

Birla Institute of Technology & Science, Pilani
2nd Semester 2014-15
Data Structures & Algo (CS/IS F211)
Lab-3 (3rd Review Lab)

Problem Statement:

Sort the given an unsorted list of integers and save them back using

- a) Mergesort algorithm (Algorithm A1)
- b) A simple Quicksort algorithm (Algorithm A2)

Objectives:

File handling

Sorting

Linked list (review)

Data structures:

List: a list of integers. (to be implemented using linked lists.)

Tasks to perform:

readData(filename): read contents of file given by filename, store them in a linked list, and return the linked list.

printList(list, file): print the contents of the list into the file. Here file corresponds to FILE * of an already opened file(in main) or **stdout**(for printing on to screen)

sort(list): this sorts the given list and returns the sorted list using either algorithm A1 or A2.

Main function: that reads the list from the file and prints the output into file.

File format:

All files have the following in each line:

<integer>

Example:

Input5.txt

12

3

14

2

23

Deliverables:

Executable file merge.exe which implements the mergesort algorithm

Executable file qsort.exe which implements the mergesort algorithm