

Online A1 on Linked list

Time: 50 minutes

Extend your Linked list implementation with the following additional functions:

1. (marks 7) `sort()`: This member function will sort the elements of the linked list in ascending order
2. (marks 3) `insertSort(item)` : This member function takes an item as parameter and insert it into an already sorted linked list in appropriate position
3. (marks 10) `mergeList(list)`: This member function takes an list as input parameter which is already sorted. The task is to merge this list into the current one (which is also sorted) and ensure that the merged list is sorted.

In main function add the following cases:

1. First input some numbers in random sequence and print them
2. Sort them and print
3. Take another linked list and do step 1 and 2
4. Merge the second list to first one
5. Add another test case to check Insert sort function