contents and T "writer" threads to write the sorted data to new binary files.

the writers should create/write their new files to a sub-directory D/sorted of the original directory D. The program (the parent thread) should not assume that the sub-directory is already created and should create the D/sorted sub-directory if needed.

you can use any sorting algorithm you like, but you need to write the sort. You are not allowed to use qsort() or some other library function for sorting.

HINT: don't let your readers get too far ahead of the writers. define an artificial limit (I suggest 10) for the number of files that the reader can read before waiting.

Use your previously created "filecreator" program to create two different unsorted directories. one small and one larger, like this:

./filecreator <name of directory 1> 10 10 2
this creates 10 files, each with 10 integers, it runs with 2 threads

./filecreator <name of directory 2> 1000 10000 2
this directory will then have a larger set of larger files

Test your filesorter program with the following parameters (and more!):

./filesorter <name of directory> 1
./filesorter <name of directory> 2
./filesorter <name of directory> 3

run these with both your small directory and your large directory

My completed filesorter.c program *

☑ works with all inputs

☑ uses condition variables

How did you sort your integers? *

I read the file data into a dynamically allocated memory array and sorted the values using a simple insertion sort algorithm that I implemented myself

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Upload your completed filesorter.c program *

filesorter - Herm...

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