CyrilleLingaiJonathanGrant_06 Pseudo-code

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Define the program class header.
    Declare the Input File Name.
    Declare the list length.

    Define the main method header.
        Create two arrays of length 100.
        Try to read the input file’s integers to both arrays.
        Throw file not found if the file is not found.
        Sort both lists by using algorithms quick sort and shell sort.
        Try to write each list to its own file, with ten integers per line. translating the lists to strings.
        Throw IO exception if writing to file fails.

    Define the array to strings method header.
        Iterate the integers of the list, pushing each integer to a string, ten per line, with white-space between each integer.
        Return the string to the method caller.

    Define the shell sort method header.
        Define an interval by half the list.
        Scan the list by decreasing intervals, while intervals are greater than zero.
            Iterate each sub-list grouped by spacing.
                Sort the sub-list of integers.

    Define the quick sort method header.
        If the list is less than four entries, sort using the shell sort: Donald Shell’s improved insertion sort.
        Otherwise, swap the middle and last integers.
            Find the new pivot of the sub-list.
            Compare the first entry to the last entry.
                If the first entry is greater than the last entry, swap them.
            Compare the first entry to the middle entry.
                If the first entry is greater than the middle entry, swap them.

            The middle entry is the pivot.
            Swap the pivot with the second to last entry in the list.

        Iterate the list from the second entry tothe first entry greater than or equal to the pivot.
            Assign the left index this entry.

        Iterate the list from the third to last entry for the first entry that is less than or equal to the pivot.
            Assign the right index this entry.

        If the right index overlaps the left index, swap them.

        Swap the leftmost integer and the pivot.
        Split the sub-list into two new sub-lists by the pivot and use quick sort on them.
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