Design

1) For subdirectory, the code recursively spawns threads to handle its subdirectories and files. For files, the sort records of the file and puts the sorted records in the linked list.
2) I used some global variables. A thread count for keeping track of the progress and to exit when it becomes 0. A linked list of all the sorted files for the output.
3) All the thread are kept detached. I used thread count to make sure that all the threads were completed before the exit.
4) I merged all the small files into a large combined file as it was more efficient to do so. There were total 128 temporary buffers that helped combine all files into bigger files.

Difficulties

1) The main difficulty i faced with this assignment was that my last assignment did not compile and therefore i had no idea what i did wrong. I had to check my last assignment completely and redo this one from scratch which took a while.

Assumptions

1) I had to assume that only NULL,Integer,Float, and string data type were used for all the records.
2) Null was the beginning of the sorted list and number and string would follow it respectively.

Testing

1) For testing, i used several small files to see if the code would work with a lot of records at the same time.