

# CSC775 Homework3 - Two-way External Merge Sort

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In my submission, there are 4 files:

Test.java:

This class includes the main function.

**TwoWayExternalMergeSort.java:**

This class includes the core part of the algorithms. It operates every pass except pass0.

Pass0.java:

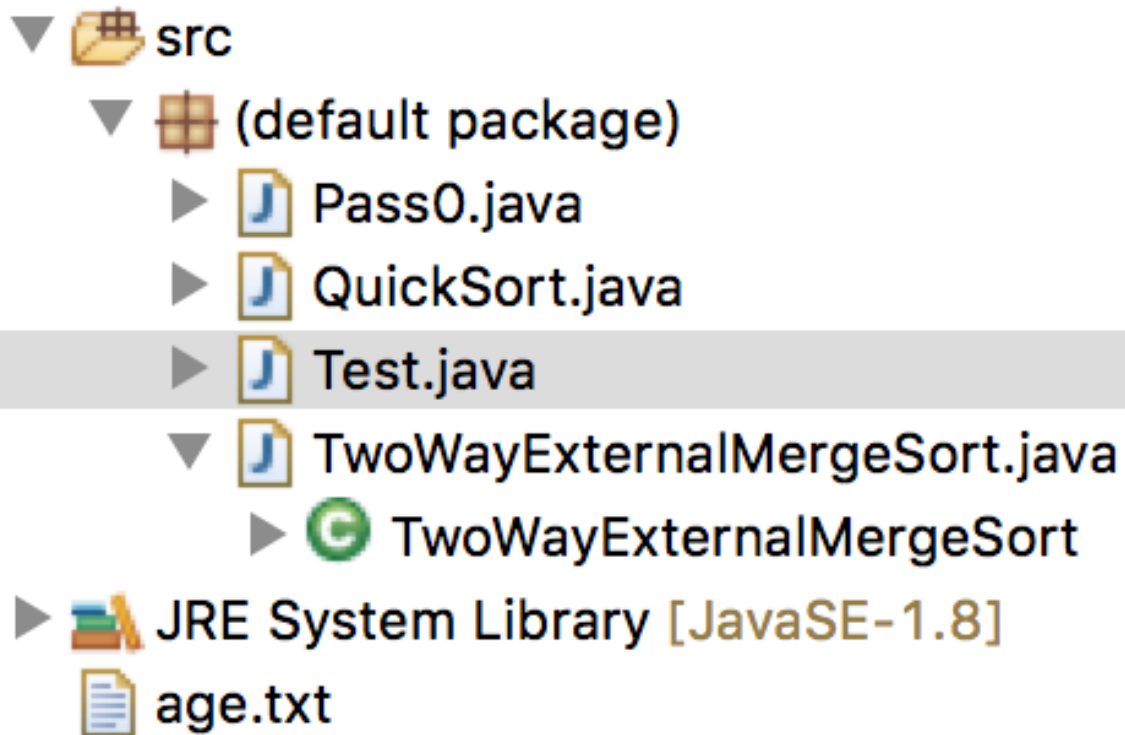
This class is to do Pass0 to separate the given file into each page, and then use **quick sort** to sort the numbers in each page.

QuickSort.java:

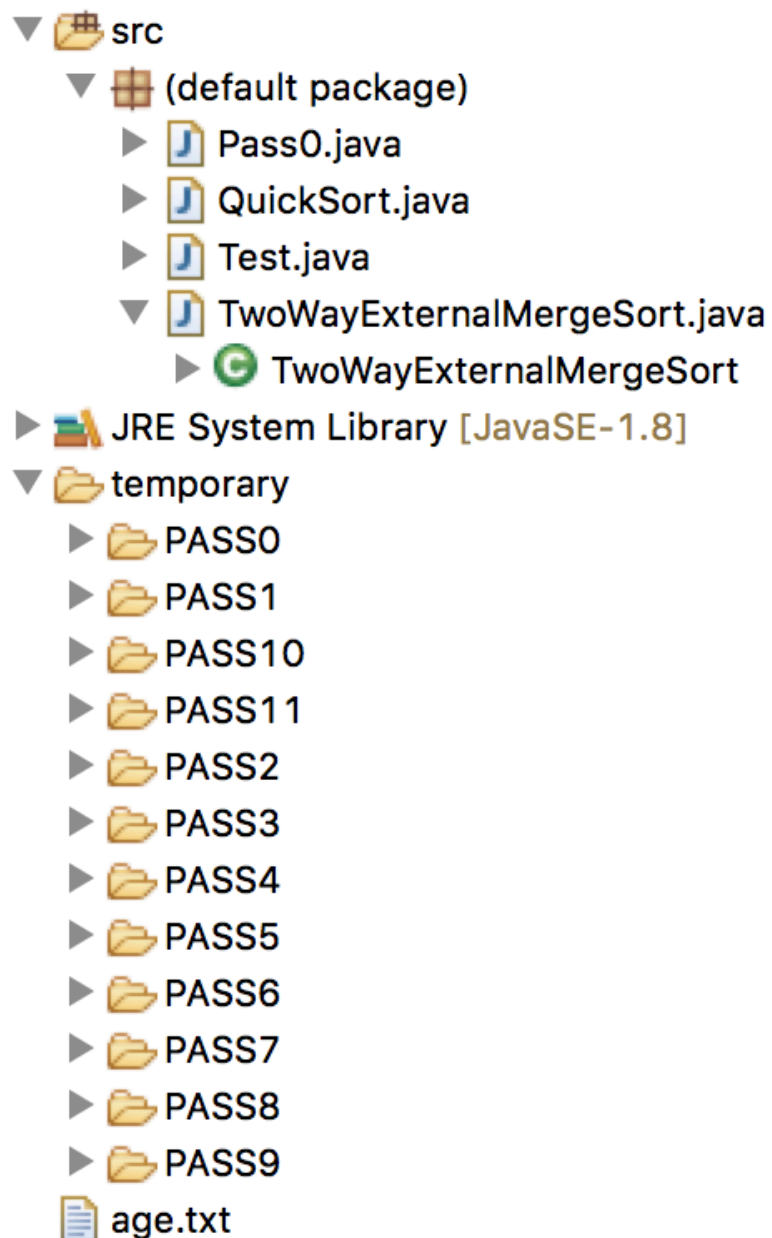
This class is the quick sort algorithm that Pass0 uses.

In TwoWayExternalMergeSort.java class, there are 2 core private functions which could represent the main idea. One is **mergeTwoFiles()** function, which does how to merge 2 files (maybe each one larger than one page), and in this function, I use another core function—**mergeTwoPages()** function, which does how to merge 2 pages.

When I use IDE, the file structure is like below:



When it runs, it will generate each directory and temporary files automatically. After it runs, the structure would be like:



**The large sorted result file is in ‘temporary/PASS11’.**

Notice:

If you want to rerun the program after you have run it, you’d better delete ‘temporary/PASS0/pass0-713.txt’. Then you could retry it.